

ARR for FY 2023-24

As per Regulation 3 of *Delhi Electricity Regulatory Commission (Terms and Conditions for Determination of Tariff) Regulations, 2017*, the Commission has notified Business Plan Regulations, 2023, which contains the following parameter applicable for the Control Period (FY 2023-24 to FY 2025-26):

- (1) Rate of Return on Equity
- (2) Margin for rate of interest on Loan
- (3) Operation and Maintenance Expenses
- (4) Capital Investment Plan
- (5) Mechanism for sharing of incentive-disincentive mechanism
- (6) Allocation of overhead expenses incurred on account of Administrative Expenditure out of Operation and Maintenance Expenses for creation of Capital Asset

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(9) Distribution Norms:

- (a) Distribution Loss Target
- (b) Collection Efficiency Target
- (c) Targets for HPO, Wind & Other RPO
- (d) Contingency limit for Sale through Deviation Settlement Mechanism (Unscheduled Interchange) transactions
- (e) The ratio of various ARR components for segregation of ARR into Retail Supply and Wheeling Business.

Based on the above norms, the Petitioner submits its Aggregate Revenue Requirement for FY 2023-24.

Projected Energy Sales & Billed Revenue for FY 2023-24

To estimate the energy sales for year FY 2023-24, the Petitioner has considered FY 2022-23 as base year for available growth trends as FY 2022-23 was a normal year and not impacted by any COVID lockdown. The Petitioner has further assumed that the underlying factors which drive the demand for electricity are expected to follow the same growth trend. Therefore, demand forecast is based on the standard approach looking at the past year's consumption trend.

The assumptions considered for forecasting category wise sales are as below:

1. The category wise and year wise Compounded Annual Growth Rate (CAGR) has been computed for the past sales pattern.
2. For those categories where CAGR/ past growth trends are not showing any particular type of movement then the demand has been forecasted based on consumption pattern of FY 2022-23.
3. Impact of Demand Side Management due to replacement of existing electrical equipment's with the star rated equipment's have been considered while forecasting the sales.
4. Impact of Net Metering due to Solar Energy generated by the different categories of consumers has also been factored while forecasting the energy sales. Prospective plans of generation under Net metering are given below:

Category	FY 23-24 (in MUs)
Domestic	20
Non Domestic	12
Industrial	20
Total	52

5. Impact of movement of consumers under Open Access has also been factored for future years. FY 2023-24 projection of reduction in consumption (in MU) due to open Access is given below:

Category	FY 23-24 (in MUs)
Industrial	32
Non Domestic	30
Total	62

Previous year trends are given below:

Year on Year Category wise billed Sale from FY 2017-18 onwards is given below

From FY 2018 to FY 2023, there has been an annual growth of 2.86% in billed units (i.e. from the level of 8,638 MUs to 9,947 Mus.)

Table 2.1: Category wise summary of units sold from FY 18 to FY 23

Sl. No.	Category	FY18 Sales (MU)	FY19 Sales (MU)	FY20 Sales (MU)	FY21 Sales (MU)	FY22 Sales (MU)	FY23 Sales (MU)
1	Domestic	3,947	4,068	4,321	4,474	4,428	4,935
2	Non Domestic	1,528	1,541	1,552	1,182	1,349	2,094
3	Industrial	2,432	2,539	2,497	2,080	2,340	2,177
4	Agriculture & Mushroom Cultivation	13	14	15	17	14	18
5	Public Utilities	603	615	580	440	501	574
6	Own Consumption	19	12	13	13	14	13
7	Advertisement & Hoarding	0.91	0.42	0.38	0.48	0.42	0.32
8	Others**	94	79	108	103	106	135
	Total	8,638	8,867	9,086	8,310	8,752	9,947

* As per Form 2.1a for respective years, all sub-categories are merged into one main category.

** Others includes Staff, Temporary, and Theft & Misuse.

Table 2.2: CAGR of Units Billed based on Main Category wise consumption

Sl. No.	Category	CAGR for 5 years	CAGR for 4 years	CAGR for 3 years	CAGR for 2 years	CAGR for 1 years
1	Domestic	4.57%	4.95%	4.53%	5.03%	11.45%
2	Non Domestic	1.52%	1.15%	1.80%	14.41%	15.76%
3	Industrial	1.52%	1.15%	1.80%	14.41%	15.76%
4	Agriculture & Mushroom Cultivation	4.52%	4.20%	2.82%	-0.79%	22.24%
5	Public Utilities -Public Lighting	-4.28%	1.72%	1.60%	2.23%	4.38%
6	Public Utilities - DJB	1.98%	3.00%	2.55%	1.96%	5.08%
	Total	2.86%	2.91%	3.06%	9.40%	13.65%

#FY 2022-23 is taken as base year available for growth trends, as it was a normal year and not impacted by COVID. Thus, FY 2022-23 considered for sales forecast for FY 2023-24. Also, predominantly CAGR of four years has been considered for sales projections for FY 2023-24 to avoid including any COVID impacted periods.

Domestic

The consumption of energy by domestic consumers constitutes substantial part of total sales of the Petitioner.

Based on the actual sales of 4,935 MU for FY 2022-23, the Petitioner has computed the given below CAGR over a period of one year to five years.

CAGR for 5 years	CAGR for 4 years	CAGR for 3 years	CAGR for 2 years	CAGR for 1 year
4.57%	4.95%	4.53%	5.03%	11.45%

Considering the available trends of CAGR, the Petitioner has considered a growth rate of 4.95%, (i.e. 4 year CAGR) to estimate the energy sales for domestic consumers considering FY 2022-23 as base year.

Further impact due to energy generated under roof top solar has been adjusted in the domestic consumption as per above assumptions.

Based on above, the projected consumption for domestic consumers is computed as below:

Table 2.3: Projected billed energy for FY 2023-24

Sl. No.	Category	FY 23 Sales (MU)	Growth (%)	FY 24 Sales (MU)
A	Domestic			
I	Domestic - Others than CGHS	4,908.46	4.95%	5,151.28
	Adjusted due to			
	Metering of Roof top solar			20.00
	Impact of DSM due to replacement of existing electrical equipment's with the star rated equipment's			4.00
	Net Consumption – Domestic			5,127.28
II	Single delivery point for CGHS/Hospital	26.50		27.81
	Total Domestic	4,934.97		5,155.10

Non-Domestic

The consumption of energy by non-domestic consumers constitutes reasonable share of total sales of the Petitioner.

Based on the actual sales of 2,094 MU for FY 2022-23, the Petitioner has computed the given below CAGR over a period of one year to five years.

CAGR for 5 years	CAGR for 4 years	CAGR for 3 years	CAGR for 2 years	CAGR for 1 years
1.52%	1.15%	1.80%	14.41%	15.76%

Considering the available trends of CAGR, the Petitioner has considered a growth rate of 1.15%, (i.e. 4 year CAGR) to estimate the energy sales for Non-domestic consumers considering FY 2022-23 as base year.

The Petitioner has further considered the impact of Net Metering arrangement and Open Access for its consumption for Non- Domestic Consumers as per above assumptions.

Based on above, projected consumption for non-domestic consumers is computed as below:

Table 2.4: Projected billed energy for FY 2023-24

Sl. No.	Category	FY 23 Sales (MU)	Growth (%)	FY 24 Sales (MU)
A	Non-Domestic	2,094.40	1.15%	2,118.57
	Less: Open Access			30.00
	Less- Adjustment for Net Metering			12.00
	Net Consumption			2,076.57

Industrial

The consumption of energy by Industrial consumers constitutes approx. 1/4th part of total sales of the Petitioner.

Based on the actual sales of 2,177 MU to industrial consumers for FY 2022-23, the Petitioner has computed the given below CAGR over a period of one year to five years.

CAGR for 5 years	CAGR for 4 years	CAGR for 3 years	CAGR for 2 years	CAGR for 1 years
1.52%	1.15%	1.80%	14.41%	15.76%

Considering the available trends of CAGR, the Petitioner has considered a growth rate of 1.15%, (i.e. 4 year CAGR) to estimate the energy sales for Industrial consumers considering FY22-23 as base year.

The Petitioner has further considered the impact of Net Metering arrangement and Open Access for its consumption for Industrial Consumers as per above assumptions.

Based on above, projected consumption for Industrial consumers is computed as below:

Table 2.5: Projected billed energy for FY 23-24

Sl. No.	Category	FY 23 Sales (MU)	Growth (%)	FY 24 Sales (MU)
A	Industrial			
I	Industrial	2,176.62	1.15%	2,201.74
	Less: Impact of DSM due to replacement of existing electrical equipment's with the star rated equipment's			3.11
	Less: Open Access			31.98
	Less- Adjustment for Net Metering			20.00
	Net Consumption			2,146.65

Agriculture and Mushroom Cultivation

The consumption of energy by Agriculture & Mushroom cultivation consumers constitutes a very small portion of total sales of the Petitioner.

