

CHAPTER-6

AGGREGATE ANNUAL REVENUE REQUIREMENT

6.1 POWER PURCHASE COST:

In the Chapter “Energy Sales Projections” MESCOM has elaborated the projections made in respect of the energy sales for the period from FY23 to FY27. Further, the energy requirement at generation point has also been arrived considering the projected distribution loss and transmission loss for the respective years.

In this Chapter, the energy requirement projected for the year FY23 to FY25 has been considered for estimations of power purchase cost to arrive at the aggregate annual revenue requirement for the control period.

a. Cost of power at generation point:

M/s PCKL has made available the source wise energy availability and related cost which has been considered in the filing.

For FY23 to FY25, PCKL has estimated that the cost of power purchase for MESCOM as Rs.2505.48 Cr, Rs.2595.22 Cr and Rs.2663.02 Cr, respectively. Power purchase cost incurred by MESCOM in previous years and the projected for future years are indicated in the below table;

Rs. in Cr.	
Year	Amount
FY20 (Actuals)	2541.03
FY21 (Actuals)	2813.79
FY22 (Revised Projections)	2319.25
FY23 (Projection)	2505.48
FY24 (Projection)	2595.22
FY25 (Projection)	2663.02

b. PGCIL PoC Charges:

The power transmission from Central Sector Generating Stations is either through the PGCIL lines or any lines constructed by developer selected through competitive bidding route from the generating plants. ESCOMs have to pay POC (Transmission charges) to PGCIL / Independent Power Transmission Utility for transmitting the CGS power and power from other States.

Central Electricity Regulatory Commission (Sharing of Inter-State Transmission Charges and Losses), Regulations 2020 came into force with effect from 1.11.2020. National Load Despatch Centre (NLDC) as the Implementing Agency under Sharing Regulations 2020 has been entrusted with the responsibility of computation of Inter State Transmission Charges (ISTS) and losses. As per Regulation (14)(5)(b), Transmission Charges payable by DICs shall be notified by the Implementing Agency by 25th day of the month following billing period. The computation of transmission charges shall be done on the basis of inputs received from ISTS Licensees, DICs / States, CTU as per the Regulations.

As per Central Electricity Regulatory Commission (Sharing of Inter-State Transmission Charges and Losses) Regulations, 2020, the ESCOMs shall have to make transmission charges on the following components;

- 1) National Component (NC);
- 2) Regional Component (RC);
- 3) Transformer Component (TC); and
- 4) AC System Component (ACC).

1. National Component (NC):

National Component shall be sum of the following components:

- ✓ National Component-Renewable Energy (NC-RE); and
 - ✓ National Component-HVDC (NC-HVDC).
- a) National Component-Renewable Energy shall comprise of the Yearly Transmission Charges for transmission systems developed for renewable energy projects as identified by the Central Transmission Utility.
 - b) National Component-HVDC shall comprise of the following:
 - i) 100% of Yearly Transmission Charges for “back-to-back HVDC” transmission system;
 - ii) 100% of Yearly Transmission Charges for Biswanath-Chariali/ Alipurdwara to Agra HVDC transmission system;

- iii) Yearly Transmission Charges of Mundra-Mohindergarh 2500 MW HVDC transmission system corresponding to 1005 MW capacity
- c) The Yearly Transmission Charges for the National Component shall be shared by all drawee DICs and injecting DICs with untied LTA in proportion to their quantum of Long Term Access plus Medium Term Open Access and untied LTA respectively.
- d)

2. Regional Component- shall be sum of the following components:

- a) Regional Component of HVDC (RC-HVDC) comprising of 70% of Yearly Transmission Charges of HVDC transmission systems planned to supply power to the concerned region, except HVDC transmission systems covered as above.
- b) Yearly Transmission Charges for static compensators (STATCOMs), static VAR compensators (SVCs), bus reactors, spare transformers, spare reactors and any other transmission element(s) located in the concerned region and identified by the Central Transmission Utility as being critical for providing stability, reliability and resilience in the grid.
- c) Yearly Transmission Charges covered under sub-clause (a) of Clause (1) of this Regulation shall be shared by drawee DICs of the receiving region and injecting DICs with untied LTA in the receiving region, in proportion to their quantum of Long Term Access plus Medium Term Open Access and untied LTA, respectively.
- d) Yearly Transmission Charges covered under sub-clause (b) of Clause (1) of this Regulation shall be shared by drawee DICs of the region and injecting DICs (with untied LTA) of the same region, in proportion to their quantum of Long

Term Access plus Medium-Term Open Access and untied LTA, respectively.

3. Components and sharing of Transformer Component (TC)

- i) Transformer Component for a State shall comprise of Yearly Transmission Charges for inter-connecting transformers (ICTs) planned for drawal of power by the concerned State. A list of such transformers for each State shall be provided by the Central Transmission Utility to the Implementing Agency.
- ii) Transformer Component for a State shall be borne and shared by the drawee DICs located in the concerned State in proportion to their Long Term Access plus Medium Term Open Access.

4. Components and sharing of AC System Component (ACC)

- a) AC System Component shall have following components:
 - (i) Usage Based Component (AC-UBC); and
 - (ii) Balance Component (AC-BC).
- b) The Yearly Transmission Charges of AC-UBC shall be shared by drawee DICs and injecting DICs with untied LTA corresponding to their respective usage of the transmission lines, in accordance with Regulation 9 of these regulations.

As per Regulation 24(2), Implementing Agency shall publish the peak block of the billing period on the first day of the month following the billing period.

