DELHI ELECTRICITY REGULATORY COMMISSION
New Delhi

EXPLANATORY MEMORANDUM
DRAFT DELHI ELECTRICITY REGULATORY COMMISSION (BUSINESS PLAN) REGULATIONS, 2023

A. INTRODUCTION

(a) In exercise of the powers vested under Sections 61, 86(1) and 181 of the *Electricity Act, 2003* (Act) and all other enabling powers and in compliance of the requirement under Section 181 (3) of the Act, the Commission has uploaded the draft of *DERC (Business Plan) Regulations, 2023*, in succession to *DERC (Business Plan) Regulations 2019*, on its website http://derc.gov.in/

(b) The Commission has invited comments/suggestions from stakeholders through Public Notices published in leading newspapers and also uploaded the same on Commission's website http://derc.gov.in/. The last date for submission of comments/suggestions from stakeholders on the said Regulations is 14/02/2023.

(c) This Explanatory Memorandum has been issued with the intent of explaining the rationale and objective behind *Draft DERC (Business Plan) Regulations, 2023*.

(d) It may be mentioned for the sake of clarity, that the term "Commission" in most of the cases refers to the officers of the Commission for carrying out the research/due diligence on the available information for preparation of Explanatory Memorandum for *Draft Delhi Electricity Regulatory Commission (Business Plan) Regulations, 2023*.

B. COMMON POINTS

1. RETURN ON EQUITY

PROVISIONS IN DRAFT DERC BUSINESS PLAN REGULATIONS, 2023

" 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 10.00% on post tax basis:

Provided that the Equity for the purpose of Return on Equity shall be lower of the Normative Equity determined as per Regulation 63 of the DERC (Terms And Conditions

For Determination of Tariff) Regulations, 2017 or Equity available as per Audited Financial Statement of the relevant year.

12. 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 10.00% on post tax basis:

Provided that the Equity for the purpose of Return on Equity shall be lower of the Normative Equity determined as per Regulation 63 of the DERC (Terms And Conditions For Determination of Tariff) Regulations, 2017 or Equity available as per Audited Financial Statement of the relevant year.

20. 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 shall be computed at the Base Rate 10.00% on post tax basis for Wheeling and Retail Business together."

EXPLANATORY NOTES

(1) The Rate of Return on Equity in *DERC (Business Plan) Regulations, 2019* was determined during 2019 and the same is applicable for the Financial Years 2020-21, 2021-22 and 2022-23. It is worthwhile to mention that the same Rate of Return on Equity was in force during the Financial Years 2017-18, 2018-19 and 2019-20 also, as was covered under *DERC (Business Plan) Regulations,2017* and also in MYT (Multi Year Tariff) 2011 & MYT Regulations, 2007.

(2) The DERC (Delhi Electricity Regulatory Commission) had specified a Post-tax return of 14 % in case of Generation & Transmission Licensees and 16% in case of Distribution Licensees.

(3) Considering the downward revision of Marginal Cost of Funds Based Landing Rate (MCLR) of the Public Sector Banks and 10-year G-Sec Rates, it is felt prudent to revisit and re-determine the Rate of Return on Equity for the control period FY 2023-24, 2024-25 and 2025-26.

(4) It is pertinent to submit that the overall interest rate has shown a declining trend during the past period mainly the RBI Repo Rate, Interbank Rate and SBI Base Rate/MCLR Rate have come down during this period:

a. **The RBI Repo Rate:** It is the rate at which the Central Bank of a country *(Reserve Bank of India in case of India)* lends money to Commercial Banks in the event of any shortfall of funds. Repo rate is used by monetary authorities to control inflation.

b. **Interbank Rate:** The term Interbank Rate also refers to the interest rate charged when banks conduct wholesale transactions in foreign currencies with banks in other nations. The Interbank Rate, also known as the Federal Funds Rate, is the interest charged on short-term loans made between financial institutions.

c. **Marginal Cost of Funds based Lending Rate (MCLR):** It is the minimum lending rate below which a bank is not permitted to lend. MCLR replaced the earlier base rate system to determine the lending rates for commercial banks.

(5) With better control over inflation, the interest rates have remained low and stable over short & medium term. It could be observed from the following table, that SBI MCLR rates have gradually fallen down from April 2019 onwards:

Table 1: SBI MCLR RATE Apr'19 to Mar'22

Date	Rate (%)	Date	Rate (%)	Date	Rate (%)
15.03.2022	7.00	10.12.2020	7.00	10.09.2019	8.15
15.02.2022	7.00	10.11.2020	7.00	10.08.2019	8.25
15.01.2022	7.00	10.10.2020	7.00	10.07.2019	8.40
15.12.2021	7.00	10.09.2020	7.00	10.06.2019	8.45
15.11.2021	7.00	10.08.2020	7.00	10.05.2019	8.45
15.10.2021	7.00	10.07.2020	7.00	10.04.2019	8.50
15.09.2021	7.00	10.06.2020	7.00	10.03.2019	8.55
15.08.2021	7.00	10.05.2020	7.25		
15.07.2021	7.00	10.04.2020	7.40		
15.06.2021	7.00	10.03.2020	7.75		
15.05.2021	7.00	10.02.2020	7.85		
10.04.2021	7.00	10.01.2020	7.90		
10.03.2021	7.00	10.12.2019	7.90		
10.02.2021	7.00	10.11.2019	8.00		
10.01.2021	7.00	10.10.2019	8.05		

(6) The yield on 10-year benchmark Government Bond has also come down to 5.96% (1-year average) during FY 2020-2021 as compared to 7.40% at the beginning of FY 2019-20, while it was 6.84% at the end of FY 2021-22. *(Annexure–A)*.

(7) Different models are available for estimation of cost of equity/RoE. However, DERC has relied upon other SERCs' models for arriving at RoE.

(8) In accordance with Section 3 of the Electricity Act 2003, the Central Government has notified the Tariff Policy on 6th January, 2006. Further amendments to the Tariff Policy were notified on 31st March, 2008, 20th January, 2011 and 8th July, 2011. In exercise of powers conferred under Section 3(3) of Electricity Act, 2003, the Central Government notified the revised Tariff Policy on 28/01/2016. Tariff Policy mandates to have **appropriate return on investment.** The Tariff Policy has mandated the Distribution Licensees to procure their future requirement of power through Tariff Based Competitive Bidding. The market forces are likely to exert downward pressure on the IRR (Internal Rate of Return) of the new projects. Further, the rate of interest has also come down in recent times. Therefore, there is market dynamics which favours reduction of rate of return.

(9) Under this circumstances, the following scenario are coming before.

- ✓ Review the rate of return on equity considering the present market expectations and risk perception of power sector for new projects;
- ✓ Pre-tax RoE basis will not motivate the generators/licensees to take efforts for reducing tax burden.

MODEL FOR RATIONALISED STRUCTURE OF RETURN ON EQUITY

CAPITAL ASSET PRICING MODEL (CAPM)

(10) The CAPM describes the relationship between the expected return and risk of investing in a security. It shows that the expected return on a security is equal to the risk-free return plus a risk premium, which is based on the beta of that security.

(11) CAPM is also the most popular and widely accepted method for determining the cost of equity. It is recognised that this model will give the approx. rate of return on equity, as it is based on the assumption of data e.g. market return data, Risk Free rate taken as Government/Sovereign Bonds yield for 1 year or more will also impact the rate of return on equity.

(12) In financial market, CAPM is a well-established model for calculation of return on equity of an asset. Essentially it is based on Modern Portfolio Theory and theory of diversification of risk wherein a rational investor maximizes his portfolio's expected return for a given amount of portfolio risk, or equivalently minimize risk for a given level of expected return, by carefully choosing the proportions of various assets.

(13) The CAPM gives an approximate rate of return on equity, which can be used to take an informed decision on rate of return on equity. In order to compute the Market Risk Premium (Rm), the return expected by the market has been estimated by assuming the past returns provided by the equity market, as it mirrors the expectations of the investors (by considering the market return for 10 years from April 2012-Mar 2022). In order to compute the Risk free return, the average of daily last traded price (PX_LAST) of 10 Year G-Sec (Government Security) for the past 3 years (FY 2019-20 to FY 2021-22) is considered.

(14) CAPM is being applied to "quantify what the market should expect ROE of generating companies/ Transmission Licensees/Distribution Licensees which are either traded in the stock market or their Group Companies are Traded or not Traded and whose Tariff is being determined by the various Commissions." CAPM is just one of the models that tries to determine what the market should expect.

(15) It needs to be noted that on one hand while these companies are regulated entities these are also listed and traded in the stock markets. This would act as a useful insight on the expectation of the financial / portfolio investors in these companies, how they perceive risk in these companies and their expected return. With this data analysis and information, it would be better placed to arrive at the ROE to be allowed to these regulated companies.

(16) It is also noteworthy to mention that there are several other unregulated IPP also listed and traded in the stock market. The expected return on these companies has also been calculated and compare with the returns of the regulated companies.

(17) It is also worth emphasizing that there are a large number of power generating companies which are listed and the stock are liquid. This is helpful in terms of market data available for analytic purposes.

POWER UTILITIES CONSIDERED FOR CAPM

(18) As mentioned in the preceding paragraph, Power companies listed in the stock markets have been classified into two categories which are considered for CAPM: -

a) Regulated Power companies traded in stock markets which include

1. NTPC
2. NHPC
3. PGCIL
4. NLC
5. SJVNL
6. GIPCL

b) De-regulated Power Companies or IPP's traded in stock markets include

1. Tata Power
2. Reliance Power
3. Torrent Power
4. CESC
5. JSW Energy
6. Rattan India Power
7. Jaiprakash Power Ventures Limited

(19) In the case of private power companies, it is noted that while some of the companies are pure play generating companies, some are also in to power distribution business and some have exposure to other infrastructure business. Hence the expected returns to that extent their returns do not reflect the pure power generation business expected returns but also risk associated with infrastructure and power distribution businesses.

(20) As Delhi DISCOMs (Distribution Companies) are not listed in stock market but their Group companies are listed i.e. Reliance Power and Tata Power are listed. Therefore, the same gets appropriately factored in their CAPM.

STEPS FOR CAPM

(21) As mentioned earlier, the CAPM describes the relationship between the expected return and risk of investing in a security. It shows that the expected return on a security is equal to the risk-free return plus a risk premium, which is based on the beta of that security. CAPM can be summarized according to the following formula:

Required (or expected) Return = Risk Free Rate + (Market Return – Risk Free Rate) x Beta.

Expected Return on a Stock = Risk Free rate of return +Beta *(Risk Premium of Stocks over risk free rate of return).

This is denoted as follows:

$$E(R_i) = R_f + \beta_i(E(R_m) - R_f)$$

where:

$E(R_i)$ is the expected return on the capital asset

R_f is the risk-free rate of interest such as interest arising from government bonds

β_i(the *beta*) is the sensitivity of the expected excess asset returns to the expected excess market returns, or also $\beta_i = \frac{\mathrm{Cov}(R_i, R_m)}{\mathrm{Var}(R_m)}$,

$E(R_m)$is the expected return of the market

$E(R_m) - R_f$ is sometimes known as the market premium (the difference between the expected market rate of return and the risk-free rate of return).

$E(R_i) - R_f$ is also known as the risk premium

(22) For estimating the rate of return on equity using CAPM, following steps were followed:

STEP-1 - CALCULATE RISK FREE RATE (RF) for using 10-year govt. bond yields. Though Government securities do not have a default risk, they are still susceptible to reinvestment risk and inflation risk. To eliminate reinvestment risk, zero coupon securities have been considered. However, inflation risk is still not effectively mitigated. Due to the lack of any better measure of risk free rate, the yield on Government securities is considered as Risk Free rate. The risk free rate for India has been estimated based on yield on average yield of 10-year government bond over past 3 years (FY 2019-20 to 2021-22). The Risk free rate (Rf) based on 10-year Indian government bond (for 3 years) works out to be 6.30%, details are placed at *Annexure A.*

STEP-2 -CALCULATE HISTORICAL MARKET RETURNS (RM) for the past 10 years (April 2012 – March 2022) using BSE Sensex data to determine the Expected rate of return (Rm). The market return has been estimated based on historical data of returns of BSE Sensex over past 10 years from FY 2012-13 to FY 2021-2022.The data has been taken for 10 years including the Financial Year 2021-22 in which year there was a spurt in the Sensex considering the fact there was a dip in the Sensex during Financial Year 2020-21 due to COVID related strains. The market return for a period from FY 2012-13 to FY 2021-22 work out to around 11.59%.

a) In order to compute the Market Risk Premium (Rm), the return expected by the market has been estimated by assuming the past returns provided by the equity market, as it mirrors the expectations of the investors. For determining the market return, the returns provided by the BSE Sensex in different period ranges has been considered as a proxy for the historical returns provided by the Indian equity market.

Table 2: BSE SENSEX RETURN

Financial Year	Open	High	Low	Close	Returns
2012	15534.67	19612.18	15358.02	19426.71	25.70%
2013	19513.45	21483.74	17448.71	21170.68	8.98%
2014	21222.19	28822.37	19963.12	27499.42	29.89%
2015	27485.77	30024.74	24833.54	26117.54	-5.03%
2016	26101.5	29077.28	22494.61	26626.46	1.95%
2017	26711.15	34137.97	26447.06	34056.83	27.91%
2018	34059.99	38989.65	32483.84	36068.33	5.91%
2019	36161.8	41809.96	35287.16	41253.74	14.38%
2020	41349.36	47896.97	25638.9	47751.33	15.75%
2021	47785.28	62245.43	46160.46	58253.82	21.99%
2022	58310.09	61475.15	52260.82	54884.66	-5.78%
					11.59%

Source: https://www.bseindia.com/Indices/IndexArchiveData.html

b) The average annual growth rate of the BSE Sensex over the period of FY 2012-13–FY 2021-22 works out to around 11.59%. the same has been considered as market return for calculating ROE.

STEP 3 - BETA (β) is a measure of the volatility, or systematic risk, of a security or a portfolio in comparison to the market as a whole. For computing the Beta for CAPM formula, firstly the Beta is estimated for all major power sector companies in the business of power generation and transmission listed in the BSE. In the next step, the composite Beta based on the weighted average of market capitalization separately for Regulated entities and IPPs has been computed to estimate the business risk of the concerned companies. The Beta for various Power Sector Companies (based on daily returns) has been estimated for the FY 2012-13 to FY 2021-22 as well the Composite Beta which is calculated on the basis of Market capitalisation of various Power Sector Companies on 31/03/2022, which is tabulated below.

Table 3: BSE MARKET CAPITALISATION AS ON 31/03/2022

Sr. No.	Script Code	Company Name	Market Cap (Rs Cr.)
1.	532898	POWER GRID CORPORATION OF INDI	1,51,262.70
2.	532555	NTPC LTD.	1,30,856.51
3.	500400	TATA POWER CO.LTD.	76,320.69
4.	533148	JSW ENERGY LTD	49,140.11
5.	533098	NHPC LTD.	27,925.20
6.	532779	TORRENT POWER LTD.	23,641.54
7.	533206	SJVN LTD	10,787.29
8.	500084	CESC LTD.	9,482.64
9.	513683	NLC India Limited	8,673.41
10.	532627	JAIPRAKASH POWER VENTURES LIMI	4,653.50
11.	532939	RELIANCE POWER LTD.	4,590.17
12.	533122	RATTANINDIA POWER LTD.	2,862.27
13.	517300	GUJARAT INDUSTRIES POWER CO.LT	1,109.43

Source: https://www.bseindia.com/static/about/downloads.aspx

c) **The different betas calculated are:-**

i. Composite Beta of the Regulated Companies

ii. Composite Beta of IPPs (For Comparison with Regulated Companies)

iii. Composite Beta of Regulated companies and IPPs (consolidated)

d) **Methodology of Beta Calculation:**

i. Beta calculation: The daily stock return has been regressed against the daily Sensex returns to calculate the beta of the stock. Linear regression has been used with Sensex return as an independent variable and stock returns as the dependent variable.

ii. Calculation of return: As is the practice in financial markets, the return taken are the Logarithmic returns i.e. R = LN (Pt/ Pt-1)

iii. Time period: Data from April 2012 – March 2022 have been used.

e) Individual Beta of each stock has been calculated. Thereafter the Composite Beta of regulated Companies and Composite Beta of IPPs has been calculated. The market capitalization of the stock has been used as weight for the composite beta calculation.

STEP 4 – EXPECTED RETRUN is a return expected by an investor in a stock.

f) The expected return is calculated using the CAPM and is dependent on Beta, market risk premium and risk free rate. The below table shows the Beta and the Expected return on the stock.

g) The expected return of all Regulated Companies combined together is also found using CAPM and taking the composite beta.

h) Difference between Expected Return on a stock and Return of Equity (ROE) allowed by Regulators: The ROE to be allowed by regulators is a public information and is known to the market. This information gets factored in the stock price and the expected return gets adjusted accordingly. The expected return adjusted itself to many other factor like macro economy factors, industry factors, company specific business risk, management quality etc. Accordingly, the required (expected) return is shown in the following Table:

Table 4: Return on Equity- Regulated Companies

Sr. No.	Regulated Companies	Daily Beta	Market Cap (Rs. cr)	Daily beta x Market Cap	Composite Beta (Daily)	ROE_ Daily Beta based
1	NTPC	0.7127	1,30,857	93,266.85	0.64	9.69
2	NHPC	0.6576	27,925	18,364.93		
3	Power Grid	0.5920	1,51,263	89,541.77		
4	NLC	0.6477	8,673	5,617.74		
5	SJVN	0.4140	10,787	4,465.76		
6	GIPCL	0.6682	1,109	741.29		
	TOTAL		**3,30,615**	**2,11,998**		

Table 5: Return on Equity-Independent Power Producers (IPPs)

Sr. No.	IPPs-Unregulated Companies	Daily Beta	Market Cap (Rs. cr)	Daily beta x Market Cap	Composite Beta (Daily)	ROE_ Daily Beta based
7	TATA	1.0553	76,321	80540.37	1.00	11.59
8	Reliance Power	0.9651	4,590	4430.17		
9	TORRENT power	0.7660	23,642	18109.72		
10	CESC	0.8579	9,483	8134.81		
11	JSW	1.0638	49,140	52277.53		
12	Rattan India Power	0.8621	2,862	2467.55		
13	JPVL	0.9644	4,654	4487.69		
	TOTAL		**1,70,691**	**2,16,439.90**		

Table 6: Return on Equity -Regulated Companies and IPPs

Sr. No.	Regulated and IPPs Companies	Daily Beta	Market Cap (Rs. Cr)	Daily beta x Market Cap	Composite Beta (Daily)	ROE_ Daily Beta based
1	NTPC	0.7127	1,30,857	93,266.85	0.76	**10.34%**
2	NHPC	0.6576	27,925	18,364.93		
3	Power Grid	0.5920	1,51,263	89,541.77		
4	NLC	0.6477	8,673	5,617.74		
5	SJVN	0.4140	10,787	4,465.76		
6	GIPCL	0.6682	1,109	741.29		
7	TATA	1.0553	76,321	80,540.37		
8	RELIANCE POWER	0.9651	4,590	4,430.17		
9	TORRENT POWER	0.7660	23,642	18,109.72		
10	CESC	0.8579	9,483	8,134.81		
11	JSW	1.0638	49,140	52,277.53		
12	RATTAN INDIA POWER	0.8621	2,862	2,467.55		
13	JPVL	0.9644	4,654	4,487.69		
	TOTAL		**5,01,305**	**4,57,723**		

i) Daily Rate of RoE worked out at 10.34 % by CAPM by considering the Daily Composite Beta of Regulated Companies and IPPs. Accordingly, RoE is rounded off to the nearest whole number i.e., Rate of RoE as **10%.**

PROPOSAL ON RETRUN ON EQUITY

(23) In view of the above analysis, the rate of Return on Equity is rationalised as follows:

- **GENERATING ENTITY = 10%** on post tax basis.
- **TRANSMISSION LICENSEE = 10%** on post tax basis.
- **DISTRIBUTION LICENSEE (*WHEELING AND RETAIL BUSINESS) = 10.00%*** *on post tax basis**.***

