



दिल्ली ट्रांसको लिमिटेड DELHI TRANSCO LIMITED

पंजीकृत कार्यालय : शक्ति सदन, कोटला रोड, न्यू दिल्ली-110002
(Regd. Office Shakti Sadan, Kotla Road, New Delhi-110002)

Office of Dy. General Manager (System Operation)

एस एल डी सी बिल्डिंग, मिनटो रोड, न्यू दिल्ली-110002

SLDC Building, Minto Road, New Delhi-110002

Ph: 23221175 FAX No.23221069

No. F./DTL/207/18-19/DGM(SO)/233

Dated :28.02.2019

Subject : Minutes of the 20th meeting of the Grid Coordination Committee (GCC) held on 28.11.2018 at 10.30hrs at Conference Hall (1st Floor), NDMC Convention Centre, NDCC Phase-II, Near NDMC Head Quarter, Palika Kendra, Sansad Marg, New Delhi-110001

Dear Sir,

The Minutes of the 20th meeting of the Grid Coordination Committee (GCC) held on 28.11.2018 at 10.30hrs at Conference Hall (1st Floor), NDMC Convention Centre, NDCC Phase-II, Near NDMC Head Quarter, Palika Kendra, Sansad Marg, New Delhi-110001 are enclosed for ready reference and further necessary action please.

Thanking you,

Yours faithfully

Encl. as above

(PRADEEP KATIYAR)

Dy. G.M. (System Operation)
Convener GCC

To

- 01 **Sh. Prem Prakash, Chairperson, GCC**
Director (Operations), Delhi Transco Ltd, 1st floor, Shakti Sadan Building, Kotla Road, New Delhi-110002, Office-Phone- 011-23232715, Fax : 23232721
- 02 **Sh. Harjiwan Vyas, Executive Director (T), SLDC, Delhi**
- 03 **Sh. Birender Prasad, G. M. (Planning)**
- 04 **Sh. V. Venugopal, G.M. (O&M)-II, Delhi Transco Ltd.**
- 05 **Sh. Mukesh Kumar Sharma, G. M. (Corporate Monitoring & SEM), DTL**
- 06 **Sh. K.K. Verma, G. M. (Project)-I, Delhi Transco Ltd.**
- 07 **Sh. Suresh Kumar Sharma, G. M. (O&M)-I, Delhi Transco Ltd,**
- 08 **Ms. Kiran Saini, G. M. (Project)-II, Delhi Transco Ltd.**
- 09 **Sh. Lovleen Singh, G. M. (P&M, Disaster Management & Safety), DTL**
- 10 **Sh. Suresh Nimwal, G.M. (C&MM), DTL**
- 11 **Sh. Rajeev Sharma, G.M. (Civil), DTL**
- 12 **Sh. P.K. Malik, General Manager (Finance), DTL**
- 13 **G.M. (C&RA), DTL**
- 14 **Sh. Ved Mitra Chief Engineer, DMRC, Inderlok Metro Station, Delhi, 9871165812**

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- 16 **General Manager (Electrical), DMRC**
- 17 **Sh. Jagdish Kumar, Director(Tech), IPGCL / PPCL**
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- 20 **Sh. A.K. Sharma, Head (O&M), BYPL, Shakti Kiran Building, Karkardooma, Delhi**
- 21 **Sh. Mukesh Dadhichi, G.M. (SO), BYPL, Shankar Road, New Delhi**
- 22 **Sh. Sunil Kakkar, Head (PMG), BYPL, Shakti Kiran Building, Karkardooma, Delhi**
- 23 **Chief Engineer (Transmission System), BBMB**
SLDC Complex, Sector-28, Industrial Area Phase-I, Chandigarh.
- 24 **Superintending Engineer (O&M) Circle, BBMB, 400kV S/Stn, BBMB Complex,**
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- 25 **Sh. Sanjay Kumar Banga, Head (PEC, PM&BD), TPDDL**
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- 26 **Sh. P. Devanand, HoD, (PSC & Smart Grid), TPDDL**
- 27 **Sh. Surinder Kansal, VP, (System Operation), BRPL**
- 28 **Sh. Sanjay Srivastava, AVP (PMG), BRPL**
- 29 **General Manager, BTPS, NTPC, New Delhi-110044** Office Phone: 011- 26949523,
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- 30 **Sh. A.K. Joshi, Chief Engineer (Elect)-II, NDMC**
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- 31 **Dy.G.M. (Market Operation), NRLDC, 18-A, SJSS Marg, New Delhi-110016**
- 32 **Sh. Mahender Singh, Executive Director (Tariff), DERC**
DERC Viniyamak Bhawan, C-Block, Shivalik, New Delhi-17
- 33 **Sh. U.K. Tyagi, Executive Director (Engineering), DERC**
DERC Viniyamak Bhawan, C-Block, Shivalik, New Delhi-17
- 34 **General Manager (Commercial), NTPC, NCR Headquarters, R&D Building, A&A,**
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- 39 **Sh. Neelesh Gupta**
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- 40 **General Manager, Indira Gandhi Super Thermal Power Station, Jharli, Jhajjar Distt.**
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- 41 **CWE (U), MES, MES Palam Road, Delhi Cantt, New Delhi-110010**
- 42 **GE (U), MES, Electric Supply, Kotwali Road, Delhi Cantt, Delhi-110010**

- 43 Dy. G. M. (Fin-I & II), DTL Rajghat Power House New Delhi -110002
44 **Sh. R.S. Meena, Dy. G.M. (SCADA), SLDC**
45 **Sh. Bharat Gujjar, Dy. G.M. (EA), SLDC**
46 Ms. Parul Kapadia, Manager (HW), SCADA, SLDC
47 Ms. Anjalee Das, Manager Software), SCADA, SLDC
48 **Sh. Naveen Goel**, Manager (T), System Operation, SLDC
49 **Ms. Sonali Garg**, Manager (Energy Accounting), Delhi SLDC
50 **Manager (SO)-Shift**, Delhi SLDC
51 Ms Mukesh Dagar, Dy. Manager (Finance), SLDC
52 Sh. Appi Reddy, Associate V.P. DMSWL, Sec-5, Pocket N-1, Bawana Industrial Area, Behind Pragati Power Plant, Bawana, New Delhi-110039 appireddy.k@ramky.com
Project-in-Charge, 12MW East Delhi Waste Processing Company Ltd, Near Veterinary
53 Hospital, Gazipur, Delhi-110096, Ph.22782152
54 Sh. Sudhir Saxena, Chief Executive Officer, Railway Energy Management Co. Ltd. Ground Floor, Central wing, Plot No-1, Sector-29, Gurgaon-122001

Copy for favour of kind information to :-

1. Secretary (Power), Govt. of NCT of Delhi,
2. Secretary, DERC, Viniyamak Bhawan, C-Block, Shivalik, New Delhi-110017
3. Chairman & Managing Director, DTL
4. Chairperson, NDMC, Palika Kendra, Sansad Marg, New Delhi-110001
5. Member Secretary, NRPC, Katwaria Sarai, New Delhi-110016
6. Director (Operations), NTPC, Scope Complex, 7 Institutional Area, Lodhi Road, New Delhi-110003
7. Managing Director, IPGCL / PPCL, Himadri, Rajghat Power House, New Delhi-02
8. Director (Operations), DMRC, Metro Bhawan, Fire Brigade Lane, Barakhamba Road, New Delhi-110001.
9. Director (Finance) DTL
10. CEO, BSES Rajdhani Power Ltd, BSES Bhawan, Nehru Place, New Delhi-110019
11. CEO, BSES Yamuna Power Ltd, Shakti Kiran Building, Karkardooma, New Delhi-92
12. CEO, TPDDL, 33kV Grid S/Stn, Hudson Lane, Kingsway Camp, Delhi-110009
13. Chief Engineer, Delhi Zone,(CEDZ), MES Palam Road, Delhi Cantt, New Delhi-10
14. Addl. Secretary (Power), Govt. of NCT of Delhi, Delhi Secretariat, New Delhi.



DELHI TRANSCO LTD.

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

[Office of Dy General Manager (System Operation)]

SLDC Building, Minto Road, New Delhi – 110 002

Phone No.23221175, Fax 23221069

Subject : Summary Record of discussions held in the 20th meeting of the Grid Coordination Committee held on 28.11.2018 at 10.30hrs at Conference Hall (1st Floor), NDMC Convention Centre, NDCC Phase-II, Near NDMC Head Quarter, Palika Kendra, Sansad Marg, New Delhi-110001

The list of participants is enclosed as **Annexure-1**.

WELCOME

Sh. Prem Prakash, Director (Operations), DTL, Chairperson, GCC welcomed all delegates in the 20th Grid Coordination Committee meeting. He hoped that the issues would be sorted out amicably.

He expressed great pleasure that DTL has strengthened its transmission network by augmentation of various transmission lines. With these arrangements, DTL would be able to meet summer peak successfully without any constraints. He hoped that all utilities have made sufficient arrangements to meet consumer's demand.

He further expressed his concerns on the non payment of dues by some of the Distribution licenses due to which generating and transmission companies are facing acute shortage of funds. He advised Distribution Companies to pay dues in time.

Concluding the remarks, he requested all the Stake Holders to actively participate in the proceedings of meeting for fruitful discussions and arrive at a considered decision to ensure secure and economic operation of the power system of Delhi. He advised Dy. G.M. (SO) to take up agenda for discussion.

Accordingly, the Agenda was taken up for discussion.

1 CONFIRMATION OF THE MINUTES OF 18TH MEETING OF GCC HELD ON 22.09.2017 & 19TH MEETING OF GCC HELD ON 09.04.2018.

The minutes of the 18th meeting of GCC held on 22.09.2017 & 19th meeting of GCC held on 09.04.2018 have been circulated vide letter no F./DTL/207/17-18/DGM(SO)/204 dt. 02.01.2018 & vide letter No. F./DTL/207/18-19/DGM(SO)/144 dt. 14.09.2018 which includes the observations of BYPL on MoM of 18th GCC. No comments have been received from any entities so far.

GCC confirms the MoM of 18th & 19th meeting of GCC.

2 FOLLOWUP ACTION ON THE DECISIONS TAKEN IN THE PREVIOUS GCC MEETINGS

2.1. PROVISIONS OF HOT RESERVE OF TRANSFORMERS.

a) The present status of hot reserve of Power Transformers is as under:-

SN.	Transformation Capacity	Population in no.	Hot Reserve (No.) Decided	Present status/ Remarks
1	400/220kV, 500MVA ICT	2	1x500MVA Tr. at Bamnauli	DTL informed that one 400/220kV 500MVA Tx is proposed to be installed as hot reserve by the year 2019-20 and would be placed at Bamnauli. 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	25	2x160MVA Tr., (1 each at Mundka and Mehrauli)	One 160MVA Tx would be kept as hot reserve and placed at Mundka. While the 2nd 160MVA, 220/66kV Hot reserve transformer is to be placed at 220kV Mehrauli. Both the transformers are expected to be provided by 2020.
4	220/66kV, 100MVA	41	1x100 MVA Tr. at Pappankalan-I	DTL confirmed that the scheme for 100 MVA Tr. at PPK-I has been approved. The Tx. is expected by 2020.
5	220/33kV, 100MVA	44	2x100MVA Tr., (1 each at Okhla and Patparganj)	DTL informed that the Txs. are expected by 2020.

SN.	Transformation Capacity	Population in no.	Hot Reserve (No.) Decided	Present status/ Remarks
6	66/11kV 20MVA	24	NIL	Steering Committee in its meeting held on 15.03.2017 had decided that in case of exigency, the Discoms may provide these transformer on returnable basis. As per the decision taken in the Steering Committee Meeting held on 30.10.17 the transformer augmentation has been planned and detailed under sr. No.2.1(b) below.
7	33/11kV 20MVA	5	NIL	
8	33/11kV 16MVA	11	NIL	

b) Augmentation plan for 66/11kV and 33/11kV 16MVA / 20 MVA Transformers-

S.No	Sub Station	Details of existing Tx.	Augmentation Plan	Year	Latest status of Scheme	Remarks
1	Lodhi Road	2 no 33/11kV 20MVA	2 no 33/11kV 25MVA	2018-19	Under tendering.	It is informed that 11kV panel is quite old and under rated compared to 25 MVA Tr. Rating. It was suggested to replace the panel also alongwith the augmentation. GCC advised Planning Department to discuss the matter in steering Committee the issue of replacement of 11kV panel since major expenditure is involved and requires DERC approval. Meanwhile the load shall be limited by the Discoms to the level of 16/20MVA capacity only.
	Lodhi Road	2 no 33/11kV 16MVA	2 no 33/11kV 25MVA	2018-19	Under tendering.	
2	Najaf Garh	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	Pappan kalan-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		

Augmentation/replacement plan for 220/66kV, 100 MVA Transformers-

S. No.	Name of the Sub Station	Qty. (No.)	Year	Latest status of Scheme
1	SaritaVihar (100 MVA to 160 MVA)	1	2018-19	Txs are expected by June 2019.
2	Narela (100 MVA to 160 MVA)	1	2018-19	Txs are expected by June 2019.
3	Najafgarh (100 MVA to 160 MVA)	2	2018-19	P.O. awarded to BHEL and expected by April 2019.
4	Okhla (100 MVA to 160 MVA)	1	2019-20	Approval of Board is awaited.
5	Mehrauli (100 MVA to 160 MVA)	1	2019-20	Approval of Board is awaited.
6	Patparganj (100 MVA to 160 MVA)	2	2019-20	Approval of Board is awaited.
	Total	8		

GCC advised that all out efforts be taken to charge the hot reserve transformers within the target date to avoid any power crisis due to breakdown of transformer. Timelines for all associated works for ETC of Tr. such as civil works including Tr. Foundation, equipment replacement, cabling, etc. be also quantified.