Based on inputs furnished by DICs/ States, all India basic network has been prepared along with node wise generation and demand as per the peak block and made it available on POSOCO website on 15th of each month for

review and comments of DICs/ States in line with the notified procedures with the last date for submission of comments as 18th each month.

The usage part of AC system charges has been computed by running AC load flow and determining the utilization of the lines with respect to SIL of the lines. For SIL of lines at various voltage levels, annexure -II to Regulations has been followed.

AC Usage Base Charges (AC-UBC) thus determined has been used for apportionment through hybrid method and computed total aggregated nodal charges in for each drawee DIC and injecting DICs having untied LTA.

- c) The Yearly Transmission Charges under AC-BC shall be the balance Yearly Transmission Charges for AC System Component after apportioning the charges for AC-UBC.
- d) Transmission charges under AC-BC shall be shared by all drawee DICs and injecting DICs with untied LTA in proportion to their quantum of Long Term Access plus Medium Term Open Access and untied LTA respectively.

Based on the above methodology and mechanism, Transmission Charges paid by ESCOMs for the year from April 2021 to September-2021 is as below;

Month	LTA Demand	Usage based AC system charges	Balance AC system charges	National component	
		AC-UBC	AC-BC	NC-RE	NC+HVDC
1	2	3	4	5	6
Apr-21	5796	49.62	92.55	4.82	11.16
May-21	5884	55.29	108.90	5.37	12.44
Jun-21	5824	40.18	103.95	5.15	11.92
Jul-21	5887	45.70	109.06	5.60	12.45
Aug-21	5897	32.78	103.96	5.49	12.13
Sep-21	5666	30.81	103.84	5.40	11.94

Month	Regional Component	Transformers component	Bilateral charges	Total Transmission charges
	RC	TC		
1	7	8	9	10
Apr-21	7.45	9.60	0.32	175.53
May-21	8.39	10.63	0.35	201.39
Jun-21	7.99	10.17	0.34	179.71
Jul-21	8.33	10.58	0.35	192.08
Aug-21	8.13	10.20	0.34	173.02
Sep-21	8.10	10.54	0.35	170.99

In addition to the above, 800 kV Raigarh – Paglur HVDC system has commissioned during 2020-21 and 2021-22. The expected additional PoC charges would be Rs. 40.73 Crs /month translating to Rs.488.76 Crs / per annum. The details of the lines commissioned and expected YTC of these lines is as below;

Scheme	Asset details	Petition No.	COD
1	2	3	4
I	± 800KV 6000MW Raigarh (HVDC Station) – Pugalur (HVDC Station) HVDC Link along with ± 800KV 1500 MW (Pole-I) HVDC terminals each at Raigarh (HVDC Station) & Pugalur (HVDC Station)	685/TT/2020	06.09.2020
	±800kV 1500 MW (Pole-II) HVDC terminals each at Raigarh (HVDC Station) & Pugalur (HVDC Station)	173/TT/2021	09.03.2021
	±800kV 1500 MW (Pole-III) HVDC terminals each at Raigarh (HVDC Station) & Pugalur (HVDC Station)		13.07.2021
	±800kV 1500 MW (Pole-IV) HVDC terminals each at Raigarh (HVDC Station) & Pugalur (HVDC Station)	Not yet filed	25.10.2021
	a) 400kV Pugalur (HVDC Station) - Pugalur (Existing) (Quad) D/C Transmission line along with associated bays at Pugalur (HVDC Station) & Pugalur (Existing) Substation and b) 400kV Pugalur (HVDC Station) – Arasur (Quad) D/C Transmission line along with associated bays at Pugalur (HVDC Station) & Arasur station	693/TT/2020	06.09.2021
II	c.PUGALUR- TVLM 400KV AC LINE d. PUG - EDAYARPLYM 400KV AC LINE E. EDYRPLYM- UPET DC400KV	Not yet filed	25.10.2021
III	(Pugalur, Tamil Nadu) – North Trichur (Kerala) – Scheme #3: Pugalur-Trichur 2000MW VSC based HVDC System”.	172/TT/2021	Pole –II 09.03.2021

Scheme	Asset details	Capital cost (in Lakhs)	YTC (in Lakhs (2021-22))
1	2	5	6
I	± 800KV 6000MW Raigarh (HVDC Station) – Pugalur (HVDC Station) HVDC Link along with ± 800KV 1500 MW (Pole-I) HVDC terminals each at Raigarh (HVDC Station) & Pugalur (HVDC Station)	949401.26	132035
	±800kV 1500 MW (Pole-II) HVDC terminals each at Raigarh (HVDC Station) & Pugalur (HVDC Station)	120232.06	16207.94
	±800kV 1500 MW (Pole-III) HVDC terminals each at Raigarh (HVDC Station) & Pugalur (HVDC Station)	219076.79	27199.89
	±800kV 1500 MW (Pole-IV) HVDC terminals each at Raigarh (HVDC Station) & Pugalur (HVDC Station)		
II	a) 400kV Pugalur (HVDC Station) - Pugalur (Existing) (Quad) D/C Transmission line along with associated bays at Pugalur (HVDC Station) & Pugalur (Existing) Substation and b) 400kV Pugalur (HVDC Station) – Arasur (Quad) D/C Transmission line along with associated bays at Pugalur (HVDC Station) & Arasur station	57775.16	7660.18
	c.PUGALUR- TVLM 400KV AC LINE d. PUG - EDAYARPLYM 400KV AC LINE E. EDYRPLYM- UPET DC400KV (Pugalur, Tamil Nadu) – North Trichur (Kerala) – Scheme #3: Pugalur-Trichur 2000MW VSC based HVDC System".	517625.68	68735.11
III			
Total capital cost Rs in crore			18641.10

The above charges vary on month to month depending on load, generation, usage of lines and transmission charges of additional lines added to the system.