Annexure-A

G-Sec Rate for FY 2019-20

Date	PX_LAST	Date	PX_LAST	Date	PX_LAST	Date	PX_LAST
02-04-2019	7.27	03-07-2019	6.83	01-10-2019	6.66	01-01-2020	6.51
03-04-2019	7.27	04-07-2019	6.75	03-10-2019	6.61	02-01-2020	6.50
04-04-2019	7.35	05-07-2019	6.70	04-10-2019	6.69	03-01-2020	6.52
05-04-2019	7.35	08-07-2019	6.57	07-10-2019	6.68	06-01-2020	6.57
08-04-2019	7.40	09-07-2019	6.59	09-10-2019	6.45	07-01-2020	6.55
09-04-2019	7.38	10-07-2019	6.54	10-10-2019	6.46	08-01-2020	6.56
10-04-2019	7.37	11-07-2019	6.49	11-10-2019	6.51	09-01-2020	6.53
11-04-2019	7.37	12-07-2019	6.49	14-10-2019	6.48	10-01-2020	6.59
12-04-2019	7.41	15-07-2019	6.43	15-10-2019	6.49	13-01-2020	6.60
15-04-2019	7.39	16-07-2019	6.33	16-10-2019	6.47	14-01-2020	6.67
16-04-2019	7.39	17-07-2019	6.35	17-10-2019	6.50	15-01-2020	6.63
18-04-2019	7.42	18-07-2019	6.39	18-10-2019	6.52	16-01-2020	6.60
22-04-2019	7.48	19-07-2019	6.36	22-10-2019	6.54	17-01-2020	6.63
23-04-2019	7.47	22-07-2019	6.42	23-10-2019	6.51	20-01-2020	6.64
24-04-2019	7.43	23-07-2019	6.46	24-10-2019	6.50	21-01-2020	6.64
25-04-2019	7.45	24-07-2019	6.44	25-10-2019	6.50	22-01-2020	6.64
26-04-2019	7.41	25-07-2019	6.51	29-10-2019	6.52	23-01-2020	6.60
30-04-2019	7.41	26-07-2019	6.52	30-10-2019	6.50	24-01-2020	6.58
02-05-2019	7.39	29-07-2019	6.41	31-10-2019	6.45	27-01-2020	6.56
03-05-2019	7.39	30-07-2019	6.39	01-11-2019	6.45	28-01-2020	6.58
06-05-2019	7.39	31-07-2019	6.37	04-11-2019	6.48	29-01-2020	6.57
07-05-2019	7.38	01-08-2019	6.42	05-11-2019	6.52	30-01-2020	6.56
08-05-2019	7.38	02-08-2019	6.35	06-11-2019	6.49	31-01-2020	6.60
09-05-2019	7.40	05-08-2019	6.39	07-11-2019	6.51	03-02-2020	6.51
10-05-2019	7.41	06-08-2019	6.34	08-11-2019	6.56	04-02-2020	6.51
13-05-2019	7.39	07-08-2019	6.37	11-11-2019	6.57	05-02-2020	6.51
14-05-2019	7.38	08-08-2019	6.40	13-11-2019	6.53	06-02-2020	6.45
15-05-2019	7.38	09-08-2019	6.50	14-11-2019	6.52	07-02-2020	6.44
16-05-2019	7.38	13-08-2019	6.53	15-11-2019	6.52	10-02-2020	6.44
17-05-2019	7.36	14-08-2019	6.63	18-11-2019	6.48	11-02-2020	6.47
20-05-2019	7.29	16-08-2019	6.55	19-11-2019	6.48	12-02-2020	6.48
21-05-2019	7.30	19-08-2019	6.59	20-11-2019	6.46	13-02-2020	6.43
22-05-2019	7.26	20-08-2019	6.59	21-11-2019	6.51	14-02-2020	6.37
23-05-2019	7.24	21-08-2019	6.57	22-11-2019	6.50	17-02-2020	6.39
24-05-2019	7.23	22-08-2019	6.56	25-11-2019	6.47	18-02-2020	6.39
27-05-2019	7.17	23-08-2019	6.57	26-11-2019	6.48	20-02-2020	6.42
28-05-2019	7.15	26-08-2019	6.48	27-11-2019	6.47	24-02-2020	6.37
29-05-2019	7.13	27-08-2019	6.53	28-11-2019	6.46	25-02-2020	6.33
30-05-2019	7.14	28-08-2019	6.57	29-11-2019	6.47	26-02-2020	6.35
31-05-2019	7.03	29-08-2019	6.55	02-12-2019	6.49	27-02-2020	6.38
03-06-2019	6.98	30-08-2019	6.56	03-12-2019	6.47	28-02-2020	6.37
04-06-2019	7.02	03-09-2019	6.52	04-12-2019	6.47	02-03-2020	6.35
06-06-2019	6.93	04-09-2019	6.55	05-12-2019	6.61	03-03-2020	6.34
07-06-2019	6.97	05-09-2019	6.58	06-12-2019	6.67	04-03-2020	6.23
10-06-2019	7.08	06-09-2019	6.60	09-12-2019	6.67	05-03-2020	6.24
11-06-2019	7.04	09-09-2019	6.58	10-12-2019	6.71	06-03-2020	6.18
12-06-2019	7.01	11-09-2019	6.68	11-12-2019	6.76	09-03-2020	6.07
13-06-2019	7.01	12-09-2019	6.67	12-12-2019	6.78	11-03-2020	6.13
14-06-2019	6.92	13-09-2019	6.64	13-12-2019	6.79	12-03-2020	6.24
17-06-2019	6.93	16-09-2019	6.72	16-12-2019	6.80	13-03-2020	6.32
18-06-2019	6.81	17-09-2019	6.73	17-12-2019	6.75	16-03-2020	6.21
19-06-2019	6.84	18-09-2019	6.62	18-12-2019	6.71	17-03-2020	6.26
20-06-2019	6.79	19-09-2019	6.64	19-12-2019	6.75	18-03-2020	6.30
21-06-2019	6.86	20-09-2019	6.79	20-12-2019	6.60	19-03-2020	6.41
24-06-2019	6.85	23-09-2019	6.75	23-12-2019	6.57	20-03-2020	6.26
25-06-2019	6.88	24-09-2019	6.78	24-12-2019	6.58	23-03-2020	6.38
26-06-2019	6.93	25-09-2019	6.76	26-12-2019	6.58	24-03-2020	6.30
27-06-2019	6.90	26-09-2019	6.72	27-12-2019	6.51	26-03-2020	6.22
28-06-2019	6.88	27-09-2019	6.74	30-12-2019	6.55	27-03-2020	6.14
01-07-2019	6.88	30-09-2019	6.70	31-12-2019	6.56	30-03-2020	6.21
02-07-2019	6.84					31-03-2020	6.14

G-Sec Rate for FY 2020-21

Date	PX_LAST	Date	PX_LAST	Date	PX_LAST	Date	PX_LAST
03-04-2020	6.31	07-07-2020	5.79	01-10-2020	6.00	01-01-2021	5.88
07-04-2020	6.42	08-07-2020	5.78	05-10-2020	6.00	04-01-2021	5.83
08-04-2020	6.44	09-07-2020	5.77	06-10-2020	6.03	05-01-2021	5.82
09-04-2020	6.49	10-07-2020	5.76	07-10-2020	6.01	06-01-2021	5.85
13-04-2020	6.50	13-07-2020	5.79	08-10-2020	6.02	07-01-2021	5.86
15-04-2020	6.43	14-07-2020	5.83	09-10-2020	5.94	08-01-2021	5.88
16-04-2020	6.44	15-07-2020	5.81	12-10-2020	5.90	11-01-2021	5.92
17-04-2020	6.35	16-07-2020	5.81	13-10-2020	5.90	12-01-2021	5.92
20-04-2020	6.21	17-07-2020	5.81	14-10-2020	5.90	13-01-2021	5.91
21-04-2020	6.21	20-07-2020	5.80	15-10-2020	5.90	14-01-2021	5.89
22-04-2020	6.22	21-07-2020	5.83	16-10-2020	5.94	15-01-2021	5.95
23-04-2020	6.05	22-07-2020	5.81	19-10-2020	5.94	18-01-2021	5.91
24-04-2020	6.17	23-07-2020	5.81	20-10-2020	5.93	19-01-2021	5.91
27-04-2020	6.15	24-07-2020	5.83	21-10-2020	5.91	20-01-2021	5.92
28-04-2020	6.13	27-07-2020	5.86	22-10-2020	5.91	21-01-2021	5.93
29-04-2020	6.12	28-07-2020	5.85	23-10-2020	5.84	22-01-2021	5.91
30-04-2020	6.11	29-07-2020	5.84	26-10-2020	5.84	25-01-2021	5.92
04-05-2020	6.08	30-07-2020	5.83	27-10-2020	5.85	27-01-2021	5.91
05-05-2020	6.07	31-07-2020	5.84	28-10-2020	5.86	28-01-2021	5.89
06-05-2020	6.03	03-08-2020	5.84	29-10-2020	5.88	29-01-2021	5.91
08-05-2020	5.97	04-08-2020	5.77	02-11-2020	5.89	01-02-2021	6.06
11-05-2020	6.17	05-08-2020	5.77	03-11-2020	5.90	02-02-2021	6.13
12-05-2020	6.17	06-08-2020	5.81	04-11-2020	5.89	03-02-2021	6.08
13-05-2020	5.80	07-08-2020	5.84	05-11-2020	5.86	04-02-2021	6.07
14-05-2020	5.78	10-08-2020	5.86	06-11-2020	5.87	05-02-2021	6.07
15-05-2020	5.78	11-08-2020	5.87	09-11-2020	5.88	08-02-2021	6.04
18-05-2020	5.77	12-08-2020	5.85	10-11-2020	5.92	09-02-2021	6.07
19-05-2020	5.78	13-08-2020	5.87	11-11-2020	5.91	10-02-2021	6.01
20-05-2020	5.78	14-08-2020	5.95	12-11-2020	5.91	11-02-2021	5.96
21-05-2020	5.78	17-08-2020	5.95	13-11-2020	5.88	12-02-2021	5.99
22-05-2020	5.75	18-08-2020	5.96	17-11-2020	5.88	15-02-2021	6.02
26-05-2020	5.75	19-08-2020	5.97	18-11-2020	5.88	16-02-2021	6.02
27-05-2020	5.76	20-08-2020	5.95	19-11-2020	5.88	17-02-2021	6.03
28-05-2020	5.75	21-08-2020	6.09	20-11-2020	5.88	18-02-2021	6.14
29-05-2020	5.76	24-08-2020	6.17	23-11-2020	5.90	22-02-2021	6.20
01-06-2020	5.78	25-08-2020	6.13	24-11-2020	5.88	23-02-2021	6.17
02-06-2020	5.76	26-08-2020	6.19	25-11-2020	5.89	24-02-2021	6.15
03-06-2020	5.77	27-08-2020	6.15	26-11-2020	5.87	25-02-2021	6.18
04-06-2020	5.76	28-08-2020	6.14	27-11-2020	5.91	26-02-2021	6.23
05-06-2020	5.77	31-08-2020	6.12	01-12-2020	5.85	01-03-2021	6.21
08-06-2020	5.81	01-09-2020	5.94	02-12-2020	5.84	02-03-2021	6.23
09-06-2020	5.78	02-09-2020	5.92	03-12-2020	5.85	03-03-2021	6.23
10-06-2020	5.77	03-09-2020	5.90	04-12-2020	5.82	04-03-2021	6.22
11-06-2020	5.78	04-09-2020	5.93	07-12-2020	5.84	05-03-2021	6.23
12-06-2020	5.80	07-09-2020	5.99	08-12-2020	5.86	08-03-2021	6.22
15-06-2020	5.79	08-09-2020	6.06	09-12-2020	5.83	09-03-2021	6.21
16-06-2020	5.85	09-09-2020	5.99	10-12-2020	5.85	10-03-2021	6.25
17-06-2020	5.84	10-09-2020	6.05	11-12-2020	5.90	12-03-2021	6.23
18-06-2020	5.82	11-09-2020	6.04	14-12-2020	5.89	15-03-2021	6.20
19-06-2020	5.85	14-09-2020	6.03	15-12-2020	5.89	16-03-2021	6.18
22-06-2020	5.88	15-09-2020	6.03	16-12-2020	5.89	17-03-2021	6.19
23-06-2020	5.90	16-09-2020	5.99	17-12-2020	5.89	18-03-2021	6.20
24-06-2020	5.92	17-09-2020	6.03	18-12-2020	5.91	19-03-2021	6.19
25-06-2020	5.89	18-09-2020	6.02	21-12-2020	5.92	22-03-2021	6.18
26-06-2020	5.92	21-09-2020	6.02	22-12-2020	5.91	23-03-2021	6.14
29-06-2020	5.90	22-09-2020	6.01	23-12-2020	5.91	24-03-2021	6.15
30-06-2020	5.89	23-09-2020	5.99	24-12-2020	5.89	25-03-2021	6.13
01-07-2020	5.84	24-09-2020	5.99	28-12-2020	5.88	26-03-2021	6.12
02-07-2020	5.84	25-09-2020	6.04	29-12-2020	5.89	30-03-2021	6.15
03-07-2020	5.85	28-09-2020	6.06	30-12-2020	5.87	31-03-2021	6.17
06-07-2020	5.84	29-09-2020	6.04	31-12-2020	5.87		
		30-09-2020	6.01				

G-Sec Rate for FY 2021-22

Date	PX_LAST	Date	PX_LAST	Date	PX_LAST	Date	PX_LAST
05-04-2021	6.12	07-07-2021	6.17	07-10-2021	6.27	07-01-2022	6.54
06-04-2021	6.12	08-07-2021	6.12	08-10-2021	6.32	10-01-2022	6.59
07-04-2021	6.08	09-07-2021	6.19	11-10-2021	6.35	11-01-2022	6.57
08-04-2021	6.03	12-07-2021	6.22	12-10-2021	6.33	12-01-2022	6.59
09-04-2021	6.02	13-07-2021	6.20	13-10-2021	6.32	13-01-2022	6.56
12-04-2021	6.01	14-07-2021	6.20	14-10-2021	6.33	14-01-2022	6.58
15-04-2021	6.13	15-07-2021	6.19	18-10-2021	6.39	17-01-2022	6.64
16-04-2021	6.09	16-07-2021	6.21	20-10-2021	6.37	18-01-2022	6.61
19-04-2021	6.08	19-07-2021	6.19	21-10-2021	6.34	19-01-2022	6.60
20-04-2021	6.07	20-07-2021	6.19	22-10-2021	6.36	20-01-2022	6.61
22-04-2021	6.05	22-07-2021	6.20	25-10-2021	6.35	21-01-2022	6.62
23-04-2021	6.04	23-07-2021	6.23	26-10-2021	6.36	24-01-2022	6.65
26-04-2021	6.04	26-07-2021	6.17	27-10-2021	6.34	25-01-2022	6.66
27-04-2021	6.05	27-07-2021	6.18	28-10-2021	6.37	26-01-2022	0.00
28-04-2021	6.05	28-07-2021	6.19	29-10-2021	6.39	27-01-2022	6.75
29-04-2021	6.06	29-07-2021	6.20	01-11-2021	6.39	28-01-2022	6.77
30-04-2021	6.03	30-07-2021	6.20	02-11-2021	6.36	30-01-2022	6.78
03-05-2021	6.00	02-08-2021	6.20	03-11-2021	6.36	31-01-2022	6.68
04-05-2021	6.02	03-08-2021	6.20	08-11-2021	6.30	01-02-2022	6.83
05-05-2021	5.98	04-08-2021	6.20	09-11-2021	6.29	02-02-2022	6.88
06-05-2021	5.97	05-08-2021	6.21	10-11-2021	6.34	03-02-2022	6.89
07-05-2021	6.02	06-08-2021	6.23	11-11-2021	6.37	04-02-2022	6.88
10-05-2021	6.01	09-08-2021	6.22	12-11-2021	6.37	07-02-2022	0.00
11-05-2021	6.01	10-08-2021	6.23	15-11-2021	6.34	08-02-2022	6.81
12-05-2021	6.01	11-08-2021	6.24	16-11-2021	6.36	09-02-2022	6.80
14-05-2021	5.99	12-08-2021	6.23	17-11-2021	6.36	10-02-2022	6.72
17-05-2021	5.97	13-08-2021	6.24	18-11-2021	6.35	11-02-2022	6.70
18-05-2021	5.98	17-08-2021	6.24	19-11-2021	0.00	14-02-2022	6.67
19-05-2021	5.98	18-08-2021	6.23	22-11-2021	6.35	15-02-2022	6.67
20-05-2021	5.97	20-08-2021	6.23	23-11-2021	6.36	16-02-2022	6.69
21-05-2021	5.98	23-08-2021	6.24	24-11-2021	6.37	17-02-2022	6.67
24-05-2021	5.97	24-08-2021	6.25	25-11-2021	6.37	18-02-2022	6.66
25-05-2021	5.97	25-08-2021	6.24	26-11-2021	6.33	21-02-2022	6.69
27-05-2021	5.99	26-08-2021	6.25	29-11-2021	6.34	22-02-2022	6.75
28-05-2021	6.00	27-08-2021	6.26	30-11-2021	6.33	23-02-2022	6.74
31-05-2021	6.02	30-08-2021	6.23	01-12-2021	6.35	24-02-2022	6.76
01-06-2021	6.02	31-08-2021	6.22	02-12-2021	6.35	25-02-2022	6.75
02-06-2021	6.01	01-09-2021	6.20	03-12-2021	6.37	28-02-2022	6.77
03-06-2021	6.00	02-09-2021	6.17	06-12-2021	6.36	01-03-2022	0.00
04-06-2021	6.03	03-09-2021	6.16	07-12-2021	6.39	02-03-2022	6.81
07-06-2021	6.02	06-09-2021	6.17	08-12-2021	6.35	03-03-2022	6.83
08-06-2021	6.01	07-09-2021	6.20	09-12-2021	6.35	04-03-2022	6.81
09-06-2021	6.02	08-09-2021	6.19	10-12-2021	6.37	07-03-2022	6.89
10-06-2021	6.02	09-09-2021	6.18	13-12-2021	6.37	08-03-2022	6.89
11-06-2021	6.01	13-09-2021	6.19	14-12-2021	6.36	09-03-2022	6.84
14-06-2021	6.00	14-09-2021	6.20	15-12-2021	6.36	10-03-2022	6.81
15-06-2021	6.04	15-09-2021	6.16	16-12-2021	6.37	11-03-2022	6.86
16-06-2021	6.05	16-09-2021	6.17	17-12-2021	6.41	14-03-2022	6.85
17-06-2021	6.02	17-09-2021	6.17	20-12-2021	6.44	15-03-2022	6.82
18-06-2021	6.01	20-09-2021	6.14	21-12-2021	6.47	16-03-2022	6.79
21-06-2021	6.03	21-09-2021	6.12	22-12-2021	6.46	17-03-2022	6.78
22-06-2021	6.03	22-09-2021	6.14	23-12-2021	6.46	18-03-2022	0.00
23-06-2021	6.02	23-09-2021	6.14	24-12-2021	6.46	21-03-2022	6.78
24-06-2021	6.01	24-09-2021	6.18	27-12-2021	6.46	22-03-2022	6.83
25-06-2021	6.03	27-09-2021	6.21	28-12-2021	6.48	23-03-2022	6.83
28-06-2021	6.06	28-09-2021	6.23	29-12-2021	6.46	24-03-2022	6.83
29-06-2021	6.04	29-09-2021	6.21	30-12-2021	6.47	25-03-2022	6.81
30-06-2021	6.05	30-09-2021	6.22	31-12-2021	6.45	28-03-2022	6.84
01-07-2021	6.04	01-10-2021	6.25	03-01-2022	6.46	29-03-2022	6.82
02-07-2021	6.07	04-10-2021	6.25	04-01-2022	6.52	31-03-2022	6.84
05-07-2021	6.09	05-10-2021	6.26	05-01-2022	6.51		
06-07-2021	6.18	06-10-2021	6.28	06-01-2022	6.53		

Annexure-B

GUJARAT ELECTRICITY REGULATORY COMMISSION, GANDHINAGAR

Draft Gujarat Electricity Regulatory Commission (Multi Year Tariff) Regulations, 2021

Contents

36.4. Any expenditure incurred or projected to be incurred on or after April 1, 2021, as may be admitted by the Commission as additional capital expenditure for determination of Tariff, and renovation and modernisation expenditure for life extension, shall be serviced in the manner specified in this Regulation.