Based on the actual sales of 18 MU for FY 2022-23, the Petitioner has computed the given below CAGR over a period of one year to five years.

CAGR for 5 years	CAGR for 4 years	CAGR for 3 years	CAGR for 2 years	CAGR for 1 years
4.52%	4.20%	2.82%	-0.79%	22.24%

The Petitioner has considered the CAGR of 4 Year i.e. 4.20% growth for projecting the agriculture & mushroom cultivation consumption.

Table 2.6: Projected billed energy for FY 23-24

Sl. No.	Category	FY 23 Sales (MU)	Growth (%)	FY 24 Sales (MU)
Agriculture & Mushroom				
I	Agriculture & Mushroom	17.60	4.20%	18.34

Public Utilities

The consumption of energy towards public utilities constitutes approx. 6% of total sales of the Petitioner.

Based on the actual sales of 574 MU for FY 2022-23 the Petitioner has computed CAGR over a period of one year to five years.

Categories	CAGR for 5 years	CAGR for 4 years	CAGR for 3 years	CAGR for 2 years	CAGR for 1 years
Public Lighting	-4.28%	1.72%	1.60%	2.23%	4.38%
Delhi Jal Board	1.98%	3.00%	2.55%	1.96%	5.08%

Based on 1-year CAGR (except for DMRC), below is the projected energy considered for sale

Table 2.7: Projected billed energy for FY 2023-24

Sl. No.	Category	FY 23 Sales (MU)	Growth (%)	FY 24 Sales (MU)
Public Utilities				
I	Public Utilities -Public Lighting	123.76	4.38%	129.18
II	Public Utilities – DJB	267.83	5.08%	281.44
III	Public utilities-DMRC*	182.59		188.00
	Net Consumption	574.18		598.63

*DMRC on actual basis

Own Consumption

The Hon'ble Commission in its Business Plan Regulations, 2023 has stated that normative Own consumption of DISCOM's shall be considered @ 0.25% of billed sales of the respective year. Based on the same the Petitioner is seeking Own consumption as computed below:

Table 2.8: Projected energy from FY 2023-24

Sl. No.	Category	FY 24 Sales (MU)
I	Billed Sale	10170.18
II	Own consumption @ 0.25%	0.25%
III	Own consumption MU	25.43

Advertisement & Hoardings

The consumption of energy by Advertisement & Hoardings consumers constitutes a very little portion of total sales of the Petitioner. The Petitioner has considered a growth of 1.15% just like Non-Domestic to project the energy sales for Advertisement & Hoardings.

Table 2.9: Projected energy for FY 2023-24

Sl. No.	Category	FY 23 Sales (MU)	Growth (%)	FY 24 Sales (MU)
I	Advertisement & Hoardings	0.32	1.15%	0.32

E – Vehicle

Based on the actual sales of 44 MU for FY 2022-23 the Petitioner has computed the given below CAGR over a period of one year to five years.

CAGR for 5 years	CAGR for 4 years	CAGR for 3 years	CAGR for 2 years	CAGR for 1 years
202.36%	59.78%	33.84%	64.30%	89.56%

Based on 1 year CAGR of 89.56% below is the projected energy considered for sale

Table 2.10: Projected energy for FY 2023-24

Sl. No.	Category	FY 23 Sales (MU)	Growth (%)	FY 24 Sales (MU)
I	E vehicle	43.77	89.56%	82.96

Others (including Temporary Supply, Misuse and Theft)

The Petitioner has considered sale for temporary, misuse, Theft and Staff category consumers based on actuals of FY 2022-23.

Table 2.11: Projected energy for FY 2023-24

Sl. No.	Category	FY24 Sales (MU)
I	Others	91.61

Based on the above assumptions and explanations, the category wise estimated summary of billed sale (MU) for FY 2023-24 is given below:

Table 2.12: Projected Sales (MU)

Sl. No	Category	FY 2023-24 (MU)
A	Domestic	5,155.10
B	Non –Domestic	2,076.57
C	Industrial	2,146.65
D	Agriculture	16.89
E	Mushroom Cultivation	1.45
F	Public Utilities	598.63
G	Advertisement & Hoardings	0.32
H	E-Vehicle	82.96
I	Others* including Temporary Supply	91.61
J	Own consumption	25.43
	Total	10,195.61

*Others includes Staff, Theft & Misuse

Estimated Consumers for next year

To estimate the number of consumers for the FY 2023-24, the Petitioner has considered FY 2022-23 as base year for growth trends as FY 2022-23 was a non COVID year. The Petitioner has further analyzed the underlying factors which drive the demand for new connection and consumer growth for FY 2023-24. Also, number of consumers is forecasted based on the standard approach looking at the past year's trend as follows:

- a) CAGR of four years has been considered for consumer projections for FY 2023-24 for categories like Domestic, Non Domestic, Industrial, Agriculture & Mushroom in line with CAGR used for Sales.
- b) CAGR of one year has been considered for consumer projections for FY 2023-24 for categories like E-Rickshaw/ E- Vehicle & Public Utilities due to major change in Trend of New Connection of these categories of consumers.

The trend of CAGR of Consumers based on Main Category wise consumption is as below:

Sl. No.	Category	CAGR for 5 years	CAGR for 4 years	CAGR for 3 years	CAGR for 2 years	CAGR for 1 years
A	Domestic	4.18%	4.19%	3.99%	4.05%	4.17%
B	Non Domestic	0.99%	1.30%	1.46%	1.77%	2.37%
C	Industrial	0.99%	1.30%	1.46%	1.77%	2.37%
D	Agriculture & Mushroom Cultivation	0.20%	-0.20%	-0.70%	-1.43%	-0.81%
E	Public Utilities -Public Lighting	1.81%	1.29%	1.22%	0.92%	0.28%
F	Public Utilities – DJB	12.62%	16.72%	10.03%	6.17%	2.92%
G	E-vehicle	87.35%	31.35%	21.86%	26.21%	30.00%
	Total	3.61%	3.67%	3.52%	3.64%	3.90%

The Petitioner has projected approx. 20.32 lakhs consumers for FY 2023-24. Category wise breakup of Consumers is given below:

Table 2.13: Given below is the projected number of consumers for Next year

Sl. No.	Category	FY 2023-24
A	Domestic	17,25,221
B	Non –Domestic	2,62,348
C	Industrial	14,700
D	Agriculture	4,152
E	Mushroom Cultivation	23
F	Public Utilities	6,507
G	Adv. & Hoardings	203
H	Others- including E vehicle	19,272
	Total	20,32,426

Estimated Consumer Load for next year

To estimate the consumer load for the FY 2023-24, the Petitioner has considered FY 2022-23 as base year for growth trends as FY 2022-23 was a non COVID year. The Petitioner has further analyzed the underlying factors which drive the demand for new connection and consumer load growth for FY 2023-24. Also, load estimate is forecasted based on the standard approach looking to the past year's trend as follows:

- a) CAGR of four years has been considered for consumer load projections for FY 2023-24 for categories like Domestic, Agriculture & Mushroom in line with CAGR used for Sales.
- b) CAGR of one year has been considered for consumer load projections for FY 2023-24 for categories like E-Rickshaw/ E- Vehicle & Public Utilities due to major change in Trend of New Connection of these categories of consumers.

The trend of CAGR of Consumers based on Main Category wise consumption is as below:

Sl. No.	Category	CAGR for 5 years	CAGR for 4 years	CAGR for 3 years	CAGR for 2 years	CAGR for 1 years
A	Domestic	3.33%	3.90%	4.43%	5.21%	6.23%
B	Non Domestic	-1.27%	-1.01%	-0.39%	1.30%	0.76%
C	Industrial	-1.27%	-1.01%	-0.39%	1.30%	0.76%
D	Agriculture & Mushroom Cultivation	2.15%	1.80%	1.85%	2.60%	1.52%
E	Public Utilities -Public Lighting	-12.88%	-1.38%	2.88%	3.55%	1.42%
F	Public Utilities – DJB	3.12%	3.98%	4.50%	4.52%	7.43%
G	E -vehicle	0.00%	76.11%	83.54%	131.36%	139.49%
	Total	1.22%	1.87%	1.86%	3.60%	4.05%

For the purpose of computing fixed charges, the Petitioner has projected load of 6,651 MW for FY 2023-24. Category wise break up of consumer load is given below:

Table 2.14: Given below is the projected number of consumer load for Next year

Sl. No.	Category	FY 2023-24
A	Domestic	3,642
B	Non –Domestic	1,743
C	Industrial	870
D	Agriculture	32
E	Mushroom Cultivation	0
F	Public Utilities	228
G	Adv. & Hoardings	0
H	Others- including E vehicle	135
	Total	6,651

Estimated Revenue at existing Tariff for next year

The Hon'ble Commission has followed two-part tariff principle for each consumer category (except CGHS colonies) consisting of fixed/ demand charges as well as energy charges.