In case POC charges are not paid within due date, PGCIL is operating the regulation of power supply, wherein lower cost of Central Generation Stations has been curtailed. Therefore, ESCOMs have to arrange payment to PGCIL as per the Regulation computed by NLDC & SRPC.

In accordance with the above provisions, the transmission charges payable to PGCIL is computed for the energy projected to be drawn from CGS/Other States (as worked out by PCKL) and factored into the power purchase cost.

The Hon'ble Commission has been approving the PGCIL Transmission cost over the years. However, the PGCIL cost is not being approved in full as projected quoting the provisions of Central Electricity Regulatory Commission (Sharing of Inter-State Transmission Charges and Losses), Regulations 2020 and relying on the November, 2020 bill amount. As a result, there has been substantial reduction in PGCIL Cost considered for computing power purchase cost taken to ARR.

However, the Hon'ble Commission is considering the actual PGCIL cost during the true up exercise. Consequently, the difference in cost will be recovered after a span of two years. The effect of this would be that, ESCOMs has to meet this expenditure (not approved portion of expenditure in ARR) without any income (source) during the year and the same would get added to the deficit after one year (i.e after true up). As the amount is significant, this will adversely affect the cash flow and financials of the company.

A comparison of the actual PGCIL transmission cost as against the PGCIL cost approved by the Commission for MESCOM in Tariff Orders and True Up Orders are shown below:

Year	As Filed	Appd in ARR	Actuals	Appd. In APR
2017-18	106.30	85.53	157.40	157.40
2018-19	141.94	125.34	155.51	155.51
2019-20	179.69	143.91	220.01	220.01
2020-21	192.92	219.58	245.68	
2021-22	254.57	217.56	83.41 *	

*Amount incurred up to Sept 2021.

The Hon'ble Commission is requested to consider the above facts and the significant impact of PGCIL cost on the cash flow and financials of ESCOMs allow the cost in full as filed subject to truing up through Annual Review of Performance.

c. KPTCL Transmission Charges:

MESCOM has projected the transmission charges payable to KPTCL as below;

In the KPTCL Tariff Order-2021, Hon'ble Commission has determined the transmission charges for FY22 with the following components.

Sl. No.	Particulars	FY22 approved Rs. in Cr
1.	O&M Expenses	1850.52
2.	Depreciation	895.25
3.	Interest & Finance charges	573.01
4.	Interest on working capital	104.04
5.	Return on Equity	843.36
6.	Less: Interest & Finance charges capitalized	(81.91)
7.	Less: Other expenses capitalized	(48.74)
8.	Less: Other Income	(225.04)
9.	FY20 Deficit	34.18
10.	Amortized regulatory asset as per APTEL Order	331.40
	Total:	4276.08

MESCOM has considered the weighted average percentage increase in O&M costs, Depreciation, Interest & Finance charges and Interest on working capital with reference to the approved ARR for the years FY20 to FY22 as per KPTCL MYT Tariff Order 2019, as indicated below, and the same has been applied to approved ARR of FY22 to project the transmission charges for FY23 to FY25.

Sl. No.	Particulars	FY20 Apprd. ARR Rs. in Cr	FY21 Apprd. ARR Rs. in Cr	FY22 Apprd. ARR Rs. in Cr	Weighted Average increase (%)
1.	O&M Expenses	1490.20	1661.30	1850.52	12.09%
2.	Depreciation	786.38	839.59	895.25	6.92%
3.	Interest & Finance charges	502.40	541.51	573.01	7.03%
4.	Interest on working capital	91.58	97.56	104.04	6.80%

Sl. No.	Particulars	FY22 apprd Rs. in Cr	FY23	FY24	FY25
1.	O&M Expenses (*1)	1850.52	2074.25	2325.03	2606.13
2.	Depreciation(*2)	895.25	1003.49	1124.81	1260.80
3.	Interest & Finance charges(*3)	573.01	642.29	719.94	806.98
4.	Interest on working capital(*4)	104.04	116.62	130.72	146.52
5.	Return on Equity	843.36	843.36	843.36	843.36
6.	Less: Int. & Fin. charges capital.	(81.91)	-81.91	-81.91	-81.91
7.	Less: Other expenses capital.	(48.74)	-	-	-
8.	Less: Other Income	(225.04)	-225.04	-225.04	-225.04
9.	FY20 Deficit	34.18	-	-	-
10.	Amortized regulatory asset as per APTEL Order	331.41	331.41	331.41	331.41
	Total:	4276.08	4704.47	5168.32	5688.25

Out of the total transmission capacity of 23518 MW for FY22, MESCOM's allocated capacity is 1750 MW. Accordingly, transmission charges for FY23 to FY25 would be as below;

FY23: Rs.350.06 Cr FY24: Rs.384.58 Cr FY25: Rs.423.27 Cr.

KPTCL is also filing its proposal before Hon'ble Commission for transmission charges for the control period from FY-20 to FY-22.

- a. SLDC Charges: SLDC charges for FY22 approved by the Hon'ble Commission in Tariff Order 2021 are Rs.2.59 Cr. MESCOM has considered the weighted average increase in O&M charges (as considered for transmission charges above) of 12.09% on the approved O&M Charges for FY22 to project the transmission charges for FY23 to FY25, as below:

FY23: Rs.2.90 Cr FY24: Rs.3.25 Cr FY25: Rs.3.64 Cr.

