Delhi Electricity Regulatory Commission

Business Plan Regulations, 2017

DELHI ELECTRICITY REGULATORY COMMISSION

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DRAFT NOTIFICATION

New Delhi, 8 June, 2017

Delhi Electricity Regulatory Commission Business Plan Regulations, 2017

F.3(512)/Tariff/DERC/2016-17/5750: In exercise of powers conferred under Section 181 read with Section 61 and Section 86(1)(b) of the Electricity Act, 2003 (Act 36 of 2003) and all other powers enabling it in this behalf, the Delhi Electricity Regulatory Commission hereby makes the following Regulations namely:

PART 1
PRELIMINARY

1. SHORT TITLE, COMMENCEMENT AND EXTENT

(1) These Regulations shall be called the Delhi Electricity Regulatory Commission (Business Plan) Regulations, 2017.

(2) These Regulations shall remain in force for a period of 3 (three) years i.e., for FY 2017-18, FY 2018-19 and FY 2019-20, unless reviewed earlier.

(3) The period of validity of these Regulations may be extended by the Commission, as deemed fit.

(4) These Regulations shall extend to the whole of National Capital Territory of Delhi.

2. DEFINITIONS AND INTERPRETATION

In these Regulations, unless the context otherwise requires, words and expressions used in these Regulations have the same meaning as defined in Delhi Electricity Regulatory Commission (Terms and Conditions for Determination of Tariff) Regulations, 2017;

Words and expressions used but not defined in these Regulations shall have the same meaning as assigned to it in the Act or any other law framed under the Act.

PART 2

BUSINESS PLAN FOR GENERATING ENTITY

3. RATE OF RETURN ON EQUITY

Return on Equity in terms of Regulation 4(1) of the DERC (Terms and Conditions for Determination of Tariff) Regulations, 2017 for Generating Entity shall be computed at the Base Rate of 14.00% on post tax basis.

4. TAX ON RETURN ON EQUITY

The base rate of Return on Equity as allowed by the Commission under Regulation 3, shall be grossed up with the Minimum Alternate Tax or Effective Tax Rate of the respective financial year in terms of Regulation 72 and 73 of the DERC (Terms and Conditions for Determination of Tariff) Regulations, 2017, as per the following formula:

Rate of Return on Equity= 14/[(100-Tax Rate)/100]

where, Tax Rate is Minimum Alternate Tax (MAT) or Effective Tax Rate, as the case may be.

Illustration-

(i) In case of the Generating Entity paying Minimum Alternate Tax (MAT), say @ 20.96% including surcharge and cess, then,

Rate of Return on Equity shall be = 14/[(100-20.96)/100] = 17.71%

(ii) In case of Generating Entity paying normal Corporate Tax including surcharge and cess:

(a) Estimated Gross Income from generation for FY 2017-18 is, say Rs. 1000 Cr. and

(b) If estimated Advance Tax for the year on above is Rs. 240 Cr., then,

Effective Tax Rate for the year 2017-18 = 240/1000 = 0.24 or 24%, and

Rate of Return on Equity shall be = 14/[(100-24)/100] = 18.42%

5. MARGIN FOR RATE OF INTEREST ON LOAN

(1) Margin for rate of interest in terms of Regulation 4(2) of the DERC (Terms and Conditions for Determination of Tariff) Regulations, 2017 for the Generating Entity shall be allowed over and above 1 (one) year Marginal Cost of Fund based Lending Rate (MCLR) of SBI for computation of rate of interest on loan:

Table 1: Margin for Rate of Interest on Loan

Sr. No.	Generating Station	Margin for Rate of Interest on Loan (%)		
		2017-18	2018-19	2019-20
1	Gas Turbine Power Station (GTPS)	2.34%	2.11%	2.01%
2	Pragati Power Station I (PPS I)	2.98%	2.98%	2.98%

(2) The rate of interest on loan (MCLR plus Margin) shall not exceed approved base rate of return on equity i.e., 14.00%.

6. OPERATION AND MAINTENANCE EXPENSES

(1) Normative Operation and Maintenance expenses in terms of Regulation 4(3) and Regulation 92 of the DERC (Terms and Conditions for Determination of Tariff) Regulations, 2017 for the Generating Entity shall be as follows :

(a) Normative Operation and Maintenance expenses for existing generating stations shall be as follows :

Table 2: O&M Expenses (Rs. Lakh/ MW)

Station	2017-18	2018-19	2019-20
GTPS	29.66	31.32	33.08
PPS I	17.69	18.68	19.73

(b) Additional R&M Expenses for generating stations shall be as follows :

Table 3: Additional R&M Expenses (in Rs. Cr.)

Station	2017-18	2018-19	2019-20
GTPS	0.00	0.00	0.00
PPS I	16.12	16.12	0.00

(2) Impact of seventh pay commission on employee cost shall be considered separately, based on actual payment made by the Generation Entity and prudence check at the time of true up of ARR for the relevant financial year.

7. CAPITAL INVESTMENT PLAN

(1) The tentative Capital Investment plan for Gas Turbine Power Station for FY 2017-18 to FY 2019-20 is as follows:

Table 4:Capital Investment plan (in Rs. Cr.)

Sr. No.	Description	2017-18	2018-19	2019-20	Efficiency Improvement
1	Procurement and commissioning of exhaust plenum for GT # 1	1.45	0	0	Reduction in Gross Station Heat Rate
2	Replacement of Steam Ejector with Vacuum Pump Mod-1,2,3	0.35	0.35	0.35	Increase in output power
3	Installation of VFD in Condensate Extraction Pump (CEP) Mod-I,2,3	0.08	0.08	0	Reduction in Auxiliary Consumption
4	Procurement of steam turbine rotor/GBC/ Inner casing/Steam glands, for steam turbine (34MW)-Mod-2	0	17	0	Increase in output power
5	**Total**	**1.88**	**17.43**	**0.35**	

(2) The Capital investment and the respective scheduled date of commissioning, submitted by the Generating Entity in the Annual Tariff Petition, shall form the basis for computation of Annual Fixed Cost in terms of Regulation 99 of the DERC (Terms and Conditions for Determination of Tariff) Regulations, 2017.

(3) Energy Charge Rate in terms of Regulation 103 of the DERC (Terms and Conditions for Determination of Tariff) Regulations, 2017 shall be computed with improved operational parameters resulting from commissioning of the Additional Capital Investment in existing generating stations from the scheduled date of commissioning of the respective schemes.

(4) Capital cost shall be trued up annually and financial impact on account of variation in projected capital cost in the tariff order vis-a-vis actual capital cost and scheduled date of commissioning vis-a-vis actual date of commissioning shall be dealt as per the provisions of Regulations 61, 62 and 150 of the DERC (Terms and Conditions for Determination of Tariff) Regulations, 2017.

8. NORMS OF OPERATION FOR GENERATING STATIONS:

(1) Normative Annual Plant Availability Factor and Normative Annual Plant Load Factor for existing generating stations of Delhi shall be as follows :

I. Normative Annual Plant Availability Factor (NAPAF) : 85%

II. Normative Annual Plant Load Factor (NAPLF) : 85%

(2) **GROSS STATION HEAT RATE (GHR)**

Gross Station Heat Rate for existing generating stations of Delhi shall be as follows:

Table 5:Gross Station Heat Rate (GHR)

Sr. No	Generating Station	Combined Cycle	Open Cycle
		(kCal/ kWh)	
1	Gas Turbine Power Station (GTPS)	2100	3045
2	Pragati Power Station I (PPS I)	2000	2900

(3) **AUXILIARY ENERGY CONSUMPTION**

Auxiliary Energy Consumption shall be computed in two parts:

a) **Fixed:** 0.5% of the generation at normative PLF of the plant capacity which shall form part of other expenses under Fixed Cost, at energy charge rate approved by the Commission in respective Tariff Order.

b) **Variable:** 2.0% of the actual generation which shall form part of computation of energy charge rate of the respective month.

9. INCENTIVE

Incentive to a Generating Entity or unit thereof shall be payable at a flat rate of 25 Paisa/kWh for ex-bus scheduled energy corresponding to scheduled generation in excess of ex-bus energy corresponding to Normative Annual Plant Load Factor (NAPLF) as specified in Regulation 8(1) of these Regulations.

PART 3

BUSINESS PLAN FOR TRANSMISSION LICENSEE

10. RATE OF RETURN ON EQUITY

Return on Equity in terms of Regulation 4(1) of the DERC (Terms and Conditions for Determination of Tariff) Regulations, 2017 for Transmission Licensee shall be computed at the Base Rate of 14.00% on post tax basis.

11. TAX ON RETURN ON EQUITY

The base rate of Return on Equity as allowed by the Commission under Regulation 10 of these Regulations shall be grossed up with the Minimum Alternate Tax or Effective Tax Rate of the respective financial year in terms of Regulation 72 and 73 of the DERC (Terms and Conditions for Determination of Tariff) Regulations, 2017, as per the following formula:

Rate of Return on Equity= 14/[(100-Tax Rate)/100]

where, Tax Rate is Minimum Alternate Tax (MAT) or Effective Tax Rate, as the case may be.

Illustration-

(i) In case of the Transmission Licensee paying Minimum Alternate Tax (MAT), say @ 20.96% including surcharge and cess, then,

Rate of Return on Equity shall be = 14/[(100-20.96)/100] = 17.71%

(ii) In case of Transmission Licensee paying normal Corporate Tax including surcharge and cess:

(a) Estimated Gross Income from Transmission Business for FY 2017-18 is, say Rs. 1000 Cr. and,

(b) If estimated Advance Tax for the year on above is Rs. 240 Cr., then,

Effective Tax Rate for the year 2017-18 = 240/1000 = 0.24 or 24% and

Rate of Return on Equity shall be = 14/[(100-24)/100] = 18.42%

12. MARGIN FOR RATE OF INTEREST ON LOAN :

(1) The following Margin shall be allowed over and above 1 (one) year Marginal Cost of Fund based Lending Rate (MCLR) of SBI for computation of rate of interest on loan:

Table 6: Margin for Rate of Interest on Loan

Sr. No.	Particulars	2017-18	2018-19	2019-20
1	Margin for Rate of Interest on Loan	1.69%	1.69%	1.69%

The rate of interest on loan (MCLR plus Margin) shall not exceed approved base rate of return on equity i.e., 14.00%.

13. OPERATION AND MAINTENANCE EXPENSES

(1) The Normative, Bay wise and Circuit kilometres wise, Operation and Maintenance expenses of a Transmission Licensee, including Own consumption of energy for Transmission Licensee's installations and offices, shall be as follows:

Table 7: Bay wise Norms for HVAC (Rs. Lakh/bay)

Voltage Levels	2017-18	2018-19	2019-20
400kV	45.23	47.76	50.44
220kV & below	15.30	16.16	17.06

Table 8: Circuit km wise Norms for HVAC lines (Rs. Lakh/ckm.)

Voltage Levels	2017-18	2018-19	2019-20
400kV	8.13	8.59	9.07
220kV	2.03	2.15	2.27

(2) Impact of seventh pay commission on employee cost shall be considered separately based on actual payment made by the Transmission Licensees and prudence check at the time of true up of ARR for the relevant financial year.

14. CAPITAL INVESTMENT PLAN

(1) The tentative Capital Investment Plan for the Transmission Licensee for FY 2017-18 to FY 2019-20 is as follows:

Table 9:Capital Investment plan (in Rs. Cr.)

Sr. No.	Details of scheme	2017-18	2018-19	2019-20
1	**New Works**			
	400 kV			
a	Substations	-	-	-
b	Lines	-	-	130
	220 kV			
c	Substations	560	480	285
d	Lines	204	458	550
e=a+b+c+d	Sub Total	764	938	965
2	**Automation Works**			
a	400 kV	-	-	20
b	220 kV	-	-	152
c=a+b	Sub Total	-	-	172
3	**Augmentation Works**			
a	400 kV	7	-	-
b	220 kV	162	43	52
c	66kV and below	35	36	4
d=a+b+c	Sub Total	204	79	56
4	**Land Cost**			
Land		20	20	20
5=1+2+3+4	**Grand Total**	**988**	**1037**	**1213**

(2) The Capital investment and the respective scheduled date of commissioning, submitted by the Transmission Licensee in the Annual Tariff Petition, shall form the basis for computation of Annual Fixed Cost in terms of Regulation 111 of the DERC (Terms and Conditions for Determination of Tariff) Regulations, 2017.