1. The fixed/ demand charges are specified for different categories as a fixed amount per month or as a fixed amount per kW of sanctioned load per month.
2. The energy charges, on the other hand, are always usage-based and are specified as per unit of electricity consumed.

In order to reduce the cost of power purchase during peak hours the Hon'ble Commission has implemented Time of Day Tariff (TOD) wherein peak hour consumption is charged at higher rates which reflects the higher cost of power purchase during peak hours. At the same time, a rebate is being offered on consumption during off peak hours. This is also meant to incentivize consumers to shift a portion of their loads from peak time to off peak time. The Hon'ble Commission in its Tariff Order September, 2015 has reviewed the TOD time slots and restrict the applicability of TOD for the period May- September instead of whole year. As it is possible to ascertain distinct peak and off-peak periods during the winter season also in addition to the summer season, for which TOD mechanism has already been put in place by the Hon'ble Commission, the Petitioner has requested the Hon'ble Commission for review of TOD mechanism which forms part of this petition as there has been no change since September, 2015.

It is further clarified that the Hon'ble Commission vide its Tariff Order dated July, 2012 has introduced Deficit Recovery Surcharge @ 8% on the aforesaid two part tariff. The aforesaid surcharge has been imposed for recovery of previous years accumulated Revenue Gap and carrying cost which otherwise has to be met through increase in two- part tariff.

Methodology for Computation of Fixed Charges for Domestic Consumers

- a) For Domestic consumers with sanctioned load less than 5 kW, the revenue from fixed charges is calculated by multiplying the corresponding fixed charge with the number of months for respective consumers in that particular tariff slab.
- b) For Domestic consumers with sanctioned load exceeding 5 kW, the revenue from fixed charges is calculated by multiplying the specified fixed charge with the connected load (in kW) of the category.

Methodology for Computation of Energy Charges for Domestic Consumers

For calculation of revenue from energy charges, the actual usage is multiplied by the applicable tariff category slab.

Methodology for Computation of Fixed Charges & Energy Charges for other than Domestic Consumers and Advertisement & Hoarding Consumers

For Non-Domestic, Industrial, public utilities billing is done either on kW or kVA basis, as specified in the last approved tariff schedule. Since projections for next year are done only on kW basis for sanctioned load and on kWh basis for energy sales, wherever the tariff is specified in kVA/kVAh terms, the relevant kW/kWh projection is divided by the Power Factor in order to obtain the corresponding kVA/kVAh projection. Thereafter, revenue from demand charges is calculated by multiplying the demand charge of each tariff slab with the sanctioned load of that slab, while revenue from energy charges is calculated by multiplying the energy charges specified for each tariff slab with the energy consumption projected for that slab.

Based on the above factors i.e. energy billed, no. of consumers, consumer load, the Petitioner has estimated revenue at existing retail supply Tariff for next year.

Category wise estimated Revenue Billed for respective year of control period is given below:

Table 2.15: Estimated Billed Revenue for FY 23-24 (Rs Cr)

Category	Fixed Charges	Energy Charges	TOD Tariff	Total Revenue	ABR Rs kWh	7% PT
Domestic	226.92	2,115.07	0.00	2,341.99	4.54	163.94
Non –Domestic	522.90	1,776.11	9.61	2,308.62	11.12	161.60
Industrial	260.87	1,704.50	11.36	1,976.73	9.21	138.37
Agriculture	4.76	2.53	0.00	7.29	4.32	0.51
Mushroom Cultivation	0.11	0.51	0.00	0.62	4.27	0.04
Public Utilities	68.50	404.28	0.14	472.92	7.90	33.10
Adv. & Hoardings	0.11	0.27	0.00	0.39	12.07	0.03
E Vehicle	0.01	37.33	0.16	37.50	4.52	2.63
Others	6.85	66.03	0.00	72.89	6.23	5.08
Total	1,091.04	6,106.63	21.27	7,218.95	7.08	505.30
8% Deficit Revenue Surcharge				577.49		

Collection efficiency

The Hon'ble Commission has approved collection target of 99.80% for 5th MYT Control period vide Regulations 26(1) of Delhi Electricity Regulatory Commission Business Plan Regulation, 2023.

Relevant extract of the same is given below:

"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%."

Based on above, collection efficiency at 99.80% level is considered for FY 2023-24.

Table 2.16: Estimated Energy Collection

(Rs Cr)

Sl. No.	Particulars	Amount	Remark
A	Estimated Billing at Current Tariffs –without DRS, PPAC,E tax & Pension Trust	7,218.95	Table 2.15
B	Collection Efficiency	99.80%	
C	Estimated Collection	7,204.51	(A*B)

Target for Distribution Loss Level

The Hon'ble Commission in its Business Plan Regulations, 2023 has approved distribution loss reduction targets as mentioned in table below in terms of Regulation 4(9)(a) of the DERC (Terms and Conditions for Determination of Tariff) Regulations, 2017:

Table 2.17: Distribution loss level for 5th MYT Control Period

Category	FY 2023-24	FY 2024-25	FY 2025-26
Approved Distribution Target Loss level	6.91%	6.83%	6.74%
Year on Year reduction in distribution loss level		0.08%	0.09%

Based on above table, Distribution Loss level of 6.91% for FY 2023-24 has been considered and corresponding energy requirement at TPDDL periphery comes to 10,952 MU for FY 2023 -24.

Table 2.18: Estimated Energy Requirements for FY 23-24

Sl. No.	Particulars	UoM	Amount	Remark
A	Expected Sales	MU	10,196	Table 2.12
B	Distribution Loss	%	6.91%	Table 2.17
C	Energy Input (at TPDDL periphery)	MU	10,952	A/(1-B))
D	Distribution Loss	MU	757	(C-A)

Power Purchase Projections for FY 2023-24

Power purchase cost is the single largest component of ARR for a distribution company and hence the same is being submitted as part of MYT Regulations considering power from both existing as well as future power stations.

Allocation of Power from Central and State Generating Stations

- Delhi has a firm allocated share in Central Sector Generating Stations (CSGS), State Generating Stations (SGS) and other stations. For the purpose of projecting the units, the latest allocation order has been considered.
- Further, allocation from various stations has been considered as per the Hon'ble Commission Tariff Order for FY 2021-22.
- It is further clarified that no power from unallocated quota has been considered for projection purposes.
- Bilateral Purchase from TPTCL, NVVNL, PTC & GMR has been considered as per the contract i.e. from April'23 to July'23.

Energy Availability from the Central Sector, State Sector and Other Generating Stations and cost assumptions:

The Energy available in MU's for the purpose of projections has been computed as below:

- (i) To estimate the energy (MU) which would be scheduled from the long-term sources; stations like Hydro, Nuclear, Renewable & Delhi Genco stations have been considered as must run stations. All other plants have been considered to be running at minimum technical limit (MTL) and further, it has been assumed that the plants having Energy charge rate (ECR) less than the estimated sale rate at exchange shall be scheduled to the maximum allocation for maximizing the sale rate of surplus power.
- (ii) Interstate STOA Charges have been considered as 5 Paise for the short-term purchase.
- (iii) The generation expected from Own TPDDL- Solar installed capacity and roof top solar has been considered at 15% Capacity utilization factor (CuF).
- (iv) No energy is considered to be scheduled from Rithala in view of DERC directive.