6.2 Operation and Maintenance (O&M) Costs:

The Operation and Maintenance (O&M) costs includes employee-related costs, repairs & maintenance costs and administrative & general costs. All the above sub components of the O&M costs are projected for the control period FY23 to FY25 as detailed below;

MESCOM has considered the norms as prescribed in MYT regulations for projecting the various costs under the head 'O&M Expenses' and accordingly, the parameters considered for projections for the years from FY23 to FY25.

- ✓ Actual O&M Expenses in the year FY21 as the base.
- ✓ Consumer growth index of 3.13%(3 year CAGR,FY18 to FY21).
- ✓ Weighted average inflation index of 6.96%
- ✓ Efficiency factor of 1%.

Weighted average inflation index of 6.96% is computed as follows:

Year	WPI	CPI	Comp. Series	Yt/Y1 =Rt	Ln Rt	Year (t-1)	Product [(t-1)*(LnRt)
2009	81.90	54.50	59.98				
2010	89.70	61.10	66.82	1.11	0.11	1.00	0.11
2011	98.20	66.50	72.84	1.21	0.19	2.00	0.39
2012	105.70	72.70	79.30	1.32	0.28	3.00	0.84
2013	111.10	80.60	86.70	1.45	0.37	4.00	1.47
2014	114.80	85.70	91.52	1.53	0.42	5.00	2.11
2015	110.30	90.80	94.70	1.58	0.46	6.00	2.74
2016	110.30	95.30	98.30	1.64	0.49	7.00	3.46
2017	114.10	97.60	100.90	1.68	0.52	8.00	4.16
2018	118.90	102.40	105.70	1.76	0.57	9.00	5.10
2019	121.20	110.20	112.40	1.87	0.63	10.00	6.28
2020	121.80	116.30	117.40	1.96	0.67	11.00	7.39
A=Sum of the product column							34.05
B=6 times of A							204.28
C=(n-1)*n*(2n-1)							3036.00
D=B/C							0.067287
Annual Escalation rate (exponential of D)							6.96%

On the above elucidated norms / parameters, MESCOM has proceeded to project the O&M Expenses for the control period from FY23 to FY25 as below;

6.2.1 Employee Related Costs:

Rs. in Cr.

Particulars	FY21	FY22	FY23
Actual Expenses in FY-18	467.61	-	-
Consumer Growth Index	-	3.13%	3.13%
Weighted Inflation Index	-	6.96%	6.96%
Efficiency Factor	-	1.00%	1.00%
Net Growth Rate	-	9.09%	9.09%
Expenses projected	-	510.12	556.48

Particulars	FY24	FY25
Actual Expenses in FY-18	-	-
Consumer Growth Index	3.13%	3.13%
Weighted Inflation Index	6.96%	6.96%
Efficiency Factor	1.00%	1.00%
Net Growth Rate	9.09%	9.09%
Expenses projected	607.06	662.24

6.2.2 Repairs and Maintenance Costs:

Rs. in Cr.

Particulars	FY21	FY22	FY23
Actual Expenses in FY21	64.99	-	-
Consumer Growth Index	-	3.13%	3.13%
Weighted Inflation Index	-	6.96%	6.96%
Efficiency Factor	-	1.00%	1.00%
Net Growth Rate	-	9.09%	9.09%
Expenses projected	-	70.89	77.35

Particulars	FY24	FY25
Actual Expenses in FY21	-	-
Consumer Growth Index	3.13%	3.13%
Weighted Inflation Index	6.96%	6.96%
Efficiency Factor	1.00%	1.00%
Net Growth Rate	9.09%	9.09%
Expenses projected	84.38	92.06

6.2.3 Administrative and General Costs:

Rs. in Cr.

Particulars	FY21	FY22	FY23
Actual Expenses in FY-18	113.39	-	-
Consumer Growth Index	-	3.13%	3.13%
Weighted Inflation Index	-	6.96%	6.96%
Efficiency Factor	-	1.00%	1.00%
Net Growth Rate	-	9.09%	9.09%
Expenses projected	-	123.68	134.91

Particulars	FY24	FY25
Actual Expenses in FY-18	-	-
Consumer Growth Index	3.13%	3.13%
Weighted Inflation Index	6.96%	6.96%
Efficiency Factor	1.00%	1.00%
Net Growth Rate	9.09%	9.09%
Expenses projected	147.16	160.52

6.2.4 ABSTRACT of Operation and Maintenance (O&M) Costs:

(O&M Costs: Rs. in Cr)

Year	Employee Costs	R&M Costs	A&G Costs	Total O&M Costs
FY16 (Actual)	249.24	33.04	67.41	349.69
FY17 (Actual)	266.98	35.88	68.27	371.13
FY18 (Actual)	355.68	39.39	93.60	488.67
FY19 (Actual)	392.40	59.14	106.84	558.38
FY20 (Actual)	493.34	67.33	123.59	684.26
FY21 (Appd. TO 2020)	-	-	-	702.32
FY21 (Actual)	467.61	64.99	113.39	645.99
FY22 (Appd. TO 2021)	-	-	-	796.62
FY22 (Revised Projection)	510.12	70.89	123.68	704.69
FY23 (Projection)	556.48	77.35	134.91	768.74
FY24 (Projection)	607.06	84.38	147.16	838.60
FY25 (Projection)	662.24	92.06	160.52	914.82

6.3

DEPRECIATION:

CAPEX program of MESOM for the years FY23, FY-24 & FY-25 are Rs.661.92 Cr, Rs.506.42 Cr & Rs.509.69 Cr, respectively. In the year FY21, MESCOM has categorized the assets amounting to Rs.402.83 Cr. As such, MESCOM has expected to incur the CAPEX as proposed for the years FY23 to FY25. Accordingly, sector wise categorization of assets have been arrived and indicated in the Format-D15.

Further, net weighted average rate of depreciation in the year FY21 is 5.186% on the average of the opening & closing balances of value of assets, which has been considered to project the depreciation for the years FY22 to FY25, as detailed below;

(Rs. in Cr.)

Particulars	Average of Opening & Closing Assets in FY21 (Actuals)	Depreciation Provided in FY21 (Actuals)	%
Land and rights	9.66	0.09	0.932%
Buildings	140.33	4.88	3.478%
Hydraulic Works	3.50	0.18	5.143%
Other Civil Works	1.05	0.04	3.810%
Plant & Machinery, Lines, Cables, Networks / Service Lines /Metering equipment	3467.84	182.19	5.254%
Vehicles	13.20	1.1	8.333%
Furniture Fixtures	8.82	0.49	5.556%
Office Equipment	17.29	0.93	5.379%
Total:	2,030.36	189.91	5.186%
Non-Tangible Assets		3.23	
Grand Total		193.14	

(Rs. in Cr.)

Particulars	Average of Opening & Closing Assets for FY22 (Projections)	Weighted Average Depreciation (%)	Depreciation for FY22 (Projections)
Land and rights	11.25	0.932%	0.10
Buildings	173.45	3.478%	6.03
Hydraulic Works	3.86	5.143%	0.20
Other Civil Works	1.49	3.810%	0.06
Plant & Machinery, Lines, Cables, Networks / Service Lines /Metering equipment	3,960.86	5.254%	208.09
Vehicles	13.65	8.333%	1.14
Furniture Fixtures	9.30	5.556%	0.52
Office Equipment	18.73	5.379%	1.02
Total:	4192.59	5.186%	217.17
Non-Tangible Assets			3.23
Grand Total			220.40

(Rs. in Cr.)

Particulars	Average of Opening & Closing Assets for FY23 (Projections)	Weighted Average Depreciation (%)	Depreciation for FY23 (Projections)
Land and rights	12.95	0.932%	0.12
Buildings	208.84	3.478%	7.26
Hydraulic Works	4.25	5.143%	0.22
Other Civil Works	1.95	3.810%	0.08
Plant & Machinery, Lines, Cables, Networks / Service Lines /Metering equipment	4,485.95	5.254%	235.68
Vehicles	14.14	8.333%	1.18
Furniture Fixtures	9.81	5.556%	0.55
Office Equipment	20.26	5.379%	1.11
Total:	4758.15	5.186%	246.21
Non-Tangible Assets			1.74
Grand Total			247.95

(Rs. in Cr.)

Particulars	Average of Opening & Closing Assets for FY24 (Projections)	Weighted Average Depreciation (%)	Depreciation for FY24 (Projections)
Land and rights	14.63	0.932%	0.14
Buildings	243.76	3.478%	8.47
Hydraulic Works	4.63	5.143%	0.24
Other Civil Works	2.41	3.810%	0.10
Plant & Machinery, Lines, Cables, Networks / Service Lines /Metering equipment	5,000.36	5.254%	262.71
Vehicles	14.61	8.333%	1.22
Furniture Fixtures	10.32	5.556%	0.58
Office Equipment	21.77	5.379%	1.20
Total:	5312.49	5.186%	274.67
Non-Tangible Assets			-
Grand Total			274.67

(Rs. in Cr.)

Particulars	Average of Opening & Closing Assets for FY25 (Projections)	Weighted Average Depreciation (%)	Depreciation for FY25 (Projections)
Land and rights	16.08	0.932%	0.15
Buildings	274.14	3.478%	9.53
Hydraulic Works	4.96	5.143%	0.26
Other Civil Works	2.81	3.810%	0.12
Plant & Machinery, Lines, Cables, Networks / Service Lines /Metering equipment	5,440.48	5.254%	285.83

Vehicles	15.01	8.333%	1.25
Furniture Fixtures	10.75	5.556%	0.60
Office Equipment	23.08	5.379%	1.28
Total:	5787.31	5.186%	299.03
Non-Tangible Assets			-
Grand Total			299.03

Abstract:	(Rs. in Cr.)
Year	Depreciation Amount in different years
FY16 (Actual)	63.74
FY17 (Actual)	78.45
FY18 (Actual)	90.39
FY19 (Actual)	125.69
FY20 (Actual)	166.65
FY21 (Appd. TO 2020)	153.53
FY21 (Actual)	193.14
FY22 (Appd. TO 2021)	186.77
FY22 (Revised Projection)	220.40
FY23 (Projection)	247.95
FY24 (Projection)	274.67
FY25 (Projection)	299.03

6.4 INTEREST AND FINANCE COSTS:

Interest and Finance costs include interest on capital loan, interest on working capital, interest on consumer deposits and other finance costs.

6.4.1 Interest on Capital Loan:

CAPEX program of MESCOM for the years FY23, FY-24 & FY-25 are Rs.661.92 Cr, Rs.506.42 Cr & Rs.509.69 Cr, respectively. In the year FY21, MESCOM has categorized the assets amounting to Rs.402.83 Cr. As such, MESCOM has expected to incur the CAPEX as proposed for the years FY23 to FY25. Accordingly, MESCOM has considered the amount equal to the proposed CAPEX for projection of Interest on Loan Capital for the years FY23 to FY25.

Capital Budget of MESCOM for FY23 to FY25 has been detailed in Business Plan, Chapter-5A.

Considering the above int

Interest on loan capital has been projected as indicated below.

(Rs. in Cr.)

Particulars	FY22	FY23	FY24	FY25
Opening Balance of loans	1209.54	1310.54	1511.54	1502.54
Add: New Loans	300.00	430.00	250.00	250.00
Less: Repayments	199.00	229.00	259.00	289.00
Closing Balance of loans	1310.54	1511.54	1502.54	1463.54
Average Loan	1260.04	1411.04	1507.04	1483.04
Rate of interest	11.00%	11.00%	11.00%	11.00%
Interest on Capital Loan	138.59	155.20	165.78	163.13

6.4.2 Interest on Consumer Deposits:

Methodology adopted by the Hon'ble Commission in the Tariff Order 2018 has been followed for projecting the interest on consumer security deposit. Increase in consumer deposit in FY-18 with reference to security deposit in FY-17 is taken as the estimated additions for the years FY-19 to FY-22. Further, interest rate of 6.75%, as per RBI Notification dated 01-08-2018, has been considered for estimating the interest on consumer deposits.

Accordingly, Interest on Consumer Deposits is projected as below;

Rs.in Cr.

Particulars	FY22	FY23	FY24	FY25
OB of the security deposits	712.61	751.13	789.65	828.17
Add: Collection during the year	38.52	38.52	38.52	38.52
CB of the security deposits	751.13	789.65	828.17	866.69
Average	731.87	770.39	808.91	847.43
Rate of interest	6.50%	6.50%	6.50%	6.50%
Interest on Consumer Security Deposits	47.57	50.08	52.58	55.08

6.4.3 Interest on Working Capital:

Interest on working capital has been projected for the year FY22 to FY25 as per the norms prescribed in the MYT regulations.

(Interest on Working Capital: Rs. in Crores)

Year	FY22 (Proj.)	FY23 (Proj.)	FY24 (Proj.)	FY25 (Proj.)
1/12th of O&M Expenses	58.72	64.06	69.88	76.24
Opening GFA	3,944.04	4,441.11	5,075.14	5,549.79
1% on opening GFA	39.44	44.41	50.75	55.50
1/6th of Revenue	658.31	681.46	704.95	728.67
Total Working Capital	756.47	789.93	825.58	860.41
Rate of Interest (%)	11.00%	11.00%	11.00%	11.00%
Interest on Working Capital	83.21	86.89	90.81	94.65

6.4.4 Cost of raising finance:

In the year FY21 MESCOM has incurred an expense of Rs.1.58 Cr towards cost of raising finance for capital loans. The same amount has been maintained for FY22 to FY25.

6.4.5 ABSTRACT of Interest and Finance Costs:

(Interest and Finance Costs: Rs. in Crores)

Year	Interest on Capital Loan	Working Capital Interest	Interest on consumer Deposit	Cost of raising finance	Total
FY17 (Actual)	53.43	45.01	35.68	3.95	138.07
FY18 (Actual)	51.62	49.36	34.02	1.10	136.10
FY19 (Actual)	67.79	49.99	34.15	1.84	153.77
FY20 (Actual)	84.96	52.45	39.85	1.08	178.34
FY21 (Appd. TO 2020)	109.84	79.80	38.34	1.84	229.82
FY21 (Actual)	98.61	54.01	30.15	1.58	184.35
FY22 (Appd. TO 2021)	116.10	91.13	32.37	1.08	240.68
FY22 (Revised Projection)	138.59	83.21	47.57	1.58	270.95
FY23 (Projection)	155.20	86.89	50.08	1.58	293.75
FY24 (Actual)	165.78	90.81	52.58	1.58	310.75
FY25 (Actual)	163.13	94.65	55.08	1.58	314.44

6.4.6 Interest & Other expenses capitalized:

In FY21 annual accounts no amount is reflected as '*Interest & other expenses capitalized*'. Hence, MESCOM has not projected any amount in this regard for the control period.

6.5 OTHER DEBITS (including bad debts):

Actual / projected 'Other Debits' charges for different years are tabulated below;

(Rs. in Crores)

Year	Amount
FY17 (Actual)	20.20
FY18 (Actual)	(1.55)
FY19 (Actual)	18.42
FY20 (Actual)	13.99
FY21 (Appd. TO 2020)	-
FY21 (Actual)	6.55
FY22 (Appd. TO 2021)	-
FY22 (Revised Projection)	6.55
FY23 (Projection)	6.55
FY24 (Actual)	6.55
FY25 (Actual)	6.55

6.6 PRIOR PERIOD (CREDITS) / CHARGES:

In FY21 annual accounts no amount is reflected as 'Prior period (Credits) / Chargs'. Hence, MESCOM has not projected any amount in this regard for the control period.

6.7 RETURN ON EQUITY:

Paid up share capital, share deposit and reserves & surplus, *at the beginning of the year*, considered for projection of 'Return on Equity' for the years FY22 to FY25 is indicated below;

(Return on Equity: Rs. in Crores)

Year	FY22	FY23
Opening balance of paid up share capital	619.44	619.44
Share Deposit	34.96	34.96
Reserves & Surplus	226.80	362.04
Less: Recapitalized Security Deposit	-26.00	-26.00
Total:	855.20	990.44
Rate of ROE (grossed up with MAT) [*]	18.7815%	18.7815%
ROE (Projection)	160.62	186.02

(Return on Equity: Rs. in Crores)

Year	FY24	FY25
Opening balance of paid up share capital	619.44	619.44
Share Deposit	34.96	34.96
Reserves & Surplus	494.60	648.12
Less: Recapitalized Security Deposit	-26.00	-26.00
Total:	1123.00	1276.52
Rate of ROE (grossed up with MAT) [*]	18.7815%	18.7815%
ROE (Projection)	210.92	239.75

[*] Considered 15.50% of return on equity duly grossed up with the applicable MAT of 17.472% which works out to 18.7815%, as approved in Tariff Order 2021.