(3) Capital cost shall be trued up annually and financial impact on account of variation in projected capital cost in the tariff order vis-a-vis actual capital cost and scheduled date of commissioning vis-a-vis actual date of commissioning shall be dealt as per the provisions of Regulations 61, 62 and 150 of the DERC (Terms and Conditions for Determination of Tariff) Regulations, 2017.

15. NORMS OF OPERATION FOR TRANSMISSION BUSINESS

(1) Normative Annual Transmission System Availability Factor (NATAF) for recovery of Annual Fixed Charges for AC System shall be considered at 98%.

(2) Transmission System Availability shall be computed as per the formulae and methodology specified in Appendices-I, II and III of these Regulations.

16. TRANSMISSION CHARGES FOR TRANSMISSION LICENSE

The Transmission Charges (inclusive of incentive) for AC system to be billed, in terms of Regulations 112 to 115 of the DERC (Terms and Conditions for Determination of Tariff) Regulations, 2017,for a calendar month for transmission system or part thereof shall be computed as follows:

a) For TAFM ≤ 98%, AFC x (NDM/NDY) x (TAFM/98%)

b) For TAFM: 98% < TAFM < 99%,

AFC x (NDM/NDY) x (1)

c) For TAFM: 99% < TAFM ≤ 99.75%,

AFC x (NDM/NDY) x (TAFM/99%)

d) For TAFM ≥ 99.75%,

AFC x (NDM/NDY) x (99.75%/99%)

where,

AFC =Annual Fixed Cost specified for the year in Rupees

NATAF =Normative Annual Transmission availability factor, in per cent

NDM =Number of days in the month

NDY =Number of days in the year

TAFM =Transmission System availability factor for the month.

PART 4

BUSINESS PLAN FOR DISTRIBUTION LICENSEE

17. RATE OF RETURN ON EQUITY

(1) **Wheeling Business:** Return on Equity in terms of Regulation 4(1) of the DERC (Terms and Conditions for Determination of Tariff) Regulations, 2017 shall be computed at the Base Rate of 14.00% on post tax basis.

(1) **Retail Business:** Return on Equity in terms of Regulation 4(1) of the DERC (Terms and Conditions for Determination of Tariff) Regulations, 2017 shall be computed at the Base Rate of 2.00% on post tax basis.

(2) **Carrying Cost:** Return on Equity in terms of Regulation 2(16) of the DERC (Terms and Conditions for Determination of Tariff) Regulations, 2017 for computation of weighted average rate of interest for funding of Regulatory Asset/accumulated Revenue Gap through debt and equity shall be considered at 14.00% on pre-tax basis.

18. TAX ON RETURN ON EQUITY

The base rate of return on equity as allowed by the Commission under Regulation 17(1) and Regulation 17(2) of these Regulations shall be grossed up with the Minimum Alternate Tax or Effective Tax Rate of the respective financial year in terms of Regulation 72 and 73 of the DERC (Terms and Conditions for Determination of Tariff) Regulations, 2017, as per the following formula:

Rate of Return on Equity= 16/[(100-Tax Rate)/100]

where, Tax Rate is Minimum Alternate Tax (MAT) or Effective Tax Rate, as the case may be.

Illustration-

(i) In case of the Distribution Licensee paying Minimum Alternate Tax (MAT) say @ 20.96% including surcharge and cess, then,

Rate of Return on Equity shall be = 16/[(100-20.96)/100] = 20.24%

(ii) In case of Distribution Licensee paying normal Corporate Tax including surcharge and cess:

(a) Estimated Gross Income from Distribution business for FY 2017-18, say is Rs. 1000 Cr. and

(b) If estimated Advance Tax for the year on above is Rs. 240 Cr., then,

Effective Tax Rate for the year 2017-18 = 240/1000 = 0.24 or 24%, and

Rate of Return on Equity shall be = 16/[(100-24)/100] = 21.05%.

19. MARGIN FOR RATE OF INTEREST ON LOAN

(1) Margin for rate of interest in terms of Regulation 4(2) of the DERC (Terms and Conditions for Determination of Tariff) Regulations, 2017 for the Distribution licensee shall be allowed over and above one (1) year Marginal Cost of Fund based Lending Rate (MCLR) of SBI for computation of rate of interest on loan as follows:

Table 10:Margin applicable on Capex loan for the Control Period

Sr. No.	Distribution Licensee	2017-18	2018-19	2019-20
1	BSES Rajdhani Power Limited	5.34%	5.34%	5.34%
2	BSES Yamuna Power Limited	6.05%	6.05%	6.05%
3	Tata Power Delhi Distribution Limited	1.73%	1.73%	1.73%
4	New Delhi Municipal Council	0.10%	0.10%	0.10%

Table 11: Margin applicable on other than Capex loan for the Control Period

Sr. No.	Distribution Licensee	2017-18	2018-19	2019-20
1	BSES Rajdhani Power Limited	6.10%	6.10%	6.10%
2	BSES Yamuna Power Limited	6.05%	6.05%	6.05%
3	Tata Power Delhi Distribution Limited	1.68%	1.68%	1.68%
4	New Delhi Municipal Council	0.10%	0.10%	0.10%

(2) The rate of interest on loan (MCLR plus Margin) shall not exceed approved base rate of return on equity for wheeling business i.e., 14.00%.

(3) The Distribution Licensee shall endeavour to invite open tender for availing loans.

20. OPERATION AND MAINTENANCE EXPENSES

(1) Normative Operation and Maintenance expenses in terms of Regulation 4(3) and Regulation 92 of the DERC (Terms and Conditions for Determination of Tariff) Regulations, 2017 for the Distribution Licensees shall be as follows:

Table 12: O&M Expenses for BRPL for the Control Period

Particulars	Unit	2017-18	2018-19	2019-20
66 kV Line	Rs. Lakh/ckt. km	3.454	3.648	3.853
33 kV Line	Rs. Lakh/ckt. km	3.454	3.648	3.853
11kV Line	Rs. Lakh/ckt. km	1.001	1.058	1.117
LT Line system	Rs. Lakh/ckt. km	5.170	5.460	5.766
66/11 kV Grid S/s	Rs. Lakh/MVA	0.933	0.986	1.041
33/11 kV Grid S/s	Rs. Lakh/MVA	0.933	0.986	1.041
11/0.415 kV DT	Rs. Lakh/MVA	2.209	2.333	2.464

Table 13: O&M Expenses for BYPL for the Control Period

Particulars	Unit	2017-18	2018-19	2019-20
66 kV Line	Rs. Lakh/ckt. km	4.421	4.669	4.931
33 kV Line	Rs. Lakh/ckt. km	4.421	4.669	4.931
11kV Line	Rs. Lakh/ckt. km	1.857	1.961	2.071

Particulars	Unit	2017-18	2018-19	2019-20
LT Line system	Rs. Lakh/Ckt. km	8.290	8.756	9.247
66/11 kV Grid S/s	Rs. Lakh/MVA	1.045	1.104	1.166
33/11 kV Grid S/s	Rs. Lakh/MVA	1.045	1.104	1.166
11/0.415 kV DT	Rs. Lakh/MVA	2.296	2.425	2.561

Table 14: O&M Expenses for TPDDL for the Control Period

Particulars	Unit	2017-18	2018-19	2019-20
66 kV Line	Rs. Lakh/ckt. km	3.297	3.482	3.678
33 kV Line	Rs. Lakh/ckt. km	3.297	3.482	3.678
11kV Line	Rs. Lakh/ckt. km	0.862	0.910	0.961
LT Line system	Rs. Lakh/ckt. km	6.372	6.730	7.107
66/11 kV Grid S/s	Rs. Lakh/MVA	0.927	0.979	1.034
33/11 kV Grid S/s	Rs. Lakh/MVA	0.927	0.979	1.034
11/0.415 kV DT	Rs. Lakh/MVA	1.326	1.400	1.479

Table 15: O&M Expenses for NDMC for the Control Period

Particulars	Unit	2017-18	2018-19	2019-20
66 kV Line	Rs. Lakh/ckt. km	3.297	3.482	3.678
33 kV Line	Rs. Lakh/ckt. km	3.297	3.482	3.678
11kV Line	Rs. Lakh/ckt. km	0.862	0.910	0.961
LT Line system	Rs. Lakh/ckt. km	5.170	5.460	5.766
66/11 kV Grid S/s	Rs. Lakh/MVA	0.927	0.979	1.034
33/11 kV Grid S/s	Rs. Lakh/MVA	0.927	0.979	1.034
11/0.415 kV DT	Rs. Lakh/MVA	1.326	1.400	1.479

(2) The Distribution Licensees shall be allowed own consumption, at Zero Tariff for actual recorded consumption subject to a maximum of 0.25% of total sales to its retail consumers for the relevant financial year as part of O&M expenses for the relevant year:

(3) Actual recorded own consumption in excess of 0.25% of total sales to its retail consumers for the relevant financial year, shall be billed at Non Domestic Tariff of respective year's Tariff Schedule and shall form part of revenue billed and collected for the same year.

(4) Impact of seventh pay commission on employee cost shall be considered separately, based on actual payment made by the Distribution Licensees and prudence check at the time of true up of ARR for the relevant financial year.

21. CAPITAL INVESTMENT PLAN

(1) The tentative Capital Investment Plan in terms of Regulation 4(4) of the DERC (Terms and Conditions for Determination of Tariff) Regulations, 2017 for the

Distribution licensee shall be as follows:

Table 16: Capitalisation for BRPL for the Control Period (in Rs. Cr.)

Particulars	2017-18	2018-19	2019-20	Total
Capitalization	425	439	449	1313
Smart Meter	87	87	87	262
Less: Deposit Work	40	41	42	123
Total	**472**	**485**	**494**	**1452**

Table 17: Capitalisation for BYPL for the Control Period (in Rs. Cr.)

Particulars	2017-18	2018-19	2019-20	Total
Capitalization	331	345	349	1025
Smart Meter	64	64	64	191
Less: Deposit Work	11	11	12	34
Total	**384**	**398**	**401**	**1182**

Table 18: Capitalisation for TPDDL for the Control Period (in Rs. Cr.)

Particulars	2017-18	2018-19	2019-20	Total
Capitalization	423	414	414	1251
Smart Meter	66	66	66	198
Less: Deposit Work	50	50	50	150
Total	**439**	**430**	**430**	**1299**

(2) The Licensee shall submit the quarterly Capital investment plan along with scheduled date of Commissioning in the Annual Tariff Petition for the relevant year, which shall form the basis for computing the Fixed Cost in terms of Regulation 130 (c) of the DERC (Terms and Conditions for Determination of Tariff) Regulations, 2017.

(3) The Distribution Licensee shall submit an application including details of actual Capitalisation on quarterly basis for physical verification and true up of capital cost within 1 (one) month of the completion of the relevant quarter.

(4) The quarterly Capital Cost submitted by the Distribution Licensee as per aforesaid sub-Regulation (3) shall be trued up by the Commission and financial impact on account of variation in projected capital cost in the tariff order vis-a-vis actual capital cost & scheduled date of commissioning vis-a-vis actual date of commissioning shall be treated in Annual true up of relevant financial year as follows:

(a) Any excess tariff recovered on account of variation in projected

capitalization in the tariff order vis-a-vis trued up capitalization by more than 10% during the year, shall be adjusted in the Revenue Gap/Surplus of the relevant year along with interest rate at 1.20 times of the bank rate prevalent on 1st April of respective year:

Provided that any excess tariff recovered on account of variation in projected capitalization in the tariff order vis-a-vis trued up capitalization due to reasons beyond the control of the Distribution Licensee i.e., delay in 'In-principle' approval of the schemes, road cutting permission from the concerned agencies etc., shall be adjusted in the Revenue Gap/Surplus of the relevant year along with interest rate equal to bank rate prevalent on 1st April of respective year.

(b) Any shortfall in tariff recovered on account of variation in projected capitalization in the tariff order vis-a-vis trued up capitalization by more than 10% during the year, shall be adjusted in the Revenue Gap/Surplus of the relevant year along with interest rate at 0.80 times of the bank rate prevalent on 1st April of respective year.

22. TARGET FOR DISTRIBUTION LOSS

(1) The Distribution Loss target in terms of Regulation 4(9)(a) of the DERC (Terms and Conditions for Determination of Tariff) Regulations, 2017 for the Distribution licensees shall be as follows:

Table 19: Target for Distribution Loss for the Control Period

Sr. No.	Distribution Licensee	2017-18	2018-19	2019-20
1	BSES Rajdhani Power Limited	10.93%	10.19%	9.50%
2	BSES Yamuna Power Limited	13.00%	11.69%	10.50%
3	Tata Power Delhi Distribution Limited	8.38%	8.19%	8.00%
4	New Delhi Municipal Council	10.30%	9.63%	9.00%

(2) The amount for Overachievement/Underachievement on account of Distribution Loss target shall be computed as per the formula specified in the Regulation 159 of the DERC (Terms and Conditions for Determination of Tariff) Regulations, 2017 for the Distribution Licensee.

(3) The amount computed for Underachievement on account of Distribution Loss target by the distribution licensee for the relevant year shall be on account of distribution licensee as specified in the Regulation 161 of the DERC (Terms and

Conditions for Determination of Tariff) Regulations, 2017.

(4) The amount computed for Overachievement on account of Distribution Loss target by the distribution licensee for the relevant year shall be shared between the Distribution Licensee and Consumers as follows:

i. in case actual Distribution Loss is between the loss target and loss target minus [50%*(Previous Year Target-Current Year Target)] for the relevant year shall be shared in the ratio of 2/3rd to Consumers and 1/3rd to the Distribution Licensee;

ii. in case actual Distribution Loss is less than loss target minus [50%*(Previous Year Target-Current Year Target)] for the relevant year shall be shared in the ratio of 1/3rd to Consumers and 2/3rd to the Distribution Licensee.

Illustration.-

a) Sales (A) = 1000 MU
b) Previous Year Distribution Loss Target (B) = 12%
c) Current Year Distribution Loss Target (C) = 10%
d) Power Purchase allowed by the Commission in Tariff Order [D=A/(1-C)] = 1111 MU
e) Trued up Power Purchase Rate (E)= Rs. 5.00/kWh

CASE 1 *[Actual Loss> Loss Target]*

a) Actual Distribution Loss (F) = 12%
b) Actual Power Purchase done by the Distribution Licensee [G=A/(1-F)] = 1136 MU
c) The Distribution Licensee has under-achieved the Distribution Loss target from 10% to 12% resulting into procurement of additional 25 MU (G-D).
d) 100% Loss to Distribution Licensee = (25*5)/10 = Rs. 12.50 Cr.

CASE 2 *[Loss Target>Actual>[Loss Target -50%*(Previous Year Target-Current Year Target)]*

a) Actual Distribution Loss (F) = 9%
b) Actual Power Purchase done by the Distribution Licensee [G=A/(1-F)] = 1099 MU
c) The Distribution Licensee has Over-achieved the Distribution Loss target from 10% to 9% resulting into lesser procurement of additional 12 MU (G-D).
d) 1/3rd of Incentive to Distribution Licensee = (12*5)/10*(1/3) = Rs. 2 Cr.
e) 2/3rd of Incentive to Consumers = (12*5)/10*(2/3) = Rs. 4 Cr.

CASE 3 *[Actual<[Loss Target -50%*(Previous Year Target-Current Year Target)]*

f) Actual Distribution Loss (F) = 8%

g) Actual Power Purchase done by the Distribution Licensee [G=A/(1-F)] = 1087 MU

Incentive up to overachievement of loss target minus [50%*(Previous Year Target-Current Year Target)]

2/3rd of Incentive to Consumers = [(1111-1099)*5)/10]*2/3 = Rs. 4 Cr. ------- (i)

Balance 1/3rd to Distribution Licensee = [(1111-1099)*5)/10]*1/3 = Rs. 2 Cr.—(ii)

Incentive for overachievement less than loss target minus [50%*(Previous Year Target-Current Year Target)]

1/3rd of Incentive to Consumers = [(1099-1087)*5)/10]*1/3 = Rs. 2 Cr. ---------- (iii)

Balance 2/3rd to Distribution Licensee = [(1099-1087)*5)/10]*2/3 = Rs. 4 Cr. ---(iv)

Total incentive to Consumers (i) + (iii) = Rs. 6 Cr.

Total incentive to Distribution Licensee (ii) + (iv) = Rs. 6 Cr.

23. TARGET FOR COLLECTION EFFICIENCY

(1) The targets for Collection Efficiency for FY2017-18 to FY2019-20 of the Distribution Licensees shall be 99.50%.

(2) The financial impact on account of Collection Efficiency target shall be computed as per the formula specified in the Regulation 163 of the DERC (Terms and Conditions for Determination of Tariff) Regulations, 2017 for the Distribution Licensee.

(3) The financial impact on account of over-achievement in terms of in the Regulation 164 of the DERC (Terms and Conditions for Determination of Tariff) Regulations, 2017 for the Distribution Licensee, from 99.50% to 100% shall be shared equally between Consumers and the Distribution Licensees.

24. TARGET FOR RENEWABLE PURCHASE OBLIGATION

(1) The targets for Renewable Purchase Obligation (RPO) in terms of the Regulation 124 of the DERC (Terms and Conditions for Determination of Tariff) Regulations, 2017 for the Distribution Licensee from FY 2017-18 to FY 2019-20 of the Distribution Licensees shall be computed as a percentage of total sales to retail consumers in its area of supply excluding procurement of hydro power as follows:

Table 20: Targets for Renewable Purchase Obligation

Sr. No.	Distribution Licensee	2017-18	2018-19	2019-20
1	Solar Target (Minimum)	2.75%	4.75%	6.75%
2	Total	11.50%	14.25%	17.00%

(2) The Distribution Licensee shall comply its RPO through procurement of either Solar energy or combination of Solar energy and Non-Solar energy with minimum purchase of Solar energy as specified in the table above:

Provided that the Distribution Licensee may purchase solar energy in excess of the minimum solar Target as specified in aforesaid sub-Regulation (1),

Provided further that the Distribution Licensee may purchase REC for any shortfall in meeting their total RPO targets for any year within one month from the date of completion of the relevant financial year.

(3) Renewable Energy generation recorded through Renewable Energy meters installed in the premises of net metering Consumers shall be deemed to be part of RPO of the Distribution Licensee as specified in Delhi Electricity Regulatory Commission (Net Metering for Renewable Energy) Regulations, 2014, for the relevant year:

Provided that in case the annual generation from solar generation system recorded through Renewable Energy meters exceeds the Capacity Utilisation Factor (CUF) of 19%, the Distribution Licensee shall get the Renewable Energy meters tested by Independent third party National Accreditation Board for Testing and Calibration Laboratories (NABL) accredited meter testing lab.

(4) The cost of Renewable Energy of the Distribution Licensee, through Power Purchase Agreement approved by the Commission and power injected into the grid through net metering arrangement, in excess of RPO target shall be part of power purchase cost of the relevant year.

(5) Non-compliance of the RPO targets by the Distribution Licensee shall attract penalty at the rate of 50% of the weighted average Floor Price of Solar and Non-Solar Renewable Energy Certificate, as specified by Central Electricity Regulatory Commission for the relevant year, for quantum of shortfall in RPO.

(6) The amount of penalty imposed on the Distribution Licensee due to non-compliance of the RPO targets shall be reduced from the ARR during True up of the relevant Financial Year in terms of the Regulation 124 of the DERC (Terms and

Conditions for Determination of Tariff) Regulations, 2017.

25. CONTINGENCY LIMIT FOR SALE OF POWER THROUGH DEVIATION SETTLEMENT MECHANISM (UNSCHEDULED INTERCHANGE CHARGES)

(1) The Contingency Limit for Sale of Power through Deviation Settlement Mechanism in terms of the Regulation 152 (c) of the DERC (Terms and Conditions for Determination of Tariff) Regulations, 2017 from FY 2017-18 to FY 2019-20 of the Distribution Licensees shall be 5% of Gross Power Procured by the Distribution Licensee for the relevant month.

(2) In case the Distribution Licensee sell power in Deviation Settlement Mechanism (Unscheduled Interchange Charges) more than 5% of Gross Power procured by the Distribution Licensee for the relevant month such sale rate shall be restricted to the average rate of power purchase/sale through exchange during same month for Delhi region.

26. INCENTIVE SHARING MECHANISM FOR SALE RATE OF SURPLUS POWER

(1) The computation of incentive for Sale Rate of Surplus Power in terms of the Regulation 165 of the DERC (Terms and Conditions for Determination of Tariff) Regulations, 2017 from FY 2017-18 to FY 2019-20 of the Distribution Licensees shall be as follows:

i. The variable cost of the generating station for which power is surplus and required to be sold through Power Exchanges shall be considered as the previous month's billed variable cost of such generating station.

ii. The variable cost of the generating station for which power is surplus and required to be sold through Banking and Bilateral shall be considered as the previous month's billed variable cost of such generating station prevalent at the date of entering into such contracts.

iii. The incentive shall be the product of Rate difference (Actual Sale Rate-Variable Cost) and Quantum of Power actually sold.

(2) The incentive computed under sub-clause (1) above shall be shared between the Consumers and the Distribution Licensees as follows:

i. The incentive realisation upto 100% recovery of Average Fixed Cost per unit of all Generating sources of relevant year, projected by the Commission in the relevant Tariff Order, prorated to actual sale of Surplus Power shall be

shared in the ratio of 2/3rd to the Consumers and 1/3rd to the Distribution Licensees.

ii. The incentive realisation above 100% recovery of Average Fixed Cost per unit of all Generating sources of relevant year, projected by the Commission in the relevant Tariff Order, prorated to actual sale of Surplus Power shall be shared in the ratio of 1/3rd to the Consumers and 2/3rd to the Distribution Licensees.

Illustration:-

a) Quantum of Sale of Surplus Power (A) = 1000 MU
b) Applicable Variable Cost per Unit (B) = Rs. 2.00/kWh
c) Actual Sale rate of Surplus Power (C) = Rs. 3.50/kWh
d) Incentive [D=A*(C-B)] = Rs. 150 Cr.
e) Approved Average Fixed Cost per unit in the Tariff Order (E)= Rs. 1.00/kWh

Incentive realisation upto 100% recovery of Average Fixed Cost per unit = (E*A) = Rs. 100 Cr. shall be shared in the ratio of 2/3rd (Rs. 67 Cr.) to the Consumers and 1/3rd (Rs. 33 Cr.) to the Distribution Licensees.

Incentive realisation above 100% recovery of Average Fixed Cost per unit = [D-(E*A)] = Rs. 50 Cr. shall be shared in the ratio of 1/3rd (Rs. 16.67 Cr.) to the Consumers and 2/3rd (Rs. 33.33 Cr.) to the Distribution Licensees.

Therefore,

i. Total incentive to the Distribution Licensees = Rs. 66.33 Cr. (33+33.33)
ii. Total incentive to the Consumers = Rs. 83.67 Cr. (67+16.67)

27. MECHANISM FOR RECOVERY OF POWER PURCHASE COST ADJUSTMENT CHARGES

The mechanism for recovery of Power Purchase Cost Adjustment Charges (PPAC) in terms of the Regulation 134 of the DERC (Terms and Conditions for Determination of Tariff) Regulations, 2017 from FY 2017-18 to FY 2019-20 of the Distribution Licensees shall be as follows:

(1) The Commission shall specify the detailed formula for computation of PPAC in the Tariff Order for the relevant year.

(2) The Distribution Licensee shall compute the PPAC for any quarter as per the specified formula for the relevant year:

Provided that a quarter refers to one-fourth of a year i.e., January, February

and March (Q1); April, May and June (Q2); July, August and September (Q3); and October, November and December (Q4).

(3) The PPAC computation of any quarter shall be equally spread and adjusted over subsequent quarter only:

Provided that the Commission may allow to carry forward PPAC to more than one quarter in order to avoid the tariff shock for consumers in terms of Regulation 136 of the DERC (Terms and Conditions for Determination of Tariff) Regulations, 2017.

(4) The treatment of PPAC computation as per the specified formula shall be as follows:

(a) in case PPAC does not exceed 5% for any quarter, the Distribution Licensee may levy PPAC at 90% of computed PPAC with prior intimation to the commission without going through the regulatory proceedings.

(b) in case PPAC exceeds 5% for any quarter, the Distribution Licensee shall file an application for prior approval of the Commission with respect to their claim on account of PPAC.

(5) The Distribution Licensee shall upload the computation of PPAC on its website before the same is levied to the consumers' electricity bills.

28. INCENTIVE SHARING MECHANISM FOR RE-FINANCING OF LOAN

(1) The incentive due to lower rate of interest on account of re-financing of loan in terms of the Regulation 71 of the DERC (Terms and Conditions for Determination of Tariff) Regulations, 2017 from FY 2017-18 to FY 2019-20 of the Distribution Licensees shall be computed as the product of total quantum of loan availed and difference of margin approved in these Regulations compared to actual margin availed by the Distribution Licensees through re-financing of loan only.

(2) The incentive on account of re-financing of loan computed as per sub clause (1) above shall be shared equally between the Consumers and the Distribution Licensee.

29. RATIO OF ALLOCATION OF ARR INTO WHEELING & RETAIL SUPPLY

The ratio of allocation of ARR into Wheeling & Retail Supply Business in terms of the Regulation 4(9)(e) of the DERC (Terms and Conditions for Determination of Tariff) Regulations, 2017 shall be as follows:

Table 21: Retail Business

Particulars	BRPL	TPDDL	BYPL
Cost of Power Purchase	100%	100%	100%
Inter-State Transmission charges	100%	100%	100%
Intra-state Transmission charges	100%	100%	100%
SLDC fees and charges	100%	100%	100%
Operation & Maintenance Costs	40%	38%	38%
Depreciation (including AAD)	21%	23%	19%
Return on Capital Employed	26%	28%	28%
Income Tax	26%	28%	28%
Non Tariff Income	85%	60%	85%

Table 22: Wheeling Business

Particulars	BRPL	TPDDL	BYPL
Operation & Maintenance Costs	60%	62%	62%
Depreciation (including AAD)	79%	77%	81%
Return on Capital Employed	74%	72%	72%
Income Tax	74%	72%	72%
Non Tariff Income	15%	40%	15%

30. TREATMENT OF REVENUE GAP/SURPLUS

(1) Various components of ARR of the Distribution Licensees shall be trued up in terms of the Regulation 152 of the DERC (Terms and Conditions for Determination of Tariff) Regulations, 2017.

(2) Variation on account of projections of various components of ARR in annual tariff order vis-a-vis trued up expenses for computation of Revenue Gap/Surplus shall be as follows:

i. **Power Purchase Cost:** The variation in Power Purchase Cost shall be adjusted in the Revenue Gap/Surplus along-with Interest for half year at bank rate prevalent on 1st April of respective year.

ii. **Capital Cost:** The variation in RoCE, Depreciation and Income Tax on account of variation in Capital Cost related expenses shall be dealt as per Regulation 21 of these Regulations.

(3) The Revenue Gap/Surplus computed as per aforesaid sub-Regulation (2) for the trued up year shall be adjusted against the closing balance of accumulated Revenue Gap for the relevant year:

Provided that if there is no accumulated Revenue Gap or any Surplus left after adjusting against closing balance of accumulated Revenue Gap for the relevant year, same shall be adjusted in the ARR.

PART 5
MISCELLANEOUS

31. **Issue of Regulations, Orders and Practice Directions:** Subject to the provision of the Act and these Regulations, the Commission may, from time to time, issue Orders and Practice directions in regard to the implementation of these Regulations and procedure to be followed on various matters, which the Commission has been empowered by these Regulations to direct, and matters incidental or ancillary thereto.

32. **Powers to remove difficulties:** If any difficulty arises in giving effect to any of the provisions of these Regulations, the Commission may, by a general or special order, not being inconsistent with the provisions of these Regulations or the Act, do or undertake to do things or direct the Licensee to do or undertake such things which appear to be necessary or expedient for the purpose of removing the difficulties.

33. **Power of Relaxation:** The Commission may in public interest and for reasons to be recorded in writing, relax any of the provision of these Regulations.

34. **Interpretation:** If a question arises relating to the interpretation of any provision of these Regulations, the decision of the Commission shall be final.

35. **Saving of Inherent Powers of the Commission:** Nothing contained in these Regulations shall limit or otherwise affect the inherent powers of the Commission from adopting a procedure, which is at variance with any of the provisions of these Regulations, if the Commission, in view of the special circumstances of the matter or class of matters and for reasons to be recorded in writing, deems it necessary or expedient to depart from the procedure specified in these Regulations.

36. **Enquiry and Investigation:** All enquiries, investigations and adjudications under these Regulations shall be done by the Commission through the proceedings in accordance with the provisions of the *Delhi Electricity Regulatory Commission Comprehensive (Conduct of Business) Regulations, 2001 as amended from time to time*.

37. **Power to Amend:** The Commission, for reasons to be recorded in writing, may at any time vary, alter or modify any of the provision/(s) of these Regulations by amendment.

Sd/-
Surendra Edupghanti
(Secretary)

Appendix-I
Procedure for Calculation of Transmission System Availability Factor for a Month

1. Transmission system availability factor for a calendar month (TAFM) shall be calculated by the respective transmission licensee, got verified by the concerned SLDC separately for each AC and HVDC transmission system and grouped according to sharing of transmission charges. Transmission System Availability shall be calculated separately for each Transmission System. For the purpose of calculation of TAFM:

   a. AC transmission lines: Each circuit of AC transmission line shall be considered as one element.

   b. Inter-Connecting Transformers (ICTs): Each ICT bank (three single phase transformer together) shall form one element.

   c. Static VAR Compensator (SVC): SVC along with SVC transformer shall form one element. However, 50% credit to inductive and 50% to capacitive rating shall be given.

   d. Bus Reactors/Switchable line reactors: Each Bus Reactors/Switchable line reactors shall be considered as one element.

   e. HVDC Bi-pole links: Each pole of HVDC link along with associated equipment at both ends shall be considered as one element.

   f. HVDC back-to-back station: Each block of HVDC back-to-back station shall be considered as one element. If associated AC line is not available, the HVDC back-to-back station block shall also be considered as unavailable.

   g. For AC system, two trippings per year shall be allowed. After two trippings in a year, additional 12 hours outage shall be considered in addition to the actual outage.

   h. In case of outage of a transmission element affecting evacuation of power from a generating station, outage hours shall be multiplied by a factor of 2.