- (v) The ECR's have been considered as per following:
- Thermal stations: As per FY 2022-23 & 6% blending of imported coal for Apr – Sep'23 as per MoP order.
 - Hydro Stations: Apr to Mar: - As per FY 2022-23
 - Nuclear Stations: Apr to Mar: - As per FY 2022-23
 - Renewable Stations: As per their defined tariffs
- (vi) PGCIL Transmission charges have been considered as per the recent change in methodology hence approx. Rs. 55 cr. has been considered for each month
- (vii) New Plant additions considered in FY 2023-24 are:
- Cosmos Hydro - Full share of 19.8 MW as per minimum energy mentioned in PPA.
 - SDMC - Full share of 7.5 MW at 85% CuF @ Rs. 4.3/-.
 - SECI Solar 100 MW added for full year as per energy received in FY 22-23.
 - Medium Term Hydro (200 MW) has been considered from May'23 to Sep'23 @ Rs. 5.99/-unit.
- (viii) Others
- Flue Gas Desulfurization (FGD) has been considered in plants (Dadri 2, Aravali Jhajjar, CLP Jhajjar) in line with MoEF&CC notification dated 05.09.22 regarding the FGD and categorized the power plants in A, B & C on certain parameters. As per the communications from the generators the same have been considered for complete year. However, the same has not been considered in Energy balance table 2.29.
 - Arrear of Rs. 109.67 crores have been considered on account of true-up petition 2014-19 & tariff petition 2019-24 filed by the generator at CERC.
 - Compensation charges of Rs. 5.6 Cr. have been kept to the extent of the Aravali Jhajjar backed down from Nov'23 to Mar'23.

Based on above assumption, power purchase & its cost from various state generating stations for next year is given below:

Power Procurement cost of the above State Generating Plant (Rs Cr.)

To compute the power procurement cost for next year, the following assumptions are considered:

- (i) Fixed Cost is considered as per Current Billed AFC's.
- (ii) Variable cost for FY 2023-24 for each generating station, considered as per above assumptions

Table 2.19: Projected Power Purchase from State Generating Stations for FY 2023-24

Sl. No.	Stations	Petitioner Share	Fixed Charge	Variable Charge	Total Charge
		(MU)	(Rs Cr)	(Rs Cr)	(Rs Cr)
A	State Generating Stations				
I	Pragati	243	25	271	296
II	Pragati III	876	285	625	909
III	GT	96	4	127	131
	Total SGS	1,215	314	1,022	1,336

Central Sector Generating Stations

- (i) Thermal Plants: The estimates for energy availability from coal-based plants are based on the normative month wise availability (PAFM) of the stations.
- (ii) Energy from Nuclear Stations: Energy from nuclear stations (NAPS and RAPS) is taken as per actual energy scheduled during previous years.
- (iii) Hydro Plant: The energy estimation is based on the actual energy received from these plants in previous years.
- (iv) To estimate the energy (MU) which would be scheduled from the CSGS, it has been assumed that the plants having ECR less than the estimated sale rate at exchange shall be scheduled to 85% of allocation.
- (v) Scheduling from these Central Generating Stations Plants have been factored @ 85%, but if variable rates of any station found higher than the sale rate at exchange for that particular month scheduling is restricted to 55%. (Minimum Technical Limit)
- (vi) No New Thermal capacity addition has been considered.

Based on above assumption, power purchase quantum (Mus) & its cost from Central State Generating stations for next year is projected as below:

Table 2.20: Projected Power Purchase from Central Generating Stations

Source	Petitioner Share	Fixed Charges	Variable Charges	Total Charges
	(MU)	(Rs Cr)	(Rs Cr)	(Rs Cr)
Central State Generating Stations				
NTPC				
ANTA	1	7	2	9
Auriya GPS	1	10	3	12
Dadri GPS	10	11	14	24
Rihand STPS-I	211	18	33	51
Rihand STPS-II	271	19	43	62
Unchahaar-I TPS	50	5	18	23
Unchahaar-II TPS	98	10	36	46
Unchahaar-III TPS	60	8	22	30
Dadri (Th) II	71	10	28	38
Kahalgaoon-I TPS	106	11	34	45
Kahalgaoon-II TPS	339	37	102	139
Aravali	3701	696	1774	2470
Farakka	48	4	16	20
Singrauli STPS	319	21	44	65
Total	5,285	866	2,168	3,034
NHPC				
Bairasul	21	3	2	5
Tanakpur	16	4	3	6
Chamera-I	45	5	5	10
Chamera-II	53	7	5	12
Chamera-III	39	9	8	17
URI	91	9	7	16
URI II	62	13	12	24
Dhauliganga	51	7	6	13
Sewa II	21	6	6	12
Dulhasti	79	18	18	36
Parbati III	25	12	4	15
Total	502	91	76	167
THDC				
Tehri HPP	63	12	12	24
Koteshwar HEP	37	9	9	18
Total	100	21	21	42
DVC				
DVC (CTPS 7&8)	618	98	187	285
DVC (MTPS 6)	206	29	73	102
Total	824	127	260	387
NPCIL				
NAPS	94	0	28	28
RAPS	126	0	47	47

Total	221	0	75	75
SJVNL				
Naptha Jhakri	203	27	24	51
Total	203	27	24	51
Others				
Tala	21	0	5	5
Sasan, MP	405	6	47	53
CLP Jhajjar	788	82	317	400
MPL	2094	318	586	904
Total	3,309	407	955	1,362
Total CSGS	10,444	1,538	3,579	5,117

Renewable Power Purchase Obligation

The Hon'ble Commission has notified the Delhi Electricity Regulatory Commission (Renewable Purchase Obligation & Renewable Energy Certificate Framework Implementation) Regulations, 2012 with effect from October 2012.

Further the Hon'ble Commission in its Business Plan Regulations 2023, has notified the following RPO trajectory for DISCOM:

Table 2.21: Targets for Renewable Power Purchase Obligation

Sl. No.	Distribution Licensees	FY 2023-24
1	Wind RPO	1.60%
2	Other RPO	24.81%
3	HPO Target	0.66%
4	Total RPO Target	27.07%

Based on above targets, following RPO/REC cost has been considered for FY 2023-24:

Table 2.22: RPO Compliance for FY 2023-24

Sl. No.	Particulars	UoM	FY 23-24		
			Wind	HPO	Other RPO
A	Projected Energy sale for FY 2023-24	MU	10,195.61		
B	RPO target–Solar & Non-Solar	%	1.60%	0.66%	24.81%
C	RPO target –Solar & Non-Solar	MU	163.13	67.29	2,529.53
D	RPO Compliance through	MU	0	0	2,693.02
i	Purchase from TPDDL Solar	MU			1.55
ii	Purchase from SECI 20 MW	MU			42.91
iii	Purchase from SECI 200 MW	MU			256.29
iv	SunEdison	MU			324.11
v	Net Metering- at Gross	MU			85.41
vi	Suryakanta	MU			44.36
vii	Nanti Hydro	MU			45.19

viii	Medium Term Hydro 200 MW	MU			660.96
ix	Purchase from Singrauli Small Hydro	MU			5.89
x	Purchase from DMSWL	MU			40.26
xi	SECI Wind 1	MU			138.32
xii	Purchase from TOWMCL	MU			48.67
xiii	Cosmos Hydro	MU			78.05
xiv	Taranda Hydro	MU			38.38
xv	SDMC @100%	MU			55.85
xvi	Purchase from Large Hydro	MU			826.81
E	(Excess)/ Shortfall= (C-D)	MU	163.13	67.29	(163.49)
F	Inter head adjustment which can be done	MU	-	-	-
G	Available inter head quantum	MU	163.13	67.29	(163.49)
H	REC rate + 12% GST	Rs/kWh	1.18		
I	Cost for REC purchase	Rs Cr	19.25		
J	HPO requirement	MU			67.29
K	Cost for HEC purchase	Rs Cr			37.00
L	Total REC Cost				56.26

Power Procurement through NET Metering

The Petitioner would further like to submit that, the Petitioner has already undertaken an assessment of roof top potential in its area and accordingly, the following is estimated:

Solar Capacity	Target / Milestone FY 23-24
Capacity in MW	65
Energy in MU	85.41

MU due to Net Metering Capacity addition has been calculated after assuming a Capacity utilization factor (CuF) of 15%

Additionally, the Petitioner would like to submit that with DMRC and other Open Access consumers pursuing open access from Renewable sources; the same would also add up to meeting of the RPO requirements of the Petitioner considering Discoms and Open access consumers as Obligated Entities. This shall reduce the RPO requirements to be met by the Petitioner on a stand-alone basis substantially as cumulative RPO met of obligated entities like the Petitioner and future expected open access consumers having substantial load like DMRC and other Open Access consumers shall add up the RPO mandates of the Hon'ble Commission.