Status of Debt Equity Ratio:

Particulars	FY22	FY23	FY24	FY25
GFA Closing Balance	4441.11	5075.14	5549.79	6024.80
Debt	1310.54	1511.54	1502.54	1463.54
Equity	1016.44	1149.00	1302.52	1476.59
Normative Debt @ 70% of GFA	3108.78	3552.60	3884.85	4217.36
Normative Equity @ 30% of GFA	1332.33	1522.54	1664.94	1807.44
% of actual DEBT on GFA	29.51%	29.78%	27.07%	24.29%
% of actual EQUITY on GFA	22.89%	22.64%	23.47%	24.51%

From the above table, it is clear that the debt equity amount lies within the normative debt equity ratio of 70:30 on the closing balances of GFA.

6.8 PROVISION FOR TAX:

In line with the norms adopted by the Hon'ble Commission in the Tariff Orders, MESCOM has not claimed separately any amount towards income tax as the RoE projections are considered duly factoring MAT.

6.9 FUNDS TOWARDS CONSUMER RELATIONS:

Hon'ble Commission has allowed an amount of Rs.50 lakhs towards Consumer Education / Relations activities. The same amount has been projected for the years FY22 to FY25. In the year FY21, actual amount incurred under this head is Rs.41 lakhs.

6.10 Regulatory Assets;

In the Tariff Order 2020, Hon'ble Commission has earmarked the unrecovered gap of Rs.122.93 Cr as regulatory asset which has been directed to be recovered in FY22 and FY23. Accordingly, MESCOM has claimed Rs.61.97 Cr in FY22 ARR and the remaining amount of Rs.61.96 Cr has been claimed in the current filing for FY23.

To consider the Truing up result of previous year in the Truing up exercise of year under consideration.

The Hon'ble Commission is carrying out the Truing up exercise of the previous year/s annually since 2009 (25.11.2009) for the year 2007-08 onwards. The details of Trued up amount and the orders thereon are as under.

Sl. No	FY	The tariff order in which ARR was done	Net ARR as per APR order	Net revenue as per ARR order	Deficit (-) surplus (+)
1	2007-08	25.11.2009	942.69	900.58	-42.11
2	2008-09	25.11.2009	1141.93	1047.68	-94.26
3	2009-10	07.12.2010	1171.76	1175.25	3.50
4	2010-11	28.10.2011	1428.03	1347.65	-80.38
5	2011-12	06.05.2013	1529.70	1598.59	68.89
6	2012-13	12.05.2014	1997.31	1748.73	-248.57
7	2013-14	02.03.2015	1866.77	1952.77	86.00
8	2014-15	30.03.2016	2046.84	2191.35	144.51

9	2015-16	11.04.2017	2758.95	2363.21	-395.74
10	2016-17	30.05.2018	3372.13	2818.30	-553.83
11	2017.18	30.02.2019	3184.86	3156.64	-28.22
12	2018.19	04.11.2020	3037.25	3270.80	233.55
	Total		18256.11	17144.11	-906.66

The Hon'ble Commission is carrying out the process of tariff revision and also the truing up exercise every year without considering previous year/s trued up amount in the truing up exercise of the year under consideration. This has resulted in under recovery of overall deficit resulting into financial loss to MESCOM.

While arriving at the ARR for any particular year, Hon'ble KERC is considering revenue deficit of the year under APR at that point of time, so that the said deficit is recovered in the year for which ARR is being approved. So the revenue recovered for the year for which ARR was arrived will include the deficit of previous years also. Therefore while carrying at the APR of this particular year, the revenue to the extent of previous year's deficit is required to be set aside (deducted) and net of the revenue to the extent of previous year's deficit is required to be set aside (deducted) and net of the revenue has to be considered for APR. Alternatively, since Hon'ble KERC has considered the Gap of previous year as an expense while arriving at the ARR, same amount can also be considered as a part of expense in the APR of the particular year instead of deducting the same from Revenue. By doing so, the actual gap of the year under APR can be arrived. Otherwise the revenue recovered for previous year will suppress the actual gap of the year under APR.

An appeal is made in the current filing for the APR to pass on the deficit of the earlier years from FY 2007-08 to 2018-19 to the extent of Rs.906.66 crs (which includes the surplus as well as deficit of the relevant years making it to a net deficit as shown in the above table.

During filing APR for FY 2018-19, Company has requested to consider the deficit of previous years upto FY 2016-17 amounting to Rs.1111.98 Crs. However the claim of the Company was rejected by Hon'ble Commission stating that, **"As per the decisions of the Hon'ble ATE, True up of ARR once**

done cannot be re-opened at subsequent point of time”. In this regard it is once again submitted that MESCOM is not requesting for reopening or redoing of the APR of the any earlier years for determination of the surplus or deficit of the respective years. MESCOM has already conceded for the APR results carried out by the Hon’ble Commission. The only appeal to the Hon’ble Commission is that, to pass on the result of APR of the respective years in the current APR to this Company.

It is evident from the records that, though the Hon’ble Commission is taking into account the surplus or the deficit of the relevant year for determining the tariff for ensuing financial year, it has not passed the deficit or surplus, as Hon’ble Commission is considering the entire revenue as the revenue of the year under consideration for APR. It is very conspicuous from the APR format that, the gap figure of the previous year considered in the tariff determination is missing in the APR. This missing figure is the reason for not passing on of the gap of the previous / earlier years.