2.2 IMPLEMENTATION OF AUTOMATIC DEMAND MANAGEMENT SCHEME BY DISCOMS

The implementation of ADMS is being monitored by CERC and in suo moto petition no. 5/2014 in the matter of "non compliance of Regulation 5.4.2(d) of the Central Electricity Regulatory Commission (Indian Electricity Grid Code) Regulation 2010" the following has been directed:

.....however, considering the request of the respondents to grant time to implement ADMS, we grant time till 30.06.2016 to the respondent to implement ADMS failing which they will be liable for action under Section 142 of the Act for non compliance of the Regulation 5.4.2(d) of the Grid Code and order of the Commission. RLDCs are directed to submit the report in this regard by 31.08.2016".

The position updated in the utilities in the 19th GCC is as under:-

TPDDL : SCADA has already been upgraded. This has the facility of ADMS. The work has been completed and commissioned on 19 March 2018.

BYPL : Already in place.

BRPL : SCADA has already been up-graded. This has the facility of ADMS.

NDMC: The software has been upgraded and under testing.

MES : Exempted due to very small utility and considering strategic important load to be catered.

In the last meeting, GCC advised SLDC to call a meeting with all discoms after implementation of ADMS. No reply received from NDMC regarding implementation of ADMS.

During meeting NDMC informed that testing of ADMS is remaining and work is linked with the IPDS project, for which efforts shall be made to complete at the earliest.

GCC advised NDMC to take up the work on priority and submit status to SLDC regularly.

2.3 OUTSTANDING DUES

DTL

2.3.1 NON PAYMENT OF OUTSTANDING DUES OF DTL BY BRPL, BYPL.

BSES utilities are not paying dues to DTL since October, 2010 due to which DTL is facing acute financial crisis. Due to financial crunch, DTL is not able to expand its network as per plans. Even, maintenance activities are also suffering badly. The outstanding dues owed to BSES utilities are increasing month by month. Hon'ble Supreme Court vide its orders dated 26.03.2014, 12.05.2016 has directed BSES Discoms to clear the current dues of DTL i.e. dues w.e.f. 01.01.2014 but BSES utilities are not even complying the directions of Hon'ble Supreme Court. The details of outstanding dues on BSES utilities are as under :-

- i) **The details of current dues payable to DTL by BRPL for the period 01.01.2014 to 31.08.2018 are reproduced hereunder:**

(Amount in Rs. Cr.)

Billing Period	Total Bill amount	Minimum payable amount (as per direction of Hon'ble Supreme Court Orders)	Total minimum payable amount (as per direction of Hon'ble Supreme Court Orders)	Payment received till 30.09.2018	Balance minimum amount of current dues payable as per direction of Hon'ble Supreme Court
01.01.14 to 30.04.16	752.51	677.26	1317.01	468.29	848.72
01.05.16 to 31.08.18	932.58	639.75			

Therefore, it is evident from the above that minimum amount of Rs. 848.72Cr. is still required to be paid by BRPL to honour the Hon'ble Supreme Court orders.

The total outstanding dues on BRPL as on 30.09.2018 amounting of Rs. 1702.69 Cr after adjustment of subsidy diverted by GNCTD (including current dues and LPSC for the billing period 01.10.2010 to 31.08.2018.)

BRPL representative informed the following :-

BRPL submitted that it is already complying with Hon'ble Supreme Court Order of making payment of 70% of current dues. Further from Nov'17 onwards it has also started paying 100% of current dues to DTL. Further BRPL, has also endeavoured to make the additional payments to DTL, since June 18 onwards, which is over and above the current dues payable.

- ii) The details of current dues payable to DTL by BYPL for the period 01.01.2014 to 31.08.2018 are reproduced hereunder:**

The details of current dues for the period 01.01.2014 to 31.08.2018 are reproduced hereunder:

(Amount in Rs. Cr.)

Billing Period	Total Bill amount	Minimum payable amount (as per direction of Hon'ble Supreme Court Orders)	Total minimum payable amount (as per direction of Hon'ble Supreme Court Orders)	Payment received till 30.09.18	Balance minimum amount of current dues payable as per direction of Hon'ble Supreme Court
01.01.14 to 30.04.16	473.67	426.30	767.82	196.21	571.61
01.05.16 to 31.08.18	497.84	341.52			

Therefore, it is evident from the above that minimum amount of Rs. 571.61Cr. is still required to be paid by BYPL to honour the Hon'ble Supreme Court orders.

The total outstanding dues on BYPL as on 30.09.2018 amounting of Rs.1094.21 Cr after adjustment of subsidy diverted by GNCTD (including current dues and LPSC for the billing period 01.10.2010 to 31.08.2018).

In view of the huge outstandings as brought out above, the above beneficiaries i.e. BRPL & BYPL were advised to liquidate the outstanding dues of DTL at the earliest.

- iii) Non furnishing of LCs by BRPL &BYPL**

BRPL and BYPL have not furnished LCs to DTL. Letters were issued to both the Distribution Licensees for providing LCs for FY 2018-19 for amount of Rs. 38,15,94,196/- and **Rs.** 20,47,98,509/- respectively w.e.f. 1st October, 2018 but no LCs have been provided by both the Discoms so far.

BRPL representative informed the following:-

Cash flow mismatch in past had adversely affected payment obligations, debt servicing capability of the Company and accumulation of outstanding dues to power suppliers. These constraints have restricted our capability to establish desired LC's in favour of power suppliers. Presently BRPL is not in position to establish LC in favour of any of its power supplier.

GCC advised the above beneficiaries i.e. BRPL & BYPL to make all efforts for opening of LC in favour of DTL at the earliest.

2.3.2 INTRASTATE UI ACCOUNT

The position of payment of Intrastate UI/ DSM accounts for last three years (as on 31st March) is updated as under:-

STATEMENT OF UI AS ON 31.03.2016					
S. No.	Financial Year	Constituents	Payable Amount (Principal)	Receivable Amount (Principal)	Net Payable/ Receivable
1	31.03.2016	IPGCL	1,44,52,343.00	1,16,29,075.00	28,23,268.00
2	31.03.2016	PPCL	25,89,170.00	-	25,89,170.00
3	31.03.2016	BTPS (NTPC)	-	-	-
4	31.03.2016	BYPL	5,68,43,845.00	96,08,57,017.00	-90,40,13,172.00
5	31.03.2016	BRPL	1,12,75,12,497.00	1,79,44,04,903.00	-66,68,92,406.00
6	31.03.2016	TPDDL (NDPL)	31,082.00	-	31,082.00
7	31.03.2016	NDMC	2,98,00,465.00	-	2,98,00,465.00
8	31.03.2016	MES	3,38,84,058.00	10,62,21,181.00	-7,23,37,123.00
		TOTAL	1,26,51,13,460.00	2,87,31,12,176.00	-1,60,79,98,716.00

STATEMENT OF UI AS ON 31.03.2017					
S. No.	Financial Year	Constituents	Payable Amount (Principal)	Receivable Amount (Principal)	Net Payable/ Receivable
1	31.03.2017	IPGCL	1,44,52,343.00	1,16,29,075.00	28,23,268.00
2	31.03.2017	PPCL	25,89,170.00	-	25,89,170.00
3	31.03.2017	BTPS (NTPC)	-	-	-
4	31.03.2017	BYPL	6,18,16,587.00	1,09,42,90,851.00	-1,03,24,74,264.00
5	31.03.2017	BRPL	1,13,70,18,003.00	1,79,44,04,903.00	-65,73,86,900.00
6	31.03.2017	TPDDL (NDPL)	31,082.00	-	31,082.00
7	31.03.2017	NDMC	2,98,00,465.00	-	2,98,00,465.00
8	31.03.2017	MES	4,84,31,731.00	14,63,00,388.00	-9,78,68,657.00
9	31.03.2017	MSW BAWANA	-	-	-
		TOTAL	1,29,41,39,381.00	3,04,66,25,217.00	-1,75,24,85,836.00

STATEMENT OF UI AS ON 31.03.2018					
S. No.	Financial Year	Constituents	Payable Amount (Principal)	Receivable Amount (Principal)	Net Payable/ Receivable
1	31.03.2018	IPGCL	1,50,89,103.00	1,16,29,075.00	34,60,028.00
2	31.03.2018	PPCL	30,58,995.00	-	30,58,995.00
3	31.03.2018	BTPS (NTPC)	-	-	-
4	31.03.2018	BYPL	6,53,79,542.00	1,29,52,53,108.00	-1,22,98,73,566.00
5	31.03.2018	BRPL	1,17,11,55,858.00	1,79,44,04,903.00	-62,32,49,045.00
6	31.03.2018	TPDDL (NDPL)	7,05,562.00	2,12,79,811.00	-2,05,74,249.00
7	31.03.2018	NDMC	5,37,03,019.00	14,63,07,123.00	-9,26,04,104.00
8	31.03.2018	MES	6,32,07,939.00	18,23,31,575.00	-11,91,23,636.00
9	31.03.2018	MSW BAWAN A	-	-	-
		TOTAL	1,37,23,00,018.00	3,45,12,05,595.00	-2,07,89,05,577.00

Notes:-

The above figures are showing outstanding principal amount only.

Interest @ 0.04% per day is yet to be figured out on the above outstanding amount payable, after confirmation from various constituents.

The above figures are yet to be reconciled and confirmed from the constituents.

SLDC discharges the payment liabilities to the utilities including that of NRPC (which is the priority payment as per the provisions of DSM Regulations) from the Pool.

It was informed that during the year 2016-17, SLDC has paid Rs.60.76 Crores to NRLDC to avoid legal issues arising out of non payment of dues and the dues of other utilities were also settled.

However, the interest portions with regard to Intrastate Utilities are to be settled. It was explained that upto 2013-14, the accounts have already been settled.

In the last meeting, GCC advised SLDC to immediately do the needful for recovery of dues from the defaulting utilities. As per the decision taken in the last GCC, SLDC has started the proceedings for filing the petition before DERC for recovery of the dues from the defaulting utilities.

In the last meeting, GCC advised SLDC to reconcile the accounts at the earliest.

SLDC Finance Department informed that they have finalised the accounts at their level and are now sending letters to each utility to reconcile the accounts.

2.3.3 OUTSTANDING DUES OF IPGCL / PPCL.

i) Non-payment of Energy Bills by BRPL and BYPL since October, 2010.

Since the re-assignment of the PPA signed with DTL, energy is being supplied and billed by IPGCL and PPCL to all the Distribution Companies as per the Energy Account issued by the State Load Dispatch Centre, Delhi (SLDC) and the payments for the bills raised were being realized within the stipulated period in the past, as per the PPA/ Regulations issued by the DERC.

However, full payments are not being released by BRPL and BYPL from the month of October, 2010. The details of outstanding are as under:

(Amount Rs. in Crores)

Company	BRPL	BYPL	Total
IPGCL	1889.44	1160.11	3049.55
PPCL	3572.24	2627.09	6199.33
Total	5461.68	3787.20	9248.88

Further, in total disregard to Hon'ble Supreme Court of India order dated 12-05-2016; BYPL and BYPL are not paying even 70 % of Current outstanding. The balance current unpaid dues as on date are as under:

(Amount Rs. in Crores)

70% of Current Dues payable by BSES Discoms as per SC order dt. 12.05.16							
Rs. in cr.							
Utility	BRPL			BYPL			Total
	70% of Billed & due Amount wef 01.01.14	Payment received wef 01.01.14	Net Payable 01.01.14	70% of Billed & due Amount wef 01.01.14	Payment received wef 01.01.14	Net Payable 01.01.14	Total
IPGCL	818.73	410.70	408.02	311.86	102.98	208.88	616.91
PPCL	2576.21	1120.74	1455.47	1457.91	364.91	1093.00	2548.48
Total	3394.94	1531.44	1863.50	1769.78	467.89	1301.89	3165.38

The State Commission, in its Tariff order dated 31.08.2017 under chapter 6 Clause 6.1 in case of BRPL & BYPL has also directed as under;

“A6 Directives (2017)

6.1. The commission directs the petitioner to make timely payment of bills to all the generating companies and transmission utilities. No late payment surcharge shall be allowed as pass through in the ARR on account of delayed payments.....”

Further, Hon’ble State Commission in its tariff order dt. 28.03.2018 for FY 2018-19 under chapter 6 clause 6.1 in case of BRPL & BYPL has also directed as under:

A6: Directives (2018)

6.1 The Commission directs the Petitioner to make timely payment of bills to all the Generating Companies and Transmission Utilities. No Late Payment Surcharge shall be allowed as a pass through in the ARR on account of delayed payments.....”

However, even from April’17 to Oct’18 an amount of Rs. 1595.60 Cr. is due for payment for the energy bills raised.

BRPL representative informed the following :-

BRPL submitted that it is already complying with Hon’ble Supreme Court Order of making payment of 70% of current dues. Further from Nov’17/Dec ‘17 onwards it has also started paying 100% of current dues to IPGCL/PPCL. Further BRPL, has also endeavoured to make the additional payments to IPGCL/PPCL, since June 18 onwards, which is over and above the current dues payable.

In view of the huge outstandings as brought out above, the above beneficiaries i.e. BRPL & BYPL were advised to liquidate the outstanding dues of PPCL/IPGCL at the earliest.

ii) Opening of LC by BRPL and BYPL for Bulk Power Supply to IPGCL and PPCL Power Stations.

Various correspondences have been made by IPGCL and PPCL in respect of opening of LC for securing Bulk Power Supply. However, BRPL and BYPL in spite of number of reminders have not established LC in respect of IPGCL and PPCL since April, 2011.

BRPL representative informed the following :-

Cash flow mismatch in past had adversely affected payment obligations, debt servicing capability of the Company and accumulation of outstanding dues to power suppliers. These constraints have restricted our capability to establish desired LC’s in favour of power suppliers. Presently BRPL is not in position to establish LC in favour of any of its power supplier.

GCC advised the above beneficiaries i.e. BRPL & BYPL to make all efforts for opening of LC in favour of PPCL/IPGCL at the earliest.

iii) Non-payment of dues and LPSC charges by TPDDL.

The TPDDL started default in payment of energy bills since October, 2015. The status of various communication, DERC order and follow up by IPGCL & PPCL since first default till date are as under:

(Amount Rs. in Crores)

Company	IPGCL	PPCL	Total
TPDDL	46.76	166.80	213.56
Total	46.76	166.80	213.56

GCC advised the TPDDL to reconcile the accounts and clear all dues of PPCL/IPGCL at the earliest.

iv) Non-payment of Energy Bills of Sept'17 to March'17 of IPGCL (GTPS) by NDMC.

Energy bills in respect of energy supplied from 01.09.2017 to 31.03.18 from GTPS power station as per allocation letter dt. 01.09.2017 of Delhi SLDC. The power from GTPS was scheduled by Delhi SLDC to NDMC since 01.09.2017 to 31th March 2018. Accordingly, IPGCL raised invoices to NDMC for release of payment but NDMC has not made payment towards energy bills for power supply from GTPS from September' 2017 to March'2018. Further with effect from 01.04.2018, the allocations for said amount of Power have been withdrawn from NDMC. Rs 79.98 Cr. is due for payment for energy bills raised from 01.09.2017 to 31.03.2018.

NDMC representative informed that the allocation of GTPS was made by DERC without any requirement from NDMC. Further, NDMC never requisitioned such power for consumption, as such their law deptt has objected to any payment of power allotted from GTPS. SLDC rep contended that the power is scheduled by SLDC as per the allocations made by DERC. Further SLDC also requested NDMC to pay SLDC charges for the same period.

The matter was discussed in length and GCC advised NDMC that in view of the allocations by DERC, and to avoid LPSC, payment be released as per the regulations, however, if still there is any clarity required under the regulations, a meeting can be arranged at SLDC .

v) **Reconciliation of DSM Charges bills with SLDC**

The Reconciliation of Deviation Settlement Mechanism charges bills for FY 2015-16 are pending due to non signing of SLDC Finance. IPGCL/PPCL Finance have already worked out the reconciliation statement and visited SLDC finance several times. However, there is no progress in signing of reconciliation statement by SLDC Finance. The Members of Grid coordination Committee of Delhi State are requested to deliberate the issue and impress to SLDC to reconcile the DSM charges bills without further delay.

SLDC Finance Department informed that they have finalised the accounts at their level and are now sending letters to each utility to reconcile the accounts.

vi) **Non-payment of outstanding amount of IPGCL / PPCL by DTL**

Following bills raised on DTL are outstanding:-

- a) A bill of Rs.41.76 Crores on a/c of impact of true up order for the period FY 2007-08 to FY 2011-12 (carrying cost Implementation of Hon'ble ATE Judgment in Appeal No.81 of 2017 Rs.17.35Crores).
- b) Rs.33.36 Crore for late payment of revised Bill of FY 2006-07 IPGCL. As on 31.03.2018, DTL is to release a balance of Rs.16, 97, 49,833/- on account of principal bill dated 18.01.2010 and unpaid surcharge on it Rs.16,39,19,900/- further surcharge as per DERC Regulations will be attracted on balance principal.
- c) Rs.2.65 crore for late payment of revised Bill of FY 2006-07 PPCL.

As per earlier decision of commercial sub-committee meeting held on 02.08.2018, a letter dated 01.10.2018 was sent to DTL for release and or to have a meeting to sort out the issue as regards above outstanding dues , however till date no communication has received from DTL.

DTL rep expressed inability to pay since the said amount is not included in Tariff order of DTL. GCC advised IPGCL and DTL to approach DERC for resolving the issue.

- 2.3.4 BYPL and TPDDL submitted a table agenda regarding refund of NRLDC charges for the period FY 2009-2014 as per Hon'ble CERC directions. Wherein both have informed that earlier the fees and charges of NRLDC were billed and collected by NRLDC from Delhi Discoms through Delhi SLDC (Nodal Agency). The billed amount was being paid by DISCOMS to DTL and the same was being disbursed by DTL to NRLDC (after deducting the TDS).

In compliance to CERC order dated 31.03.2015 and ROP dated 07.07.2015 and CERC final order dated 18.03.2016 for truing up of principal and interest refund amount for the period Apr-09 to Mar-14, NRLDC has refunded the differential amount of Delhi Discoms, to DTL on May-2015 (95%) and July-2016 (balance)

Delhi Discoms have not received the refund of differential amount till date.

GCC advised Delhi SLDC to reconcile the complete statement and refund the amount due to the beneficiaries/utility at the earliest.

2.4 **STATUS OF IMPLEMENTATION OF RECOMMENDATIONS OF EXPERT COMMITTEE ON GRID DISTURBANCES OCCURRED ON 30.07.2012 AND 31.07.2012 IN THE GRID.**

The position is as under:

Clause	RECOMMENDATIONS	STATUS AS ON DATE								
9.1.1	Periodical 3 RD Party Protection Audit – Time frame – within one year	<p>The Protection Audit was completed before CWG-2010. The deficiencies pointed out and the latest status on the issue of removal of deficiencies is as under :-</p> <table border="1"> <thead> <tr> <th>S N</th> <th>Description of Issue</th> <th>Sub-Stn</th> <th>Action taken/proposed</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>DR and Event Logger to be provided or to be kept in order</td> <td>Bamnauli</td> <td>The EL at 400kV S/Stns is in place. EL for 220kV under procurement and installation expected to be completed by December 2016. DR already available with 400kV system. DR for 220kV system is the inbuilt feature of Numerical Relays which have already been installed.</td> </tr> </tbody> </table> <p>(Basic Protection Audit carried out on 400kV S/Stn Bamnauli before CWG) NRPC advised DTL to go for fresh third party protection audit of entire DTL system. In 95th OCC meeting held on 21.01.2014 at NRPC, DTL submitted the list of 25 numbers of 220kV Grids S/Stns identified for third party audit. Out of these, TPA of 400kV Mundka, 220kV Shalimar Bagh, 220kV Rohini-I and 220kV Mehrauli S/Stn were completed by 25.05.2014. The main observation was regarding replacement of static relays by Numerical relays. DTL's protection Department representative informed that Line Numerical differential relays are installed in DTL 220kV lines. PO for 26 No. bus bar protection schemes awarded. All panels along with control cables received in corresponding sides. Erection work under process. Tender for replacement of old Static relays with numerical relay has been dropped and estimate has been revised and under approval of Competent Authority. DR and EL for the DTL sub Stations is the inbuilt function of the Numerical relays and will be integrated in the SAS while upgradation of conventional sub stations to automation which will be done after commissioning of all BCU's and Numerical relays. NRPC has constituted a committee for conducting regular audit, DTL has given its nomination to NRPC for the audit group. NRPC is going to conduct a training programme for the all the Nominees of various states, after which the audits shall carried out regularly in whole of NR. GCC advised DTL to expedite the replacement work.</p>	S N	Description of Issue	Sub-Stn	Action taken/proposed	1	DR and Event Logger to be provided or to be kept in order	Bamnauli	The EL at 400kV S/Stns is in place. EL for 220kV under procurement and installation expected to be completed by December 2016. DR already available with 400kV system. DR for 220kV system is the inbuilt feature of Numerical Relays which have already been installed.
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9.1.4	Complete independent audit of time synchronization of DRs, EL and PMUs should be carried out - Time frame – within one month	As far as IPGCL and PPCL systems are concerned, they informed that DR is available at CCGT Bawana and Pragati. EL is not required at generating stations as generators have inbuilt features of EL. PPCL / IPGCL informed the following:								

Name of Utility	Time synchronization		
	DR	EL	PMU
DTL	Implemented	Implemented	Insta lled at Baw ana and Bam nauli
RPH	Not required on 33kV feeders	<p>Two Nos of 33 kV bays i.e. Bay No. 1 and 2 are already having Numerical relays installed. The switchyard maintenance is now being taken care of by DTL.</p> <p>In the last meeting, DTL representative informed that the work will be completed by December 2018.</p> <p><u>DR and EL for these Numerical relays shall be utilized for any disturbances in these feeders.</u></p> <p><u>DTL rep informed that the relays shall be replace after award and supply of equipments proposed in the PSDF tender.</u></p>	
PPCL	DRs are installed at all the three units of PPS-I. The DRs are time synchronized.	<p>In the last meeting, it was informed that the latest numerical relays are installed on GT-1 & 2 and the process of installing Numerical relays on GRPs of STG is being done in phased manner. The same is expected to be completed in 05-06 months. Complete independent audit of time synchronization shall be carried out within one month of installation completion.</p> <p><u>IPGCL/PPCL rep informed that the work shall be carried out by Feb 19</u></p>	
GT	<p>The process of installing of DRs on the units of GTPS is being taken up on priority in phased manner. Further, 06 nos units out of nine are having numerical relays installed and the process of installing of latest numerical relays on the rest of the units is under progress in phased manner.</p> <p>The representative of GT informed that the work will be completed in three months</p>	<p>In the last meeting, it was informed that one of the STGs relay retrofitting is planned during next overhauling. Numerical relays have been installed in almost all 66kV feeders / bays and rest are being envisaged. The same is expected to be completed in 5-6 months. Complete independent audit of time synchronization shall be carried out within one month of installation completion. It was also informed that the work will be completed in three months.</p> <p><u>IPGCL/PPCL rep informed that the work shall be carried out by March 19</u></p>	
GCC advised all to expedite the replacement / modification work			

9.2.1	Tightening of Frequency band and be brought very close to 50Hz.	<p>CERC has already issued the amended Grid Code to be implemented from 17.02.2014 in which the allowable frequency band is 49.90Hz to 50.05Hz. The Deviation Settlement Mechanism has also been introduced according to the tightening to the frequency band. The main thrust of the amended Grid Code is the utilities should always strict to its scheduled drawal. Further, the following are the main issues:-</p> <ol style="list-style-type: none"> No over drawal by Delhi if frequency is below 49.90Hz. No under drawal by Delhi if the frequency is more than 50.05Hz. Every (12) time blocks the polarity of drawal should change. <p>In the regular OCC meetings of NRPC, the adherence of the above provisions is monitored. As far as Delhi is concerned, the main violation is occurring in respect of non change of polarity in 12 time blocks.</p> <p>The details of the violations of Delhi for last two years are as under:-</p> <table border="1" data-bbox="613 548 1409 758"> <thead> <tr> <th>Duration</th> <th>Sept 16</th> <th>Oct.16</th> <th>Nov.16</th> <th>Dec. 16</th> <th>Jan 17</th> <th>Feb.17</th> </tr> </thead> <tbody> <tr> <td>Violation of drawal limit 150MW if freq \geq49.7Hz and above</td> <td>OD- 0 UD-2</td> <td>OD-5 UD-4</td> <td>OD-11 UD-1</td> <td>OD-11 UD-3</td> <td>OD- 14 UD-2</td> <td>OD- 2 UD-1</td> </tr> <tr> <td>Violation of non polarity change of drawal</td> <td>95</td> <td>120</td> <td>144</td> <td>147</td> <td>152</td> <td>87</td> </tr> </tbody> </table>	Duration	Sept 16	Oct.16	Nov.16	Dec. 16	Jan 17	Feb.17	Violation of drawal limit 150MW if freq \geq 49.7Hz and above	OD- 0 UD-2	OD-5 UD-4	OD-11 UD-1	OD-11 UD-3	OD- 14 UD-2	OD- 2 UD-1	Violation of non polarity change of drawal	95	120	144	147	152	87																																																
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9.4	<p>All out efforts should be made to implement the provisions of IEGC with regard to Governor Action - POSOCO to take up the matter with Central Commission</p> <p>- Time frame – 3 months</p>	<p>CERC in its order dated 31.12.2012 reiterated the need for compliance by generators and directed as to why they may not be held responsible for non-implementation of RGMO / FGMO mode of operation. A task force has been constituted by CEA under Member (Thermal), CEA to develop a procedure for testing of primary response of Generating units.</p> <p>CERC has revised the Clause regarding FGMO / RGMO as under:-</p> <p><i>CERC (IEGC) 5th amendment of IEGC dated 12.04.2017 provides that all Coal/lignite based thermal generating units of 200 MW and above, Open Cycle Gas Turbine/Combined Cycle generating stations having gas turbines of capacity more than 50 MW each and all hydro units of 25 MW and above should provide RGMO/FGMO response. Further, it has been provided at Regulation 5.2(h) that 'RLDCs/SLDCs should not schedule the generating station or unit(s) thereof beyond ex-bus generation corresponding to 100% of the installed capacity of the generating station or unit(s) thereof and that the generating station shall not resort to Valve Wide Open operation of units" so that primary response is ensured. CERC in its letter dated 05.06.2017 has directed to obtain the status of availability of RGMO/FGMO response from the generators (ISGS as well as intra-state generators) in the region.</i></p> <p>PPCL representative intimated that they are pursuing the matter with their OEM department regarding details of RGMO / FGMO of PPCL-I & PPCL -III and expected by December 2017.</p> <p><u>PPCL rep informed that placement of PO is under progress and ensured to submit compliance by April'19.</u></p>																																																																														
	<p>In order to avoid frequent outages / opening of lines under over voltages and also providing voltage support under steady state and dynamic conditions, installation of adequate reactive power compensators should be planned.</p> <p>Action : CTU/STUs and CEA</p> <p>- Time frame 6 months</p>	<p>As far as Capacitor requirement of Delhi is concerned, CPRI has already conducted the revised study, it is revealed from study that no additional capacitor is required to be installed in Delhi for 2017-18.</p> <p>As for as reactor installation is concerned, the 39th meeting of Standing Committee of CEA held on 29&30 May 2017, it was suggested that reactors at following locations in Delhi be installed to control high voltage issues.</p> <table border="1" data-bbox="613 1283 1273 1770"> <thead> <tr> <th>Sr. No</th> <th>Name of the Grid</th> <th>Reactors proposed in MVAR</th> <th>Sr. No</th> <th>Name of the Grid</th> <th>Reactors proposed in MVAR</th> </tr> </thead> <tbody> <tr> <td>A</td> <td>220kV</td> <td></td> <td>12</td> <td>Electric Lane</td> <td>2X25</td> </tr> <tr> <td>1</td> <td>Narela</td> <td>25</td> <td>13</td> <td>Mandola</td> <td>25</td> </tr> <tr> <td>2</td> <td>R.K. Puram-I</td> <td>25</td> <td>14</td> <td>AIIMS</td> <td>2X25</td> </tr> <tr> <td>3</td> <td>Patparganj-II</td> <td>2X25</td> <td>15</td> <td>Sarita Vihar</td> <td>25</td> </tr> <tr> <td>4</td> <td>Maharani Bagh (PG)</td> <td>2X25</td> <td>16</td> <td>Bawana</td> <td>25</td> </tr> <tr> <td>5</td> <td>Bamnauli</td> <td>25</td> <td>17</td> <td>Preet Vihar</td> <td>25</td> </tr> <tr> <td>6</td> <td>Subzi Mandi</td> <td>2X25</td> <td>18</td> <td>Mundka</td> <td>25</td> </tr> <tr> <td>7</td> <td>Gopalpur</td> <td>2X25</td> <td>19</td> <td>Masjid Moth</td> <td>25</td> </tr> <tr> <td>8</td> <td>Indraprastha</td> <td>2X25</td> <td>B</td> <td>400kV</td> <td></td> </tr> <tr> <td>9</td> <td>Geeta Colony</td> <td>2X25</td> <td>1</td> <td>Maharani Bagh (PG)</td> <td>125</td> </tr> <tr> <td>10</td> <td>Harsh Vihar</td> <td>2X25</td> <td>2</td> <td>Mundka</td> <td>125</td> </tr> <tr> <td>11</td> <td>Wazirabad</td> <td>2X25</td> <td>3</td> <td>Mandola (PG)</td> <td>125</td> </tr> </tbody> </table>	Sr. No	Name of the Grid	Reactors proposed in MVAR	Sr. No	Name of the Grid	Reactors proposed in MVAR	A	220kV		12	Electric Lane	2X25	1	Narela	25	13	Mandola	25	2	R.K. Puram-I	25	14	AIIMS	2X25	3	Patparganj-II	2X25	15	Sarita Vihar	25	4	Maharani Bagh (PG)	2X25	16	Bawana	25	5	Bamnauli	25	17	Preet Vihar	25	6	Subzi Mandi	2X25	18	Mundka	25	7	Gopalpur	2X25	19	Masjid Moth	25	8	Indraprastha	2X25	B	400kV		9	Geeta Colony	2X25	1	Maharani Bagh (PG)	125	10	Harsh Vihar	2X25	2	Mundka	125	11	Wazirabad	2X25	3	Mandola (PG)	125
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9	Geeta Colony	2X25	1	Maharani Bagh (PG)	125																																																																											
10	Harsh Vihar	2X25	2	Mundka	125																																																																											
11	Wazirabad	2X25	3	Mandola (PG)	125																																																																											