Table 2.23: Power Purchase from solar and non-solar generating stations

Sl. No.	Stations	Petitioner Share	Total Charges
		(MU)	(Rs Cr)
A	Solar		
I	Purchase from TPDDL Solar	2	1
II	Purchase from SECI 20 MW	43	24
III	Purchase from SECI 100 MW	0	0
IV	Purchase from SECI 200 MW	256	69
V	SunEdison	324	128
VI	Net Metering	31	17
	Sub-Total	655	239
B	Non-Solar		
I	SECI Wind 1	138	35
II	TOWMCL	49	28
III	Singrauli Small Hydro	6	3
IV	Suryakanta	44	17
V	Nanti Hydro	45	19
VI	Medium Term Hydro (200 mw)	661	396
VII	DMSWL	40	28
VIII	Cosmos Hydro	78	35
IX	Taranda Hydro	38	16
X	SDMC @100%	56	24
	Sub-Total	1,156	601
	Total	1,811	840

Short Term Purchase

Total short-term purchase for FY 2023-24 has been considered as below:

Table 2.24: Projected Units purchase

Other Sources	Projection FY 2023-24		
	Mus	Amount (Rs Cr)	Av. Rate
Power Purchase from Other Sources			
Inter-State Bilateral Purchase	305	271	8.90
Intra-State Power Purchase			
Other Purchases Total	305	271	8.90

Short Term Sale

Surplus unit: Based on the energy required at the Petitioner's periphery and Gross Power Purchase schedule to the Petitioner, the surplus power available for sale is determined which shall be sold and the sale proceeds shall entirely go towards reducing the net power purchase cost charged to consumers. Given below is the surplus power available for sale in FY 2023-24:

Table 2.25: Short Term Power Sale

Source	Amount
Sale of Surplus Power – MU	(2,341.81)
Revenue from Sale of Surplus Power – Rs Cr	(1,170.91)
Per unit Rate- Rs/kWh	5.00

Transmission Losses

Transmission losses have been considered @ 3.50% for PGCIL & DTL as a whole.

Given below is the year-on-year projected transmission losses for FY 2023-24:

Table 2.26: Transmission Losses for FY 2023-24

Source	Mus
Inter-State Transmission	(380.45)
Intra-State Transmission (DTL)	(100.61)
Total Transmission Losses	(481.06)

Transmission Charges: year on year transmission charges has been considered including increase in transmission charges on account of new transmission lines/network required for enhanced renewable power.

Table 2.27: Transmission Charges (Rs Cr.) for FY 2023-24

Source	Amount (Rs Cr.)
PGCIL Charges	650
DTL & SLDC Charges	365
Other Transmission charges, LDC charges, STOA Charges	80
Total (excluding Pension Trust)	1,094

**STOA charges of Rs. 0.05/unit has been factored as a part of transmission cost*

Additional Impact due to CERC Tariff Regulations, 2019 on FGD and arrears impact due to CERC orders

- FGD expected in plants (Dadri 2, Aravali Jhajjar, CLP Jhajjar) in line with MoEF&CC notification dated 05.09.22 regarding the timelines for compliance for FGD and categorized the power plants in category A, B & C as per location of plant. As per the communications from the generator i.e Aravali Jhajjar (Major contributor is Aravali Jhajjar for TPDDL due to allocation of 578 MW) they are going to install FGD & operational in current FY 2023-24, so the additional expected cost would be tentatively Rs. 140 cr. for full FY based on the FGD rates quoted in petition by plant. However, the same has not been considered in Energy balance table 2.29.

- b. Arrear of Rs. 109.67 have been provisionally considered on the basis of average of last 3 years trend. However, the amount may change due to arrears received against true-up order for FY 2014-19 & tariff order for FY 2019-24 (where orders are expected to be released in FY 2023-24).
- c. Compensation charges of Rs. 5.6 Cr. have been kept to the extent of the Aravali Jhajjar backed down from Nov'23 to Mar'23.

Normative Rebate

CERC in its Tariff Regulations (2019-24) has reduced rate of normative rebate from the existing rate of 2% to 1.50%. However, the Hon'ble Commission has kept the normative rebate at 2%. Therefore, normative rebate for the purpose of Power Purchase cost is computed in table below:

Table 2.28: Computation of Normative Rebate

Genco's	Rate	Amount (Rs Cr)
State Generating Stations		
Pragati	2.00%	5.92
Pragati III	1.50%	13.64
GT	2.00%	2.62
Central Generating Stations		
NTPC	1.50%	45.51
NHPC	1.50%	2.51
NPCIL	2.50%	1.88
Others	1.50%	27.61
Transmission		
DTL & SLDC	2.00%	7.29
PGCIL/CTUIL	1.50%	9.75
Total		116.72

Energy balance for FY 2023-24

Based on above submissions, Energy balance for FY 2023-24 is given below:

Table 2.29: Energy Balance Summary and Power Purchase Cost for FY 2023-24

Sl. No.	Particulars	Energy MU	Amount	Rate
			Rs. Cr	Rs./unit
A	Power from CSGS	10,444	5,117	4.90
B	Power from SGS	1,215	1,336	11.00
C	Short Term Power Purchase	305	271	8.90
D	RPO obligation to be met through purchase from renewable sources (Including medium term 200 MW)	1,811	840	4.64
E	RPO obligation to be met through purchase of REC & HEC		56	
F	Arrears/Compensation		115	
	TOTAL Purchase	13,775	7,736	5.62
G	Transmission losses (Intra state & Interstate)	(481)		
H	Transmission charges		1,094	
	Total Purchase with Tx	13,294	8,830	6.64
I	Less: Short Term surplus power sale	(2,342)	(1,171)	5.00
J	Less: Normative Rebate		(117)	
	Net Power Purchase Cost	10,952	7,543	6.89

Operation & Maintenance Expenses for FY 2023-24

The Hon'ble Commission in its Business Plan Regulations, 2023 has notified norms for Operation and Maintenance expenses in terms of Regulation 23(10).

The Petitioner is seeking O&M Expenses for FY 2023-24 as given in table below.

Table 2.30: O&M Expenses entitlement for FY 2023-24

Sl. No.	Particulars	Amount Rs. Cr	Remark
A	Normative O&M Expenses	643.08	As specified in page no. 59 SOR of BPR 2023
B	FRSR Employee Cost (Net of capitalization)	252.41	To be allowed on actuals as per clause no 23 (5) of BPR 2023
C	Statutory Levies		To be allowed on actuals as per clause no 23 (6) of BPR 2023
i	DERC License Fee	4.57	Basis actual expense of FY 23-24 (Paid in Apr'23)
ii	Land License Fee	15.48	
iii	Property Tax	2.07	
iv	Rates and Taxes	0.14	
v	CETP Charges	0.40	
vi	Other Regulatory Charges	0.84	
D	Legal Expenses	22.28	Basis actual expense of FY 22-23
E	Replacement cost against FRSR retirees	11.88	
	Total amount Sought towards O&M Expenses	953.16	

The Petitioner has considered normative O&M expenses at Rs. 643.08 Cr for FY 2023-24 as per the estimated O&M expenses considered by the Hon'ble Commission. Since there seems to be an ambiguity in CAGR considered by the Hon'ble Commission while deriving sales (Mus) for FY 2023-24, therefore the Petitioner has not considered O&M expenses based on estimated sales per unit rate as prescribed in BPR 2023. Further the above computation shall be subject to any subsequent amendment/relief provided by the Hon'ble Commission against O&M regulations of BPR 2023.

FRSR employee cost (on Actual Basis)

As per Business Plan Regulations 2023, FRSR employee cost shall be allowed on actual basis.

"(5) The Employee benefits pertaining to Employees transferred under the Tripartite Agreement are considered uncontrollable in nature, therefore not forming part of Normative O&M Expenses as tabulated below, accordingly, shall be Trued up for relevant Financial year subject to prudence check."

Further as per Statement of Reason for Business Plan Regulations 2023, Uncontrollable expenses such as FRSR expenses, Rates & Taxes shall be allowed in the ARR equal to last available actual expenses which shall be trued-up.

Therefore, FRSR employee cost for FY 2023-24 has been computed based on FY 2022-23 estimated actuals with following assumptions:

- a) Total increase of 12% on account of DA hike (twice a year), promotions & annual increment
- b) Net of capitalization
- c) Net of estimated savings due to retirements expected in FY 2023-24

FRSR Replacement Cost

Further as per Statement of Reason for Business Plan Regulations 2023, the Hon'ble Commission has agreed to allow replacement cost of FRSR retirees while mapping suitably the replacement cost of FRSR employees with Non- FRSR employees subject to prudence check.

The Petitioner based on the expected superannuating employees from FRSR structure has estimated replacement cost at Average Employee cost payable for additional recruitment of Non-FRSR employees against superannuating FRSR Employees at Rs. 11.88 Crs. It is imperative to mention that the total savings due to retirement of FRSR employee shall be around Rs 23.75 Crs which is much higher than the replacement cost claimed by the Petitioner.