37. Return on Equity

37.1. Return on equity shall be computed on the paid up equity capital determined in accordance with Regulation 36 on the assets put to use, for the Generating Company, Transmission Licensee, SLDC and Distribution Licensee as the case may be and shall be allowed subjected to a ceiling of 14% for Generating Companies, including hydro generation stations above 25 MW, Transmission Licensee, SLDC and Distribution Licensee:

Provided that Return on Equity shall be allowed in two parts viz. Base Return on Equity, and Additional Return on Equity linked to actual performance:

Provided further that Additional Return on Equity shall be allowed at time of truing up for respective year based on actual performance substantiated by documentary evidence, after prudence check by the Commission:

Provided further that for the purpose of truing up for the Generating Company, Transmission Licensee, SLDC and Distribution Licensee, return on equity shall be allowed from the COD on pro-rata basis based on documentary evidence provided for the assets put to use during the year.

However, in case of multiple schemes whereby the CoD of different scheme may be spread throughout the year, at the discretion of the Commission, Return on Equity shall be allowed on the amount of allowed equity capital for the assets put to use at the commencement of each financial year and on 50% of equity capital portion of the allowable capital cost for the investments put to use during the financial year.

Provided further that assets funded by consumer contributions, capital subsidies/Govt. grants shall not form part of the capital base for the purpose of calculation of Return on Equity.

37.2. The premium if any, raised by the Generating Company or the Transmission Licensee or SLDC or Distribution Licensee while issuing share capital and investment of internal resources created out of free reserve, if any, shall also be reckoned as paid up capital for the purpose of computing return on equity, provided such premium amount and internal resources are actually utilised for meeting capital expenditure, and are within the ceiling of 30% of capital cost approved by the Commission.

37.3. Base Return on Equity for the Generating Company, Transmission Licensee and SLDC as the case may be, shall be allowed on the equity capital determined in accordance with Regulation 36 for the assets put to use, at the rate of 13 per cent per annum in Indian Rupee terms, and for Distribution

Licensee, the base Return on Equity shall be allowed on the amount of equity capital determined in accordance with Regulation 36 for the assets put to use at the rate of 13.5 per cent per annum in Indian Rupee terms :

37.4. The Base Return on Equity shall be computed in the following manner:

a) Return at the allowable rate as per this Regulation, applied on the amount of equity capital at the commencement of the Year; plus

b) Return at the allowable rate as per this Regulation, applied on 50 per cent of the equity capital portion of the allowable capital cost, for the investments put to use in Generation Business or Transmission Business or Distribution Business or SLDC, for such Year:

Provided that Base Return on Equity in respect of additional capitalization after cut-off date and beyond the original scope excluding additional capitalization due to Change in Law or revised emission standards, shall be computed at the weighted average rate of interest on actual loan portfolio of the generating station or the transmission system.

Provided at the time of true-up, Base Return on Equity to be calculated in accordance with the proviso of 37.1 of this Regulation.

37.5. In case of a new project, the rate of Return on Equity shall be reduced by 1.00% for such period as may be decided by the Commission, if the generating station or transmission system is found to be declared under commercial operation without commissioning of any of the Restricted Governor Mode Operation (RGMO) or Free Governor Mode Operation (FGMO), data telemetry, communication system up to load dispatch centre or protection system based on the report submitted by the SLDC.

37.6. In case of existing generating station, as and when any of the requirements under Regulation 37.5 are found lacking based on the report submitted by the SLDC, rate of Return on Equity shall be reduced by 1.00% per year at the time of true-up, for the period for which the deficiency continues.

37.7. In case of a thermal generating Unit, with effect from April 1, 2021, at the time of true-up:

(a) an additional rate of Return on Equity of 0.25% shall be allowed for every incremental ramp rate of 0.10% per minute achieved over and above the ramp rate of 1% per minute, subject to ceiling of additional rate of Return on Equity of 1.00%, for the year in which such ramp rate is achieved.

Provided that the additional rate of Return on Equity shall be allowed on pro-rata basis for incremental ramp rate of more than 0.10% per minute.

37.8. In case of Transmission Licensee, an additional rate of Return on Equity shall be allowed on Transmission Availability, at time of truing up as per the following schedule:

(a) For every 0.50% over-achievement in Transmission Availability up to Transmission Availability of 99.00% for AC System and 96.50% for HVDC bi-pole links and HVDC back-to-back stations, rate of return shall be increased by 0.50%;

(b) For every 0.25% over-achievement in Transmission Availability above 99.00% for AC System and 96.50% for HVDC bi-pole links and HVDC back-to-back stations, rate of return shall be increased by 0.50%, subject to ceiling of additional rate of Return on Equity of 1.00%;

Provided that the additional rate of Return on Equity shall be allowed on pro-rata basis for incremental Availability higher than Target Availability:

Provided further that Target Availability for additional rate of Return on Equity shall be as per Regulation 70.

37.9. In case of Distribution Wires Business, an additional rate of Return on Equity shall be allowed on Wires Availability at the time of true-up as per the following schedule:

(a) The target Wires Availability for recovery of base rate of return on equity shall be 95 percent for Distribution Licensees;

(b) For every 0.50% over-achievement in Wires Availability, rate of return shall be increased by 0.25%, subject to ceiling of additional rate of Return on Equity of 0.50%;

(c) Wires Availability shall be computed in accordance with the following formula:

Wires Availability = (1- (SAIDI / 8760)) x 100;

Provided that the System Average Interruption Duration Index (SAIDI) shall be calculated in accordance with the definition specified in Gujarat Electricity Regulatory Commission (Standards of Performance of Distribution Licensees, Period for Giving Supply and Determination of Compensation) Regulations, 2005, as amended from time to time.

37.10. In case of Retail Supply Business, an additional rate of Return on Equity shall be allowed at the time of true-up, as per the following schedule:

(a) If overall collection efficiency for the year is above 99.00%, then rate of return shall be increased by 0.50%;

(b) If overall collection efficiency for the year is below 99.00%, for every 0.50% improvement in the overall collection efficiency, rate of return shall be increased by 0.25%, subject to ceiling of additional rate of Return on Equity of 0.50%.

GUJARAT ELECTRICITY REGULATORY COMMISSION, GANDHINAGAR

37.11. In case of SLDC, an additional rate of Return on Equity shall be allowed at the time of true-up, as per the following schedule:

(a) The target Availability of SCADA System will be 98% and for every 1% over-achievement in Availability, rate of return shall be increased by 0.25%, subject to ceiling of additional rate of Return on Equity of 0.50%;

(b) The target Availability of Website Availability will be 98% and for every 1% over-achievement in Availability, rate of return shall be increased by 0.25%, subject to ceiling of additional rate of Return on Equity of 0.50%.

38. Interest and finance charges

38.1. The loans arrived at in the manner indicated in Regulation 36 on the assets put to use, shall be considered as gross normative loan for calculation of interest on loan:

Provided that interest and finance charges on capital works in progress shall be excluded:

Provided further that in case of de-capitalisation or retirement or replacement of assets, the loan capital approved as mentioned above, shall be reduced to the extent of outstanding loan component of the original cost of the de-capitalised or retired or replaced assets, based on documentary evidence.

38.2. The normative loan outstanding as on April 1, 2021, shall be worked out by deducting the cumulative repayment as admitted by the Commission up to March 31, 2021, from the gross normative loan.

38.3. The repayment for the year during the Control Period from FY 2021-22 to FY 2025-26 shall be deemed to be equal to the depreciation allowed for that year.

38.4. Notwithstanding any moratorium period availed by the Generating Company or the Transmission Licensee or SLDC or the Distribution Licensee, as the case may be, the repayment of loan shall be considered from the first year of commercial operation of the project and shall be equal to the annual depreciation allowed.

38.5. The rate of interest shall be the weighted average rate of interest calculated on the basis of the actual loan portfolio at the beginning of each year applicable to the Generating Company or the Transmission Licensee or SLDC or the Distribution Licensee:

Provided that at the time of truing up, the weighted average rate of interest calculated on the basis of the actual loan portfolio during the year applicable to the Generating Company or the Transmission Licensee or SLDC or the Distribution Licensee shall be considered as the rate of interest:

Draft GERC (Multi Year Tariff) Regulations, 2021 Page 57 of 166

HARYANA ELECTRICITY REGULATORY COMMISSION

BAYS 33-36, SECTOR - 4, PANCHKULA - 134112, HARYANA

Notification

The 31st October, 2019

Regulation No. HERC/46/2019: - The Haryana Electricity Regulatory Commission, in exercise of the powers conferred on it by section 181 of the Electricity Act 2003 (Act 36 of 2003) and all other powers enabling it in this behalf, after previous publication, hereby frames the following Regulations: -

PART - I PRELIMINARY

1. SHORT TITLE, COMMENCEMENT, EXTENT, AND INTERPRETATION

1.1 These Regulations shall be called the Haryana Electricity Regulatory Commission (Terms and Conditions for Determination of Tariff for Generation, Transmission, Wheeling and Distribution & Retail Supply under Multi Year Tariff Framework) Regulations, 2019.

1.2 These Regulations shall come into force with effect from 1st April, 2020 and shall, unless otherwise directed by the Commission, remain in force up to 31st March, 2025 for the duration of second control period.

1.3 These Regulations shall extend to the whole of the State of Haryana.

2. SCOPE OF APPLICATION

2.1 These Regulations shall be applicable to all existing and future Generating Companies, Transmission Licensees / SLDC and Distribution Licensees and their successors/assignees, if any, and shall apply where the Commission determines: -

i) tariff for supply of electricity by a generating company to a distribution licensee under section 62 and 64 of the Act;

ii) tariff for intrastate transmission of electricity by a transmission licensee to a distribution licensee or to open access consumers under section 62 and 64 of the Act;

iii) State Load Dispatch Centre (SLDC) fees and charges under section 32(3) of the Act;

iv) tariff for wheeling, distribution & retail supply of electricity by a distribution licensee under Section 62 and 64 of the Act;

v) tariff in all other cases where the Commission has the jurisdiction for tariff determination; and

vi) Cross-subsidy Surcharge in addition to the charges for wheeling

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30%) of the original cost of the de-capitalised or retired or replaced asset, and the debt capital approved as mentioned above, shall be reduced to the extent of actual debt component, based on documentary evidence, of the original cost of the decapitalised or retired or replaced asset:

In case of Generating Station or a transmission system or distribution system, which has completed its useful life as on or after 1.4.2020, the accumulated depreciation as on the completion of the useful life less cumulative repayment of loan shall be utilized for reduction of the equity and depreciation admissible after the completion of useful life and the balance depreciation, if any, shall be first adjusted against the repayment of balance outstanding loan and thereafter shall be utilized for reduction of equity.

20. RETURN ON EQUITY

20.1 The rate of return on equity shall be decided by the Commission keeping in view the incentives and penalties and on the basis of overall performance subject to a ceiling of 14% provided that the ROE shall not be less than the net amount of incentive and penalty.

20.2 Return on equity shall be allowed on equity employed in assets in use considering the following and subject to Regulation 20.1 above:

i. Equity employed in accordance with Regulation 19.1 and 19.2 on assets (in use) commissioned prior to the beginning of the year; plus

ii. 50% of equity capital portion of the allowable capital cost for the assets put to use during the year.

Provided that for the purpose of truing up, return on equity shall be allowed from the COD on pro-rata basis based on documentary evidence provided for the assets put to commercial operation during the year.

Provided further that assets funded by consumer contributions, capital subsidies/Govt. grants shall not form part of the capital base for the purpose of calculation of Return on Equity

20.3 Return on equity invested in work in progress shall be allowed from the actual date of commercial operation of the assets.

20.4 There shall be no Return on Equity for the equity component above 30%.

MAHARASHTRA ELECTRICITY REGULATORY COMMISSION (MULTI YEAR TARIFF) REGULATIONS, 2019

28.3 In case of existing assets, the balance depreciable value as on April 1, 2020, shall be worked out by deducting the cumulative depreciation as admitted by the Commission up to March 31, 2020, from the gross depreciable value of the assets:

Provided that depreciation shall be chargeable from the first year of commercial operation.

28.4 In case of projected commercial operation of the assets for part of the year, depreciation shall be computed based on the average of opening and closing value of assets.

28.5 Depreciation shall be re-computed for assets capitalised at the time of Truing-up along with the Mid-term Review or at the end of the Control Period, based on documentary evidence of assets capitalised by the Petitioner, subject to the prudence check of the Commission, such that the depreciation is allowed proportionately from the date of capitalisation.

28.6 The Generating Company or Licensee or SLDC shall submit the depreciation computations separately for assets added upto March 31, 2020 and assets added on or after April 1, 2020.

29 Return on Equity

29.1 Return on Equity for the Generating Company, Transmission Licensee, Distribution Wires Business and MSLDC shall be allowed on the equity capital determined in accordance with Regulation 27 for the assets put to use, at the rate of up to 15.5 per cent per annum in Indian Rupee terms, and for the Retail Supply Business, Return on Equity shall be allowed on the amount of equity capital determined in accordance with Regulation 27 at the rate of up to 17.5 per cent per annum in Indian Rupee terms:

Provided that Return on Equity shall be allowed in two parts viz. Base Return on Equity, and Additional Return on Equity linked to actual performance:

Provided further that Additional Return on Equity shall be allowed at time of truing up for respective year based on actual performance, after prudence check of the Commission:

29.2 Base Return on Equity for the Generating Company, Transmission Licensee, Distribution Wires Business and MSLDC shall be allowed on the equity capital determined in accordance with Regulation 27 for the assets put to use, at the rate of 14 per cent per annum in Indian Rupee terms, and for the Retail Supply Business, Return on Equity shall be allowed on the amount of equity capital determined in accordance with Regulation 27 at the rate of 15.5 per cent per annum in Indian Rupee terms:

Provided that in case the Generation Company or Licensee or MSLDC claims Return on Equity at a rate lower than the normative rate specified above for any particular year, then such claim for lower Return on Equity shall be unconditional:

Provided further that such claim for lower Return on Equity shall be allowed subject to the condition that the reduction in Return on Equity shall be foregone permanently for that year and shall not be allowed to be recouped at the time of Mid-Term Review or true-up as applicable.

29.3 The Base Return on Equity shall be computed in the following manner:

(a) Return at the allowable rate as per this Regulation, applied on the amount of equity capital at the commencement of the Year; plus

(b) Return at the allowable rate as per this Regulation, applied on 50 per cent of the equity capital portion of the allowable capital cost, for the investments put to use in Generation Business or Transmission Business or Distribution Business or MSLDC, for such Year:

Provided that Base Return on Equity in respect of additional capitalization after cut-off date beyond the original scope excluding additional capitalization due to Change in Law or revised emission standards, shall be computed at the weighted average rate of interest on actual loan portfolio of the generating station or the transmission system.

29.4 In case of a new project, the rate of Return on Equity shall be reduced by 1.00% for such period as may be decided by the Commission, if the generating station or transmission system is found to be declared under commercial operation without commissioning of any of the Restricted Governor Mode Operation (RGMO) or Free Governor Mode Operation (FGMO), data telemetry, communication system up to load dispatch centre or protection system based on the report submitted by the SLDC.

29.5 In case of existing generating station, as and when any of the requirements under Regulation 29.4 are found lacking based on the report submitted by the SLDC, rate of Return on Equity shall be reduced by 1.00% at the time of true-up, for the period for which the deficiency continues.

29.6 In case of a thermal generating Unit, with effect from 1.4.2020, at the time of true-up:

a) an additional rate of Return on Equity of 0.25% shall be allowed for every incremental ramp rate of 0.10% per minute achieved over and above the ramp rate of 1% per minute, subject to ceiling of additional rate of Return on Equity of 0.50%, for the year in which such ramp rate is achieved:

Provided that the additional rate of Return on Equity shall be allowed on pro-rata basis for incremental ramp rate of more than 0.10% per minute.

b) an additional rate of Return on Equity shall be allowed as per the following schedule:

i. 0.50% for Unit that achieves Mean Time Between Failure (MTBF) of at least 45 days;

ii. 0.75% for Unit that achieves Mean Time Between Failure (MTBF) of at least 90 days;

iii. 1.00% for Unit that achieves Mean Time Between Failure (MTBF) of at least 120 days:

Provided that the Mean Time Between Failure (MTBF) shall be computed as provided in **Annexure-III** to these Regulations:

Provided further that the equity base for the respective Unit shall be considered in proportion to the installed capacity of the generation station, in case the tariff is determined for the generation station as a whole.

29.7 In case of Transmission, an additional rate of Return on Equity shall be allowed on Transmission Availability, at time of truing up as per the following schedule:

a) For every 0.50% over-achievement in Transmission Availability up to Transmission Availability of 99.50% for AC System and 96.50% for HVDC bi-pole links and HVDC back-to-back stations, rate of return shall be increased by 0.75%;

b) For every 0.25% over-achievement in Transmission Availability above 99.50% for AC System and 96.50% for HVDC bi-pole links and HVDC back-to-back stations, rate of return shall be increased by 0.75%, subject to ceiling of additional rate of Return on Equity of 1.50%;

Provided that the additional rate of Return on Equity shall be allowed on pro-rata basis for incremental Availability higher than Target Availability:

Provided further that Target Availability for additional rate of Return on Equity shall be as per Regulation 60.

29.8 In case of Distribution Wires Business, an additional rate of Return on Equity shall be allowed on Wires Availability at the time of true-up as per the following schedule:

a) The target Wires Availability for recovery of base rate of return on equity shall be 95 percent for MSEDCL and 98% for other Distribution Licensees;

b) For every 0.50% over-achievement in Wires Availability, rate of return shall be increased by 0.50%, subject to ceiling of additional rate of Return on Equity of 1.50%;

c) Wires Availability shall be computed in accordance with the following formula:

Wires Availability = (1- (SAIDI / 8760)) x 100:

Provided that the System Average Interruption Duration Index (SAIDI) shall be calculated in accordance with the definition specified in Maharashtra Electricity Regulatory Commission (Standards of Performance of Distribution Licensees, Period for Giving Supply and Determination of Compensation) Regulations, 2014, as amended from time to time.

29.9 In case of Retail Supply Business, an additional rate of Return on Equity shall be allowed at the time of true-up, as per the following schedule:

a) If the percentage of assessed bills is less than 1.5% of the total number of bills issued during the year, then rate of return shall be increased by 1%;

b) If the percentage of assessed bills is more than 1.5% of the total number of bills issued during the year, for every 0.5% reduction in the percentage of assessed billing, rate of return shall be increased by 0.25%, subject to ceiling of additional rate of Return on Equity of 1.00%.

c) If overall collection efficiency for the year is above 99 %, then rate of return shall be increased by 1%;

d) If overall collection efficiency for the year is below 99 %, for every 0.5% improvement in the overall collection efficiency, rate of return shall be increased by 0.25%, subject to ceiling of additional rate of Return on Equity of 1.00%.

30 Interest on loan

30.1 The loans arrived at in the manner indicated in Regulation 27 on the assets put to use shall be considered as gross normative loan for calculation of interest on loan:

Provided that in case of retirement or replacement or de-capitalisation of assets, the loan capital approved as mentioned above, shall be reduced to the extent of outstanding loan component of the original cost of such assets based on documentary evidence.

30.2 The normative loan outstanding as on April 1, 2020, shall be worked out by deducting the cumulative repayment as admitted by the Commission up to March 31, 2020, from the gross normative loan.

30.3 The loan repayment during each year of the Control Period from FY 2020-21 to FY 2024-25 shall be deemed to be equal to the depreciation allowed for that year.