It is prayed before the Hon’ble Commission to consider the trued up deficit balances to the extent of Rs.906.66 Crs, as shown in the above table in the truing up exercise of the FY 2021-21 which under consideration in this appeal petition.

In view of the above, MESCOM has indicated an amount of Rs.906.66 Crs in the ARR for FY23. However, MESCOM requests to Hon’ble Commission to consider the amount as Regulatory Asset and approve for amortizing the same in a period of five years from FY23 to FY27 equally.

6.10 ABSTRACT – Annual Revenue Requirement (Rs. In Cr.):

Projections of the expenditures in all the sub heads are detailed in the respective prescribed formats D1 to D21 and the values are abstracted in the below table;

Particulars	FY21		
	As approved in TO-2020	As per Accounts	As proposed for APR
Power Purchase Cost	2805.94	2813.79	2813.79
KPTCL Transmission charges	319.22	293.01	293.01
SLDC Charges	2.00	2.00	2.00
O&M Costs	702.32	645.99	645.99
Depreciation	153.53	193.14	193.14
Interest & Finance Charges	229.82	161.81	184.35
Interest & Finance Charges Capitalized	-2.10	-	-
Other Debits	-	6.55	6.55
Extraordinary Items	-	-7.95	-7.95
Funds towards consumer relations	0.50	0.41	0.41
TOTAL:	4211.23	4108.75	4131.29
Return on Equity	167.04	-	135.24
APR (Surplus) / Deficit	(233.55)	-	-
Regulatory Assets as per TO-2020	-	-	-
Other Income	(133.38)	(143.41)	(143.41)
Regulatory Assets as per accounts	-	(262.50)	-
Trued up deficits of previous years	-	-	-
Regulatory Assets requested	-	-	-
ARR:	4011.33	3702.84	4123.12

Particulars	FY22	
	As approved in TO-2021	As per revised projections
Power Purchase Cost	2738.02	2319.25
KPTCL Transmission charges	318.19	318.19
SLDC Charges	2.59	2.59
O&M Costs	796.62	704.69
Depreciation	186.77	220.40
Interest & Finance Charges	240.67	270.95
Interest & Finance Charges Capitalized	(2.10)	-
Other Debits	-	6.55
Extraordinary Items	-	-
Funds towards consumer relations	0.50	0.50
TOTAL:	4281.26	3843.12
Return on Equity	151.67	160.62
APR (Surplus) / Deficit	103.15	103.15
Regulatory Assets as per TO-2020	61.47	61.47
Other Income	(89.88)	(96.73)
Regulatory Assets as per accounts	--	-
Trued up deficits of previous years	-	-
Regulatory Assets requested	-	-
ARR:	4507.65	4071.63

Particulars	FY23	FY24	FY25
	Projections	Projections	Projections
Power Purchase Cost	2,505.48	2,595.22	2,663.02
KPTCL Transmission charges	350.06	384.58	423.27
SLDC Charges	2.90	3.25	3.64
O&M Costs	768.74	838.60	914.82
Depreciation	247.95	274.67	299.03
Interest & Finance Charges	293.75	310.75	314.44
Interest & Finance Charges Capitalized	-	-	-
Other Debits	6.55	6.55	6.55
Extraordinary Items	-	-	-
Funds towards consumer relations	0.50	0.50	0.50
TOTAL:	4,175.93	4,414.12	4,625.27
Return on Equity	186.02	210.92	239.75
APR (Surplus) / Deficit	473.25	-	-
Regulatory Assets as per TO-2020	61.46	-	-
Regulatory Assets as per accounts	-	-	-
Other Income	(96.73)	(96.73)	(96.73)
Trued up deficits of previous years	906.66	-	-
Regulatory Assets requested	(906.66)	-	-
ARR:	4,799.93	4,528.31	4,768.29

6.11 It is to be submitted before the Hon'ble Commission to consider the projected Aggregate Annual Revenue Requirement of MESCOM as elaborated above. The enclosed formats from A1 to D24 have contained the costs under each sub heads of income / expenditure.

6.12 CAPITAL INVESTMENT PROGRAMME:

Capital Investment Programme envisaged for FY23 to FY27 is detailed in Business Plan, Chapter-5A.

6.13 RPO compliance for FY23 to FY25:

Considering the projected source wise energy, as depicted in Format D1, RPO compliance in respect of Non-solar and Solar have been estimated in the below given tables for the period from FY23 to FY25. Further, it is to be submitted that Hon'ble Commission is yet to determine RPO targets from FY23 onwards.

Non Solar RPO Compliance:

Sl. No.	Particulars	FY23	FY24	FY25
1.	Total power purchase quantum from all sources excluding Hydro-energy	4141.27	4361.76	4585.49
2.	Non-Solar RE purchased under PPA route at Generic Tariff including Non-Solar RE purchased from KPCL	625.46	625.46	625.46
3.	Non-Solar RPO Target (%)	#	#	#
4.	Non-Solar RPO Compliance(%)	15.10%	14.34%	13.64%

Solar RPO Compliance:

Sl. No.	Particulars			
1.	Total power purchase quantum from all sources excluding Hydro-energy	4141.27	4361.76	4585.49
2.	Solar RE purchased under PPA route at Generic Tariff including Solar RE purchased from KPCL	716.97	716.97	716.97
3.	Solar RPO Target (%)	#	#	#
4.	Solar RPO Compliance (%)	17.31%	16.44%	15.64%

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