Statutory Levies to be allowed on actual basis

As per regulations 23 (6) Statutory levies like license fee paid to the Hon'ble Commission and land licensee fee has been considered on actual basis as the amount has already been paid for FY 2023-24 on advance basis. Property tax amount has been considered based on last year actual expense.

As per Statement of Reasons [point (e) page no. 55] for Business plan Regulations 2023, the Hon'ble Commission has specified to allow rates and taxes on actual basis. Apart from license fees and property tax, Rates and taxes also include CETP Charges, stamp duty, court charges etc. Therefore, it is requested to the Hon'ble Commission to include these expenses based on actual expense of FY 2022-23 for determination of ARR of FY 2023-24.

Any statutory levies arising due to Government of India's Notification or Change in law but not factored in base year expenses shall be claimed separately over and above normative expenses.

Other Regulatory Expense

The '**Other Regulatory expense**' include statutory expense like contribution towards expenses of electricity ombudsman & Consumer Grievance Redressal Forum (CGRF) as per the direction of the Hon'ble Commission and petition filling fee with the Hon'ble Commission for various petitions like ARR & Tariff, Power purchase agreement approval, PPAC petition etc.

All the above expenses are statutory in nature and mainly incurred as per the direction of the Hon'ble Commission and other applicable Regulations/Laws.

The Formation of forum for redressal of grievances of the consumer by licensee is governed by clause 5, Section 42 (Duties of distribution licensee and open access) of Electricity Act'2003. Further the payment of electricity ombudsman is released as per communication received from the Hon'ble Commission from time to time.

Therefore, it is requested to the Hon'ble Commission to include these expenses based on actual expense of FY 2022-23 for determination of ARR of FY 2023-24

Legal Expenses

The Hon'ble Commission in its Business Plan Regulations 2023 has provided the treatment of Legal Expenses as follows:

"(7) 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 Aggregate Revenue Requirement (ARR)".

With respect to above, the Petitioner would like to mention that the legal expenses should be allowed to the Petitioner. Non allowance of legal expenses amounts to curtailment of Statutory Right of the Petitioner to challenge the decisions of the Commission and is against the principle of natural justice as well the same is against Article 14 of the Constitution of India. The distribution business is a regulated business under the aegis of this Commission. The majority of issues in Distribution Business will arise out of orders/ directions issued by the Commission. In all such cases, the Petitioner has right to challenge the same before the Hon'ble Appellate Tribunal for Electricity and Hon'ble Supreme Court thereafter. The final Judgment passed at the

Appellate stage will be binding on both the DISCOM as well as the Hon'ble Commission. Therefore, all legal expenses without any distinction should be allowed as an expense in the ARR.

Therefore, it is requested to the Hon'ble Commission to allow Rs 22.28 Cr. as part of ARR of FY 2023-24 basis last year actual expense. The said amount can be trued up based on prudence check of actual expenses.

Capitalization for FY 2023-24

The Hon'ble Commission in its Business Plan Regulations, 2023 has approved capitalization of Rs 404 Cr. for FY 2023-24 (excluding Rs. 50 Cr towards Capital Deposit). However, The Petitioner has considered capitalization for FY 2023-24 as following:

Table 2.31: Approved Capitalization for FY 2023-24

Particulars	Amount (Rs Cr)
Capitalization including deposit work	321
Smart Meter	59
Less- Deposit work	105
Total Capitalization excluding deposit work	275

It is worthwhile to mention that deposit work is already treated as a part of capitalization, thus, gross capitalization for FY 2023-24 is considered as given below:

Table 2.32: Capitalization considering Deposit work for FY 2023-24

Particulars	Amount (Rs Cr)
Capitalization without deposit work	216
Smart Meter	59
Employee cost capitalization	69
Deposit Work	105
Total including Deposit Work	449

Considering the capitalization of Rs. 449 Cr, gross block of fixed assets for FY 2023-24 works out as follows:

Table 2.33: Capitalization of Fixed Assets

Sl. No.	Particulars	Amount (Rs Cr)	Remark
A	Opening balance of Gross Fixed Assets (as on 1st April'2020)	5,996.08	Table 3.82 of Tariff Order 2021-22
B	Add- Capitalization during the FY 2020-21	501.39	Table 3.45 of True up Petition 2020-21
C	Less- Retirement/ De-capitalization for the FY 2020-21	41.17	Table 3.45 of True up Petition 2020-21
D	Closing balance of Gross Fixed Assets (net of Retirement) (as on 31st Mar'2021)	6,456.30	(A+B-C)
E	Add- Capitalization during the FY 2021-22	415.76	Table 3.44 of True up Petition 2021-22
F	Add - 7th Pay LSC/PC capitalization	8.62	Table 3.45 of True up Petition 2021-22
G	Less- Retirement/ De-capitalization for the FY 2021-22	79.68	Table 3.45 of True up Petition 2021-22
H	Closing balance of Gross Fixed Assets (net of Retirement) (as on 31st Mar'2022)	6,801.01	(D+E+F-G)

I	Add- Capitalization during the FY 2022-23	447.65	Note 4.4 of the Audited Financial Statement-Annexure II
j	Less- Retirement/ De-capitalization for the FY 2022-2023	54.94	Note 4.4 of the Audited Financial Statement-Annexure II
k	Closing balance of Gross Fixed Assets (net of Retirement) (as on 31st Mar'2023)	7,193.71	(H+I-J)
L	Add- Projected Capitalization for FY 2023-2024	448.70	Table no 2.32
M	Less- Retirement/ De-capitalization for FY 2023-2024*	-	
N	Closing balance of Gross Fixed Assets (net of Retirement) (as on 31st Mar'2024)	7,642.41	(K+L-M)
O	Average Balance of Fixed Assets	7,418.06	((K+N)/2)

*No De-capitalization has been considered & Actual de-capitalization impact will be considered at the time of true up

Contributions, Grants, subsidies towards cost of Capital Assets

The contribution towards cost of capital assets is transferred to sources of funds in the balance sheet when the assets for which such contribution is received are capitalized. It is estimated that Rs 105 Cr will be capitalized towards consumer contribution in FY 2023-24.

Table 2.34: Estimated Consumer Contribution capitalized

Sl. No.	Consumer Contribution/Grant	Amount (Rs Cr)	Remarks
A	Opening Balance (as on 1st April'2020)	900.94	Table 3.84 of Tariff Order 2021-22
B	Add- Capitalized during the FY 2020-21	27.98	Table 3.46 of True up Petition 2020-21
C	Less- Refund during the FY 2020-21	16.89	Table 3.46 of True up Petition 2021-22
D	Closing balance (as on Mar'2021)	912.03	(A+B-C)
E	Add- Capitalized during the FY 2021-22	52.47	Table 3.46 of True up Petition 2021-22
F	Closing Balance (as on March'2022)	964.51	(D+E)
G	Add- Capitalized during the FY 2022-23	60.77	Note 21.1(ii) of Audited Financial Statement- Annexure II
H	Closing Balance (as on March'2023)	1025.28	(F+G)
I	Add- Projected Capitalized for FY 2023-24	105.00	Table 2.32
J	Closing Balance (as on March'2024)	1130.28	(H+I)
K	Average Cumulative Capitalized Consumer Contribution	1077.78	(H+J)/2

Depreciation and Provision of Depreciation

The Hon'ble Commission in its 5th MYT Regulation's has followed same methodology for allowance of Depreciation as in 4th MYT Regulations. Based on the said regulations the Petitioner has changed depreciation rate in its books of account. Thus, for the purpose of computation of Depreciation for FY 2023-24, the Petitioner has considered Depreciation rate of 4.96% equivalent to the rate considered for FY 2021-22 in Nov'22 True up petition.

Table 2.35: Estimated Depreciation

Sl. No.	Particulars	Amount (Rs Cr)	Remark
A	Opening GFA	7,193.71	Table 2.33
B	Net Additions to Asset during the year	448.70	Table 2.32
C	Closing GFA	7,642.41	A+B
D	Average GFA	7,418.06	(A+C)/2
E	Less: Average Consumer Contribution	1077.78	Table 2.34
F	Average GFA net of CC	6,340.28	D-E
G	Average rate of depreciation	4.96%	Table 3.47 of True Up for FY 21-22
H	Depreciation for the year	314.27	F*G
I	Opening Depreciation	2,801.04	Table 3.49 of True Up for FY 21-22 & Rs 288.05 for FY 22-23
J	Closing Depreciation	3,115.31	H+I
K	Average Depreciation	2,958.18	(I+J)/2

Working Capital Requirement

The Petitioner has computed working capital requirement as per Regulation 84 (4) Delhi Electricity Regulatory Commission (Terms and Conditions for Determination of Tariff) Regulations, 2017. The relevant extract of the Regulation is as follows:

"84. The Commission shall calculate the Working Capital requirement for:

(4) Distribution Licensee as follows:

(i) Working capital for wheeling business of electricity shall consist of ARR for two months of Wheeling Charges.