9.7		<p>Based on the feasibility study conducted by DTL, the 40th Standing Committee Meeting held on 13.07.2018. DTL/PGCIL were advised to install reactors at the following locations.</p> <table border="1" data-bbox="738 268 1404 651"> <thead> <tr> <th>S.No</th> <th>Name of the Grid</th> <th>Voltage level</th> <th>Reactors proposed in MVAR</th> <th>Remarks</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>Mundka</td> <td>400kV</td> <td>125</td> <td rowspan="9">The scheme for 125 and 25 MVAR at 400 KV Mundka substation has been finalized and under costing. For rest the schemes are under preparation.</td> </tr> <tr> <td>2</td> <td>Bamnauli</td> <td>220kV</td> <td>2X25</td> </tr> <tr> <td>3</td> <td>Indraprastha</td> <td>220kV</td> <td>2X25</td> </tr> <tr> <td>4</td> <td>Harsh Vihar</td> <td>220kV</td> <td>2X50</td> </tr> <tr> <td>5</td> <td>Electric Lane</td> <td>220kV</td> <td>1X50</td> </tr> <tr> <td>6</td> <td>Mundka</td> <td>220kV</td> <td>25</td> </tr> <tr> <td>7</td> <td>Peera Garhi</td> <td>220kV</td> <td>1X50</td> </tr> <tr> <td>8</td> <td>Maharani Bagh (PG)</td> <td>400kV</td> <td>125</td> <td>To be installed by Power Grid.</td> </tr> <tr> <td>9</td> <td>Mandola(PG)</td> <td>400kV</td> <td>125</td> <td></td> </tr> <tr> <td></td> <td>Total</td> <td>700</td> <td></td> <td></td> </tr> </tbody> </table> <p>It is expected that the reactors at the above locations would be installed by the year 2020-21.</p> <p>In the last meeting, GCC advised DTL and PGCIL to expedite the reactors installation as suggested by Standing Committee of CEA.</p> <p>In the NRPC meetings, it has been informed that the orders shall be placed by Dec 18.</p> <p>DTL planning rep informed that approvals for all schemes from Sl. 1 to 7 (to be carried out by DTL) is in approval stage, however informed the constraint of land at Electric lane, where there is only space for one additional transformer (for n-1 criteria) or one Reactor. In this regard, NDMC representative informed that there is huge voltage problem at Electric lane s/stn and confirmed that present two 100MVA transformers for meeting maximum 100MVA load with n-1 criteria shall be sufficient at Electric lane for the next few years.</p> <p>In view of NDMC's confirmation GCC advised DTL to expedite the scheme of installation of reactors at all the seven locations (including Electric lane) as above.</p>	S.No	Name of the Grid	Voltage level	Reactors proposed in MVAR	Remarks	1	Mundka	400kV	125	The scheme for 125 and 25 MVAR at 400 KV Mundka substation has been finalized and under costing. For rest the schemes are under preparation.	2	Bamnauli	220kV	2X25	3	Indraprastha	220kV	2X25	4	Harsh Vihar	220kV	2X50	5	Electric Lane	220kV	1X50	6	Mundka	220kV	25	7	Peera Garhi	220kV	1X50	8	Maharani Bagh (PG)	400kV	125	To be installed by Power Grid.	9	Mandola(PG)	400kV	125			Total	700		
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9.1 2	<p>Efforts should be made to design islanding scheme based on frequency sensing relays so that in case of imminent Grid failure, electrical island can be formed. These electrical islands not only help in maintaining essential services but would also help in faster restoration of Grid.</p> <p>Action : CEA, RPCs, CTU, STUs, SLDCs and generators Time Frame : six months</p>	<p>As per CPRI Study, it was concluded that due to variation of generation in the Delhi Island envisaged earlier, the chances of survival of single island including the generation of Dadri generating complex, Jhajjar, Bawana, BTPS and Pragati generating stations would be more.</p> <p>DTL representative informed that Revised Islanding scheme as per the NRPC /TCC recommendations is under implementation. The estimate has been prepared and is under vetting stage.</p> <p>In the last meeting, GCC advised DTL to implement the revised islanding scheme at the earliest as it is meant for meeting the exigencies and to maintain power supply of critical installations at the time of Grid failure.</p> <p>As per the revised scheme all the small islands shall be merged to a single island.DTL have to make the necessary changes in the relay settings for the creation of single island however the operational changes in the SAS are to be done through OEM. The work of implementation of revised islanding scheme for commissioning of operational changes in the SAS and Commissioning of new Islanding and Load shedding Panels through OEM is under process</p>																																																	

		<p>and is expected to be completed within 6 months.</p> <p>Meanwhile Minor Modification was required in the Islanding scheme due to introduction of 400kV Tuglakabad Sub Station. In the Islanding scheme there was isolation of 400kV Ballabgarh from 400kV Bamnauli. However after introduction of 400kV Tuglakabad isolation of grid connectivity from Bamnauli had to be disabled and isolation of 400kV Ballabgarh had to be shifted to 400kV Tuglakabad .</p> <p>The issue was deliberated in the 153 OCC meeting and thereafter as agreed in the meeting Main-1 and Main-2 Relays of 400kV Ballabgarh Feeders at 400kV Tuglakabad Sub Station are being utilised for isolation at Flat frequency of 47.9 Hz with some operational time delay of 50ms as done in existing scheme.</p> <p>Settings have been implemented on the Main-1 and Main-2 relays at 400kV Tuglakabad Sub Station and the scheme is functional. However the provisional arrangement will be removed after the commissioning of islanding panels by DTL as per the revised configuration.</p> <p>BYPL rep raised the issue of survival and subsequent synchronizing of local islanding at GT/ Pragati.</p> <p>GCC advised DTL to carry out a joint visit with Discoms and IPGCL/ PPCL to analyse the requirements for sustaining local island at GT station and to complete the pending work of Islanding at the earliest.</p>
9.1 3.1	<p>System Operation needs to be entrusted to independent system operator. In addition, SLDCs should be reinforced for ring fences for ensuring function autonomy.</p> <p>Action : Govt. of India, time frame : one year</p>	<p>Delhi SLDC is operated under the control of DTL. There is the provision for SLDC to file separate ARR in DERC. The report of the committee constituted for ring fencing of SLDC Delhi was forwarded to GNCTD and followed up subsequently in 2018. Response of GNCTD is awaited.</p>

3 OPERATIONAL ISSUES

3.1 POWER SUPPLY POSITION

The anticipated power supply position of Winter 2018-19 is as under:-

All figures in MW

DELHI AS A WHOLE

MONTH	1 st Fortnight					2 nd fortnight				
	00-05	05-12	12-18	18-22	22-24	00-05	05-12	12-18	18-22	22-24
NOV 2018										
DEMAND	2450	3750	3800	3650	2700	2150	3700	3600	3300	2400
AVAILABILITY	3996	4362	4106	4476	3947	3698	3966	3710	4115	3535
SURPLUS (+) / SHORTAGE (-)	1546	612	306	826	1247	1548	266	110	815	1135
DEC 2018										
DEMAND	1950	4050	3500	3500	2450	2200	4100	3650	3450	2650
AVAILABILITY	4096	4472	4210	4580	4021	4234	4595	4333	4843	4234
SURPLUS (+) / SHORTAGE (-)	2146	422	710	1080	1571	2034	495	683	1393	1584
JAN 2019										
DEMAND	2100	4600	3750	3600	2700	2150	4250	3600	3550	2575
AVAILABILITY	4278	4770	4377	4882	4278	4278	4755	4362	4882	4278
SURPLUS (+) / SHORTAGE (-)	2178	170	627	1282	1578	2128	505	762	1332	1703
FEB 2019										
DEMAND	2050	4050	3400	3450	2500	2050	3950	3300	3350	2400
AVAILABILITY	3599	3992	3730	4032	3599	3593	3971	3709	4026	3593
SURPLUS (+) / SHORTAGE (-)	1549	-58	330	582	1099	1543	21	409	676	1193
MAR 2019										
DEMAND	2500	3650	3650	3650	2850	3200	3800	4000	3900	3300
AVAILABILITY	4049	4210	4165	4389	4022	4694	4743	4698	4850	4401
SURPLUS (+) / SHORTAGE (-)	1549	560	515	739	1172	1494	943	698	950	1101

BRPL										
MONTH	1 st Fortnight					2 nd fortnight				
NOV 2018	00-05	05-12	12-18	18-22	22-24	00-05	05-12	12-18	18-22	22-24
DEMAND	1019	1544	1564	1509	1116	887	1526	1480	1355	984
AVAILABILITY	1797	1828	1686	1891	1747	1673	1589	1447	1687	1523
SURPLUS (+) / SHORTAGE (-)	778	284	123	382	631	786	62	-33	332	539
MONTH	1 st Fortnight					2 nd fortnight				
DEC 2018	00-05	05-12	12-18	18-22	22-24	00-05	05-12	12-18	18-22	22-24
DEMAND	797	1673	1441	1445	1008	903	1682	1489	1419	1091
AVAILABILITY	1701	1655	1514	1783	1626	1825	1764	1622	2032	1825
SURPLUS (+) / SHORTAGE (-)	904	-18	73	338	618	922	81	133	613	733
JAN 2019	00-05	05-12	12-18	18-22	22-24	00-05	05-12	12-18	18-22	22-24
DEMAND	845	1924	1520	1467	1091	867	1741	1465	1454	1041
AVAILABILITY	1855	1799	1663	2027	1855	1855	1784	1648	2027	1855
SURPLUS (+) / SHORTAGE (-)	1010	-125	143	560	764	988	43	183	573	814
FEB 2019	00-05	05-12	12-18	18-22	22-24	00-05	05-12	12-18	18-22	22-24
DEMAND	834	1671	1388	1421	1015	834	1640	1353	1381	975
AVAILABILITY	1473	1444	1303	1504	1473	1473	1429	1288	1504	1473
SURPLUS (+) / SHORTAGE (-)	639	-227	-85	83	459	639	-211	-65	123	498
MAR 2019	00-05	05-12	12-18	18-22	22-24	00-05	05-12	12-18	18-22	22-24
DEMAND	1004	1480	1502	1515	1164	1302	1537	1654	1616	1353
AVAILABILITY	1633	1528	1513	1664	1612	1931	1898	1883	1962	1828
SURPLUS (+) / SHORTAGE (-)	629	48	11	149	448	628	361	229	346	475

BYPL

MONTH	1 st Fortnight					2 nd fortnight				
	00-05	05-12	12-18	18-22	22-24	00-05	05-12	12-18	18-22	22-24
NOV 2018										
DEMAND	589	893	904	872	645	513	883	856	784	569
AVAILABILITY	853	1097	1024	1137	853	809	1084	1010	1124	809
SURPLUS (+) / SHORTAGE (-)	264	205	120	265	208	296	201	154	340	240
DEC 2018										
DEMAND	461	968	833	836	583	522	973	861	820	631
AVAILABILITY	857	1182	1108	1172	857	841	1166	1093	1156	841
SURPLUS (+) / SHORTAGE (-)	396	214	275	336	274	319	193	232	336	210
JAN 2019										
DEMAND	489	1113	879	848	631	502	1007	847	841	602
AVAILABILITY	841	1302	1088	1171	841	841	1302	1088	1171	841
SURPLUS (+) / SHORTAGE (-)	352	190	209	323	210	340	295	241	331	239
MONTH	1 st Fortnight					2 nd fortnight				
	00-05	05-12	12-18	18-22	22-24	00-05	05-12	12-18	18-22	22-24
FEB 2019										
DEMAND	483	966	803	822	587	483	949	782	799	564
AVAILABILITY	685	1010	936	1000	685	679	1004	930	994	679
SURPLUS (+) / SHORTAGE (-)	202	43	133	178	98	196	55	148	195	115
MAR 2019										
DEMAND	580	856	869	876	673	753	889	956	935	782
AVAILABILITY	752	983	968	1011	749	1044	1091	1076	1119	857
SURPLUS (+) / SHORTAGE (-)	171	127	99	135	76	291	202	119	185	74

TPDDL										
MONTH	1 st Fortnight					2 nd fortnight				
NOV 2018	00-05	05-12	12-18	18-22	22-24	00-05	05-12	12-18	18-22	22-24
DEMAND	712	1078	1092	1054	779	620	1066	1034	946	687
AVAILABILITY	1135	1226	1185	1237	1136	1033	1110	1069	1121	1020
SURPLUS (+) / SHORTAGE (-)	423	147	93	183	356	413	44	35	175	333
DEC 2018	00-05	05-12	12-18	18-22	22-24	00-05	05-12	12-18	18-22	22-24
DEMAND	557	1169	1006	1009	704	630	1175	1040	991	762
AVAILABILITY	1354	1452	1404	1442	1354	1357	1454	1406	1444	1357
SURPLUS (+) / SHORTAGE (-)	798	283	398	432	650	726	279	366	453	594
JAN 2019	00-05	05-12	12-18	18-22	22-24	00-05	05-12	12-18	18-22	22-24
DEMAND	591	1344	1062	1025	762	606	1216	1023	1016	727
AVAILABILITY	1370	1457	1415	1472	1370	1370	1457	1415	1472	1370
SURPLUS (+) / SHORTAGE (-)	780	113	353	448	608	764	241	392	457	643
FEB 2019	00-05	05-12	12-18	18-22	22-24	00-05	05-12	12-18	18-22	22-24
DEMAND	583	1167	969	992	709	583	1146	945	965	681
AVAILABILITY	1248	1345	1298	1335	1248	1248	1345	1298	1335	1248
SURPLUS (+) / SHORTAGE (-)	665	177	328	342	539	665	199	353	370	567
MAR 2019	00-05	05-12	12-18	18-22	22-24	00-05	05-12	12-18	18-22	22-24
DEMAND	701	1034	1049	1058	813	910	1074	1155	1129	945
AVAILABILITY	1471	1506	1491	1520	1468	1508	1543	1528	1557	1505
SURPLUS (+) / SHORTAGE (-)	770	472	442	462	655	598	469	373	428	560

Ndmc										
MONTH	1 st Fortnight					2 nd fortnight				
NOV 2018	00-05	05-12	12-18	18-22	22-24	00-05	05-12	12-18	18-22	22-24
DEMAND	100	200	200	180	120	100	190	190	180	120
AVAILABILITY	193	193	193	193	193	165	165	165	165	165
SURPLUS (+) / SHORTAGE (-)	93	-7	-7	13	73	65	-25	-25	-15	45
DEC 2018	00-05	05-12	12-18	18-22	22-24	00-05	05-12	12-18	18-22	22-24
DEMAND	100	200	180	170	120	110	230	220	180	130
AVAILABILITY	165	165	165	165	165	193	193	193	193	193
SURPLUS (+) / SHORTAGE (-)	65	-35	-15	-5	45	83	-37	-27	13	63
JAN 2019	00-05	05-12	12-18	18-22	22-24	00-05	05-12	12-18	18-22	22-24
DEMAND	140	180	250	220	180	140	240	230	200	170
AVAILABILITY	193	193	193	193	193	193	193	193	193	193
SURPLUS (+) / SHORTAGE (-)	53	13	-57	-27	13	53	-47	-37	-7	23
FEB 2019	00-05	05-12	12-18	18-22	22-24	00-05	05-12	12-18	18-22	22-24
DEMAND	120	210	200	180	150	120	180	180	170	140
AVAILABILITY	178	178	178	178	178	178	178	178	178	178
SURPLUS (+) / SHORTAGE (-)	58	-32	-22	-2	28	58	-2	-2	8	38
MAR 2019	00-05	05-12	12-18	18-22	22-24	00-05	05-12	12-18	18-22	22-24
DEMAND	180	240	190	160	160	200	260	200	180	180
AVAILABILITY	178	178	178	178	178	193	193	193	193	193
SURPLUS (+) / SHORTAGE (-)	-2	-62	-12	18	18	-7	-67	-7	13	13

MES										
MONTH	1 st Fortnight					2 nd fortnight				
NOV 2018	00-05	05-12	12-18	18-22	22-24	00-05	05-12	12-18	18-22	22-24
DEMAND	30	35	40	35	40	30	35	40	35	40
AVAILABILITY	18	18	18	18	18	18	18	18	18	18
SURPLUS (+) / SHORTAGE (-)	-12	-17	-22	-17	-22	-12	-17	-22	-17	-22
DEC 2018	00-05	05-12	12-18	18-22	22-24	00-05	05-12	12-18	18-22	22-24
DEMAND	35	40	40	40	35	35	40	40	40	35
AVAILABILITY	18	18	18	18	18	18	18	18	18	18
SURPLUS (+) / SHORTAGE (-)	-17	-22	-22	-22	-17	-17	-22	-22	-22	-17
MONTH	1st Fortnight					2nd fortnight				
JAN 2019	00-05	05-12	12-18	18-22	22-24	00-05	05-12	12-18	18-22	22-24
DEMAND	35	40	40	40	35	35	45	35	40	35
AVAILABILITY	18	18	18	18	18	18	18	18	18	18
SURPLUS (+) / SHORTAGE (-)	-17	-22	-22	-22	-17	-17	-27	-17	-22	-17
FEB 2019	00-05	05-12	12-18	18-22	22-24	00-05	05-12	12-18	18-22	22-24
DEMAND	30	35	40	35	40	30	35	40	35	40
AVAILABILITY	15	15	15	15	15	15	15	15	15	15
SURPLUS (+) / SHORTAGE (-)	-15	-20	-25	-20	-25	-15	-20	-25	-20	-25
MAR 2019	00-05	05-12	12-18	18-22	22-24	00-05	05-12	12-18	18-22	22-24
DEMAND	35	40	40	40	40	35	40	35	40	40
AVAILABILITY	15	15	15	15	15	18	18	18	18	18
SURPLUS (+) / SHORTAGE (-)	-20	-25	-25	-25	-25	-17	-22	-17	-22	-22

Note

- 1 Availability from Un-allocated quota of Central Sector has been considered as NIL.
- 2 Availability from DVC has been considered as 375 MW only considering its past record.
- 3 Availability from Hydro stations has been considered as 0% during Night hours (00.00hrs. to 05.00hrs and 22.00-2400hrs), 75% during Morning and Evening Peak Hours and 30% during rest of the period for November to February. Availability from Hydro stations has been considered as 30% during Morning Hours (00.00hrs. to 05.00hrs and 22.00-24.00), 50% during Day time (05.00hrs. -18.00hrs), 75% during Evening Peak Hours (18.00-22.00hrs) during Oct and March.
- 4 Allocation to Distribution Licensees from various sources has been revised in line with DERC order dated 27.03.2018.

- 5 Generation from Bawana CCGT has been considered as 400MW during winter season.
- 6 Generation from Pragati has been considered as 270MW (One Block) during the period 01.10.2018 to 15.10.2018 and 150MW (One GT + ½ STG) during the period 16.10.2018 to 31.03.2019.
- 7 Generation from BTPS has been considered as NIL since closed down.
- 8 Generation from GT has been considered as 75 MW (One Block) during the period 01.10.2018 to 31.03.2019
- 9 Pragati STG (122MW) shall remain under shut-down for the period 01.02.2019 to 12.03.2019 for maintenance.
- 10 Bawana STG-2 (253MW) shall remain under shut-down for the period 20.03.2019 to 31.03.2019 for maintenance work.
- 11 Unit-3 (210MW) shall remain under shut-down from 09.11.2018 to 13.12.2018
- 12 Unit-1 of Dadri (Th)-II 490MW capacity shall be under shut-down during the period 01.02.2019 to 15.03.2019 for Boiler Overhauling.
- 13 Unit-3 (500MW) of ISTP Jhajjar shall remain under Annual Overhauling for the period 01.11.2018 to 05.12.2018 and Unit-1 shall remain under shut-down from 01.02.2019 to 25.02.2019 for Overhauling.
- 14 Rihand-I Unit-1 (500MW) shall remain under shut-down during the period 19.11.2018 to 13.12.2018 for Boiler Licence Renewal and for maintenance and Unit-II shall remain under shut-down from 20.12.2018 to 29.12.2018
- 15 Rihand-II Unit-1 (500MW) shall remain under shut-down for the period 16.10.2018 to 29.11.2018 for over hauling of boiler.
- 16 Rihand-III Unit-2 (500MW) shall remain under shut-down for the period 23.09.2018 to 28.10.2018 overhauling
- 17 Mejia Unit-6 (250MW) shall remain under shut-down during the period 08.02.2019 to 15.03.2019 for capital overhauling.

From the above, it is seen that BRPL, BYPL and TPDDL have huge surplus despite various sale through bilateral arrangements especially during off peak hours. Further, NDMC and MES have acute shortages due to closure of BTPS plant. NDMC and MES are requested to approach DERC for enhancement of allocation from other plants.

In this regard BRPL propose to surrender and reallocate its share from GT and PPCL-I to NDMC & MES equivalent to 175 MW.

NDMC informed that they are in the process of approval of LTA for renewal power to tune of 130 MW, after which there shall not be any shortages of NDMC.

MES representative was not available for comments.

GCC advised all utilities to maintain their power portfolio as per their load requirement only.

3.2 High Voltage Operation of the Grid during Winter nights.

- i) This issue is regular agenda of Delhi OCC and being continuously discussed in OCC meeting from Oct-17 onwards. OCC has taken various steps to sort out the problem of high voltage conditions and injection of reactive drawal during winter nights. In the OCC meeting, the following steps were deliberated:
- A. Switching off the capacitors at all the Substations of Delhi, but during winter season proper monitoring of the same is yet to be put in place.
 - B. Transformer taps optimization by DTL and DISCOM. DTL has changed Taps positions of most of the transformers at 220kV S/Stns
 - C. Monitoring of all 400/220kV ICTs and taking actions wherein VAR flows are observed from 220kV to 400kV side. In this respect reactive energy accounts could also be monitored.
 - D. Opening of lightly loaded transmission cables/ transmission lines keeping reliability in focus.
 - E. Absorption of reactive power by generating units.

Opening of feeders at 220kV /66kV/33kV Level by SLDC .

The following 220kV feeders had been identified and are being opened during the period 20.00hrs. to 08.00 hrs

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

Following 66kV /33kV BYPL feeders were also opened during night hours 22.00hrs. to 06.00hrs, in last winter season.

Sr. No.	Name of Stn.	Name of Ckt.	Elements to be opened
1	Parkstreet	33kV Faiz Rd	Single Ckt. at both ends
2	Rajghat	33kV Jama masjid	Single Ckt. at both ends
3		33kV Town hall	Single Ckt. at both ends
4		33kV Lahori Gate	Single Ckt. at both ends
5		33kV Motia Khan	Single Ckt. at both ends
6		33kV Kamla Market	Single Ckt. at both ends
7		33kV Mintor Road	Single Ckt. at both ends
8		33kV DDU Marg	Single Ckt. at both ends

Sr. No.	Name of Stn.	Name of Ckt.	Elements to be opened
9	Patparganj	66kV GH-I	Single Ckt. at both ends
10		33kV Karkardooma –I	Single Ckt. at both ends
11		33kV Guru-angad Nagar-II	Single Ckt. at both ends
12	Subzi Mandi	33kV B.G.Road –II	Single Ckt. at both ends
13	Preet Vihar	33kV Preet Vihar	Single Ckt. at both ends
14	Wazirabad	66kV Yamuna vihar	Single Ckt. at both ends
15		66kV Shastri Park -I	Single Ckt. at both ends
16		66kV Shastri park-III	Single Ckt. at both ends
17		66kV Shastri park-IV	Single Ckt. at both ends
18	Geeta colony	33kV Shakarpur	Single Ckt. at both ends
19		33kV Geeta colony-II	Single Ckt. at both ends

BYPL may update the list of feeders which are being switched off during night hours presently.

BRPL did not open any circuit at their level to control high voltage during the month of October to Dec. 2017 in spite of several instructions by SLDC on real time basis.

BRPL, BYPL,TPDDL and NDMC to take appropriate measures to reduce MVAR injection and submit the details to SLDC.

- ii) It is stated that Delhi has to pay heavy amount to NRPC reactive pool account. Penalty amount has increased with the progress of winter despite taking all possible steps to reduce reactive power injection during high voltage period. The details of NRPC reactive account bill from 16 Oct-17 onwards are as under:

S. N	Weeks	Payable by Delhi (in Lakhs)	Receivable by Delhi (in Lakhs)
1	16.10.17 to 22.10.17	0	0.76038
2	23.10.17 to 29.10.17	2.21401	--
3	30.10.17 to 05.11.17	7.36426	--
4	06.11.17 to 12.11.17	19.35212	--
5	13.11.17 to 19.11.17	21.28275	--
6	20.11.17 to 26.11.17	29.15394	--
7	27.11.17 to 03.12.17	29.81707	--
8	04.12.17 to 10.12.17	22.52029	--
9	11.12.17 to 17.12.17	23.21933	--
10	18.12.17 to 24.12.17	35.94213	--
11	25.12.17 to 31.12.17	43.03881	--
12	01.01.18 to 07.01.18	36.49079	--
13	08.01.18 to 14.01.18	42.91450	--
14	15.01.18 to 21.01.18	41.34701	--
15	22.01.18 to 28.01.18	38.91308	--
16	29.01.18 to 04.02.18	31.09848	--
17	05.02.18 to 11.02.18	32.31199	--
18	12.02.18 to 18.02.18	47.73575	--
19	19.02.18 to 25.02.18	57.79202	--
20	26.02.18 to 04.03.18	50.24540	--
21	05.03.18 to 11.03.18	28.25996	--

22	12.03.18 to 18.03.18	26.34728	--
23	19.03.18 to 25.03.18	27.74425	--
24	26.03.18 to 01.04.18	23.38106	--
Total		718.48628	

In the last meeting, all Stakeholders assured GCC that all efforts would be taken by them to minimize the injection of reactive power to the Grid especially during high voltage conditions. To control the high voltage issue, GCC had advised the following:-

- i) Generators to absorb reactive power during high voltage regime as per their capability curve.
- ii) DTL to form a Committee to look into high voltage issue including payment of Weekly Reactive Energy Charges bill to NRPC as Discom wise Weekly Reactive Accounts are managed by C&RA Department of DTL and Reactive Energy Charges at Regional level is paid by SLDC after receiving payment from DTL.
- iii) DTL for early commissioning of Reactors at various locations.

In spite of the all out efforts by SLDC, injection of reactive power could not be averted and Rs.7.18 Crores have been levied on Delhi due to injection of reactive power to the Grid during high voltage conditions during the period 16.10.17 to 01.04.18. It was explained that as a long term measure to control high Voltage, Standing Committee of CEA in its 39th Meeting held 29-30th May 2017 has suggested Bus Reactors in Delhi at various locations in Delhi as under:

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

Based on the feasibility study conducted by DTL, the 40th Standing Committee Meeting held on 13.07.2018. DTL/PGCIL were advised to install reactors at the following locations.

S.No	Name of the Grid	Voltage level	Reactors proposed in MVAR	Remarks
1	Mundka	400kV	125	To be installed by DTL.
2	Bamnauli	220kV	2X25	
3	Indraprastha	220kV	2X25	
4	Harsh Vihar	220kV	2X50	
5	Electric Lane	220kV	1X50	
6	Mundka	220kV	25	
7	Peera Garhi	220kV	1X50	
8	Maharani Bagh (PG)	400kV	125	To be installed by Power Grid.
9	Mandola(PG)	400kV	125	
Total		700		

Planning Department of DTL informed that the scheme for reactors is being devised and the status is as under :-

S.No.	Bus Name	Voltage Level (kV)	Reactor (MVAR)	Current status
1.	Mundka	400	125	The schemes at S.No. 1, 2,3,4,6 and 7 have been finalised and are under approval process. As confirmed by NDMC regarding no further requirement of addition of 220/33 kV Tx. at Electric lane, the scheme for reactors will be explored by DTL.
2.	Bamnauli	220	2x25	
3.	Indrapastha	220	2x25	
4.	Harsh Vihar	220	2x50	
5.	Electric Lane	220	1x50	
6.	Mundka	220	25	
7.	Peeragarhi	220	1x50	
8.	Maharani Bagh (PG)	400	125	To be installed by Powergrid
9.	Mandola (PG)	400	125	

Further, it was informed that DMRC which is also one of the prominent sources of injection of reactive power has also planned reactive power compensation in their system and would likely to be available by 2019-20. It is also expected that the reactors at the above locations would be installed by the year 2020-21.

In the last meeting, GCC advised DTL and PGCIL to expedite the reactors installation as suggested by Standing Committee of CEA. DMRC was also advised to implement the reactive power management scheme devised by them as early possible.

GCC advised all utilities to control the reactive power generation at their respective buses itself for overall effect on system. Further, DTL to expedite the work of installation of reactors as above.

3.3 NON USAGE OF BAYS ALLOTTED TO VARIOUS UTILITIES FROM DTL SUB-STATIONS.

In the last meeting, the position of unutilized bays at various newly commissioned DTL sub-stations was updated by the utilities as under:

S N.	Name of 400/220k V S/Stns.	Details of non utilization of bays				
		Voltage level	Name of bay	Name of the utility to whom the bay is allocated	Original allocation date	Present status
1	220kV Trauma Centre	33kV	Kidwai Nagar East Jor Bagh Safdarjung Hospital Race Course	NDMC	19.11.09 19.11.09 19.11.09 17.06.11	Would be charged by Feb,2019. 90% work has been completed. Work is held up due to non permission of digging due to monsoon Expected by Feb,2019. In the OCC meeting held on 28.03.2017, it was informed by NDMC that the feeder is being temporarily charged shortly to provide supply to newly built Safdarjung Hospital Complex. Work is held up due to non permission of digging due to monsoon Expected by Feb,2019..
2	220kV Electric Lane	33kV	1. Vidyut Bhawan 2. Hanuman Road 3. Janpath Lane. 4. Church Road 5. Delhi High Court 6 IGNCA Total = 6 Bays	NDMC	19.11.09	Out of 4 Km. 3Km cable laid . Expected to be completed by March,2019. Cable termination pending at Hanuman Road S/Stn. Expected to be completed by Feb,2019.8. Expected to be completed by Sep, 2019. Expected to be completed by March, 2020. Expected to be completed by March, 2020. Expected to be completed by March, 2020.
3	400kV Mundka	66kV	1. Bay 604 2. Bay 606 3. Bay 610 4. Bay 613 5. Bay 614 6. Bay 617 Total = 6 Bays	BRPL/TPDDL	31.05.2012	Due to land issues, the Two bays for TPDDL Kirari would now be utilized by 2020-21. Four bays for BRPL i.e. Bakkarwala(2 Nos.) & Nilothi(2 Nos.) would be utilized by 19-20. For Bakkarwala – Deposit case of DDA. BRPL is taking up the case with DDA for deposit.
4	400kV	66kV	2 bays -	DMRC	12.04.10	Already commissioned .

S N.	Name of 400/220k V S/Stns.	Details of non utilization of bays				
		Voltage level	Name of bay	Name of the utility to whom the bay is allocated	Original allocation date	Present status
	Harsh Vihar		DMRC			

GCC advised all utilities to utilize the bays allocated to them for optimum utilisation of the assets.

3.4 LONG OUTAGE OF ELEMENTS OF DELHI POWER SYSTEM

The status of long outage of elements is as under:-

S. N	Name of the Element	outage		Utility	Remarks
		Date	Time		
1	VASANT KUNJ - 220/66kV 160MVA PR.TR.-III	26.04.2018	01:48	DTL	TRANSFORMER BURNT DUE TO FIRE. TO BE REPLACED. Expected to be replaced by April 19.
2	PAPANKALAN -III - 66kV BUS COUPLER	24.06.2018	07:00	DTL	GAS PRESSURE PROBLEM. TO BE ATTENDED BY PGCIL STAFF. Work now Completed.
3	NARELA - 30MVA PR.TR.	11.08.2018	18:18	DTL	TRANSFORMER TO BE DE-CAPITALIZED. Approved by the C/A.
4	NARELA - 66kV CAPACITOR BANK	11.08.2018	18:18	DTL	66kV CAPACITOR BANK CELLS BLASTED AT 220kV NARELA. TO BE REPLACED. EXPECTED BY JAN 2019.
5	KASHMERI GATE - 33kV BUS COUPLER			DTL	TRIPPING COIL PROBLEM. Material is to be procured from OEM at Switzerland. However load can be taken on the breaker in case of emergency.
6	RPH STN. - 220/33kV 100MVA PR.TR.-I	03.09.2018	21:56	DTL	TRIPPED ON BUCHLOZ RELAY. Replacement of transformer is EXPECTED BY May 2019.
7	OKHLA - 220/66kV 100MVA PR.TR.-I	27.09.2018	10:15	DTL	'Y' PH. WINDING DAMAGED. TO BE REPLACED. EXPECTED BY May 2019.
8	400KV TUGLAKABAD - BAMNAULI CKT-I & II	12.10.2018	09:35	DTL	SHUT-DOWN FOR ERECTING TOWER NO.173 AT BAMNAULI. CKT-I IS EXPECTED BY 30.12.2018. CKT.-II ENERGIED ON ERS ON 15.10.2018. (LINE CHARGED ON NO LOAD ON 30.10.2018 AT 17.56HRS. UPTO TOWER No. 174 NEAR BAMNAULI FROM TUGLAKABAD END FOR SAFETY PURPOSE).
9	NAJAFGARH - 220/66kV 100MVA PR.TR.-I	24.10.2018	11:55	DTL	SHUT DOWN FOR COMPLETE OVERHAULING. Work completed and charged.
10	GAZIPUR - 66kV I/C-II OF	19.11.2018	18:00	DTL	COMPRESSOR PROBLEM. EXPECTED BY 20.11.2018. Work completed.

11	33KV BAY -3 (IP - KILOKRI)	22.02.2011	13:10	BRPL	Clearance FROM RAILWAYS FOR LAYING UNDER GROUND CABLE NEAR BHAIRO ROAD IS PENDING. The work is expected to be completed along with ITPO work.
12	66KV V.KUNJ INSTL.AREA-RIDGE VALLEY CKT.-I	26.03.2017	10:45	BRPL	UNDER SHUT DOWN. This circuit is proposed to be relaid after necessary approvals.
13	33KV ALAKNANDA - OKHLA CKT.-I	19.04.2018	15:05	BRPL	BREAKER PROBLEM expected by March-2019
14	33KV RIDGE VALLEY - KHEBAR LANE CKT.-II	13.01.2016	00:47	BRPL	R' PH. SINGLE CABLE FAULTY. MES to clarify, however no Member of MES was present in the meeting.
15	EXHIBITION GROUND -I - 33KV INTER CONNECTOR	30.05.2018	18:00	BRPL	CABLE FAULTY. A new grid is being installed at the location.
16	33KV LODHI ROAD - EXHIBITION GROUND -II CKT.	10.10.2017	13:01	BRPL	R' PH. SINGLE CABLE FAULTY. A new grid is being installed at the location.
17	33KV OKHLA PH.-II- JAMIA -T-OFF SARAI JULIENA CKT.	14.08.2018	16:45	BRPL	T-POINT SIDE JUMPER OPENED
18	33KV AMBIENANCE MALL-ANDHERIA BAGH T-OFF 'B' BLOCK VASANT KUNJ CKT.	24.10.2018	12:50	BRPL	UNDER SHUT DOWN expected by Jan-19.
19	20MVA PR.TR.-I AT VASANT KUNJ 'B' BLOCK	16.11.2018	12:10	BRPL	UNDER SHUT DOWN
20	400KV MUNDKA -66KV NANGLOI CKT.	08.05.2017	13:50	BRPL	'B' & Y'PH. CABLE FAULTY
21	66KV MANGOLPURI-I - T-OFF NANGLOI CKT.	09.03.2018		TPDDL	CABLE FAULTY. A meeting to be held at SLDC for assessing the load requirement and to judge the jurisdiction of the circuit.
22	33KV SHAHZADA BAGH - T-OFF RAMA ROAD CKT.	13.04.2018		TPDDL	CABLE FAULTY expected Jan-19.
23	220KV NARELA - 33KV AIR KHAMPUR CKT.	02.10.2018		TPDDL	CABLE FAULTY this circuit is not feasible for revival however the circuit shall remain for ROW purpose.

GCC noted the position and advised all utilities to keep their elements in healthy position so that any eventualities can be managed properly in summer months.

4.0 NEW AGENDA

4.1 Agenda by DTL

A) Nomination of Sub-committee of Delhi Grid Coordination Committee.

- A-1. During the second meeting of Grid Coordination Committee held on 25th Nov.2008, the Conduct of Business Rules of GCC were approved. As per the COBR-OCC, the following sub-committees were envisaged:

1. Operation Coordination Sub-Committee(OCC)
2. Commercial Sub-Committee(CC)
3. Protection Sub-Committee(PC)
4. System Study Sub-Committee(SSC)

A-2 There have been changes in the structure of DTL, STU since the approval of COBR. The need has arisen to review the nominations of various Sub-committees. The following amendments in constitution of sub-committees of GCC as stipulated in COBR of GCC , Delhi are proposed:

A-3 **Item 17. Operation Coordination Sub-committee(OCC)**

Item 17.2 of Chapter -3 of COBR-GCC—Composition of Operation Coordination Committee.

17.2.1---General Manager (Operation & Maintenance)-I of STU shall be Chairperson of OCC and preside over the meetings. Dy.G.M.(Operational Services), DTL shall be the convener of OCC.

17.2.2---OCC shall be represented by the representatives of the constituent members of Delhi Power Sector. The nominated representative shall be at the level of Superintending Engineer/ Dy.G.M. or equivalent level.

A-4 **Item 19---Protection Sub-committee(PC)**

19.2---Composition of Protection Sub-committee

19.2.1---General Manager (Protection Metering, Disaster Management & Safety), DTL of STU shall be Chairperson of PC and preside over the meetings. Dy.G.M.(Metering & Protection) of STU shall be convener of PC.

19.2.2---Protection Sub-Committee shall be represented by constituent members of GCC. The nominated representative shall be at the level of Superintending Engineer/Dy.G.M. or equivalent level and entrusted with power system protection/testing in the respective organization.

- B) The nominations from constituent members for all the sub-committees are required to be updated as per Delhi GCC, COBR accordingly following is the list of the Members identified and confirmed by various utilities.**

Name of Utility	OCC	Commercial Subcommittee	Protection Subcommittee	System study Subcommittee
BRPL	1. S.K. Kansal, Addl VP 2. M. Ishore Babu, DGM. 3. Sovendra Jha, Manager	1. Shreyans Naval, Sr. Manager 2. Abhishek R Ranjan, Addl VP	1. Umesh Gupta Addl. VP 2. Sanjay Bhatnagar DGM 3. Varun Ahuja, DGM 4. Bharat Garg Manager.	1. Uttam Shukla, DGM 2. Abhinav Srivastava GM
TPDDL	1. P. Devanand, HoD-PSC & COS 2. Mr. Lalit Wasan HoG-PSC.	1. Sumit Sachev. HoD-PMG. 2. Mr. Sanjay Sharma, HoG-Revenue Management	1. Rajkumar Rastogi, HoD-TS 2. Deepak Aggarwal HoG-Protection	1. Parveen Verma DGM 2. Pourush Garg HoG-NEG
BYPL	1. Mukesh Dadhich, Asst. VP	1. Sunil Kakkar, AVP	1. Praddep Lohani, AVP	1. Parikshit Bhardwaj, AVP
NDMC	1. K.S. Meena, XEN (MF)	1. Sh. D.P. Singh XEN (Commercial)	1. T.R. Fernandes, XEN (Protection)	1. G.Dass, XEN (Planning) 2. K.S. Meena, XEN (MF)
MES	1. S.R. Meena, AGE/M	I.S.R Meena, AGE/M	I.S.R. Meena, AGE/M	1. I.S.R. Meena, AGE/M
PPCL	1. Devendra Singh, DGM (Operation) 2. N.C. Sharma, DGM (Operation)	1. Devendra Singh, DGM (Operation) 2. N.C. Sharma, DGM (Operation)	1. Devendra Singh, DGM (Operation) 2. N.C. Sharma, DGM (Operation)	1. Devendra Singh, DGM (Operation) 2. N.C. Sharma, DGM (Operation)
IPGCL	1. Sahendra Singh, AGM (Operation) 2. Satyendra Prakash, AGM(T)/COS	Satyendra Prakash, AGM(T)/COS	Satyendra Prakash, AGM(T)/COS	Satyendra Prakash, AGM(T)/COS

GCC noted the above.

- C) Provision of the unit protection i.e. numerical line current differential protection on 220 kV, 66kV & 33 kV lines**

- C-1 As a unit protection the differential protection principle is considered superior with respect to selectivity, sensitivity, and speed of operation as compared with distance schemes. The faulty feeder/line is isolated in sub cycle time range keeping the rest of the

system healthy. Absence of unit protection results in delayed fault clearance and cascaded tripping which not only lead to supply outage to a large area of consumers but also affect the life of upstream high value substation equipment.

- C-2 Delhi Grid Coordination committee in its 6th GCC meeting, minutes dated 11.06.2012 approved the protection code and the protection requirement for the various voltage level feeders are as under: -

400-220 KV LINES

"Main-1 & 2 will be numerical communicable IEC 61850 compliance distance protection scheme with built in Fault Locator, Disturbance Recorder and Event Loggers of scheme as per national policy or Main-2 numerical line current differential with IEC 61850 compliant".

66KV/33KV Lines

"Main Protection: - IEC61850 compliant Numerical Distance Protection/line current differential protection with built in fault locator, disturbance recorder and event logger for all overhead lines of length more than 1 KM. For all underground cables and over head lines up to 1 km. length main protection shall be essentially Numerical line current differential protection. Back up Protection: - Directional Over Current and Earth Fault protection".

- C-3 It can be noted from the above that Numerical line current differential protection is required for all underground cables, composite lines and also O/H lines of less than 1 Km and existing Discoms feeders also. Therefore, Discoms/Users has to install the Numerical Line Current Differential relay at both ends for the lines existing as well as new line which are less than or equal to 1 km and Composite line (overhead+ cable) irrespective of length with connectivity.
- C-4 The above issues were discussed at length in various Protection Subcommittee committees with Discoms. The details of the MOMs of the Protection subcommittee are as under: -
- C-5 In 7th Protection subcommittee *the committee deliberated in details. The members were apprised about the necessity of the **Numerical line Current Differential relay** at both ends having feature of distance protection in case of communication failure for the feeders/ lines which are less than or equal to 1 km and Composite line (overhead+ cable) irrespective of length with connectivity".*

- C-6 In 8th Protection subcommittee "The issue was again discussed at length and it was agreed by all the members that line differential relay is necessary for following: -
1. All 220 kV lines (including Overhead, underground and composite).
 2. All 66kV and 33 kV underground cable.
 3. All 66 kV and 33 kV Composite feeders(overhead cum underground)
 4. All 66 kV and 33 kV Overhead Lines less than 1 km.
- C-7 TPDDL apprised the members that laying of dedicated fiber is not be necessary for line current differential protection schemes. The committee agreed that laying of fiber optic cable may not be the constraint for implementation of line current differential protection for existing feeders also, hence decided to implement line current differential protection for all the upcoming lines of DISCOMs including lines emanating from DTL substations and also implement the schemes for existing lines at the earliest in a time bound manner. All DISCOMs/utilities were requested to submit action plan and time frame for the same".
- C-8 A meeting was held on dt.16.05.2018 at 11:00 AM chaired by Director(Oprns.), DTL in the Conference Hall, Shakti Sadan, DTL, Kotla Road, New Delhi to discuss the issue of providing unit protection on DISCOM feeders through line current differential relays and redundancy criteria of DISCOM network as per Grid code. During the meeting TPDDL informed that they have implemented Numerical line current differential protection scheme on significant number of lines both their Intra substation feeders and feeders emanating from DTL Grids. DERC has approved the scheme for 83 feeders and TPDDL has implemented the scheme on 32 feeders emanating from DTL Grids and already have on 80 feeders between their own Sub-stations. It was also informed that for rest of the feeders, TPDDL was preparing a scheme and will approach DERC for approval. Regarding connectivity issue, TPDDL explained that TPDDL is adopting IP MP LS (Internet Protocol Multi layered switching) which does not require dedicated fiber for every feeder.
- C-9 It was decided that DISCOMs and DMRC will implement the Numerical line current differential schemes for the following type of feeders in a TIME BOUND MANNER and an action plan shall be submitted within a month.
- A. All 66kV and 33 kV underground cable.
 - B. All 66 kV and 33 kV Composite feeders
 - C. All 66 kV and 33 kV Overhead Lines less than 1 km.
- C-10 Despite the matter has been rigorously persuaded in the various protection sub committees and Discoms has also given the undertakings for the installation of the line current differential protection. It has been observed that the Discoms has not implemented line current differential protection for the upcoming lines of Discoms lines emanating from DTL substations and also on existing lines.

- C-11 Committee may deliberate the time line for the installation of the requisite Numerical line differential relay for the 66/33 kV DISCOM's feeders attached at Annexure –A.

BRPL and BYPL rep informed that they are not having MPLS scheme of communication, as such are unable to provide the relay on already laid out cables. However, for all new cables they have laid out dedicated OFC and line differential relays.

GCC advised the protection deptt. DTL to identify the feeders where such relays are not provided by the Discoms, and reduce the TMS to protect the EHV equipment from repeated lower level faults.

D) Change in the nomenclature of feeders due augmentation works

- D-1 In case if there is any change in the line configuration after the LILO of feeders at Discoms end than Discoms shall provide the details of length and parameters of the overhead conductor/cable in the connection agreement as follows.

1. Line length, Nature of the feeder (U/G, O/H or Composite), Positive and Zero sequence parameters (U/G, O/H or Composite) for feeder form DTL substation to Discoms substation.
2. Line length, Nature of the feeder (U/G, O/H or Composite), Positive and Zero sequence parameters (U/G, O/H or Composite) for feeder form New Discoms substation to existing Discoms substation.

GCC advised C&RA deptt DTL to confirm the provision of above in connection agreement. Further all DISCOMS to arrange for correction of any discrepancy in feeder nomenclature at S/stn / Discom level in coordination with DTL's planning deptt.

E) Reliability criteria for DISCOMS network for important feeders.

- E-1 A meeting was held on 16.5.18 at 11:00AM chaired by Director (Oprn.), DTL in Conference Hall, Shakti Sadan. The issue of providing reliable power supply to essential services was discussed and during discussions it emerged that there are substations/feeders which are fed from single source and as per grid code do not have dual source connectivity to ensure continuity of supply in case, the supply from one source gets affected. It was also observed that in some cases the second source is also from the same substation.

- E-2 SLDC informed that the supply to essential feeders including VVIP feeders has to be maintained to ensure operational success of islanding of Delhi system during NR Grid exigency. Further, the reliable supply to essential services like Hospitals, DJB water and sewage disposal plants, Railways, underground metro, IGI Airport and VVIP areas is of utmost importance and these installations should have alternate feed from different source.

E-3 Director(Oprn.) DTL emphasized that all the efforts be made to maintain reliable supply to VVIP and essential feeders and in no case the supply be got affected. It should also be ensured that there are always two or more supplies from different sources available to emergency loads and substations feeding to them. It was agreed that reliability of important services can be ensured only if they have alternate feed from different source.

GCC advised SLDC to identify the feeders without having provision of dual supply and inform to Steering committee to take appropriate action on same.

4.2 AGENDA BY SLDC

4.2.1 REPORT ON REAL TIME VERIFICATION OF DC OF CCGT BAWANA ON 23.10.2018.

CCGT Bawana is a state generating station having capacity of 1370MW consisting of 4x216MW GTs and 2x254MW STGs.

As per Clause 32.2 of state Grid code. “The SLDC shall periodically review the actual deviation from the dispatch and net drawal schedules being issued, to check whether any of the constituents are indulging in unfair gaming or collusion. In case any such practice is detected, the matter shall be investigated and reported to the Commission.”

Real time verification of DC of CCGT Bawana was carried out on 23.10.2018 after a number of incidents of Trippings.

GCC noted the above.

4.2.2 SYSTEM STUDY FOR CAPACITOR REQUIREMENT IN NR FOR YEAR 2019-20.

The matter is a regular agenda in NRPC OCC to do system study for capacitor requirement in Northern Region. NRPC has approved the capacitor requirement study at 11/33kV level from CPRI to obtain the true requirement of capacitor. In this regard all NR utilities were requested to give peak summer data (Load/Voltage) and details as per format approved in NRPC.

In 151st NRPC OCC Meeting the format for data collection has been modified and the NR constituents were requested to submit data in revised formats.

The representative from CPRI (Dr. Manohar Singh) made a detailed presentation explaining the format for capacitor study for 2019-20 of NR. CPRI has made a detailed video explaining the format which is available on YouTube at the given link (<https://youtu.be/QTxx7owPF3q>). Personnel concerned for collecting the data is advised to go through the video before collecting the same for the study.

CPRI has also requested to initially fill the attached data format for any one 220 kV or 132 kV substation and send it back CPRI (manoharsingh@cpri.in) to check its suitability for utilization in carrying out the study. Once CPRI gives a go ahead for the submitted data, the data for the complete state network shall be collected and made available to CPRI.

The revised formats have already been circulated to the respective utilities with necessary guidelines for filling the data in desired formats.

SLDC Delhi is regularly raising this agenda in Delhi OCC Meeting and letter also written to all the utilities to provide the details. However, same is still awaited.

GCC advised all to submit the data within one week to SLDC.

4.2.3. REQUIREMENT OF DATA FOR THE GIS BASED ENERGY MAP BEING DEVELOPED BY ENERGY DIVISION OF NITI AAYOG.

This is in reference to the agenda item no. 19 of 149 NRPC OCC meeting. Energy Division of Niti Aayog is preparing a GIS based energy map, therefore, Member Secretary, NRPC has requested all Discoms / Power Department to furnish the information regarding the Name, Voltage level, Capacity Longitude and Latitude of 33kV & 66kV S/Stns and Lines. The format for data is attached as Annexure –II.

BYPL, TPDDL ,Genco's & DMRC has provided the details.

SLDC Delhi is regularly raising this agenda in Delhi OCC Meeting and letter also written to all the utilities to provide the details. However, same is still awaited from BRPL/NDMC/MES.

GCC advised the concerned utilities to submit the data within one week to SLDC.

4.2.4. STATUS OF IMPLEMENTATION OF RECOMMENDATIONS OF ENQUIRY COMMITTEE ON GRID DISTURBANCES ON 30 AND 31.07.2012.

This is in reference to the agenda item no. 14 of 150 NRPC OCC meeting. The Status of Implementation of Recommendations of Enquiry Committee on Grid disturbances on 30 and 31.07.2012 is not updated by DTL and Delhi Genco's to NRPC.

In 147th NRPC OCC meeting, all utilities were requested to update the information as per the letter enclosed at Annexure 18 with the Agenda of the 146th OCC meeting. The indicative formats are attached as Annexure –III.

SLDC Delhi is regularly raising this agenda in Delhi OCC Meeting and letter also written to the concerned utilities to provide the details. However, same is still awaited

GCC advised the concerned utilities to submit the data within one week to SLDC

4.2.5 DTL SUMMER ACTION PLAN-2019.

A meeting was held in the O/o-Dir(opr.), DTL on 25.07.2018 to finalize the summer action plan for 2019 in consultation with SLDC and DTL Planning & CMG deptt. The same was also apprised to OCC as under:-

S.No.	Details of the scheme	Time Line	Action Plan	Status
North Delhi				
1.	Addition of 1x160 MVA Transformer at 220kV Kanjhawala	15.05.2019	Existing foundation to be modified as per layout drawing of BHEL Tx to be supplied. As First 160 MVA from transformers package is to be utilize at Kanjhawala.	Foundation work in progress. One 160 MVA Tx expected to be received by April 2019. This will be one of the Tx from 09 nos. Txs ordered by C&MM Deptt.
2.	a)Addition of 220/66kV 1x100 MVA Transformer at 220kV Shalimar bagh	15.11.2018	Due to the load pattern observed at Mehrauli s/stn during the summer season and outage of 160MVA Power Tx at 220kV Vasant Kunj s/stn, it was decided to shelve the plan of shifting of 100MVA Tx from Mehrauli to Shalimar Bagh. It has now been decided to shift the existing dual ratio 100MVA EMCO make Power Tx at Shalimar Bagh which is connected there at 33kV level to newly commissioned 220kV Bay and will be charged at 66kV level at Shalimar bagh itself.	Foundation work in progress.
	b)Addition of 220/33kV 1x 100 MVA at Shalimar bagh	15.06.2019	After repair of 3 rd 100MVA 220/33kV Tx of Preet Vihar, it would be diverted to Shalimar Bagh in place of above mentioned EMCO make dual ratio Tx.,which is presently charged there at 33kV level and planned to be charged at	

S.No.	Details of the scheme	Time Line	Action Plan	Status
			66kV level at Shalimar bagh itself. 220/66-33kV, 100 MVA Transformer will be shifted from 220kV Gopalpur S/stn. to Shalimar Bagh, as the same is being replaced with 220/66kV 160MVA Tr. New 220kV & 33kV Transformer bays shall be constructed under QVC of existing contract.	One Tx from Timapur Project will be transferred to Shalimar Bagh.
3.	BRPL would be persuaded to transfer the load of Nangloi from Najafgarh to Mundka	--	The matter was discussed in SCM, it was informed by BRPL that this U/G cable is stable barring a cable fault in the summer months. BRPL was also requested to make possible effort to revive the 66kV Mundka-Nagloi feeder.	. BRPL submitted that they are facing hardship to revive the cable. OCC deliberated that this ckt is under breakdown since long time and BRPL to expedite to replace/ revive the cable to reduce the burden of already overloaded Najafgarh S/s before coming summer-2019. BRPL updated that the Mangolpuri T - Off section would be revived soon.
4.	Addition of 1x160 MVA Transformer at 220kV Goplapur	15.05.2019	66kV GIS is being re-tendered and would not available in next summer. As a stop gap arrangement, 160 MVA Tx would be installed on back to back arrangement at 66kV level for redundancy. TPDDL would be requested to provide 1.0KM 66KV 1000Sq MM cable on loan basis, as	Foundation work for the bay equipment is in progress. Expected by January 2019.

S.No.	Details of the scheme	Time Line	Action Plan	Status
			discussed in last SM dated 04.07.2018	
5.	TPDDL to divert load from 220kV Rohini-I to 220kV Rohini-II	31.08.2018	In the SCM dated 04.07.2018, TPDDL has informed that they will cater the load of 66kV DC-1 and RG-4 s/stns from 220kV Rohini-II s/stn in place of 220kV Rohini-I s/stn. This would be reduce the load of Rohini-I by 70MVA.	As informed by TPDDL the load of 66kV DC-1 ckt at Rohini-1 could be compensated through 66kV ckt emanating from Rohini-II to RG-28.
West Delhi				
1.	Re-commissioning of faulty 160 MVA BHEL make transformer at Pappankalan-III.	30.10.2019	It has been decided to commission the 160MVA BHEL make transformer after its repairing.	Tx. already sent to BHEL for repair.
2.	BRPL would be persuaded to shift the load of their G-2 grid substation from Pappanklan-I to Pappankalan-III by way of 66kV cable connection	31.03.2019	BRPL agreed in the SCM held on 04.07.218	BRPL informed that the work is under progress
3.	Augmentation of one no. 160 MVA transformer at Najafgarh	30.04.2019	Repaired BHEL make 160 MVA transformer of Pappankalan-III will be utilized at Najafgarh. Civil department has to suitably modify the existing foundation of 100MVA Tx into 160 MVA Power Tx during the shutdown period in the month of Nov to Dec, so that supplied 160MVA Power Tx could be installed at the plinth of the said 100MVA Tx in minimum possible time.	One 160 MVA Tx expected to be received by April 2019. This will be one of the Tx from 09 nos. Txs ordered by C&MM Deptt.
South Delhi				
1.	Creation of 2 nos. of 220kV Bays at Okhla for getting infeed from 400/220kV S/stn. Tuglakabad.	31.12.2018	Work awarded and execution under progress.	Project-I Dept. updated that Civil & Electrical works are under progress
2.	BRPL is to be persuaded for	Along with the	Cable laying has been done by BRPL.	BRPL updated that 66kV

S.No.	Details of the scheme	Time Line	Action Plan	Status
	executing their already conceived scheme to lay 66kV feeders to (i) Malviya Nagar (ii) Batra Grid from 220/66kV Tuglakabad substation.	commissioning of s/stn		Malviya Nagar ckt & Batra Ckt are already energized. DTL informed that the above charged ckts are under loaded & load needs to be increased to provide load relief at 220kV Okhla s/s where 01 no. 220/66kV 100MVA Tx is under breakdown condition. Further, BRPL submitted that the lines of 66kV Mohan Cooperative enclave & Okhla phase-1 ckt are planned for LILO near Tughlaqabad before next summer to optimize load at Okhla s/s.
3.	BRPL is to be persuaded for putting load at 220kV R.K.Puram to relief Mahrauli/Vasant Kunj S/stn.	31.03.2019	In the SCM held on 04.07.2018, BRPL informed that they have already laid 04 no of 33kV cables and it would be connected soon. For 66kV Level they would connect 66kV Vasant Kunj B-Block feeder to evacuate about 60-70MVA capacity before summer 2019.	BRPL shall explore to charge by March 2019. In view of outage of 160MVA Tr. at V. Kunj, BRPL should explore the possibility to connect the cable between RK Puram and Vasant Kunj B-Blk by March 2019.

S.No.	Details of the scheme	Time Line	Action Plan	Status
			The faulty 66kV VasantKunj-Ridge Valley cable ckt. will be LILLOed at R.K.Puram.	The ckt. will be utilized for next Stn at west of JNU. BRPL expressed their inability to revive the cable.
4.	The replacement of damaged 1x160 MVA Tr. at Vasant Kunj	31.03.2019	The 100MVA Transformer being spared after augmentation at 220kV NJF, would be used at Vasant Kunj	Scheme is under financial vetting. However, proposed to install one Tx being tendered for Sarita Vihar / Narela
East Delhi				
1.	Addition of 2 no 66kV Bays at Gazipur to feed PPG Indl Area and Mayur Vihar for reliability.	31.03.2019	Scheme under finance vetting	Approval accorded. PR to be generated.
2.	Addition of 2 no 66kV Bays at SOW to feed Bhagirathi for reliability.	31.03.2019	Scheme under preparation	BOQ and estimate under financial vetting.

(Action by DTL/concerned Discoms)

GCC noted.

- 4.2.6 Testing of primary frequency response curve of generator as per IEGC clause 5.2(g). Hon'ble Commission (CERC) vide notification dt. 12.04.2017 had notified Indian Electricity Grid Code (5th Amendment) Regulation, 2017 dt. 12.04.2017. As per this notification the following provision has been added at the end of regulation 5.2(g) of part 5 of the principle regulation. The relevant portion of the regulation is reproduced hereunder:

Amendment in Part 5 of the Principal Regulations: In Regulation 5.2(f) of Part 5 of the Principal Regulations, the words: "All thermal generating units of 200 MW and above and all hydro units of 10 MW and above" shall be substituted with words "All Coal / lignite based thermal generating units of 200 MW and above, Open Cycle Gas Turbine/Combined Cycle generating stations having gas turbines of capacity more than 50 MW each and all hydro units of 25 MW and above".

Regulation 5.2 (g) of Part 5 of the Principal Regulations:

"Provided that periodic checkups by third party should be conducted at regular interval once in two years through independent agencies selected by RLDCs or SLDCs as the case may be. The cost of such tests shall be recovered by the RLDCs or SLDCs from the Generators. If deemed necessary by RLDCs/SLDCs, the test may be conducted more than once in two years."

Following generating stations are in operation in Delhi:

Sr. No.	Name of Generating Stn	Units	Capacity (MW)
1	RPH Stn.	2x67.5MW	135
2	G.T.Stn.	GT- 6x30MW STG- 3X30MW	270
3	Pragati	GT- 2x104MW STG- 1X122MW	330
4	Bawana	GT- 4x216MW STG- 2X254MW	1372
5	TOWMCL	--	16
6	MSW Bawana	--	24
7	EDWPCL	--	12

As per above regulation, periodic testing for primary frequency response of generator should be conducted by third party at a regular interval (for Pragati and CCGT Bawana generators) once in two year through independent agency selected by SLDC. The cost of such test shall be recovered by SLDC from the respective generator.

In order to have ease and uniformity in procurement, NLDC is identifying the parties for conducting the primary frequency response test on behalf of RLDC. NLDC in its letter dt 12.10.2018 suggested that SLDC would either adopt the same set of parties identified by NLDC or have a separate process.

It is proposed to have the same vendor as RLDC for ease and uniformity in testing.

In order to comply the CERC regulation as mentioned above, NLDC on behalf of RLDCs has formulated a procedure for carrying out the primary frequency response test. The notice inviting expression of interest (EOI) from interested agencies was released in leading newspapers of 1st October 2018 and 3rd October 2018 edition of Indian Trade General.

IPGCL/PPCL representative agreed for the proposal to have the same vendor as RLDC for carrying out the Primary Frequency Testing as above.

GCC noted the same.

4.2.7 Updating the Scheduling procedure and State Grid Code:

With reference to DERC letter no. F.No.3(551)/Traiff-Engg./DERC/2018-19/6195/ 2707 dt. 18/10/2018 wherein DERC directed to modify the Delhi Grid Code. Accordingly the Scheduling Procedure also needs to be modified.

In this regard it is suggested all the stakeholders to inform any modification/suggestions in previous State Grid Code / scheduling procedure available on website to SLDC Delhi. A draft of State Grid Code / scheduling procedure modified as per the latest regulations of CERC will be circulated shortly.

GCC noted the same and requested all to contribute to the modifications as above.

4.2.8 Applicability of DSM on MSW Bawana:

With reference of DERC order dt. 22.02.2017 against Petition no. 27/2016 wherein DERC in its order as per clause 9.1 (d) waived off deviation charges for MSW Bawana for maximum two years from date of commissioning of the project. Further it is informed that the commissioning date for MSW Bawana is 10.01.2017 and 28.02.2017. **In view of same it is deliberated that the DSM would be made applicable w.e.f. from 10.01.2019 and accordingly MSW Bawana is advised to follow scheduling procedure for the same.**

DMSWSL rep informed that they have already taken up the matter with MOP for waiver of the DSM for further one year for settling of new technology.

SLDC rep informed that in case no directions are received from DERC, DSM would be made applicable as per schedule.

GCC noted the same.

4.2.9 Revised allocation of EDWPCL

As per DERC order dated 02.11.2018, the allocation of EDWPCL Power (Remaining power after 49% to BYPL and sale under Open Access) to the Discoms will be revised and will be effective from November, 2018 as follows:

DISCOMs	Percentage (out of 51% allocation)	Allocation from 51% share	Firm allocation	Total effective allocation w.e.f. Nov. 2018
BRPL	41.72%	21.28%	0.00%	21.28%
BYPL	23.33%	11.90%	49.00%	60.90%
TPDDL	30.09%	15.35%	0.00%	15.35%
NDMC	4.86%	2.48%	0.00%	2.48%
Total	100.00%	51.00%	49.00%	100.00%

GCC noted the same.

4.2.10 Closure of Rithala

As per DERC order 31.08.2017, Rithala has been closed down, Rithala won't be included in accounts / SLDC reports henceforth. This is for the information of GCC.

GCC noted the same.

5.0 AGENDA BY TPDDL

5.1 Intra-State Ancillary Services:

Acknowledging the fact that energy sector is to undergo a significant change in the coming years with the enhanced focus on integration of renewable energy into the grid. India has already laid Pathways to Integrate 175 Gigawatts of Renewable Energy into India's Electricity Grid by 2022. It will need paradigm shift in Indian regulations for power generators as well as distributors. Green energy comes with its own challenges as solar, wind are most unreliable and unpredictable resources.

During deliberation in workshop held at Tata Power-DDL on 5th Sep 2018, one of innovative idea of "**Intra-state ancillary services**" were come out.

GAS and HYDRO station will be used for reserve not for base load. Gas and hydro generation of Delhi Genco can be utilized as ancillary services. The generator will be given regulation up or down instruction from concerned SLDC.

We request Delhi SLDC to deliberate on the idea and implementation strategy. **SOP of intra-state ancillary services can be submitted to DERC.**

GCC advised SLDC to hold a separate meeting with all concerned, at SLDC, to formulate certain guidelines on the issue.

5.2 Black-start of BWN plant by storage

Tata Power-DDL is in the process of pilot project for installation of storage for charging and discharging. We request Delhi SLDC to deliberate on black-start of BWN plant from storage.

CCGT rep informed that they require minimum 10MW continuous power for 40 minutes to black start the Bawana plant, for which TPDDL expressed inability to supply the same.

GCC noted the same.

5.3 Deviation limit revision

In line with 3rd Amendment to CERC DSM regulations, the matter was discussed in 18th Commercial Sub-Committee Meeting held on 27.05.2016, wherein Delhi SLDC has granted the relaxation to intra-state entity whose loads are less than 400 MW, thereby allowing NDMC & MES a limit of 48 MW for over drawl/under drawal with effect from 30th May 2016.

The matter of providing a separate treatment to NDMC & MES by allowing them a flat limit of 48 MW for deviation from schedule was discussed in the meetings held at Delhi SLDC on 12th Jan 2017 and 27th Jan 2017, in presence of other intra-state entities of Delhi (Mom enclosed). Other entities of Delhi were of the opinion that allowing the flexibility to

any entity is under purview of Hon'ble DERC and hence approval from DERC must be secured in this regard.

In view of the above, we request Delhi SLDC that as separate treatment has been provided to NDMC & MES in line with 3rd Amendment to DSM regulations by way of allowing a flat deviation limit of 48 MW, the earlier approved deviation margin of 17 and 3 MW granted to NDMC & MES respectively vide DERC order dated 3rd August 2010, should be discontinued.

GCC advised SLDC to hold a separate meeting with all concerned, at SLDC, to formulate certain guidelines on the issue.

6 HOSTING OF NEXT MEETING OF GCC

Next meeting of GCC is scheduled to be held during March 2019. In accordance with the roster, GCC decided that next meeting will be hosted by IPGCL/PPCL.

Annexure-1

List of participants attended the 20th, meeting of GCC held on 28.11.2018 at 10.30AM at Conference Hall (1st Floor), NDMC Convention Centre, NDCC Phase-II, Near NDMC Head Quarter, Palika Kendra, Sansad Marg, New Delhi

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