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(लाइसेन्स टू पोस्ट ऐट कन्सेशनल रेट)

सरकारी गज़ट, उत्तर प्रदेश

उत्तर प्रदेशीय सरकार द्वारा प्रकाशित

असाधारण

प्रयागराज, सोमवार, 23 सितम्बर, 2019 ई0
(आश्विन 1, 1941 शक संवत्)

ऊर्जा विभाग
[ऊर्जा (नि0नि0) प्रकोष्ठ]

उत्तर प्रदेश विद्युत नियामक आयोग

अधिसूचना संख्या यू0पी0ई0आर0सी0/सचिव/बहुवर्षीय वितरण एवं पारेषण टैरिफ विनियमावली, 2019/408
लखनऊ, दिनांक : 23 सितम्बर, 2019, ई0

उत्तर प्रदेश विद्युत नियामक आयोग (बहुवर्षीय वितरण एवं पारेषण टैरिफ) विनियमावली, 2019

विद्युत अधिनियम, 2003 (अधिनियम सं0 36 सन् 2003) की धारा 181 की उपधारा (2) के अनुच्छेद (एच), (आई), (जे), (एल), (एम), (ओ), (वाई), (जेडडी), (जेडई), (जेडएफ), (जेडजी) (जेडएच) तथा (जेडपी) सपठित धारा 36 की उपधारा (1) के परन्तुक, धारा 39 की उपधारा (2) के अनुच्छेद (डी) के उप अनुच्छेद (ii), धारा 39 की उपधारा (2) के अनुच्छेद (डी) के उप अनुच्छेद (ii) का द्वितीय परन्तुक, धारा 40 के अनुच्छेद (सी) का उप अनुच्छेद (ii), धारा 40 के अनुच्छेद (सी) के उप अनुच्छेद (ii) का द्वितीय परन्तुक, धारा 40 का प्रथम परन्तुक, धारा 51 का प्रथम परन्तुक, धारा 61, धारा 62 की उपधारा (2) एवं (5), धारा 64 की उपधारा (1) एवं (3), धारा 65 तथा धारा 86 की उपधारा (1) के अनुच्छेद (बी) के अधीन प्रदत्त शक्तियों तथा इस निमित्त समर्थनकारी समस्त अन्य शक्तियों का प्रयोग करके उत्तर प्रदेश विद्युत नियामक आयोग एतद्द्वारा निम्नलिखित विनियमावली बनाते हैं। यह विनियमावली उ.प्र. विद्युत नियामक आयोग (बहुवर्षीय वितरण टैरिफ) विनियमावली, 2014 तथा उत्तर प्रदेश विद्युत नियामक आयोग (बहुवर्षीय पारेषण टैरिफ) विनियमावली, 2014 का अधिक्रमण करेगी।

1. संक्षिप्त नाम, सीमा, प्रयोज्यता एवं प्रारम्भ :

1.1 यह विनियमावली उत्तर प्रदेश विद्युत नियामक आयोग (बहुवर्षीय वितरण एवं पारेषण टैरिफ) विनियमावली, 2019 कहलायेगी।

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22. Return on Equity

22.1 Return on equity shall be computed in Rs. terms on equity baseat the rate of 14.5% post-tax per annum for the Transmission Licenseeand at the rate of 15% post-tax per annum for Distribution Licensee respectively as determinedin accordance with Regulation 20:

Provided that assets funded by Consumer Contribution / Deposit works, Capital Subsidies / Grants and corresponding Depreciation shall not form part of the Capital Cost. Actual Equity infused by the Licensee as per book value shall be considered and shall be used for computation in these Regulations.

23. Interest on Long- Term Loan

23.1 The long- term loans arrived at in the manner indicated in these Regulations on the assets put to use shall be considered as gross normative loan for calculation of interest on loan:

Provided that in case of retirement or replacement or de-capitalisation of assets, the loan capital approved as mentioned above, shall be reduced to the extent of outstanding loan component of the original cost of such assets based on documentary evidence.

23.2 The normative long- term loan outstanding as on April 1, 2020, shall be worked out by deducting the cumulative repayment as admitted by the Commission up to March 31, 2020, from the gross normative loan.

23.3 The repayment for each year shall be deemed to be equal to the Depreciation allowed for that year.

23.4 Notwithstanding any moratorium period availed, the repayment of loan shall be considered from the first year of commercial operation of the asset.

23.5 The rate of interest shall be the weighted average rate of interest computed on the basis of the actual long- term loan portfolio at the beginning of each year:

Provided that at the time of Truing- Up, the weighted average rate of interest of the actual long- term loan portfolio during the concerned year shall be considered as the rate of interest:

Provided further that if there is no actual long- term loan for a particular year but normative loan is still outstanding, the last available weighted average rate of interest for actual loan shall be considered:

Provided also that if the Licensee, does not have actual long- term loan even in the past, the weighted average rate of interest of its other Businesses regulated by the Commission shall be considered:

Provided also that if the Licensee does not have actual long- term loan, and its other Businesses regulated by the Commission also do not have actual loan even in the past, then the weighted average rate of interest of the entity as a whole shall be considered:

Provided also that if the entity as a whole does not have actual long-term loan because of which interest rate is not available, then the rate of interest for the purpose of allowing the interest on the normative long- term loanshould be the weighted average SBI MCLR (1 Year) prevailing during the concerned year.

23.6 The interest on long- term loan shall be computed on the normative average long- term loan of the year by applying the weighted average rate of interest:

Provided that at the time of Truing-Up, the normative average loan of the concerned year shall be considered on the basis of the actual asset capitalisation approved by the Commission for the year.

23.7 The excess interest during construction on account of time and/or cost overrun as compared to the approved completion schedule and capital cost or on account of excess drawal of the debt funds disproportionate to the actual requirement based on Scheme completion status, shall be allowed or disallowed partly or fully on a case to case basis, after prudence check by the Commission:

Provided that where the excess interest during construction is on account of delay attributable to an agency or contractor or supplier engaged by the Licensee, any liquidated damages recovered from such agency or contractor or supplier shall be taken into account for computation of capital cost:

Provided further that the extent of liquidated damages to be considered shall depend on the amount of excess interest during construction that has been allowed by the Commission.

24. Hedging Cost of Foreign Exchange Rate Variation (FERV)

24.1 The Licensee may hedge foreign exchange exposure in respect of the interest on foreign currency loan and repayment of foreign loan acquired, in part or in full in the discretion of the Licensee.

24.2 Every Licensee shall recover the cost of hedging of FERV corresponding to the normative foreign debt, in the relevant year on year-to-year basis as expense in the period in which it arises.

25. Interest on Working Capital

25.1 Transmission

(a) The working capital requirement of the Transmission Licensee shall cover:

(i) Operation and maintenance expenses for one month;

(ii) Maintenance spares at 40% of the R&M expenses for two months; and

(iii) One and a half monthe quivalent of the expected revenue from transmission charges at the prevailing Tariff;

minus

(iv) Amountheld as security deposits, if any, from Transmission System Users:

Provided further that for the purpose of Truing- Up for any year, the working capital requirement shall be re-computed on the basis of the values of components of working capital approved by the Commission in the Truing- Up;

(b) Rate of interest on working capital shall be simple interest and shall be equal to the SBI MCLR (1 Year) on October 01, 2019 plus 250 basis points:

Provided that for the purpose of Truing- Up for any year, simple interest on working capital shall be allowed at a rate equal to the weighted average SBI MCLR (1 Year) prevailing during the concerned Year plus 250 basis points.

25.2 Distribution Business

(a) The working capital requirement of the Distribution Business shall cover:

(i) Operation and maintenance expenses for one month;

(ii) Maintenance spares at 40% of the R&M expenses for two months; and

(iii) One and half month equivalent of the expected revenue from charges for use of Distribution system at the prevailing Tariff (excluding Electricity Duty);

minus

(iv) Amount held as security deposits from Distribution System Users:

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2. MARGIN FOR RATE OF INTEREST

PROVISIONS IN DRAFT DERC BUSINESS PLAN REGULATIONS, 2023

" 5. MARGIN FOR RATE OF INTEREST ON LOAN:

The Rate of Interest on Loan for a Financial Year shall be Marginal Cost of Fund based Lending Rate (MCLR) of SBI as on 1st April of that Financial Year plus the Margin. The Margin, in terms of Regulation 4(2) of the DERC (Terms and Conditions for Determination of Tariff) Regulations, 2017 for the Generating Entity, is allowed as the difference between the Weighted Average Rate of Interest on Actual Loan Portfolio and the MCLR as on 1st April of that Financial Year:

Provided that Weighted average rate of interest for any Financial year shall include the interest paid and all Bank Charges, Syndication Fee and other Charges paid during that year for raising and maintaining of the respective loans.

Provided that Margin shall not exceed 2.75%, 2.00% and 1.25% for the first, second and third year of the Control Period, respectively:

Provided further also that the Rate of Interest on Loan (MCLR plus Margin) in any case shall not exceed approved Base Rate of Return on Equity.

14. MARGIN FOR RATE OF INTEREST ON LOAN:

The Rate of Interest on Loan for a Financial Year shall be Marginal Cost of Fund based Lending Rate (MCLR) of SBI as on 1st April of that Financial Year plus the Margin. The Margin, in terms of Regulation 4(2) of the DERC (Terms and Conditions for Determination of Tariff) Regulations, 2017 for the Transmission Licensee, is allowed as the difference between the Weighted Average Rate of Interest on Actual Loan Portfolio and the MCLR as on 1st April of that Financial Year:

Provided that Weighted average rate of interest for any Financial year shall include the interest paid and all Bank Charges, Syndication Fee and other Charges paid during that year for raising and maintaining of the respective loans.

Provided that Margin shall not exceed 2.75%, 2.00% and 1.25% for the first, second and third year of the control period, respectively:

Provided further also that the Rate of Interest on Loan (MCLR plus Margin) in any case shall not exceed approved Base Rate of Return on Equity.

22. MARGIN FOR RATE OF INTEREST ON LOAN:

(1) The Rate of Interest on Loan for a Financial Year shall be Marginal Cost of Fund based Lending Rate (MCLR) of SBI as on 1st April of that financial year plus the Margin. The Margin, in terms of Regulation 4(2) of the DERC (Terms and Conditions for Determination of Tariff) Regulations, 2017 towards capitalisation of Assets, Working Capital and Regulatory Assets for Distribution Licensee, is allowed as the difference between the Weighted Average Rate of Interest on Actual Loan Portfolio and the MCLR as on 1st April of that Financial Year:

Provided that Weighted average rate of interest for any Financial year shall include the interest paid and all Bank Charges, Syndication Fee and other Charges paid during that year for raising and maintaining of the respective loans.

Provided that the Margin shall not exceed 2.75%, 2.00% and 1.25% for the first, second and third year of the control period, respectively:

Provided further also that the Rate of Interest on Loan (MCLR plus Margin) in any case shall not exceed approved Base Rate of Return on Equity.

(2) The Distribution Licensee shall follow transparent mechanism to avail Loans and, to the extent possible, shall invite open tender for availing Loans."

<u>EXPLANATORY NOTES</u>

(24) The unbundling of the Electricity Sector in India saw a large number private players enter Generation. Transmission remained almost entirely in the hands of the State, while Delhi – privatised their Distribution and provided them with margin on interest on loan due to the risk involved in the business. Later on in *DERC MYT Regulations, 2007* & *DERC MYT Regulations, 2011* and *DERC (Business Plan) Regulations, 2017* & *DERC (Business Plan) Regulations, 2019* rationalization of Interest on Loan was done considering the market condition and stability of Power companies.

(25) Power Utilities under various SERCs have been examined in this regard for rate of interest on loan and comparison of the same is as follows:

Table 7: interest Rate on loan of Power Utilities under VARIOUS SERCS

	Gujarat Electricity Regulatory Commission	**Gujarat Electricity Regulatory Commission**	**Maharashtra Electricity Regulatory Commission**	**Uttar Pradesh Electricity Regulatory Commission**	**Madhya Pradesh Electricity Regulatory Commission**	**Delhi Electricity Regulatory Commission**
Weighted Average rate of interest	Torrent power limited-distribution (Surat) Tariff order truing up for FY 2020-21 and Determination of Tariff for FY 2022-23	Torrent power limited-distribution (Ahmedabad) Truing up for FY 2020-21 and Determination of Tariff for FY 2022-23	Adani electricity MERC Multi year order for AEML-D for FY 2020-21 to FY 2024-25	Noida power company limited (NPCL) *Approval of ARR and Tariff for FY 2021-22,ARR of FY 2020-21 and True-up of FY 2019-20*	Madhya Pradesh Kshetra Vitaran Company Limited *Retail Supply Tariff Order FY 2021-22*	True-up FY 2019-20
	7.94%	**7.84%**	**9.05%**	**9.91%**	*East DISCOM* **7.56%**	*BRPL* **12.29%**
					West DISCOM **8.75%**	*BYPL* **12.41%**
					Central DISCOM **6.07%**	*TPDDL* **8.49%**

(26) From above table, it could be seen that the Weighted Average rate of interest in Power Utilities of other SERCs ranges between 8% to 10%.

(27) The rate of interest on loan for a financial year shall be Marginal Cost of Fund based Lending Rate (MCLR) of SBI as on 1st April of that financial year plus the Margin. The Margin is allowed as the difference between the weighted average rate of interest on actual loan portfolio and the MCLR as on 1st April of that financial year. It is observed that DISCOMS are now stabilized and their profitability and credit rating have improved considerably as compared to past period. Further, Debt market has become borrower friendly and loans have become cheaper. Now DISCOMs have to take initiative, be competitive and reduce their interest burden on loan. Hence, rationalization of interest on loan is required.

(28) Accordingly, it is proposed that Interest on Loan shall be the 1 year SBI MCLR on 1st April of every Financial year plus Margin. The Margin shall not exceed 2.75% for FY 2023-24, 2.00% for FY 2024-25 and 1.25% for FY 2025-26 for the first, second and third year of the Next Control Period.

(29) The Margin has been reduced by 0.75% from FY 2023-24 to FY 2025-26 which is the same reduction rate followed in the Control Period governed by *DERC (Business Plan)*

Regulations, 2019. The Interest rate of Loan shall be the lower of Actual Rate or SBI MCLR + Margin, as stipulated above. Further, Base Rate of RoE (10%) shall be the capping for Interest Rate of Loan.

3. INFLATIONARY GROWTH RATE

Commission has considered the Inflationary Growth Rate of 3.23% for the next Control Period (FY 2023-24 to FY 2025-26).

EXPLANATORY NOTES

(30) In order to compute the Inflationary Growth Rate, Commission has computed the Inflationary Growth Rate by assigning weightage of 60:40 to WPI and CPI for last five years' data for actual CPI and WPI. CPI and WPI has been considered for "All commodities".

(31) It is found that the percentage growth in WPI in FY 2021-22 is very high and as per media reports, it is highest in last 30 years mainly due to rise in prices of crude petroleum & natural gas, mineral oils, basic metals owing to disruption in the global supply chain caused by Russia-Ukraine conflict. (https://www.newindianexpress.com/business/2022/apr/19/wholesale-price-inflation-30-yr-high-in-2021-22-2443594.html). Due to abnormal inflation in FY 2021-22, average of percentage growth of FY 2016-17 to FY 2020-21 is considered.

(32) The detailed computation of Inflationary Growth Rate computation is as follows:

Table 8: Inflationary Growth Rate Computation

Year	WPI for all commodities	Percentage Growth	CPI for all commodities	Percentage Growth
2015-16	109.7		124.68	
2016-17	111.60	1.73%	130.33	4.52%
2017-18	114.90	2.96%	135.00	3.59%
2018-19	119.80	4.26%	139.61	3.41%
2019-20	121.80	1.67%	146.27	4.77%
2020-21	123.40	1.31%	155.28	6.16%
2021-22*	139.40	12.97%	163.83	5.51%
	Average	**2.39%**		**4.49%**
Inflationary Growth Rate = (2.39%*60%+4.49%*40%)= 3.23%				

* Not considered in computation

Source: MOSPI & Office of Economic Advisor

4. EFFICIENCY FACTOR

The Commission has considered the efficiency factor of 2% for the next Control Period (FY 2023-24 to FY 2025-26).

EXPLANATORY NOTES

(33) **Efficiency in DISCOMs:** Due to technological advancement like Smart metering and IT schemes, it has been judicially felt that efficiency in O&M expenses will be attained due to reduction in expenses related to meter reading, bill despatch, etc. Further, smart meters will also increase the collection and definitely provide check and monitor on pilferage of energy in the system. Thereby, efficiency factor of 2% has been considered.

(34) **Efficiency in Transmission sector:** Recent advancement in GIS substations and compact substations, along with advance solutions for preventive and live Repair & Maintenance of the Transmission system, it has been judicially felt that efficiency in O&M expenses will be attained. Thereby, efficiency factor of 2% has been considered.

(35) **Efficiency in Generation sector:** In recent years, Commission had approved multiple CAPEX schemes for the Generating Plants which focus on improvement in O&M of the plants. In view of this, it has been judicially felt that efficiency in O&M expenses will be attained. Thereby, efficiency factor of 2% has been considered.

(36) Further, Hon'ble APTEL, in it's Appeal No. Appeal No. 52 of 2008 in its judgement dated 31/05/2011 has upheld the concept of Efficiency Factor in O&M expenses in the case of TPDDL, as follows:

> ***"60. The last issue is erroneous computation of efficiency factor.***
>
> *..*
>
> *64. Since O&M expenses of the Appellant were compared with the similar urban distribution companies in other States, the Commission found the expenses of the Appellant were on the higher side and therefore MYT Regulations were framed to bring the requisite efficiency in the system. According to the Commission, the Commission is of the opinion that O &M expenses trajectory for the Control Period shall be decided on the basis of annual efficiency improvement factor and as such O&M cost of the Appellant is on the higher side….*
>
> *65. In view of the above reasoning's, the State Commission was constrained from allowing them to continue to operate in such a manner and pass on the higher costs to the consumers.* ***The increase in the O&M cost is supplemented by the increase in the efficiency level and***

cost of saving/cost of reductions/other economies being available to the Appellant. Therefore, there is no merit in this contention raised by the Appellant.

66. The Learned Counsel for the Appellant has relied on the findings of the Tribunal in its judgment dated 29.9.2010 in Appeal No. 28 of 2008 in the matter of Delhi Transco Ltd. vs. DERC and Others wherein in paragraph 25 of the judgment the Tribunal set aside the order of the State Commission in respect of efficiency factor for Delhi Transco decided by the State Commission on ad-hoc basis without any benchmarking or any analysis and identification of area of efficiency. ***However, in the present case the State Commission has compared the O&M expenses of the Appellant with other utilities and given a reasoned order. Thus the findings of the Tribunal in Appeal No. 28 of 2008 will not apply to the present case. Accordingly, this issue is answered as against the Appellant."***

C. GENERATING ENTITY

5. OPERATION AND MAINTENANCE EXPENSES

PROVISIONS IN DRAFT DERC BUSINESS PLAN REGULATIONS, 2023

"***6. OPERATION AND MAINTENANCE EXPENSES***

(1) Tentative Operation and Maintenance Expenses for the Control Period, after considering Inflationary growth rate of 3.23% and efficiency factor of 2%, for the Generating Entities shall be as follows :

Table 1: O&M Expenses (Rs. Crore)

Station	***FY 2023-24***	***FY 2024-25***	***FY 2025-26***
*Gas Turbine Power Station (GTPS)**	28.70	29.04	29.37
Pragati Power Station (PPS-I)	67.43	68.22	69.01

** For 90 MW (As per Commission's Order dated 24/03/2021)*

(2) The impact of actual implementation of Seventh Pay Revision and Interim Relief has been considered in above tabulated normative O&M Expenses.

(3) The O&M expenses shall be allowed during True-up after considering the actual O&M expenses subject to Prudence Check which will be lower of Actual or above tabulated Normative O&M expenses.

Provided that Actual O&M Expenses shall be allowed for 120 MW of GTPS operating in Synchronous Condenser Mode, as mandated in Order dtd. 24/03/2021.

(4) Additional Repair & Maintenance expenses on account of Dry Low NOx (DLN) burners and Sewage Treatment Plant (STP), if any, shall be allowed on actual basis during the Control Period after prudence check at the time of True Up on submission of documentary evidence since the said expenses have not been considered in above tabulated normative O&M expenses."

EXPLANATORY NOTES

(37) PPCL & IPGCL have submitted that:

i. The Normative O&M expenses as per *DERC (Business Plan) Regulations, 2017* and *DERC (Business Plan) Regulations, 2019* for the Generating Entity were allowed as under:

Table 9: Normative O&M Expenses (Rs. Lakh/MW)

Generating Station	FY 2017-18	FY 2018-19	FY 2019-20	FY 2020-21	FY 2021-22	FY 2022-23
Pragati Power Station I (PPS-I)	17.69	18.68	19.73	23.02	23.90	24.82
Gas Turbine Power Station (GTPS)	29.66	31.32	33.08	29.45	30.58	31.75

ii. PPCL & IPGCL further submitted that there is a significant impact on the actual O&M expenses allowed since FY 2017-18 on account of the introduction of Goods & Service Tax (GST), significant increase in the minimum wages rate of labor by the Central & State Governments and implementation of Seventh Pay Commission, which need to be considered.

iii. They have also proposed the O&M expenses of the next Control period considering the Inflationary Growth Rate of 3.83% on the O&M norm of FY 2022-23. The submission is as follows:

Table 10: Proposed O&M Expenses (Rs. Lakh/MW)

Generating Station	FY 2023-24	FY 2024-25	FY 2025-26	FY 2026-27	FY 2027-28
Pragati Power Station I (PPS-I)	25.77	26.76	27.78	28.85	29.95
Gas Turbine Power Station (GTPS)	32.96	34.21	35.51	36.86	38.26

(38) As per Clause 93 of the *DERC (Terms and Conditions for Determination of Tariff)* Regulations*, 2017*, normative Operation and Maintenance expenses shall be derived on the basis of audited O&M expenses for last 5 completed Financial years.

(39) In line with the above-mentioned clause, the Commission has analysed the available Audited Financial Statements and Cost Audit Report of FY 2015-16 to FY 2019-20 submitted by the Generation Companies in order to determine the actual O&M expense of the Plant, since the Accounts of FY 2020-21 and FY 2021-22 of IPGCL and PPCL are unaudited. Since both the Generation Companies (IPGCL & PPCL) had two generating plants out of which only one plant is supplying power to Delhi while other Plant is either

shut down or supplying power to other State also. In order to arrive the concerned plants (GTPS and PPS-I) related O&M expenses along with the appropriate share in Head Quarter O&M expenses, the Commission has adopted the Cost Audit Report of the Generating Companies to determine the actual O&M expenses.

(40) The Commission in *DERC (Business Plan) Regulation, 2019* has indicated Additional Repair & Maintenance expenses and arrears of Seventh Pay Commission as a separate item over and above the normative O&M expenses. The relevant clause is as follows:

> *"(2) Additional Repair & Maintenance expenses on account of Dry Low NOx (DLN) burners and Sewage Treatment Plant (STP), if any, shall be allowed on actual basis during the Control Period after prudence check at the time of True Up on submission of documentary evidence.*
>
> *(3) The impact of difference of amount on account of actual implementation of Seventh Pay Revision and Interim Relief already considered for determination of norms for O&M Expenses, if any, shall be allowed separately in line with the methology adopted for computation of norms for O&M Expenses, at the time of True up of ARR for relevant Financial year subject to prudence check."*

(41) Accordingly, Power Plants have submitted the details of arrears due to Seventh Pay Commission, and expenses for Special R&M during the True-up Petition of respective years. The Commission after prudence check allowed the same to the Power Plants over and above the normative O&M expenses.

(42) It is observed that the actual O&M expenses are lower than the Normative O&M expenses, considering the same Commission is of the view that instead of allowing O&M expenses on per MW basis, it should be on absolute terms i.e., in Rupees Crore.

Employee Expenses

(43) During the prudence check, it is observed that Power Plants have made the payment of Seventh Pay Commission arrears and LSC, PC and EPF Contribution in FY 2019-20, and the total payment was booked in FY 2019-20 accounts. Since the Power Plants have paid the arrears in complete and made necessary accounting for the same in their books of accounts, it is considered that there is no further need for separate items i.e., arrears of Seventh Pay Commission over and above normative Employee expenses.

(44) Further, the Commission sought a detailed year-wise breakup of arrears of LSC, PC and EPF Contributions from Power Plants and reallocated the arrears into the respective year to compute the actual Employee expenses of the Plant during the respective years.

Administrative & General (A&G) Expenses

(45) While arriving out the actual Administrative & General (A&G) Expenses, the Commission has not considered the expenditure incurred on account of Legal expenses.

Repair & Maintenance (R&M) Expenses

(46) In case of PPS-1, Commission in past True-up Tariff Orders had allowed Special R&M expenses, STP Expenses and expenses for DLN Burner which are allowed to the Power Plant over and above the normative R&M expenses of the respective year after Prudence check.

(47) In order to derive the actual routine R&M expenses, the additional expenses allowed as Special R&M expenses, STP Expenses and expenses for DLN Burner have been excluded from the R&M expenses booked by the Power Plant.

(48) Accordingly, the absolute O&M expenses of the plants have been computed as follows:

i. The actual expenditure incurred by Generating Plants on Employee expenses from FY 2015-16 to FY 2019-20 as explained in above paras;

ii. Administrative & General expenses and Repair & Maintenance expenses from FY 2015-16 to FY 2019-20 was derived after excluding non-allowable and non-routine expenses following the above-mentioned principles.

iii. In order to arrive at the respective expenses for FY 2020-21, the Commission has considered the minimum of the average of the actual cost of FY 2015-16 to FY 2019-20 as derived above escalated thrice by the Inflationary Growth Rate of 3.23% (as explained in Point-3) or the actual value of cost for FY 2019-20 multiplied by Inflationary Growth Rate once. The cost thus arrived for FY 2020-21 is escalated by the Inflationary Growth Rate of 3.23% and discounted by an efficiency factor of 2% for subsequent years. The allowed O&M expenses were the sum of three expenses, namely Employee Expenses, Administrative & General Expense and Repair & Maintenance Expenses arrived after above-mentioned method.

(49) Commission vide its Order dated 24/03/2021 approved Life extension of GTPS Plant and operation beyond March 2021. In the order, Commission allowed GTPS additional Life Extension of 10 years to the Plant with 90 MW (Base Load Capacity) and 120 MW (Synchronous Mode Operation). The Commission in Para 74 of the Order, allowed O&M

expenses w.r.t 90 MW only, in line with the Order, Commission approved the O&M expenses for the GTPS considering the Plant capacity as 90 MW.

(50) The Commission in Para 80 of the Order dated 24/03/2021 directed GTPS to prepare separate accounting for this 120 MW (Synchronous Mode Operation) and only actual O&M expenses based on statutory auditor certificate subject to prudence check shall be allowed annually in respective year True up Order.

6. CAPITAL INVESTMENT PLAN

PROVISIONS IN DRAFT DERC BUSINESS PLAN REGULATIONS, 2023

"7. CAPITAL INVESTMENT PLAN:

(1) The tentative Capital Investment plan for the Generation Entity for FY 2023-24 to FY 2025-26 is as follows:

Table 2: Capital Investment plan (Rs. Crore)

Sr. No.	Plant	FY 2023-24	FY 2024-25	FY 2025-26
1.	Gas Turbine Power Station (GTPS)	0	0	0
2.	Pragati Power Station (PPS-I)	3.00	2.10	0

(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:

Provided that any improvement in operational parameters resulting from commissioning of the scheme due to any Additional Capital Investment in existing generating stations shall form the basis for computing the Energy Charge Rate, from the scheduled date of commissioning of the respective schemes, in terms of Regulation 103 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."*

EXPLANATORY NOTE

PPCL

(51) The tentative capital investment plan for PPCL (330 MW Pragati Power Station-1) for FY 2023-24 to FY 2025-26 is as follows:

Sr.No	Description	FY2023-24	FY2024-25	FY2025-26
1.	Compressor Rotor with IGV	3.0	-	-
2.	Installation of VFD in HPBFP (Trunkey excluding civil)	-	2.1	-

(52) Based on the submission of PPCL to allow the spill over of already approved capex scheme for Compressor Rotor with IGV the above mentioned capital investment is considered.

IPGCL

(53) The Commission vide its Order dated 24/03/2021 accorded in-principal approval for life extension of GTPS plant for further 10 years. Further, the Commission has Ordered no further additional CAPEX to IPGCL during the extended life of 10 years of GTPS. The relevant extracts of the Order dated 24/03/2021 is as under:

*"**Summary of Order:***

83. Considering the GTPS under Islanding Scheme, Black Start facility, suggestions of Delhi SLDC, which is the apex body to ensure integrated operation of the power system in Delhi & ensure Grid Security as per Section 32 of the Electricity Act 2003, its competitive Energy Charge Rate (ECR) for APM gas, the following is allowed for GTPS Plant;

a) 'In-principle' approval for Life Extension of 10 years beyond March 2021:

i) 90 MW (Base Load Capacity) funded through CAPEX; and

ii) 120 MW (Synchronous Mode Operation) to be funded through PSDF subject to provisions of DERC (Power System Development Fund) Regulations, 2019.

b) IPGCL to declare availability for 90 MW of GTPS only on Administered Pricing Mechanism (APM) gas or cheaper gas than APM Gas used by the Generating Station, if any.

c) 90 MW GTPS Power is allocated to all Delhi DISCOMs (NDMC, BRPL, BYPL & TPDDL). The same Percentage allocation is valid for operation of 120 MW (4 GTs of 30MW each) on synchronous mode of operation.

d) Since, existing PPA of GTPS is expiring in March 2021, therefore, new PPA shall be entered with all Delhi DISCOMs (NDMC, BRPL, BYPL & TPDDL) for 90 MW (Generation Mode) and 120 MW (Synchronous Mode of Operation).

e) No further additional CAPEX shall be allowed to IPGCL during the extended life of 10 years of GTPS."

(54) Accordingly, no capitalisation is considered for IPGCL.

7. NORMATIVE ANNUAL PLANT AVAILABILITY FACTOR (NAPAF)

PROVISIONS IN DRAFT DERC BUSINESS PLAN REGULATIONS, 2023

"8(1). Normative Annual Plant Availability Factor and Normative Annual Plant Load Factor for existing generating stations of Delhi shall be as follows:

Table 3: Normative Availability and Load Factor

Generating Station	*Normative Annual Plant Availability Factor (NAPAF)*	*Normative Annual Plant Load Factor (NAPLF)*
Gas Turbine Power Station (GTPS)	*85%*	*85%*
Pragati Power Station (PPS-I)	*90%*	*85%*

"

EXPLANATORY NOTE

(55) PPCL & IPGCL has submitted that the actual Availability of the stations in the last 5 years is as follows:

Table 11: Plant-wise Availability

Generating Station	FY 2017-18	FY 2018-19	FY 2019-20	FY 2020-21	FY 2021-22
Pragati Power Station I (PPS-I)	92.64%	88.36%	96.95%	92.03%	93.83%
Gas Turbine Power Station (GTPS)	83.07%	81.29%	86.46%	87.21%	52.52%

(56) PPCL and IPGCL submitted to consider the NAPAF of 85% for PPS-I and GTPS for the next Control Period.

(57) Based on the actual availability in the last 5 years as per the above table, it is clear that PPS-I has NAPAF more than the norms prescribed by the Commission, while GTPS is unable to meet the norms. In view of the above, the Commission has considered NAPAF as 85% for GTPS and 90% for PPS-I for the next Control Period (FY 2023-24 to FY 2025-26).

8. NORMATIVE ANNUAL PLANT LOAD FACTOR (NAPLF)

PROVISIONS IN DRAFT DERC BUSINESS PLAN REGULATIONS, 2023

"8(1). Normative Annual Plant Availability Factor and Normative Annual Plant Load Factor for existing generating stations of Delhi shall be as follows:

Table 3: Normative Availability and Load Factor

Generating Station	*Normative Annual Plant Availability Factor (NAPAF)*	*Normative Annual Plant Load Factor (NAPLF)*
Gas Turbine Power Station (GTPS)	*85%*	*85%*
Pragati Power Station (PPS-I)	*90%*	*85%*

"

EXPLANATORY NOTE

(58) PPCL & IPGCL has submitted that the actual PLF of the stations in the last 5 years is as follows:

Table 12: Plant-wise Load Factor

Generating Station	FY 2017-18	FY 2018-19	FY 2019-20	FY 2020-21	FY 2021-22
Pragati Power Station I (PPS-I)	67.63%	52.43%	52.76%	53.11%	52.70%
Gas Turbine Power Station (GTPS)	24.48%	25.35%	21.15%	19.39%	26.34%

(59) PPCL and IPGCL submitted that there is vast difference between target NAPLF and actual PLF, this is mainly due to less scheduling as compared to available generation, and lower PLF resulted into high Station Heat Rate and Auxiliary Power Consumption of the Plant.

(60) In line with the CERC norms, the Commission has considered NAPLF as 85% for the next Control Period (FY 2023-24 to FY 2025-26).

9. GROSS STATION HEAT RATE (GHR)

PROVISIONS IN DRAFT DERC BUSINESS PLAN REGULATIONS, 2023

"8(2). Gross Station Heat Rate for existing generating stations in Delhi shall be as follow:

Table 4: Gross Station Heat Rate (GHR) (kCal/kWh)

S. No	*Generating Station*	*Combined Cycle*	*Open Cycle*
1	*Pragati Power Station I (PPS-I)*	*1950*	*2900*
2	*Gas Turbine Power Station (GTPS)*	*2450*	*3125*

"

EXPLANATORY NOTE

Pragati Power Station I (PPS-I)

(61) PPCL has submitted that the actual Heat Rate of PPS-I in the last 5 years is as follows:

Particulars	FY 2017-18	FY 2018-19	FY 2019-20	FY 2020-21	FY 2021-22
Combined Cycle Mode	1969	1974	1976	1976	1974
Open Cycle Mode	3176	3138	3083	3102	3100

(62) PPCL also submitted that Central Electricity Regulatory Commission in its latest Tariff Regulation FY 2019-24 has fixed a heat rate of 2050 kCal/kWh in Combined cycle mode and 3010 kCal/kWh in Open cycle mode for similar Kawas GPS Gas-Based Station of NTPC which consists of the same class of Gas Turbines of PPS-I.

(63) PPCL further submitted that the Station Heat Rate of PPS-I in Open cycle mode is on the higher side due to frequent starts/stops and backing down of Plant by SLDC, resulting in partial operation of the units, and accordingly proposes the Station Heat Rate of PPS-I in Combined cycle mode as 2050 kCal/kWh and 3010 kCal/kWh in Open cycle mode for the Control Period.

(64) It can be seen from the above table that the Station Heat Rate in Combined cycle mode is on the lower side than the approved norms, considering the performance of the Plant, Commission has considered Station Heat Rate in Combined cycle mode as 1950 kCal/kWh for the next Control Period (FY 2023-24 to FY 2025-26). The overall benefit to consumers due to reduction in Station Heat Rate in Combined cycle mode is about Rs. 85.55 Crore.

(65) The following table depicts the savings due to lower Station Heat Rate in Combined cycle mode:

PPS-I

	SHR	SHR- Proposed by TD
	Auxiliary Power Consumption (APC)	APC - BPR 2019
	PLF	PLF- Proposed by TD
	PAF	PAF- Proposed by TD
Open Cycle	**ECR- Open Cycle**	20.40
	Change in ECR wrt Base Case- Open Cycle	0.00
	Total impact in Rs. Cr.	0.00
Combined Cycle	**ECR- Combined Cycle**	13.96
	Change in ECR wrt Base Case- Combined Cycle	-0.36
	Total impact in Rs. Cr.	-85.55

		Particulars	*Unit*	*Base Case*		*Model*
				FY 2023-24	*Remark*	
		Plant Capacity	MW	330		330
		Gross Station Heat Rate (SHR)- Open cycle	kCal/kWh	2900	As per BPR, 2019	2900
		Gross Station Heat Rate (SHR)- Combined cycle	kCal/kWh	2000	As per BPR, 2019	1950
		Auxiliary Power Consumption (APC)- Open Cycle	%	1%	As per BPR, 2019	1.00%
		Auxiliary Power Consumption (APC)- Combined Cycle	%	2.75%	As per BPR, 2019	2.75%
		PLF	%	85%	As per BPR, 2019	85.00%
		PAF	%	85%	As per BPR, 2019	90.00%
		Gross Generation	MU= MW*24*365*PLF/1000	2457.18		2457.18
		Net Generation - Combined Cycle	MU= MW*24*365*PLF*(1-Aux.)/1000	2389.61		2389.61
		Net Generation - Open Cycle	MU= MW*24*365*PLF*(1-Aux.)/1000	2432.61		2432.61
		GCV	kCal/SCM	9488	As per IPGCL submission	9488
		Landed Price of Primary Fuel	Rs./SCM	66.07	As per IPGCL submission	66.07
Energy Charge	**Combined Cycle**	Fuel Consumption	SCM	517955312		505006429.2
		Fuel Cost	Rs. Cr	3422.13		3336.58
		ECR	**Rs./kWh**	**14.32**		**13.96**
	Open Cycle	Fuel Consumption	SCM	751035202.4		751035202.4
		Fuel Cost	Rs. Cr	4962.09		4962.09
		ECR	**Rs./kWh**	**20.40**		**20.40**

(66) The Commission has considered the Station Heat Rate in Open cycle mode as 2900 kCal/kWh for the next Control Period (FY 2023-24 to FY 2025-26).

Gas Turbine Power Station (GTPS)

(67) IPGCL has submitted that the actual Heat Rate of GTPS in the last 5 years is as follows:

Particulars	FY 2017-18	FY 2018-19	FY 2019-20	FY 2020-21	FY 2021-22
Combined Cycle Mode	2472	2517	2512	2459	2513
Open Cycle Mode	3444	3429	3485	3493	3434

(68) IPGCL has submitted that the guaranteed heat rate of GTPS at site condition of 31.5 °C is approximately 3188 kCal/kWh and after considering the correction factor of 5.70% on the guaranteed heat rate as recommended by CEA, the corrected heat rate for simple cycle mode comes out as 3370 kCal/kWh.

(69) IPGCL further submitted that Central Electricity Regulatory Commission in its latest Tariff Regulation FY 2019-24 has fixed a heat rate of 2600 kCal/kWh in Combined cycle mode and 3578 kCal/kWh in Open cycle mode for similar Assam gas station of NEEPCO which consists of the same class of gas turbines as of GTPS.

(70) IPGCL further submitted that the Station Heat Rate of GTPS is on higher side due to frequent starts/stops and backing down of Plant by SLDC, resulting in partial operation of

the units, and accordingly proposes the Station Heat Rate of PPS-I in Combined cycle mode as 2600 kCal/kWh and 3578 kCal/kWh in Open cycle mode for the Control Period.

(71) The Commission has considered to continue the existing Station Heat Rate i.e., 2450 kCal/kWh in Combined cycle mode and 2900 kCal/kWh in Open cycle mode for the next Control Period (FY 2023-24 to FY 2025-26).

10. AUXILIARY ENERGY CONSUMPTION

PROVISIONS IN DRAFT DERC BUSINESS PLAN REGULATIONS, 2023

"8(3). AUXILIARY ENERGY CONSUMPTION

Auxiliary Energy Consumption for existing Gas based Generating Stations of Delhi shall be as follows:

Table 5: Auxiliary Energy Consumption (%)

S. No	*Mode of operation*	*Pragati Power Station I (PPS-I)*	*Gas Turbine Power Station (GTPS)*
1	*Combined Cycle*	*2.30%*	*2.75%*
2	*Open Cycle*	*1.00%*	*1.00%*

"

EXPLANATORY NOTE

Pragati Power Station I (PPS-I)

(72) PPCL proposed the Auxiliary Energy Consumption at 2.75% in Combined cycle mode and 1% in Open cycle mode in line with CERC Regulations 2019.

(73) The actual Auxiliary Energy Consumption for PPS-I in the last 5 years is as follows:

Year	Actual Auxiliary Energy Consumption
FY 2017-18	2.38%
FY 2018-19	2.39%
FY 2019-20	2.31%
FY 2020-21	2.26%
FY 2021-22	2.24%

(74) It can be seen from the above table that average Auxiliary Energy Consumption is only 2.32% which is far below the targets set for the Plant by the Commission and shows a reducing trend on yearly basis.

(75) In view of the above, the Commission has considered the Auxiliary Energy Consumption of PPS-I at Combined cycle mode- 2.30% and Open cycle mode-1% for the next Control

Period (FY 2023-24 to FY 2025-26). The overall benefit to consumers due to reduction in Auxiliary Energy Consumption is about Rs. 15.84 Crore.

(76) The following table depicts the savings due to Auxiliary Energy Consumption:

PPS-I

	SHR	SHR - BPR 2019
	Auxiliary Power Consumption (APC)	APC- Proposed by TD
	PLF	PLF- Proposed by TD
	PAF	PAF- Proposed by TD
Open Cycle	**ECR- Open Cycle**	20.40
	Change in ECR wrt Base Case- Open Cycle	0.00
	Total impact in Rs. Cr.	0.00
Combined Cycle	**ECR- Combined Cycle**	14.25
	Change in ECR wrt Base Case- Combined Cycle	-0.07
	Total impact in Rs. Cr.	-15.84

		Particulars	*Unit*	*Base Case*		*Model*
				FY 2023-24	*Remark*	
		Plant Capacity	MW	330		330
		Gross Station Heat Rate (SHR)- Open cycle	kCal/kWh	2900	As per BPR, 2019	2900
		Gross Station Heat Rate (SHR)- Combined cycle	kCal/kWh	2000	As per BPR, 2019	2000
		Auxiliary Power Consumption (APC)- Open Cycle	%	1%	As per BPR, 2019	1.00%
		Auxiliary Power Consumption (APC)- Combined Cycle	%	2.75%	As per BPR, 2019	2.30%
		PLF	%	85%	As per BPR, 2019	85.00%
		PAF	%	85%	As per BPR, 2019	90.00%
		Gross Generation	MU= MW*24*365*PLF/1000	2457.18		2457.18
		Net Generation - Combined Cycle	MU= MW*24*365*PLF*(1-Aux.)/1000	2389.61		2400.66
		Net Generation - Open Cycle	MU= MW*24*365*PLF*(1-Aux.)/1000	2432.61		2432.61
		GCV	kCal/SCM	9488	As per IPGCL submission	9488
		Landed Price of Primary Fuel	Rs./SCM	66.07	As per IPGCL submission	66.07
Energy Charge	**Combined Cycle**	Fuel Consumption	SCM	517955312		517955312
		Fuel Cost	Rs. Cr	3422.13		3422.13
		ECR	**Rs./kWh**	**14.32**		**14.25**
	Open Cycle	Fuel Consumption	SCM	751035202.4		751035202.4
		Fuel Cost	Rs. Cr	4962.09		4962.09
		ECR	**Rs./kWh**	**20.40**		**20.40**

Gas Turbine Power Station (GTPS)

(77) IPGCL proposed the Auxiliary Energy Consumption at 3.50% in Combined cycle mode and 1% in Open cycle mode if the Station runs below the targeted NAPLF of 85% for the period.

(78) The actual Auxiliary Energy Consumption for PPS-I in the last 5 years is as follows:

Year	Actual Auxiliary Energy Consumption
FY 2017-18	3.78%
FY 2018-19	3.76%
FY 2019-20	3.97%
FY 2020-21	4.44%
FY 2021-22	5.89%

(79) It can be seen from the above table that the average Auxiliary Energy Consumption is 4.37% which is higher than the targets set for the Plant by the Commission.

(80) The Commission has considered to continue the existing Auxiliary Energy Consumption of PPS-I at Combined cycle mode- 2.75% and Open cycle mode-1% for the next Control Period (FY 2023-24 to FY 2025-26).

D. TRANSMISSION LICENSEE

11. OPERATION AND MAINTENANCE EXPENSES

PROVISIONS IN DRAFT DERC BUSINESS PLAN REGULATIONS, 2023

“15. OPERATION AND MAINTENANCE EXPENSES

(1) The normative Operation and Maintenance Expenses of a Transmission Licensee for the Control Period, after considering Inflationary growth rate of 3.23% and efficiency factor of 2 %, shall be as follows:

Table 6: Operation and Maintenance Expenses (Rs. Crore)

O&M Expenses	*FY 2023-24*	*FY 2024-25*	*FY 2025-26*
Annual O&M Expenses	*300.92*	*304.43*	*307.97*

(2) The impact of actual implementation of Seventh Pay Revision and Interim Relief has been considered in above tabulated normative O&M Expenses.

(3) The O&M expenses shall be allowed during True-up after considering the actual O&M expenses subject to prudent check which will be lower of actual or above tabulated normative O&M expenses.

(4) The Transmission Licensee shall claim Land License Fee and Security Expenses separately on actual basis at the time of true up of ARR for the relevant financial year subject to prudence check since the said expenses have not been considered in above tabulated normative O&M expenses.”

EXPLANATORY NOTES

(81) DTL has submitted the Audited Balance Sheet for FY 2016-17 to FY 2021-22. Commission has considered the Balance sheet for FY 2016-17 to FY 2020-21 for projecting the O&M expenses for the Control Period.

(82) As per Clause 93 of the *DERC (Terms and Conditions for Determination of Tariff) Regulations, 2017*, normative Operation and Maintenance expenses shall be derived on the basis of audited O&M expenses for last 5 completed Financial years.

(83) In line with the above-mentioned clause, the Commission has analysed the available Audited Financial Statements submitted by the Transmission Company in order to determine the O&M expense of the Company.

(84) The Commission in *Business Plan Regulation, 2019* has indicated Land Licensee Fee, Security Expenses and arrears of Seventh Pay Commission as a separate item over and above the normative O&M expenses. The relevant clause is as follows:

"…

(3) The impact of difference of amount on account of actual implementation of Seventh Pay Revision and Interim relief already considered for determination of norms for O&M Expenses, if any, shall be allowed separately in line with the methodology adopted for computation of norms for O&M expenses, at the time of True-up of ARR for relevant Financial year subject to prudence check.

(4) The Transmission Licensee shall claim land Licensee Fee and Security Expenses separately on actual basis at the time of true-up of ARR for the relevant Financial year subject to prudence check."

(85) It is observed that the actual O&M expenses are lower than the Normative O&M expenses, considering the same Commission is of the view that instead of allowing O&M expenses on per MW basis, it should be on absolute terms i.e., in Rupees Crore.

Employee Expenses

(86) During the prudence check, it is observed that Transmission Company has made the payment of Seventh Pay Commission arrears and LSC, PC and EPF Contribution in FY 2020-21, and the total payment was booked in FY 2020-21 accounts. Since the Company has paid the arrears and made necessary accounting for the same in their books of accounts, it is considered that there is no further need for separate items i.e., arrears of Seventh Pay Commission over and above normative Employee expenses.

(87) Further, the Commission sought a detailed year-wise breakup of arrears of LSC, PC and EPF Contributions from Power Plants and reallocated the arrears into the respective year to compute the actual Employee expenses of the Plant during the years.

Administrative & General (A&G) Expenses

(88) While arriving out the actual Administrative & General (A&G) Expenses, the Commission has not considered the expenditure incurred on account of Legal expenses, security expenses, Licensee fee, Loss on sale of discarded assets, External Project Cost, and Misc. expenses.

(89) Apart from the above-mentioned expenses, Expenses on account of Provisions for Slow Moving Inventory, Reactive Energy Charges, Revised Power Purchase Cost, Net Loss on foreign exchange transactions and translation and CSR expenditure also not considered while computing balance A&G expenses.

Repair & Maintenance (R&M) Expenses

(90) While arriving out the actual R&M expenses of the Company, Repair & Maintenance expenses and Consumption of stores & spares have been clubbed.

(91) Accordingly, the absolute O&M expenses of the Transmission Licensee have been computed as follows:

i. The actual expenditure incurred by Transmission Licensee on Employee expenses from FY 2015-16 to FY 2019-20 as explained in above paras;

ii. Administrative and General expenses, and Repair and maintenance expenses from FY 2016-17 to FY 2020-21 was derived after following the excluding non-allowable and non-routine expenses following the above-mentioned principles..

iii. In order to arrive at the respective expenses for FY 2021-22, the Commission has considered the lower of the average of the actual cost of FY 2016-17 to FY 2020-21 as derived above escalated thrice by the Inflationary Growth Rate of 3.23% (as explained in Point-3) or the actual value of cost for FY 2019-20 multiplied by Inflationary Growth Rate once. The cost thus arrived for FY 2021-22 is escalated by the Inflationary Growth Rate and discounted by an efficiency factor of 2% for subsequent years. The allowed O&M expenses were the sum of three expenses, namely Employee Expenses, Administrative & General Expense and Repair & Maintenance Expenses arrived after above-mentioned method.

12. CAPITAL INVESTMENT PLAN

PROVISIONS IN DRAFT DERC BUSINESS PLAN REGULATIONS, 2023

"16. CAPITAL INVESTMENT PLAN:

(1) The tentative Capital Investment Plan for the Transmission Licensee for FY 2023-24 to FY 2025-26 is as follows:

Table 7: Capital Investment Plan (Rs. Crore)

Particulars	*FY 2023-24*	*FY 2024-25*	*FY 2025-26*
Capitalization	*436*	*453*	*471*

Provided that above tabulated Capitalisation may undergo revision subject to Tariff based Competitive Bidding in the Intra-State Transmission Network.

(2) Employee expenses and A&G expenses shall be allowed to be capitalized equivalent to lower of 30% of (total Employee Expenses and A&G Expenses) or actual expenditure

towards employees engaged in Projects construction works in a particular financial year.

(3) 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.

(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."

EXPLANATORY NOTES

(92) The Commission observed that the average capitalisation of DTL in last 5 years is Rs 319.04 Cr and in the last 10 years is Rs 418.67 Cr as against the planned expenditure submitted in the BPR petition mentioned below:

Table 13: DTL Planned Expenditure (Rs Cr)

	FY 2023-24	FY 2024-25	FY 2025-26
Capital expenditure	1897	1495	883

(93) The 20th EPS survey of India has projected the CAGR of 4.03% for peak demand of Delhi.

Table 14: Peak Electrical Demand (MW)

DISCOMs	2021-22	2022-23	2023-24	2024-25	2025-26	2026-27	2027-28	2028-29	2029-30	2030-31	2031-32
BRPL	3196	3500	3702	3921	4158	4416	4697	5005	5344	5717	6131
BYPL	1673	1772	1851	1931	2012	2096	2181	2267	2355	2444	2535
MES	48	50	52	54	56	58	60	62	64	66	68
NDMC	307	348	376	390	403	416	430	443	457	470	483
TPDDL	2251	2254	2346	2448	2554	2663	2779	2901	3047	3151	3250
Delhi	**7329**	**7770**	**8164**	**8571**	**9003**	**9460**	**9948**	**10469**	**11046**	**11615**	**12222**

(94) Considering the growth of peak demand in Delhi as projected in 20th EPS Survey and the average capitalisation by DTL in last 10 years the capitalisation of the DTL is considered.

(95) Further, the above tabulated capitalisation may undergo revision subject to Tariff based Competitive Bidding in the Intra-State Transmission Network.

13. NORMS OF OPERATION FOR TRANSMISSION BUSINESS

PROVISIONS IN DRAFT DERC BUSINESS PLAN REGULATIONS, 2023

" 17. 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 98.50%.

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

EXPLANATORY NOTES

(96) DTL has submitted the Annual Transmission Availability for FY 2016-17 to FY 2021-22 as follows:

Table 15: Annual Transmission Availability (in %)

Particulars	FY 2016-17	FY 2017-18	FY 2018-19	FY 2019-20	FY 2020-21	FY 2021-22
Annual Transmission Availability	98.009	99.348	99.106	98.953	99.305	99.037

(97) It can be seen from the above table that average Annual Transmission Availability is approx. **98.96%** which is above the targets set for by the Commission.

(98) In view of past performance and technological advancement, the Commission has considered to increase the Annual Transmission Availability to 98.50% for the next Control Period (FY 2023-24 to FY 2025-26).

14. TRANSMISSION CHARGES FOR TRANSMISSION LICENSEE

PROVISIONS IN DRAFT DERC BUSINESS PLAN REGULATIONS, 2023

"18. TRANSMISSION CHARGES FOR TRANSMISSION LICENSEE

The Transmission Charges (inclusive of incentive) for AC system to be billed, in terms of Regulation 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 ≤ 98.50%*	*AFC x (NDM/NDY) x (TAFM/98.50%*
b)	*For 98.50% < TAFM ≤ 99.00%*	*AFC x (NDM/NDY) X 1*
c)	*For 99.00% < TAFM ≤ 99.75%*	*AFC x (NDM/NDY) x (TAFM/98.50%)*

d)	*For TAFM > 99.75 %*	*AFC x (NDM/NDY) x (99.75%/98.50%)*

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"

EXPLANATORY NOTES

(99) Methodology of incentive is as per CERC (Tariff Regulations), 2019.

E. DISTRIBUTION LICENSEE

15. OPERATION AND MAINTENANCE EXPENSES

PROVISIONS IN DRAFT DERC BUSINESS PLAN REGULATIONS, 2023

" 23. OPERATION AND MAINTENANCE EXPENSES:

(1) Normative Operation and Maintenance expenses are being determined in terms of Regulation 4(3) and Regulation 92 of the DERC (Terms and Conditions for Determination of Tariff) Regulations, 2017.

(2) The Distribution Licensee shall be allowed own (Auxiliary) consumption including E-Vehicle Charging Stations installed at Distribution Licensee offices and sub-stations, at Zero Tariff for actual recorded consumption subject to a maximum of 0.25% of total sales excluding own consumption to its retail consumers for the relevant financial year as part of O&M expenses for the relevant year:

(3) Actual recorded own (Auxiliary) consumption in excess of 0.25% of total sales excluding own consumption 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) The Distribution Licensee shall be allowed O&M expenses for a particular financial year of the control period by multiplying the normative rate per unit of that particular year with the trued up sales during the financial year.

(5) The Employee benefits pertaining to Employees transferred under the tripartite agreement shall be considered uncontrollable in nature and shall be Trued up for relevant Financial year subject to prudence check:

Provided that the Distribution Licensee shall submit the above details of O&M expenses within thirty (30) days from the end of finalization of audited accounts of the relevant year.

(6) Expenses on account of Statutory Levies towards Property Tax/ Land Licence Fee to GoNCTD, License Fee paid to DERC shall be Trued up for relevant Financial year subject to prudence check:

Provided that the Distribution Licensee shall submit the above details of O&M expenses within thirty (30) days from the end of finalization of audited accounts of the relevant year; Provided also that any expense in the nature of statutory levies already forming part of the regular O&M expenses and considered in the O&M Expense norms of the Distribution Licensee shall not be allowed separately.

(7) The Employee benefits in the nature of bonus, incentives for performance shall not be allowed as O&M expense of the Distribution Licensee.

(8) The legal expenses including that on account of cases filed against the Orders or Regulations of the Commission before any Court and the legal claims (compensation/penalty) paid to the consumer, if any, shall not be allowed in the ARR.

(9) The expenses on account of Corporate Social Responsibility of the Licensee shall not be allowed in the ARR.

(10) Considering Inflationary Growth Rate at 3.23% and efficiency at 2%, the O&M Expenses are being determined as follows:

Table 8: Norms for O&M Expenses for DISCOMS for the Control Period
[Rate / Unit of sale (Paise)]

Distribution Licensee	*FY 2023-24*	*FY 2024-25*	*FY 2025-26*
BRPL	*49.68*	*50.95*	*52.26*
BYPL	*55.35*	*56.77*	*58.23*
TPDDL	*53.12*	*54.49*	*55.88*
NDMC	*55.35*	*56.77*	*58.23*

”

EXPLANATORY NOTES

(100) *DERC (Terms and Conditions for Determination of Tariff) Regulations, 2017* stipulate the Regulations for determining the O&M Expenses for various Power Utilities as follows:

“87. The Utilities shall be allowed Operation and Maintenance expenses on normative basis including expenses for raising the loan for funding of Working Capital and Regulatory Asset as specified by the Commission in the Business Plan Regulations for the respective Control Period:

Provided that the Normative O&M expenses for the respective Control Period shall not be trued up;

Provided further that the ***water charges, statutory levy and taxes under O&M expenses if indicated separately*** *in the audited financial statement shall not form part of Normative O&M expenses.*

88. Escalation to be allowed for adjustment towards increase in inflation, consumer price index (CPI), wholesale price index (WPI) etc. ***shall be as specified in the Business Plan Regulations*** *for the respective Control Period.*

89. Normative Operation and Maintenance expenses of a new Generating Entity shall be as per the norms approved by the CERC in Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2014 as amended from time to time, for respective year unless specifically approved by the Commission.

90. Normative Operation and Maintenance expenses of existing Generating Entity shall be as specified in the Business Plan Regulations for the respective Control Period.

91. The Commission shall specify the target for Normative Operation and Maintenance expenses of the Transmission Licensee in the Business Plan Regulations for the respective Control Period. Provided that the Commission may specify Normative Operation and Maintenance expenses target of a Transmission Licensee on the basis of number of Bays and Circuit Kilometres.

92. Normative Operation and Maintenance expenses of a Distribution Licensee shall consist of:

(a) Employee Expenses,
(b) Administrative and General Expenses; and
(c) Repair and Maintenance Expenses.

93. Normative Operation and Maintenance expenses of a Distribution Licensee for a Control Period ***shall be derived on the basis of audited Operation and Maintenance expenses for last five (5) completed Financial Years vis-à-vis normative Operation and Maintenance expenses*** *allowed by the Commission during the corresponding period based on the following parameters:*

(a) Load growth,
(b) Consumer growth,
(c) Commercial loss,
(d) Distribution loss,
(e) Inflation,
(f) Efficiency,
(g) Capital base and,
(h) Any other factor."

(101) Of the above Regulations, Regulations 87, 88, 92 and 93 govern the provisions of Distribution Licensees.

(102) The DISCOMs filed their Business Plan for the next 5 years based on the actual financial position for the last 7 years indicating the salary expenses, A&G expenses and R&M expenses for each year.

(103) Regulation 93 states that the normative O&M Expense of a Distribution Licensee for the control period shall be derived on the base of audited O&M Expenses for the last 5 completed financial years vis-à-vis normative O&M Expense allowed by the Commission during the corresponding period based on the various parameters. Going by the Regulation, the information has been limited to audited O&M Expenses of the DISCOMs for last 5 completed financial years i.e. FY 2017-18 to FY 2021-22.

(104) Based on the submission of the DISCOMs and recent finding of Hon'ble Supreme Court of India in its judgment dated 18/10/2022, the FRSR employee cost is being treated as an uncontrollable expense. The benchmark has been carried out on the base of the actual O&M Expenses as reported in its Audited Financial Statements for the last five Financial years excluding following costs. Other expense heads may include various provisions on account of such expense under respective sub-heads and have not been excluded at the time of determining the norms for O&M expenses.

(105) Employee Cost relating to FRSR Employees governed under Tripartite agreement - The FR/SR employee cost may be considered as uncontrollable and not included in the normative O&M Expenses of the DISCOMs. The DISCOMs may argue for replacement cost for retirement of such FRSR employees in their normative Non FRSR Costs. It is to submit that the employees retiring from the business are generally replaced with fresh talent at lower levels and thus lower costs. Further, such replacement has been a continuous process as the FR/SR employee count has declined over a period of time and has been replaced in due course of time thus including the impact in the growth of Non FRSR employee costs. Thus the increase in Non FRSR employee cost is already taken care of in the y-o-y growth of such costs.

(106) Rates & Taxes - Levy such as land license fee to GoNCTD, license fee to DERC is also being treated as uncontrollable and not considered in the normative O&M Expenses. All statutory levies, if not indicated separately from the cost head, for example GST paid on service contract, professional charges etc. are not being considered separately as the same are forming part of the normative O&M expenses.

(107) Corporate Social Responsibility, or CSR, refers to the belief that businesses have an obligation to society beyond their commitments to their stockholders or investors. As per Companies Act 2013, all companies with net worth above Rs 500 crore, turnover over Rs 1,000 crore, or net profit over Rs 5 crore are required to spend at least 2 per cent of their

annual profits (averaged over 3 years). Section 135 of the Act which mandates the CSR donation also asks companies to establish a CSR committee to oversee the spending. Such obligation cannot not be passed onto the consumers and therefore excluded from the O&M Expenses of the DISCOMs.

(108) Performance Linked Incentive / any bonus paid to the employees cannot be forming part of the normative O&M expenses. Instead it is to be paid by the Licensees out of their own profits/ reserves.

(109) Bank charges as cheque book issuance, demand draft charges, LC Charges etc. that are attributable to day to day business and not directly linked to any particular loan may be included in the A&G Expenses. All charges that are directly attributable to particular loan to be included in the interest on such loan under relevant Regulations of DERC (Terms and Conditions for determination of Tariff) Regulations, 2017.

(110) Water charges have been included in the normative O&M expenses and shall not be trued up separately.

(111) The average cost for last 5 years is multiplied by an inflation rate as determined to arrive at the cost for the base year compared with the last year's audited cost multiplied by the inflation rate to arrive at the base year cost for FY 2022-23. The lower of the two is considered as the base cost for FY 2022-23.

Min(Average cost of last 5 years x (1+ inflation rate)^3, Last year's cost x (1+ inflation rate)) = Base Cost

(112) The Commission has projected the estimated sales for FY 2022-23 considering the CAGR growth from FY 2017-18 to FY 2019-20. FY 2020-21 and FY 2021-22 have not been considered due to imposition of Covid-19 lockdown.

(113) The base cost so arrived for FY 2022-23 is thereafter divided by such estimated sales to arrive at the normative O&M cost per unit of the DISCOMs (which is not to be trued up). Such cost per unit is thereafter multiplied with the inflation rate and the efficiency factor of 2% on an annual basis to arrive at the Normative O&M Expenses for the Business Plan Control period FY 2023-24 to FY 2025-26.

(114) Uncontrollable expenses such as FRSR expenses, Rates & Taxes shall be allowed in the ARR of the DISCOMs subject to true up.

16. CAPITAL INVESTMENT PLAN

PROVISIONS IN DRAFT DERC BUSINESS PLAN REGULATIONS, 2023

" 24. 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 9: Capitalisation for BRPL for the Control Period (in Rs. Cr.)

Particulars	FY 2023-24	FY 2024-25	FY 2025-26	Total
Capitalization	494	512	530	1536
Smart Meter	200	200	200	600
Less: Deposit Work	100	100	100	300
Total	**594**	**612**	**630**	**1836**

Table 10: Capitalisation for BYPL for the Control Period (in Rs. Cr.)

Particulars	FY 2023-24	FY 2024-25	FY 2025-26	Total
Capitalization	253	262	271	786
Smart Meter	150	150	150	450
Less: Deposit Work	72	76	80	228
Total	**331**	**336**	**341**	**1008**

Table 11: Capitalisation for TPDDL for the Control Period (in Rs. Cr.)

Particulars	FY 2023-24	FY 2024-25	FY 2025-26	Total
Capitalization	387	403	420	1210
Smart Meter	66	66	66	198
Less: Deposit Work	50	50	50	150
Total	**403**	**419**	**435**	**1257**

Table 12: Capitalisation for NDMC for the Control Period (in Rs. Cr.)

Particulars	FY 2023-24	FY 2024-25	FY 2025-26	Total
Capitalization	138	148	139	425

(2) The Distribution Licensee shall take approval for Capital Investment Schemes as per the provisions of Capital Investment Guidelines issued by the Commission from time to time.

(3) Employee expenses and A&G expenses shall be allowed to be capitalized equivalent to lower of 10% of (total Employee Expenses and A&G Expenses) or actuals in a particular Financial Year.

(4) 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.

(5) *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.*

(6) *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 dealt under the 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 applicable Weighted Average Cost of Capital (WACC) 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, subject to prudence check, *shall be adjusted in the Revenue Gap/Surplus of the relevant year along with interest rate equal to applicable Weighted Average Cost of Capital (WACC) 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 applicable Weighted Average Cost of Capital (WACC) of respective year."*

<u>EXPLANATORY NOTES</u>

(115) It was noted from the Business Plan filed by BRPL & BYPL that they have projected Capital Expenditure for the period from FY 2023-24 to FY 2027-28. It is pertinent to state that as far as the Tariff exercise goes, capitalization forms the basis of Return On Capital Employed & Depreciation and not Capital Expenditure.

(116) Accordingly, the Commission vide its email dated 21.12.2022 sought year-wise capitalization schedule against the capex projected in their Business Plan. It was noticed that both the DISCOMs have submitted that their CAPEX and capitalization as same. The extract of the letter dated is as under:

"In this regard, we hereby submit that proposed capitalization of assets is same as proposed CAPEX submitted in Business Plan assuming same closing CWIP from FY 2023-24 to FY 2027-28."

(117) The actual capitalization of all the DISCOMs (BRPL, BYPL & TPDDL) were accordingly analysed for the past 10 years. It was noticed that BRPL, BYPL & TPDDL had actual average capitalization for the past 10 years as Rs 477.30, Rs 243.90 & Rs 437.08 Crores respectively against their projected capitalization for the next 3 years as under:

BRPL Capital Investment Plan (Rs Cr)			
	FY 2023-24	FY 2024-25	FY 2025-26
Proposed Capital Investment	1719	2716	1432

BYPL CAPEX Estimate (Rs Cr)			
	FY 2023-24	FY 2024-25	FY 2025-26
Proposed CAPEX Estimate	1025	1658	800

TPDDL Capital Investment Plan (Rs Cr)			
	FY 2023-24	FY 2024-25	FY 2025-26
Proposed Capitalisation	454	480	496

(118) Variation in actual capitalization of BRPL & BYPL against projected capitalization is very difficult to accept. Accordingly, the Commission has split the projected capitalization of the control period into two parts. First pertaining to Smart Metering and other Conventional Capitalization, which includes laying of lines, cables, transformers, IT equipment etc.

(119) Smart Metering plan submitted by BRPL & BYPL for the control period (mentioned below) also noticed to be on higher side.

BRPL Estimated CAPEX for Smart Meter (Rs Cr)			
	FY 2023-24	FY 2024-25	FY 2025-26
Estimated CAPEX for Smart Meter	571.91	1481.74	124.45

BYPL Estimated CAPEX for Smart Meter (Rs Cr)			
	FY 2023-24	FY 2024-25	FY 2025-26
Estimated CAPEX for Smart Meter	375	970	68

(120) The Commission had already approved 262.4 Cr for BRPL and 191.3 Cr for BYPL for Smart meters in 2016. However, BRP and BYPL has installed approx. 11000 Smart Meters only till date. Accordingly, the projected capitalisation of BRPL & BYPL for Smart Meters in the control period by BRPL & BYPL seems unrealistic. In view of above, Commission has considered Rs. 200 Cr for BRPL and 150 Cr for BYPL for Capitalisation for Smart Meters in each year of control period.

(121) The distribution licensees (BRPL, BYPL & TPDDL) have projected the CAGR in the range of 0.42% to 3.71% in the Sanction loads, increase in the customer base and in the sales forecast in next 5 years.

(122) The 20th EPS survey data has projected the growth of Energy requirement of Delhi at CAGR of 3.54% in next 5 years.

Table 16: Electrical Energy Requirement (MU)

DISCOM	2021-22	2022-23	2023-24	2024-25	2025-26	2026-27	2027-28	2028-29	2029-30	2030-31	2031-32
BRPL	12673	15062	15863	16710	17606	18554	19562	20637	21795	23033	24345
BYPL	6506	7428	7661	7893	8123	8351	8575	8795	9015	9223	9414
MES	236	241	246	250	255	260	265	270	277	284	291
NDMC	1096	1286	1368	1395	1421	1447	1474	1503	1534	1570	1602
TPDDL	9937	10486	10882	11333	11808	12304	12825	13375	14037	14514	14975
Delhi	**31527**	**35715**	**37346**	**39000**	**40771**	**42566**	**44448**	**46425**	**48641**	**50702**	**52792**

(123) Therefore, Capitalization of the distribution licensees (BRPL, BYPL & TPDDL) in order to meet the growing demand is projected with the 3.54% CAGR rate for next control period. The base year for the projection of capitalisation is taken as the average of 10 year of the capitalization of the distribution licensee.

(124) Considering the reasons above, the Commission approves year-wise capitalization for the control period tabulated as below: -

Capitalisation for BRPL			
Particulars	FY 2023-24	FY 2024-25	FY 2025-26
Capitalization	494	512	530
Smart Meter	200	200	200
Less: Deposit Work	100	100	100
Total	**594**	**612**	**630**

Capitalisation for BYPL			
Particulars	**FY 2023-24**	**FY 2024-25**	**FY 2025-26**
Capitalization	253	262	271
Smart Meter	150	150	150
Less: Deposit Work	72	76	80
Total	**331**	**336**	**341**

Capitalisation for TPDDL			
Particulars	**FY 2023-24**	**FY 2024-25**	**FY 2025-26**
Capitalization	387	403	420
Smart Meter	66	66	66
Less: Deposit Work	50	50	50
Total	**403**	**419**	**435**

Capitalisation for NDMC			
Particulars	**FY 2023-24**	**FY 2024-25**	**FY 2025-26**
Capitalization	**138**	**148**	**139**

17. TARGET FOR DISTRIBUTION LOSS

PROVISIONS IN DRAFT DERC BUSINESS PLAN REGULATIONS, 2023

" 25. 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 15: Target for Distribution Loss for the Control Period

Sr. No.	*Distribution Licensee*	*2023-24*	*2024-25*	*2025-26*
1	*BSES Rajdhani Power Ltd.*	*6.83%*	*6.64%*	*6.45%*
2	*BSES Yamuna Power Ltd.*	*7.13%*	*6.95%*	*6.76%*
3	*Tata Power Delhi Distribution Ltd.*	*6.22%*	*6.11%*	*6.00%*
4	*New Delhi Municipal Council*	*7.13%*	*6.95%*	*6.76%*

(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) Any financial impact due to Underachievement on account of Distribution Loss target by the distribution licensee for the relevant year, (i.e. Actual Loss > Loss target), shall be to the account of distribution licensee as specified in Regulation 161 of the DERC (Terms and Conditions for Determination of Tariff) Regulations, 2017.

(4) Any financial impact due to 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 $2/3^{rd}$ to Consumers and $1/3^{rd}$ 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 $1/3^{rd}$ to Consumers and $2/3^{rd}$ to the Distribution Licensee."*

EXPLANATORY NOTES:

(125) The proposal submitted by DISCOMs for Distribution Loss profile over the next 5 years is summarized as follows:

Table 17: Proposal of DISCOMs for Distribution Loss Target over next 5 years

DISCOM	FY 2023-24	FY 2024-25	FY 2025-26	FY 2026-27	FY 2027-28
TPDDL	7.14%	7.14%	7.14%	7.14%	7.14%
BRPL	7.85%	7.80%	7.75%	7.70%	7.65%
BYPL	8.40%	8.30%	8.20%	8.10%	8.00%
NDMC	8.50%	8.50%	8.50%	8.50%	8.50%

(126) NDMC has forecasted Distribution Loss of 8.50% over next 5 years. TPDDL has submitted that Distribution Network has reached to a saturation level hence there is limited scope of reduction in AT&C loss levels. BRPL & BYPL submitted that Utilities of other states having Distribution Loss less than 10% are facing difficulty in reducing the same YoY and require huge technical investment on technical front.

(127) The actual Distribution Loss for Delhi DISCOMs as submitted by DISCOMs in their True up Petitions are as follows:

Table 18: Actual distribution loss levels for FY 2017-18 to FY 2019-20

DISCOM	2017-18		2018-19		2019-20	
	Target	Achievement	Target	Achievement	Target	Achievement
BRPL	10.93%	9.43%	10.19%	8.09%	9.50%	7.16%
BYPL	13.00%	10.67%	11.69%	8.93%	10.50%	7.35%
TPDDL	8.38%	8.18%	8.19%	7.90%	8.00%	6.78%
NDMC	10.30%	13.73%	9.63%	5.25%	9.00%	9.39%

(128) The Distribution Loss for Delhi DISCOMs considered for FY 2020-21 & FY 2021-22 are based on their True-up Petitions, as follows:

DISCOM	2020-21		2021-22	
	Target	As per True-up Petition*	Target	As per True-up Petition*
BRPL	8.10%	7.17%	8.00%	7.56%
BYPL	9.00%	7.98%	8.75%	8.02%
TPDDL	7.90%	7.15%	7.80%	7.11%
NDMC	9.00%	7.43%	8.75%	8.35%

**Subject to True-up*

(129) Further, Distribution Loss of private DISCOMs in other states were also analysed as follows:

DISCOM	Parameters	FY 2017-18	FY 2018-19	FY 2019-20	FY 2020-21
Torrent Power-Surat	Target	3.74%	3.69%	3.64%	3.59%
	Approved	3.59%	3.43%	3.43%	3.59%
TPCL- Mumbai	Target	0.75%	1.02%	1.02%	1.02%
	Approved	0.75%	0.27%	1.02%	-
Adani Electricity Mumbai Limited	Target	8.11%	8.61%	8.36%	7.55%
	Approved	8.16%	7.85%	7.80%	-
Noida Power Corporation Limited	Target	8.00%	8.00%	8.00%	7.92%
	Approved	7.99%	9.23%	9.00%	8.80%

(130) The division-wise Distribution Losses for DISCOMs based on data submitted by DISCOMs were analysed for the period from FY 2017-18 to FY 2020-21 to identify the divisions where Distribution Loss level is above the acceptable limit and improvement due to reduction in Loss Level is possible. The Division-wise actual Distribution Loss has been analysed which are further split into High Loss prone Zones (>18%) and Medium Loss prone Zones (9% < DL < 18%). The target at the end of Control Period i.e., FY 2025-26 has been computed considering:

a) Reduction of Losses to 18% till FY 2025-26 for Divisions under High Loss Zones *(except for Jaffarpur whose reduction of losses is considered as 28% till FY 2025-26)*
b) Reduction of Losses to 9% till FY 2025-26 for Divisions under Medium Loss Zones
c) Reduction of 0.09% for other Divisions

(131) The following table depicts various divisions where the Distribution Loss levels are on the higher side:

Computation of BRPL Division-wise Distribution Loss targets

S.No.	Division Name	Distribution Loss (%)				Distribution Loss		
		FY 2017-18	FY 2018-19	FY 2019-20	FY 2020-21	Power Purchase	Energy Billed	T&D Loss
		%	%	%	%	MU	MU	%
1	Alaknanda	8.42%	8.16%	7.43%	6.29%	572	536	6.29%
2	Khanpur	9.30%	9.30%	8.15%	7.03%	583	542	7.03%
3	Saket	9.79%	7.76%	6.85%	5.87%	954	898	5.87%
4	Vasant Kunj	7.15%	6.47%	5.31%	6.05%	760	714	6.05%
5	Nehru Place	4.52%	4.27%	3.19%	1.00%	502	497	1.00%
6	Nizamuddin	6.77%	6.06%	5.87%	5.03%	577	548	5.03%
7	Sarita Vihar	11.57%	10.96%	9.80%	5.96%	470	442	5.96%
8	**New Friends Colony**	**11.57%**	**10.96%**	**9.80%**	**11.55%**	537	489	9.00%
9	RK Puram	6.73%	4.41%	2.76%	4.18%	407	390	4.18%
10	Hauz Khas	3.57%	3.41%	4.19%	3.03%	528	512	3.03%
11	Janak Puri	3.38%	4.59%	3.39%	3.52%	795	767	3.52%
12	**Najafgarh**	**32.69%**	**33.59%**	**22.72%**	**19.72%**	563	462	18.00%
13	**Jaffarpur**	**54.00%**	**82.73%**	**42.19%**	**38.32%**	214	154	28.00%
14	Nangloi	6.72%	7.99%	8.05%	7.62%	643	594	7.62%
15	**Mundka**	**20.22%**	**19.84%**	**15.44%**	**14.36%**	411	374	9.00%
16	Punjabi Bagh	7.81%	7.69%	7.35%	5.17%	464	440	5.17%
17	**Tagore Garden**	**12.38%**	**10.27%**	**11.02%**	**10.02%**	599	545	9.00%
18	Vikas Puri	12.38%	7.65%	8.62%	5.05%	416	395	5.05%
19	Uttam Nagar	12.38%	7.65%	7.90%	4.35%	276	264	4.35%
20	Mohan Garden	12.38%	7.65%	4.05%	6.41%	281	263	6.41%
21	Palam	7.83%	5.64%	7.21%	4.44%	698	667	4.44%
22	Dwarka	4.84%	8.99%	4.68%	3.51%	684	660	3.51%
	Total	**9.94%**		**8.00%**	**7.17%**	**11933**	**11153**	**6.54%**

HIGH LOSS PRONE ZONES	MEDIUM LOSS PRONE ZONES
18%	9%

considering Other Zones Reduction during CP further reduced by 0.09%

6.45%

Computation of BYPL Division-wise Distribution Loss targets

Distribution Loss (%) Actual

Distribution Loss

	Division Name	FY 2017-18	FY 2018-19	FY 2019-20	FY 2020-21	Power Purchase	Energy Billed	T&D Loss
1	**Chandni Chowk**	16.83%	13.65%	11.32%	**14.80%**	214.55	195.24	9.00%
2	**Darya Ganj**	18.21%	18.43%	14.52%	**16.79%**	438.39	398.93	9.00%
3	**Pahar Ganj**	13.20%	10.21%	8.17%	**10.00%**	281.90	256.53	9.00%
4	Shankar Road	5.62%	4.36%	3.41%	3.71%	279.51	269.13	3.71%
5	Patel Nagar	6.67%	5.05%	3.74%	5.26%	383.24	363.09	5.26%
6	Jhilmil	5.93%	3.95%	3.88%	4.46%	405.18	387.11	4.46%
7	Dilshad Garden	5.82%	4.98%	4.02%	4.69%	587.68	560.12	4.69%
8	Krishna Nagar	10.10%	8.27%	7.01%	7.52%	602.51	557.22	7.52%
9	Laxmi Nagar	6.47%	6.07%	4.95%	5.70%	734.74	692.86	5.70%
10	Mayur Vihar	10.19%	8.72%	6.75%	6.90%	381.84	355.51	6.90%
11	Mayur Vihar - III	11.52%	8.96%	7.02%	6.39%	246.90	231.13	6.39%
12	**Yamuna Vihar**	19.55%	17.78%	13.13%	**12.47%**	658.14	598.91	9.00%
13	Karawal Nagar	9.42%	8.03%	6.39%	7.51%	659.53	610.03	7.51%
14	Nandnagri	11.29%	9.85%	7.66%	7.66%	500.31	462.01	7.66%
Total		**10.77%**	**9.31%**	**7.31%**	**7.98%**	**6374**	**5938**	**6.85%**

HIGH LOSS PRONE ZONES	18%	MEDIUM LOSS PRONE ZONES	9%

considering Other Zones Reduction during CP further reduced by 0.09%

Distribution Loss Target 6.76%

Computation of TPDDL Division-wise Distribution Loss targets

Sl. No.	Particulars	Distribution Loss						
		FY 2017-18	FY 2018-19	FY 2019-20	FY 2020-21	Energy Input (MU)	Energy Billed to the Consumers (MU)	Distribution Loss (MU)
1	**Badli**	**7.19%**	**7.21%**	**5.91%**	**11.59%**	572.64	521.10	9.00%
2	**Bawana**	**13.67%**	**12.73%**	**10.12%**	**13.33%**	1211.33	1102.31	9.00%
3	Civil Lines	5.58%	6.05%	4.47%	2.73%	717.65	698.06	2.73%
4	Keshav Puram	5.64%	5.66%	4.57%	5.61%	830.15	783.29	5.64%
5	Mangolpuri	9.06%	8.78%	8.03%	5.42%	596.14	563.83	5.42%
6	Model Town	7.30%	4.95%	4.89%	4.99%	627.77	596.44	4.99%
7	Moti Nagar	6.08%	6.06%	4.08%	5.00%	717.87	681.98	5.00%
8	**Narela**	**11.27%**	**10.16%**	**9.44%**	**11.21%**	1015.34	923.96	9.00%
9	Pitam Pura	6.23%	6.22%	5.63%	4.34%	602.66	576.50	4.34%
10	Rohini	4.20%	5.53%	5.81%	3.18%	1014.10	981.85	3.18%
11	**Kirari**	**6.33%**	**6.25%**	**5.61%**	**10.43%**	373.88	340.23	9.00%
12	Shalimar Bagh	8.89%	8.46%	7.45%	5.22%	724.20	686.40	5.22%
	Total	**8.20%**	**7.93%**	**6.83%**	**7.15%**	**9003.7**	**8456.0**	**6.08%**

HIGH LOSS PRONE ZONES	18%	MEDIUM LOSS PRONE ZONES	9.0%

considering Other Zones	
Reduction during control period	0.09%
further reduced by	
Distribution Loss Target	6.00%

Distribution Loss - Trajectory

DISCOM	Parameters	FY 2017-18	FY 2018-19	FY 2019-20	FY 2020-21	FY 2021-22	FY 2022-23	FY 2023-24	FY 2024-25	FY 2025-26
TPDDL	Target	8.38%	8.19%	8.00%	7.90%	7.80%	7.70%	7.14%	7.14%	7.14%
	Δ	4.02%	0.19%	0.19%	0.10%	0.10%	0.10%	0.56%	0.00%	0.00%
	Actual	8.18%	7.93%	6.83%	7.15%	7.11%				
	Δ	0.44%	0.25%	1.10%	-0.32%	-0.04%				
	Approved	8.18%	7.90%	6.78%	7.05%	**6.45%**				
Remarks	Target					3.53%		**6.22%**	**6.11%**	**6.00%**
	Δ							0.11%	0.11%	0.11%
BRPL	Target	10.93%	10.19%	9.50%	8.10%	8.00%	7.90%	7.85%	7.80%	7.75%
	Δ	0.30%	0.74%	0.69%	1.40%	0.10%	0.10%	0.05%	0.05%	0.05%
	Actual	9.94%	8.26%	7.02%	7.17%	7.50%				
	Δ	1.19%	1.68%	1.24%	-0.15%	0.33%				
	Approved	9.43%	8.09%	7.16%	7.40%	**7.21%**				
Remarks	Target					5.23%		**6.83%**	**6.64%**	**6.45%**
	Δ							0.19%	0.19%	0.19%
BYPL	Target	13.00%	11.69%	10.50%	9.00%	8.75%	8.50%	8.40%	8.30%	8.20%
	Δ	-0.10%	1.31%	1.19%	1.50%	0.25%	0.25%	0.10%	0.10%	0.10%
	Actual	10.77%	9.31%	7.30%	7.98%	7.63%				
	Δ	2.22%	1.46%	2.01%	-0.68%	-0.35%				
	Approved	10.67%	8.93%	7.35%	7.99%	**7.50%**				
Remarks	Target			-1.58%	0.64%	4.91%		**7.13%**	**6.95%**	**6.76%**
	Δ							0.18%	0.18%	0.18%
NDMC	Target	10.30%	9.63%	9.00%	9.00%	8.75%	8.50%	8.50%	8.50%	8.50%
	Δ	-0.70%	0.67%	0.63%	0.00%	0.25%		0.00%	0.00%	0.00%
	Actual	15.43%	6.15%	9.87%	8.43%	8.33%				
	Δ	-4.75%	9.28%	-3.72%	1.44%	-0.10%				
	Approved	13.73%	5.25%	9.39%	7.57%					
Remarks	Target							**7.13%**	**6.95%**	**6.76%**
	Δ							0.18%	0.18%	0.18%

Δ- Difference

(132) In view of above, the Commission by considering the actual past performance upto FY 2021-22 has judiciously fixed the end target of Distribution Loss for the Control Period for BRPL as 6.45%, BYPL as 6.76%, TPDDL as 6.00% and NDMC as 6.76%. Target for NDMC has been kept as that of BYPL, being highest among 3 DISCOMs, since division wise break up of losses for NDMC is not available and also there is improper energy accounting in NDMC which was highlighted by the Commission in Tariff Order dtd. 28/08/2020. Yearly reduction percentages for each DISCOM has been fixed on the basis of equal percentage reduction for each year from the target/actual of the previous years.

(133) The incentive sharing mechanism for Over/Under-achievement of Distribution loss target is same as provided in *Business Plan Regulations, 2019.*

18. TARGET FOR COLLECTION EFFICIENCY

PROVISIONS IN DRAFT DERC BUSINESS PLAN REGULATIONS, 2023

"26. TARGET FOR COLLECTION EFFICIENCY

(1) The targets for Collection Efficiency for FY 2023-24 to FY 2025-26 of the Distribution Licensee shall be 99.80%.

(2) The financial impact on account of Collection Efficiency target shall be computed as per the formula specified in 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 of Collection Efficiency from the target of 99.80%, in terms of Regulation 164 of the DERC (Terms and Conditions for Determination of Tariff) Regulations, 2017, shall be shared equally between Consumers and the Distribution Licensees."

EXPLANATORY NOTES

(134) The Commission has analysed the Collection Efficiency of Distribution Licensees from FY 2014-15 till FY 2020-21 and it is observed that the Distribution Licensees have achieved the Target of 99.50% in every year except in FY 2019-20 which was affected by COVID-19. The Collection Efficiency of NDMC in some years was below the Target of 99.50% due to improper Energy Accounting. Year-wise Collection Efficiency of Distribution Licensees from FY 2014-15 till FY 2020-21 is as follows:

BRPL

Particulars	FY 2014-15		FY 2015-16		FY 2016-17		FY 2017-18		FY 2018-19		FY 2019-20		FY 2020-21
	Petitioner Submission	Approved	Petitioner Submission	Approved	Petitioner Submission	Approved	Petitioner Submission	Approved	Petitioner Submission	Approved	Petitioner Submission	Approved	Petitioner Submission
Revenue Billed	7,407.00	7,512.84	8,047.00	8,074.53	8,089.00	8,150.49	8,501.70	8,580.89	9,168.00	9,172.93	9,343.80	9,343.76	8,086.20
Revenue Collected	7,499.00	7,499.01	8,109.00	8,109.10	8,130.00	8,130.09	8,550.80	8,550.67	9,190.60	9,191.77	9,187.48	9,187.62	8,112.00
Collection Efficiency	101.24%	99.82%	100.77%	100.43%	100.51%	99.75%	100.58%	99.65%	100.25%	100.21%	98.33%	98.33%	100.32%
Target Collection Efficiency	99.50%												
Revised Target Collection Efficiency for Next Control Period	99.80%												

BYPL

Particulars	FY 2014-15		FY 2015-16		FY 2016-17		FY 2017-18		FY 2018-19		FY 2019-20		FY 2020-21
	Petitioner Submission	Approved	Petitioner Submission	Approved	Petitioner Submission	Approved	Petitioner Submission	Approved	Petitioner Submission	Approved	Petitioner Submission	Approved	Petitioner Submission
Revenue Billed	3,961.00	3,986.15	4,322.00	4,338.27	4,421.00	4,445.55	4,706.53	4,713.56	4,911.16	4,936.71	4,888.89	4,890.20	4,247.51
Revenue Collected	3,991.00	3,991.01	4,343.00	4,342.93	4,435.70	4,435.69	4,725.44	4,728.89	4,929.17	4,929.16	4,817.81	4,817.81	4,271.64
Collection Efficiency	100.76%	100.12%	100.49%	100.11%	100.33%	99.78%	100.40%	100.33%	100.37%	99.85%	98.55%	98.52%	100.57%
Target Collection Efficiency	99.50%												
Revised Target Collection Efficiency for Next Control Period	99.80%												

TPDDL

Particulars	FY 2014-15		FY 2015-16		FY 2016-17		FY 2017-18		FY 2018-19		FY 2019-20		FY 2020-21
	Petitioner Submission	Approved	Petitioner Submission	Approved	Petitioner Submission	Approved	Petitioner Submission	Approved	Petitioner Submission	Approved	Petitioner Submission	Approved	Petitioner Submission
Revenue Billed	5,727.63	5,727.62	6,093.58	6,093.58	6,129.82	6,129.82	6,451.58	6,451.58	6,891.24	6,891.24	7,232.97	7,198.54	6,377.95
Revenue Collected	5,714.43	5,680.52	6,096.18	6,063.70	6,118.98	6,118.98	6,446.04	6,446.04	6,897.04	6,897.04	7,219.20	7,120.73	6,426.27
Collection Efficiency	99.77%	99.18%	100.04%	99.51%	99.82%	99.82%	99.91%	99.91%	100.08%	100.08%	99.81%	98.92%	100.76%
Target Collection Efficiency	99.50%												
Revised Target Collection Efficiency for Next Control Period	99.80%												

NDMC

Particulars	FY 2014-15		FY 2015-16		FY 2016-17		FY 2017-18		FY 2018-19		FY 2019-20		FY 2020-21
	Petitioner Submission	Approved	Petitioner Submission	Approved	Petitioner Submission	Approved	Petitioner Submission	Approved	Petitioner Submission	Approved	Petitioner Submission	Approved	Petitioner Submission
Revenue Billed	1,070.11	1,070.11	1,153.64	1,158.87	1,140.42	1,088.19	1,097.69	1,095.04	1,370.57	1,308.50	1,339.37	1,336.60	1,055.63
Revenue Collected	1,038.84	1,038.84	1,132.15	1,132.15	1,105.45	1,060.82	1,074.97	1,068.56	1,325.07	1,259.45	1,279.28	1,325.07	1,104.61
Collection Efficiency	97.08%	97.08%	98.14%	97.69%	96.93%	97.48%	97.93%	97.58%	96.68%	96.25%	95.51%	99.14%	104.64%
Target Collection Efficiency	99.50%												
Revised Target Collection Efficiency for Next Control Period	99.80%												

(135) From the above table it is noted that DISCOMs have Collection Efficiency more than 100% over past few years or near to 100%. Therefore, normative Collection Efficiency is set as 99.80%.

19. <u>TARGET FOR RENEWABLE PURCHASE OBLIGATION</u>

<u>PROVISIONS IN DRAFT DERC BUSINESS PLAN REGULATIONS, 2023</u>

"27. TARGET FOR RENEWABLE PURCHASE OBLIGATION

*(1) The targets for Renewable Purchase Obligation (RPO) in terms of Regulation 124 of the DERC (Terms and Conditions for Determination of Tariff) Regulations, 2017 of a Distribution Licensee from FY 2023-24 to FY 2025-26, shall be computed as a percentage of total sale of power, to its retail consumers in its area of supply, excluding procurement of Hydro Power but not excluding Hydro Power eligible under fulfilment of Hydro Purchase Obligation (HPO). The target for RPO shall be met through purchase of power from various Renewable Energy Sources or purchase of Renewable Energy Certificates ("**REC**") or purchase of Hydro Energy Certificates ("**HEC**") or combination of both, and shall be as follows:*

Table 14: Targets for Renewable Purchase Obligation

Sr. No.	***RPO Targets for Distribution Licensee***	***FY 2023-24***	***FY 2024-25***	***FY 2025-26***
1	*Wind RPO Target*	*10.75%*	*11.00%*	*11.25%*
2	*Other RPO Target*	*10.80%*	*11.10%*	*11.40%*
3	*HPO Target*	*0.45%*	*0.55%*	*0.65%*
4	***Total RPO Target***	***22.00%***	***22.65%***	***23.30%***

(2) The Distribution Licensee shall comply with its RPO through procurement of Wind Energy, Other than Wind Energy and Hydro Energy:

Provided that on achievement of Other RPO compliance as specified in aforesaid sub-Regulation (1) to the extent of 85% and above, remaining shortfall if any, can be met by excess Wind Energy/ Wind REC/eligible Hydro Energy/ Hydro REC purchased beyond Wind RPO or HPO for that particular year:

Provided further that on achievement of Wind RPO compliance as specified in aforesaid sub-Regulation (1) to the extent of 85% and above, remaining shortfall if any, can be met by excess Other RPO Energy/Other RPO REC/eligible Hydro Energy/ Hydro REC purchased beyond Other RPO or HPO for that particular year:

Provided also that the Distribution Licensee may purchase RECs/HECs for any shortfall in meeting their total RPO targets for any Financial Year within three months from the date of completion of the relevant financial year.

Provided further that, on achievement of HPO compliance to the extent of 85% and above, remaining shortfall, if any, can be met by excess Wind or Other RE energy or RECs consumed beyond specified Wind RPO or Other RPO for that particular year.

Provided further that Renewable Energy Certificates shall be considered as per Central Electricity Regulatory Commission (Terms and Conditions for Renewable Energy Certificates for Renewable Energy Generation) Regulations, 2022 for computation of balance 15% shortfall of RPO as stipulated in provisos above.

(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 DERC (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 purchased by the Distribution Licensee through Power Purchase Agreement approved by the Commission and the total power injected into the

grid through Net Metering arrangement, in excess of RPO target shall be part of Power Purchase Cost of the Distribution Licensee for the relevant year.

(5) The HPO Targets shall be fulfilled in the following manner:

a) HPO benefits to be met from power procured through eligible Hydro Power Projects (including Pump Storage Plants and Small Hydro Plants) commissioned on and after 8/03/2019 in respect of 70% of the total generated capacity for a period of 12 years from the date of commissioning.

b) Further to facilitate compliance of HPO, Hydro Energy Certificate mechanism, as available, may be utilized by Distribution Licensees.

c) The HPO Trajectory shall be trued up on an Annual Basis depending on the Revised Commissioning schedule of Hydro projects.

d) Hydro power imported from outside India shall not be considered for meeting HPO.

(6) Non-compliance of RPO targets (except HPO), by an Obligated Entity shall attract penalty at the rate of 10% of the weighted average Floor Price of Solar and Non- Solar Renewable Energy Certificate, as specified by Central Electricity Regulatory Commission (CERC) for the relevant year, for quantum of shortfall in RPO. If the Floor price as specified by CERC is zero for the year then the penalty shall be at the rate of 10% of the weighted average Forbearance Price of Solar and Non- Solar Renewable Energy, as determined by CERC, for quantum of shortfall in RPO.

(7) 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."

EXPLANATORY NOTES

(136) The *Electricity Act, 2003* entrusts on appropriate Commission the responsibility of promotion of co-generation and generation based on renewable energy sources. The policy framework of the Government of India also stresses on the encouragement of renewable energy sources keeping in view the need for energy security of the country. Relevant provisions of the Act are reproduced as below:

Section 86(1)(e):

86. Functions of State Commission

(1) The State Commission shall discharge the following functions, namely:-

(e) promote cogeneration and generation of electricity from renewable sources of energy by providing suitable measures for connectivity with the grid and sale of electricity to any person, and also specify, for purchase of electricity from such sources, a percentage of the total consumption of electricity in the area of a distribution licensee;

(137) Further, the Commission has also considered the relevant provision of RPO from the Tariff Policy dtd. 28/01/2016 as follows:

"6.4 Renewable sources of energy generation including Co-generation from renewable energy sources:

(1) Pursuant to provisions of section 86(1)(e) of the Act, the Appropriate Commission shall fix a minimum percentage of the total consumption of electricity in the area of a distribution licensee for purchase of energy from renewable energy sources, taking into account availability of such resources and its impact on retail tariffs. Cost of purchase of renewable energy shall be taken into account while determining tariff by SERCs. Long term growth trajectory of Renewable Purchase Obligations (RPOs) will be prescribed by the Ministry of Power in consultation with MNRE."

(138) Ministry of Power, Govt. of India in consultation with MNRE, vide order dated 22/07/2022 notified the long-term growth trajectory of Renewable Power Purchase Obligations (as given below) for Wind, Hydro & Other RPO, uniformly for all States / Union Territories from 2022-23 to 2029-30, as follows:

Year	Wind RPO	HPO	Other RPO	Total RPO
2022-23	0.81%	0.35%	23.44%	24.61%
2023-24	1.60%	0.66%	24.81%	27.08%
2024-25	2.46%	1.08%	26.37%	29.91%
2025-26	3.36%	1.48%	28.17%	33.01%
2026-27	4.29%	1.80%	29.86%	35.95%
2027-28	5.23%	2.15%	31.43%	38.81%
2028-29	6.16%	2.51%	32.69%	41.36%
2029-30	6.94%	2.82%	33.57%	43.33%

(139) Further, the total energy consumed from solar/ wind energy along with/ through storage uniformly for all States / Union Territories from 2022-23 to 2029-30, as follows:

F.Y.	Storage (on Energy Basis)
2023-24	1.0%
2024-25	1.5%
2025-26	2.0%
2026-27	2.5%
2027-28	3.0%
2028-29	3.5%
2029-30	4.0%

(140) BRPL & BYPL submitted that RPO Targets for FY 2023-24 to FY 2027-28 may be considered in line with targets notified by MoP, GoI vide their notification dated 22/07/2022. TPDDL submitted that RPO targets may be considered as per new RPO trajectory specified by MoP, GoI in the interest of consumers. However, considering the procurement process

through competitive bidding route and timeline towards construction of new Wind Power projects/ Battery Energy Storage System (BESS), they have requested to relax Wind RPO & Energy Storage obligation till 2026-27.

(141) The Commission also observed that Delhi DISCOMs i.e. BRPL, BYPL, TPDDL & NDMC have failed to meet their RPO targets as set by the Commission from time to time and there is continuous shortfall. Only TPPDL has only met the Renewable Purchase Obligations in FY 2020-21. Accordingly, cumulative penalty of approx. Rs. 79 Cr. was levied on Delhi DISCOMs in the last 4 years i.e. FY 2017-18 to FY 2020-21 for not meeting their RPO Obligations. The Penalty levied on Delhi DISCOMs for non-compliance to RPO from FY 2017-18 to FY 2020-21 are summarized as follows:

Rs. Crore

DISCOMs	Particulars	Unit	FY 2017-18	FY 2018-19	FY 2019-20	FY 2020-21
RPO Target	Total (Solar + Non-solar)	%	11.50%	14.25%	17.00%	17.50%
BRPL	RPO Met	MU	184.77	626.21	383.5	453.08
	Balance Obligation	MU	946.84	889.17	1,462.02	522.51
	RPO Penalty	Rs. Crore	9.47	8.89	14.62	11.38
BYPL	RPO Met	MU	122.23	110.97	103.19	177.50
	Balance Obligation	MU	623.98	721.68	897.37	352.74
	RPO Penalty	Rs. Crore	6.24	7.22	8.97	5.86
TPDDL	RPO Met	MU	911.16	652.03	1121	1,313.02
	Balance Obligation	MU	-22.59	315.64	274.58	-
	RPO Penalty	Rs. Crore	0.00	3.16	2.75	-
NDMC	RPO Met	MU	269.45	154.85	152.78	117.55
	Balance Obligation	MU	-28.65	-34.06	-63.47	20.05
	RPO Penalty	Rs. Crore	0.28	0.34	0.69	0.20
Total RPO Penalty		Rs. Crore	15.71	19.27	26.34	17.44
					Total (Rs. Cr.)	**78.76**

(142) Due to Delhi's geography, flat land terrain & limited land availability, DISCOMs are dependent on Other States for meeting their Solar, Wind & Hydro purchase obligations. Delhi DISCOMs have tied up with Traders/ Generators of other States for meeting their RPO Obligations and delay in Commissioning of various projects in Other States have affected the RPO met for Delhi DISCOMs in last 4 years. It is also pertinent to mention that BSES DISCOMs have filed Petition before the Commission for waiver/ relaxation/ carry forward of RPO targets for FY 2018-19 till FY 2021-22 on the account of Force

Majeure conditions in Petition No. 23 of 2021 (BYPL) & Petition no. 58 of 2021 (BRPL) which are under adjudication.

(143) The RPO trajectory for Other States were also analysed and it is observed that RPO targets of other States varied in the range of 8.5% to 24.61% for FY 2022-23, as follows:

	SR. No	State	FY 2017-18	FY 2018-19	FY 2019-20	FY 2020-21	FY 2021-22	FY 2022-23	FY 2023-24	FY 2024-25	FY 2025-26
Total RPO Target	1	MoP Trajectory	14.25%	17.00%	17.50%	19.00%	21.00%	24.61%	27.08%	29.91%	33.01%
	2	Delhi	11.50%	14.25%	17.00%	17.50%	19.18%	21.35%	**22.00%**	**22.65%**	**23.30%**
	3	Gujarat	10.00%	12.70%	14.30%	15.65%	17.00%	17.00%	18.70%	20.70%	
	4	Maharashtra	12.50%	13.75%	15.00%	16.00%	17.50%	19.50%	22.00%	25.00%	
	5	Orissa	7.50%	9.50%	11.00%		13.25%	14.50%	16.00%	18.00%	
	6	Punjab	6.00%	6.50%	9.50%	11.50%	21.18%	To be specified later			
	7	Rajasthan		13.35%	15.00%	16.65%	18.48%	19.95%	21.66%		
	8	Tamil Nadu	14.00%	14.00%	14.00%	18.25%	21.00%				
	9	Telangana		6.00%	6.50%	7.00%	8.00%	8.50%	9.25%	10.50%	11.75%
	10	UP	6.00%	6.00%	8.00%	11.00%	13.00%	14.00%	15.00%		
	11	Haryana	5.25%	7.00%	8.50%	10.00%	11.00%	14.35%	16.66%	To be specified	

(144) Andhra Pradesh notified draft APERC Renewable Power Purchase Obligation (Compliance by purchase of Renewable Energy/Renewable Energy Certificates) Regulations, 2022 vide public notice dated 17/03/2022 where in Total RPO targets for state of Andhra Pradesh are proposed as 21% till FY 2025-26.

(145) From above table, it can be seen that Total RPO targets for FY 2023-24 in Renewable Energy-rich states varies in the range of 18.70% to 22% which is comparable to the Total RPO targets proposed for the state of Delhi during the control period.

(146) Since the earlier trajectory for RPO under *DERC Business Plan Regulations, 2019* is applicable for control period till FY 2022-23, the Commission proposes to specify the RPO targets for the MYT Control Period from FY 2023-24 to FY 2025-26 by taking reference the trajectory issued by RPO trajectory of Other States & actual RPO met by Delhi DISCOMs from FY 2017-18 to FY 2021-22.

(147) The Commission has considered the break-up of RPO as mentioned in MoP Notification 22/07/2022.

(148) In view of above, the Commission has proposed the RPO target for FY 2023-24 to FY 2025-26 for Delhi Distribution Licensees.

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