(ii) Working Capital for Retail Supply business of electricity shall consist of:

(a) ARR for two months for retail supply business of electricity;

(b) Less: Net Power Purchase costs for one month;

(c) Less: Transmission charges for one month:"

Based on the above formula computation of working capital is given below:

Table 2.36: Computation of Change in Working Capital

Sl. No.	Particulars	Amount (Rs Cr)		Remark
A	Annual revenue requirement	9,913.26		Table 2.43
B	Receivables equivalent to 2 months ARR		1,652.21	A/12*2
C	Power Purchase expenses	7,542.64		Table 2.29
D	Add: 1/12th of power purchase expenses		628.55	C/12
E	Total working capital		1,023.66	B-D
F	Opening working capital		990.79	Table 3.51 of True Up of FY 21-22 & Rs 136.68 for FY 22-23
G	Change in working capital		32.87	(E-F)

Means of Finance for Capitalization for FY 2023-24

The Petitioner has submitted that Regulation 63 of the Tariff Regulations, 2017, provided that for determination of Tariff, the debt-equity ratio for any project or scheme under commercial operation shall be considered as 70:30.

Table 2.37: Means of finance

Sl. No.	Particulars	Amount (Rs Cr)	Remarks
A	Capitalization	448.70	Table 2.35
B	Less- Consumer Contribution Capitalized during the year	105.00	Table 2.34
C	Funding Requirement	343.70	(A-B)
D	Through- Debt @ 70%	240.59	C*70%
E	Through Equity @ 30%	103.11	C*30%

Regulated Rate Base

Regulations 65 to 71 of the Tariff Regulations, 2017 deals with the methodology for determination of Regulated Rate Base (RRB), Weighted Average Cost of Capital (WACC) and computation of Return on Capital Employed (ROCE).

Regulation 66 of the Tariff Regulations 2017 provided that *"The Regulated Rate Base (RRB) shall be used to calculate the total capital employed which shall include the Original Cost of Fixed Assets (OCFA) and Working Capital. Capital work in progress (CWIP) shall not form part of the RRB. Accumulated Depreciation, Consumer Contribution, Capital Subsidies / Grants shall be deducted in arriving at the RRB."*

Based on the approved capitalization and corresponding depreciation thereon, estimated consumer contribution and estimated working capital requirement as computed above, computation of Regulated Rate Base for FY 2023-24 is given below:

Table 2.38: Computation of Regulated Rate Base

Sl. No.	Particulars	Amount (Rs Cr)	Remarks
A	Opening Balance of OCFA	7,193.71	Table 2.33
B	Opening Balance of Accumulated Depreciation	2,801.04	Table 2.35
C	Opening Balance of Accumulated Consumer Contribution	1,025.28	Table 2.34
D	Opening balance of working capital	990.79	Table 2.36
E	RRB – Opening	4,358.18	
F	Capitalization during the year	448.70	Table 2.35
G	Depreciation for the year (Including AAD)	314.27	Table 2.35
H	Consumer Contribution, Grants,	105.00	Table 2.37
I	Change in Working Capital	32.87	Table 2.36
J	ΔAB (Change in Regulated Base)	47.58	
K	RRB – Closing	4,420.47	
L	RRB(i)	4,405.76	

Computation of WACC

The Hon'ble Commission in the Business Plan Regulations, 2023 has approved Rate of Return on Equity at base rate of 14% on post-tax basis for wheeling and retail business.

Further, based on expected cost of debt for capex loans @ 8.75% & working capital rate of interest of 8.00%, the weighted average rate of interest on loans (Capex & working capital) has been considered @ 8.45% for FY 2023-24.

Considering the above cost of debt and rate of return on equity, weighted average cost of capital has been computed by considering the average actual equity and average actual debt (net of repayment) for FY 2023-24.

Table 2.39 (i): Computation of Equity

Sl. No.	Particulars	Amount Rs Cr	Remarks
A	Opening Equity for FY 2022-23	1691.58	Table 3.54 of True Up for FY 21-22
B	Capitalization during the FY 2022-23	447.65	Table 2.33
C	Less: Consumer contribution & de-capitalization for FY 2022-23	(115.72)	Table 2.33 & Table 2.34
D	Net Capitalization for FY 2022-23	331.93	B+C
E	Equity for FY 2022-23	99.58	D*30%
F	Closing Equity FY 2022-23	1791.16	A+E
G	Average Equity for FY 2022-23	1741.37	(A+E)/2
H	Equity for FY 2023-24	103.11	Table 2.37
I	Average Equity for FY 2023-24	51.56	H/2
J	Closing Equity for FY 23-24	1792.93	G+I

Table 2.39 (ii): Weighted Average Cost of Capital (WACC) sought for FY 2023-24

Sl. No.	Particulars	Amount Rs Cr	Remark
A	Equity	1,792.93	Table 2.39 (i)
B	Debt- Capex	1,589.18	Balancing figure
C	Debt- working capital	1,023.66	Table 2.38
D	Return on Equity	14.00%	As per BPR 2023
E	Income Tax Rate	17.68%	Table 3.55 of True Up for FY 21-22
F	Grossed up Return on Equity	17.01%	D/(1-E)
G	Rate of Interest	8.46%	Cost of Debt for Capex @ 8.75% & Working capital @ 8.00%
H	Weighted Average Cost of Capital	11.94%	

Considering the above computed WACC of 11.94% the Petitioner has computed ROCE for FY 2023-24 as follows:

Table 2.40: Computation of Return on Capital Employed

Sl. No.	Particulars	Amount (Rs Cr)	Remarks
A	RRB (i)	4,405.76	Table 2.38
B	WACC	11.94%	Table 2.39 (ii)
C	Return on Capital Employed	525.87	(A*B)

Non-Tariff Income

The Petitioner has kept non-tariff income for FY 2023-24 at Rs 94.01 Cr which is in line with the methodology followed by the Hon'ble Commission in the past.

Table 2.41: Non-Tariff Income

Sl. No.	Particulars	Amount (Rs Cr)
A	Non-Tariff Income/Interest on Security Deposit	94.01
B	Additional Open Access charges	
C	Total	

Computation of Carrying Cost Rate

The Hon'ble Commission has approved Return on Equity in terms of Regulation 2(16) of the DERC (Terms and Conditions for Determination of Tariff) Regulations, 2017 shall be considered at Base Rate of Return on Equity minus One (1.00%) percent i.e., 13.00% on pre-tax basis for computation of Weighted Average Rate of Interest for funding of Regulatory Asset/Accumulated Revenue Gap through 70% Debt and 30% Equity, as per Business Plan Regulations 2023.

Further, based on the prevailing borrowing rate of carrying cost loans, rate of interest has been taken at 8.90% for FY 2023-24 for funding of regulatory gap.

Based on the above, the carrying cost rate for FY 2023-24 computed as follows.

Table 2.42: Computations of Carrying Cost Rate

Sl. No.	Particulars	FY 2023-24
A	Rate of Return on Equity	13.00%
B	Rate of Interest on Loan	8.90%
C	Rate of Carrying Cost	10.13%

Computation of Aggregate Revenue Requirement

Based on the above submissions, the total Aggregate Revenue Requirement for the FY 2023-24 comes to Rs. 9,913.26 Cr. Component wise breakup of the same is given below:

Table 2.43: Summary of Aggregate Revenue Requirement

Sl. No.	Particular	Amount (Rs Cr)	Remarks
A	Cost of Power Purchase	7,542.64	Table 2.29
B	O&M Expenses including Legal expenses	953.16	Table 2.30
C	Depreciation	314.27	Table 2.35
D	Return on Capital Employed	525.87	Table 2.40
E	Carrying Cost	671.33	Table 2.47
F	Less: Non-Tariff Income/ Interest on consumer security deposit	(94.01)	Table 2.41
H	Annual Revenue Requirement	9,913.26	

Computation of Revenue (Gap)/surplus without carrying cost & DRS for FY 2023-24

Based on the above submission, the Petitioner has estimated Revenue Gap of Rs. (2,037.41) Cr for FY 2023-24.