2. The Availability of AC and HVDC portion of Transmission system shall be calculated as under:

$$\% \text{ TAFM for AC system} = \frac{n * AV_n + p * Av_p + q * Av_q + r * Av_r}{n + p + q + r} \times 100$$

Where
n = Total number of AC lines.
AVn = Availability of n number of AC lines.
p = Total number of bus reactors/switchable line reactors
AVp = Availability of p number of bus reactors/switchable line reactors
q = Total number of ICTs.
AVq = Availability of q number of ICTs.

r = Total number of SVCs.
AVr = Availability of r number of SVCs.

3. The weightage factor for each category of transmission elements shall be as under:

(a) For each circuit of AC line – Surge Impedance Loading for Uncompensated line (SIL) multiplied by ckt-km.

SIL rating for various voltage level and conductor configuration is given in **Appendix-II**. However, for the voltage levels and/or conductor configurations not listed in Annexure-I, appropriate SIL based on technical considerations may be used for availability calculation under intimation to long-term transmission customers/DICs.

For compensated AC line, Surge Impedance Loading (SIL) shall be as certified by the SLDC considering the compensation on the line.

For shunt compensated line the reduced value of SIL shall be taken in accordance with the location of the reactor. Similarly in case of the lines with series compensation the higher SIL shall be taken as per the percentage of compensation.

(b) For each HVDC pole- The rated MW capacity * ckt-km
(c) For each ICT bank – The rated MVA capacity
(d) For SVC- The rated MVAR capacity (inductive and capacitive)
(e) For Bus Reactor/switchable line reactors – The rated MVAR capacity.
(f) For HVDC back-to-back station connecting two grids- Rated MW capacity of each block.

4. The availability for each category of transmission elements shall be calculated based on the weightage factor, total hours under consideration and non-available hours for each element of that category. The formulae for calculation of Availability of each category of the transmission elements are as per **Appendix-III**.

5. The transmission elements under outage due to following reasons shall be deemed to be available:

i. Shut down availed for maintenance or construction of elements of another transmission scheme. If the other transmission scheme belongs to the transmission licensee SLDC may restrict the deemed availability period to that considered reasonable by him for the work involved.

ii. Switching off of a transmission line to restrict over voltage and manual tripping of switched reactors as per the directions of SLDC.

6. Outage time of transmission elements for the following contingencies shall be excluded from the total time of the element under period of consideration.

i. Outage of elements due to acts of God and force majeure events beyond the control of the

transmission licensee. However, onus of satisfying the SLDC that element outage was due to aforesaid events and not due to design failure shall rest with the transmission licensee. A reasonable restoration time for the element shall be considered in accordance with Central Electricity Regulatory Commission (Standard of Performance of inter-State transmission licensees) Regulations, 2012 as amended from time to time and any additional time taken by the transmission licensee for restoration of the element beyond the reasonable time shall be treated as outage time attributable to the transmission licensee. Circuits restored through ERS (Emergency Restoration System) shall be considered as available.

ii. Outage caused by grid incident/disturbance not attributable to the transmission licensee, e.g. faults in substation or bays owned by other agency causing outage of the transmission licensee's elements, and tripping of lines, ICTs, HVDC, etc. due to grid disturbance. However, if the element is not restored on receipt of direction from SLDC while normalizing the system following grid incident/disturbance within reasonable time, the element will be considered not available for the period of outage after issuance of SLDC's direction for restoration.

Appendix-II

SURGE IMPEDANCE LOADING (SIL) OF AC LINES

Sr. No.	Line Voltage (kV)	Conductor Configuration	SIL (MW)
1	765	Quad Bersimis	2250
2	400	Quad Bersimis	691
3	400	Twin Moose	515
4	400	Twin AAAC	425
5	400	Quad Zebra	647
6	400	Quad AAAC	646
7	400	Triple Snowbird	605
8	400	ACKC(500/26)	556
9	400	Twin ACAR	557
10	220	Twin Zebra	175
11	220	Single Zebra	132
12	132	Single Panther	50
13	66	Single Dog	10

Appendix-III

FORMULAE FOR CALCULATION OF AVAILABILITY OF EACH CATEGORY OF TRANSMISSION ELEMENTS

$$\text{Availability of AC Lines (Avn)} = \frac{\sum_{i=1}^{n} W_i (T_i - T_{NAi})}{T_i} \Big/ \sum_{i=1}^{n} W_i$$

$$\text{Availability of ICT (Avq)} = \frac{\sum_{k=1}^{q} W_k (T_k - T_{NAk})}{T_k} \Big/ \sum_{k=1}^{q} W_k$$

$$\text{Availability of Switched Bus Reactor (Avp)} = \frac{\sum_{m=1}^{p} W_m (T_m - T_{NAm})}{T_m} \Big/ \sum_{m=1}^{p} W_m$$

$$\text{Availability of ICT } (Av_q) = \frac{\sum_{k=1}^{q} Wk (T_k - TNA_k)}{T_k}$$

$$\text{Availability of SVC (Avr)} = \frac{\sum_{l=1}^{r} 0.5 * W_{IL} (T_L - T_{NAL}) + \sum_{l=1}^{r} 0.5 * W_{CL} (T_{CL} - T_{NACL})}{T_{IL}} \Big/ \sum_{l=1}^{r} 0.5 * W_{IL} + \sum_{l=1}^{r} 0.5 * W_{CL}$$

Where:

Wi = Weightage factor for i^{th} transmission line

Wk = Weightage factor for k^{th} ICT

WIL & WCL = Weightage factors for inductive & capacitive operation of l^{th} SVC

Wm = Weightage factor for m^{th} bus reactor

Ti, Tm, Tk, TIL, TCL, - The total hours of i^{th} AC line, k^{th} ICT, l^{th} SVC (Inductive Operation), l^{th} SVC (Capacitive Operation), m^{th} Switched Bus Reactor during the period under consideration.(excluding time period for outages not attributable to transmission licensee for reasons given in Para 6 of the procedure)

TNA_i, TNA_k, TNAIL, TNACL, TNAm - The non-availability hours (excluding the time period for outages not attributable to transmission licensee taken as deemed availability as per Para 5 of the procedure) for i^{th} AC line, k^{th} ICT, l^{th} SVC (Inductive Operation), l^{th} SVC (Capacitive Operation),m^{th} Switched Bus Reactor.