Table 2.44: Computations of Revenue (Gap) for the year without carrying Cost

Sl. No.	Particular	FY 2023-24	Remarks
		Estimated (Rs Cr)	
A	Aggregate Revenue Requirement for the year without carrying cost	9,241.92	Table 2.43
B	Revenue available for the year without DRS	7,204.51	Table 2.16
C	Revenue (Gap)/surplus for the year	(2,037.41)	(B-A)

Computation of Revenue Gap for FY 2022-23 to compute the Opening Revenue Gap for FY 2023-24

The Petitioner has submitted closing revenue gap of Rs. (5,021.29) Cr upto FY 2021-22 in true up Petition for FY 2021-22. However, for the purpose of computation of carrying cost for FY 2023-24 (i.e. component of Aggregate Revenue Requirement), the opening revenue gap for FY 2023-24 is required to be computed.

Thus, for this purpose, since ARR for FY 2022-23 has not been released by the Hon'ble Commission, the Petitioner is considering estimated revenue requirement and revenue available for computation of estimated revenue gap of Rs (530.98) Cr for FY 2022-23.

Computation of Revenue Gap for FY 2022-23 is given below:

Table 2.45 Computations of Provisional Aggregate Revenue Requirement for FY 2022-23

Sl. No.	Particular	Amount (Rs Cr)
A	Cost of Power Purchase	7,449.59
B	O&M Expenses	881.00
C	Additional Other expenses/ statutory levies	22.28
D	On Account of 7 th Pay commission	75.03
E	Loss on sale of Fixed Assets	8.35
F	Depreciation	288.05
G	Return on Capital Employed	537.57
H	Carrying Cost	501.67
I	Less: Non-Tariff Income/ Interest on consumer security deposit	(94.01)
G	Annual Revenue Requirement	9,669.54

Table 2.46 Computations of Revenue (Gap)/Surplus for FY 2022-23

Sl. No.	Particular	Amount (Rs Cr)
A	Aggregate Revenue Requirement for the year without carrying cost	9,167.87
B	Revenue available for the year without DRS	8,562.67
C	Revenue (Gap)/surplus for the year	(605.19)
D	Carrying Cost Amount @ 9.42%	(501.67)
E	DRRS	575.89
F	Projected Revenue Gap for FY 22-23	(530.98)

The above computation of revenue gap for FY 2022-23 is on provisional basis and does not include any incentive on account of distribution loss, collection efficiency, sale of surplus power and refinance of loans.

Computation of Closing Revenue Gap (on Provisional basis) along with Carrying Cost upto FY 2023-24

For the FY 2023-24, the Petitioner has estimated an amount of Rs 577.49 Cr towards 8% Deficit recovery surcharge and thereafter adjusted the said amount against the total of closing revenue gap for the year.

The summary of addition in opening Revenue Gap along with carrying cost (net of 8% Deficit Recovery Surcharge) is given below:

Table 2.47 Computations of Closing Revenue Gap

Sl. No.	Particular	Amount (Rs Cr)	Remarks
A	Opening Provisional trued up Revenue Gap up to FY 19-20	(1762.82)	Table 5.3 of tariff order FY 21-22
B	Add: Revenue Gap sought for FY 2020-21 (including carrying cost & DRRS)	(587.35)	Table 3.67 of True up petition FY 20-21
C	Closing Provisional trued up Revenue Gap up to FY 20-21	(2350.17)	(A+B)
D	Impact of Various favourable Judgements	(1882.09)	Table 3.67 True up petition FY 21-22
E	Revised Opening Revenue Gap up to FY 20-21	(4232.26)	(C+D)
F	Add: Revenue Gap sought for FY 2021-22 (including carrying cost & DRRS)	(789.04)	Table 3.67 True up petition FY 21-22
G	Opening Revenue Gap for FY 22-23	(5,021.29)	(E+F)
H	Add- Projected Revenue Gap for FY 22-23	(530.98)	Table 2.46
I	Impact of Review petition 57 of 2021	(56.22)	Refer note below
J	Closing Revenue Gap for FY 22-23	(5,608.49)	(G+H+I)
K	Revenue (Gap)/Surplus for the year	(2,037.41)	Table 2.44
L	Closing Revenue (Gap)	(7,645.90)	(J+K)
M	Carrying Cost Rate	10.13%	Table 2.42
N	Carrying Cost	(671.33)	(J+L)/2*M
O	Deficit Revenue Recovery Surcharge	576.33	Table 2.15 (DRRS@99.80%)
P	Closing Revenue Gap (including carrying cost)	(7,740.90)	L+N+O

Review Petition No. 57 of 2021

The Hon'ble Commission in its Order dated 9th Nov 2022 in Petition No. 57 of 2021 has agreed to allow impact of following issues:

1. Interest on Consumer Security Deposit for FY 2018-19 – Rs 9.58 Cr
2. Arrears of Maithon Power Ltd. – Rs 25 Cr
3. Negative Power purchase cost of Own Solar & Rithala Power Plant for FY 2019-20 – Rs 2.08 Cr
4. Deferment of Capitalization of FY 2017-18 to FY 2018-19 due to EI not added – Rs 0.50 Cr for FY 2018-19, though it will further have consequential impact

Relevant extract of the Review Order dated 9th November 2022 is reproduce below:

"Issue No. 1: Interest on Consumer Security Deposit for FY 2018-19

Commission's Analysis

10.1.7 In view of the above the issue regarding Interest on Consumer Security Deposit for FY 2018-19 has been analyzed and the Arithmetical Error will be accordingly rectified in the ensuing Tariff Order along with Carrying Cost

Issue No. 2: Arrears of Maithon Power Ltd.

Commission's Analysis

10.2.7 There is no error apparent on this issue. However, based on the CERC Order dated 08.01.2022 the amount of Rs. 25 Crore withheld in Tariff Order dated 28/08/2020 and 30/09/2021 will be considered in the ensuing Tariff Order along with Carrying Cost.

Issue No. 3: Negative Power Purchase Cost of Own Solar and Rithala Power Plant.

10.3.7 Further, with regards to Own Solar, the Commission will review the fresh claim of Rs. 2.08 Cr. for FY 2019-20 in the ensuing tariff order.

Issue No. 4: Deferment of Capitalization of FY 2017-18 to FY 2018-19 due to EI not added.

Commission's Analysis

10.4.3 The Commission has considered Rs. 33.76 Crore on account of Electrical Inspector Certificate (EIC) being obtained in FY 2018-19 instead of Rs. 39.85 Crore as trued up. The difference of Rs. 6.09 Crore as claimed by the Petitioner will be considered appropriately in the ensuing Tariff Order."

Based on the above order, it is requested to the Hon'ble Commission to allow the impact of Rs 37.16 Cr along with carrying cost in the upcoming tariff order. Details given in below table:

Sl. No.	Particulars/Issues	Amount (Rs Cr)
A	Interest on Consumer Security Deposit for FY 2018-19	9.58
B	Arrears of Maithon Power Ltd.	25.00
C	Negative Power purchase cost of Own Solar & Rithala Power Plant	2.08
D	Deferment of Capitalization of FY 2017-18 to FY 2018-19 due to EI not added	0.50
E	Total	37.16

COST OF SERVICE

The Petitioner has considered same approach for determining the cost of supply for different voltage levels as adopted by the Hon'ble Commission in its Tariff Orders.

The total ARR has been allocated in the Wheeling and Retail Supply business to different voltage levels and the same has been considered along with the energy sales to the respective voltage level to arrive at the per unit Wheeling charge and Retail Supply Charge for that voltage level.

ALLOCATION OF WHEELING ARR

The Petitioner has considered the gross energy sales (MU) for the FY 2023-24 and has allocated the same to different voltage levels in the proportion of energy sales (MU) to these voltages to total sales. The voltage wise estimated energy sales for FY 2023-24 is as shown in the following table:

Table 3.1: Estimated Energy Sales for FY 2023-24

Particulars	MUs
Sales above 66 kV level	107.05
Sales at 33/66 kV level	75.45
Sales at 11 kV level	980.82
Sales at LT level	9,032.29
Total	10,195.61

The Petitioner has thereafter grossed up the energy sales (MU) at the specific voltage level with the respective distribution losses (%) at that level to arrive at the Energy Input (MU) for that level. The summary of the voltage wise distribution losses considered by the Hon'ble Commission are as follows:

Table 3.2: Estimated Distribution Loss for FY 2023-24

Particulars	Percent
Loss above 66 kV level	0.00%
Loss at 33/66 kV level	0.77%
Loss at 11 kV level	2.60%
Loss at LT level	7.48%

The Petitioner would like to mention that the voltage wise distribution losses considered above are estimates and based on same the Energy Input (MU) for the respective voltage levels are shown as follows: