CHAPTER – 5

REVISED ANNUAL REVENUE REQUIREMENT FOR FY19

5.0 Revised Annual Revenue Requirement (ARR) for FY19

MESCOM's Application:

MESCOM in its application dated 30th November, 2017, has sought approval of the Commission for the revised ARR and retail supply tariff for FY19. The summary of the proposed revised ARR for FY19 is as follows:

TABLE – 5.1

Revised ARR for FY19-MESCOM's Submission

Rs. Crores

Sl. No.	Particulars	Amount
1	Energy at Gen Bus in MU	5966.22
2	Transmission Losses in %	3.27%
3	Energy at Interface in MU	5771.12
4	Distribution Losses in %	11.15%
	Sales in MU	
5	Sales to other than IP & BJ/KJ installations	3222.48
6	Sales to BJ/KJ installations	41.62
7	Sales to IP-Sets	1776.44
8	**Total Sales**	**5040.54**
	Revenue at existing tariff in Rs. Crores	
9	Revenue from Tariff and Misc Charges	2244.62
10	Tariff Subsidy from BJ/KJ installations	27.09
11	Tariff Subsidy from IP-Sets	925.53
12	**Total Existing Revenue**	**3197.24**
	Expenditure in Rs. Crores.	
13	Power Purchase Cost	2407.58
14	Transmission charges of KPTCL	251.83
15	SLDC Charges	2.02
16	**Power Purchase Cost including cost of transmission**	**2661.43**
17	Employee Cost	372.28
18	Repairs & Maintenance	45.25
19	Admin & General Expenses	92.30
20	**Total O&M Expenses**	**509.83**
21	Depreciation	106.86
	Interest & Finance charges	
21	Interest on Loans	80.19
22	Interest on Working capital	65.55
23	Interest on belated payment on PP Cost	0.00
24	Interest on consumer deposits	44.30

25	Other Interest & Finance charges	3.95
26	Less interest & other expenses capitalised	2.39
27	**Total Interest & Finance charges**	**191.60**
27	Other Debits	3.95
29	Extraordinary items	0.00
30	Net Prior Period Debit/Credit	1.93
31	Return on Equity	117.50
32	Funds towards Consumer Relations/Consumer Education	0.50
34	Other Income	28.77
35	**ARR**	**3564.82**
36	Deficit for FY17 carried forward	537.82
37	**Regulatory Asset**	**(-)283.90**
	Net ARR	**3818.75**

The MESCOM has requested the Commission to approve the revised Annual Revenue Requirement of Rs.3818.75 Crores for FY19, which includes the carried forward gap of revenue of Rs.537.82 Crores of FY17 and a claim for Regulatory Asset of Rs, 283.90 Crores. Considering the estimated revenue of Rs.3197.24 Crores based on the existing retail supply tariff, MESCOM has projected a revenue gap of Rs.621.51 Crores to be recovered in FY19. In order to bridge this gap in revenue, MESCOM, in its application has proposed increase in retail supply tariff by 123 paise per unit in respect of all the categories of consumers including BJ/KJ and IP set consumers for FY19.

5.1 Annual Performance Review for FY17:

As discussed in the preceding chapter of this Order, the Commission based on the provisions of MYT Regulations has carried out the Annual Performance Review for FY17 based on the audited accounts furnished by MESCOM. Accordingly, a deficit of Rs.553.83 Crores of FY17 is carried forward in to the ARR of FY19.

5.2 Revised Annual Revenue Requirement for FY19:

The item-wise revenue and expenditure proposed by MESCOM and approved by the Commission is discussed in this Chapter as follows:

5.2.1 Capital Investments for FY19:

MESCOM's Submission:

The MESCOM has proposed a capex of Rs.803.50 Crores for the FY19 as against Rs.289.9 Crores approved in the MYT Order dated 30th March, 2016. The approved and proposed Capex of MESCOM for FY19 is shown in the table below:

Table -5.2

Capital expenditure proposed for the FY19- MESCOM's Submission

Rs. Crores

Sl. No.	Particulars	Approved capex for as per MYT Order for FY19	Proposed capex for the FY19
1	E&I Works (Addl. Transformers, Link-Lines, HT/LT Re-conductoring, HVDS)	100	150
2	DTC metering,	0.25	0.25
3	Replacement of MNR/DC & Electromagnetic meters by Static meters and providing SMC meter protection box wherever required.	5	5
4	Replacement of faulty Distribution Transformers	4.5	4.5
5	Service Connection including promoter vanished layout Works	40	45
6	Rural Electrification (General)	-	-
a	Electrification of Hamlets	2	2
b	Energization of IP-sets Including Ganga Kalyana works	75	75
c	Kutir Jyothi	0.25	0.25
7	Tribal Sub-Plan	-	-
a	Electrification of Tribal Colonies	1.5	1.5
b	Energisation of IP-sets	0.75	0.75
c	Kutir Jyothi	0.05	0.05
8	**Special Component Plan**	-	-
a	Electrification of S.C Colonies	1	1
b	Energisation of IP-sets	1	1
c	Kutir Jyothi	0.1	0.1
9	Tools & Plants & Computers	5	5
10	Civil Engineering Works	16	16
11	33 KV Station and Line Works	37.5	37.5
12	New Schemes proposed during 2016-17	-	-
a)	Deen Dayal Upadyaya Grama Jyoti Yojana (DDUGJY)	-	170
b)	R - Accelerated Power Development and Reform Programme (IPDS: System improvement & Strengthening works in R-APDRP/statutory towns)	-	63
c)	Energization of IP sets Including providing Infrastructure to regularized UIP	-	185
d)	Improvement works for Model Electricity Village	-	0.1
	Grand Total	**289.9**	**803.5**

Commission's analysis and decision:

The Commission notes that, the MESCOM has proposed a capex of Rs.803.5 Crores, which is nearly three times the capex approved in the MYT Order of the Commission.

Some of the observations on the proposed capex are:

i. It is noted from the above table that, the MESCOM has enhanced the capex of E&I Works (Addl. Transformers, Link-Lines, HT/LT Re-conductoring, HVDS) from the approved capex of Rs.100 Crores to Rs.150 Crores. The MESCOM, in its replies to the preliminary observations has stated that, more number of 33kV/11kV/LT Reconductoring and Link line works amounting Rs.80.00 Crores have been sanctioned during FY18. The financial progress of the works is likely to be incurred during FY19. The anticipated cost of spill over and new works will be Rs.85.00 Crores and Rs.65.00 Crores respectively. This has resulted in increased capex provision of Rs.150.00 Crores for FY19.

ii. In the case of Service Connections, the MESCOM has increased its capex requirement from Rs.40 Crores to Rs.45 Crores. The MESCOM, in its replies to the preliminary observations has stated that, as per the GoK Order, electrical infrastructure required for energization of Drinking Water Supply installations has to be created to water supply installations against the applications being received in MESCOM. Thus, the capex of Rs.45 Crores is proposed for FY19, under Service connections, to cover the water supply works also.

iii. In the case of Replacement of faulty Distribution Transformers, the MESCOM has indicated a capex of Rs.45 Crores. In the previous year, the MESCOM had accepted that, there was an issue in accounting the repairs to faulty transformers and the amount spent on the replacement of failed (burnt/damaged) distribution transformers would not be to the tune of Rs.45 Crores. Based on the actual cost incurred, the Commission had approved Rs.5 Crores as capex to be incurred for new transformers procured for replacing the faulty (burnt/damaged) transformers. The MESCOM, in its replies to the preliminary observations has informed that, the distribution transformer is a major equipment. In replacement of faulty DTCs, as a regular practice in MESCOM, the cost of new transformer is taken for preparation of estimates even for replacement of faulty DTCs, resulting in proposal of a higher capex of Rs.45.00 Crores for FY19 for the purpose of sanctioning the estimates.

MESCOM should note that, the actual expenditure for replacement of faulty transformers, can only be considered as capital expenditure as stated above. **Hence, the Commission decides to consider only Rs.5 Crores as the proposed capex for replacement of faulty distribution transformers.**

iv. the MESCOM has indicated Rs.75 Crores for Energization of IP sets Including providing Infrastructure to regularized un-authorized IP sets (UAIP) in item No. 6 (b). Further, under the new schemes heading, the MESCOM has indicated a capex of Rs.185 Crores. The MESCOM, in its replies to the preliminary observations of the Commission has stated that, the item No.6 (b) at page No.231 is wrongly mentioned as "Energization of IP sets including providing infrastructure to regularized IP sets" inadvertently, which may be corrected as "Energization of IP sets Including Ganga Kalyana".

v. The MESCOM has indicated higher amounts of capex for DDUGJY and RAPDRP works and Model electricity village. The MESCOM, in its replies to the preliminary observations has stated that:

(a) In case of DDUGJY launched for Rural areas by GoI, the work includes feeder separation, strengthening of sub-transmission and distribution system, metering, rural electrification etc. 'In-Principle' approval for an amount of Rs.395.65 Crores, which has been communicated from REC/GoK during January-2017 for all 4 districts of MESCOM. The tender process has been completed and feeder segregation and rural electrification works have been awarded on 28.04.2017 and metering component works awarded on 28.9.2017. The works are under progress and the scheduled date of completion is 3 years from the date of award. Hence capex provision of Rs.59.90 Crores is made for FY18 and Rs.170.00 Crores is made for FY19.

(b) As per GOK Order No: EN 70 VSC 2017 dated: 24.05.2017 & 28.10.2017, 5 number of villages in each assembly constituency are to be converted as model electricity villages. Hence, it is proposed to execute some of the improvement works in the selected 138 number of villages coming under 23 number of Rural assembly constituencies of MESCOM at a cost of about Rs.40.00 Lakhs per village, resulting in capex provision of Rs.50.00 Crores for FY18 and an additional Rs.10.00 Lakhs allocated for FY19 for balance works.

vi. In case of **Model Subdivisions, the** MESCOM had sought an additional capex of Rs.267 Crores for the FY18 in the middle of the Financial year for which the Commission had accorded approval and directed MESCOM to indicate the likely capex required for FY19 in the tariff filing. But, there is no mention of the requirement of capex for Model subdivision in the capex proposal of FY19. The MESCOM, has not furnished proper reply to the observations made by the Commission.

Though, MESCOM has proposed a huge capex of Rs.803.50 Crores for FY19, the previous annual capex performance of MESCOM is not very encouraging as shown in the table below:

Table -5.3

Approved Vs Actual capital investment

Rs. Crores

Particulars	**FY12**	**FY13**	**FY14**	**FY15**	**FY16**	**FY17**
Capital Investment Proposed and Approved	348.55	249.85	281.44	262.33	353.89	288.9
Capital Investment actually incurred	127.4	130.92	193.17	252.07	230.10	288.38
Short fall	221.15	118.93	88.27	10.26	123.79	0.52
% Achievement	36.55%	52.40%	68.64%	96.09%	65.02%	99.82%

Based on the observations made in the above paras and keeping in view of the past performance on capex by MESCOM and the newly proposed works for FY19, the Commission directs MESCOM to prepare a realistic plan duly prioritizing the works. **MESCOM shall not approach the Commission in the middle of the financial year for any additional/higher capex having adverse**

effects on the approved ARR and revenue. Any additional capex required shall be met only through re-appropriation of approved amounts for the prioritized category within the overall capex.

Thus. with the above observations, the Commission after reducing the capex indicated for 'Replacement of faulty Distribution Transformers from Rs.45 Crores to Rs.5 Crores, decides to consider the capex of Rs.763.5 Crores as proposed by MESCOM for FY19. However, the Commission by considering the actual capex incurred during the previous year's, decides to consider Rs.500 Crores as capex for the purpose of computation of interest on loans for determination of Tariff for FY19.

5.2.2 Sales Forecast for FY19:

MESCOM Submission:

The MESCOM in its filing has stated that they had made the sales estimates based on mixed CAGR during the MYT filing and also considering the actuals of the immediately preceding year. The MESCOM has adopted the following growth rates for estimation of number of installations and sales:

1. **Number of installations:**

   a. For all LT categories except for BJ/KJ, LT-5 and LT-7, CAGR for the period FY13 to the FY17 is considered. For LT5, the FY17 growth rate over the FY16 is considered and for LT-7, the number is retained at the FY17 level, as there is negative growth in the FY17.

   b. For all HT categories, CAGR for the period the FY13 to the FY17 is considered. Where the growth rate is negative or data is inconsistent, the number of installations are retained at the FY17 level.

2. **Energy Sales:**

   MESCOM has furnished the basis of forecast for FY19 as follows:

   a. For all LT categories either CAGR for the period the FY15 to the FY17 or the CAGR for the period the FY13 to the FY17 is considered, except for LT-3 [the FY17 growth over the FY16 is considered]. Where the growth rate is negative or data is inconsistent, the sales are retained at the FY17 level.

b. For all HT categories either CAGR for the period the FY15 to the FY17 or the growth rate of the FY17 over the FY16 is considered. Where the growth rate is negative or data is inconsistent, the sales is retained at the FY17 level.

The observations of the Commission on sales forecast for FY19 and the replies of MESCOM are discussed below:

i) LT (1) – BJ/KJ category:

The MESCOM had not indicated the data pertaining to installations consuming more than 40 Units/month under this category. Therefore, the MESCOM was directed to furnish the above details, if any.

MESCOM in its replies has furnished the details of number of installations consuming more than 40 units/month and the corresponding consumption as on 30.11.2017 as indicated below:

No. of Installations	Consumption-MU
15854	9.35

The Commission has considered the above data appropriately, while arriving at FY-19 sales for BJ/KJ installations.

ii) Regarding the estimation of number of installations, the Commission had noted that

a. the growth rate considered for LT-SL & LT-5 is lower when compared to CAGR and had suggested the MESCOM to consider revising the same.

MESCOM in its replies has stated that it has considered 5-year CAGR for Street Light Installations and for LT-5, the CAGRs appeared to be abnormal in comparison to FY17 growth and therefore FY-17 figures are retained.

The Commission has noted the replies furnished and the Commission's approach is discussed in the subsequent paragraphs.

b. The MESCOM had not proposed any growth in the number of installations for HT-2c category, stating that the FY-17 consumption growth rate is negative & for HT-3 category, due to inconsistent growth rate, even though the CAGR is positive. the MESCOM may consider revising the same.

MESCOM has requested to retain the estimates as proposed by them, stating that the growth rates for HT-2c and HT-3 categories are inconsistent.

The Commission has noted the replies furnished and the Commission's approach is discussed in the subsequent paragraphs.

iii) Regarding the growth rate on energy sales, the Commission had noted that:

a. The growth rate considered for LT-3, LT-6 WS & SL, HT-2c and HT-4 appears to be lower considering the CAGR and the growth rate considered for LT-2b appears to be higher, considering the past trends.

MESCOM in its replies has stated that, in case of LT-3 CAGRs is not matching with FY17 growth and therefore, 2-year CAGR is considered and for LT-6 WS & SL, CAGR for FY13 to FY17 appears to be appropriate and the same is considered. MESCOM has not furnished any explanation for LT-2b growth rate.

Further, MESCOM has stated that for HT-2c, FY17 growth rate was negative and therefore, energy sales of FY17 is retained and for HT-4, CAGR for FY13 to FY17 appears to be appropriate and the same is considered.

b. Since the growth rate for the number of installations for HT-2a has been considered positive, the sales to this category should also have been increased duly considering the new additions to the installations. the MESCOM was directed to explain the reasons for not considering the same. Further, for HT2(a) category, the sales estimate based on the analysis of open access impact should be considered. The MESCOM should have computed the growth rates considering the total energy sold to this category including OA/wheeling and should have estimated the sales considering the ratio of energy sold by the MESCOM in the FY17 to the total sales of the FY17 including OA/wheeling sales. The MESCOM was therefore directed to compute HT-2a sales on the above method and furnish the data.

MESCOM in its replies has stated that they are unable to estimate OA/wheeling sales for future year and therefore, has retained the HT-2a sales at FY-17 level.

The Commission has taken note of the replies furnished on the energy sales estimates and the Commission's approach is discussed in the subsequent paragraphs.

To validate the sales, MESCOM was directed to furnish, category-wise information in the specified format regarding the number of installations and sales. MESCOM has furnished the data and the Commission has considered the same appropriately for estimating sales.

3. Sales to MSEZ:

The MESCOM has retained sales to MSEZ for the FY19 at 18.31 MU, whereas MSEZ in their filing have indicated the same as 53.00 MU. Therefore, MESCOM was directed to reconcile the above data.

MESCOM has stated that MSEZ in the past has not achieved even 25% of sales approved and therefore, it has retained sales of FY17 for FY-19 also.

The Commission has noted the replies and has dealt with the same appropriately in the MSEZ Tariff Order.

4. Sales to KPCL:

The MESCOM has indicated total sales to KPCL & wheeling as 87.10 MU for the FY18 & the FY19. Therefore, MESCOM was directed to furnish the breakup between ‘KPCL’ and ‘wheeling’ for both the years.

MESCOM has furnished the break up and has indicated sales to KPCL as 5.89 MU for both FY18 & FY19.

Commission’s approach for estimating the number of installations and sales for FY19:

The methodology adopted by the Commission to estimate the number of installations and sales to categories other than BJ/KJ and IP sets is discussed below:

i) No. of Installations:

While estimating the number of installations (Excluding BJ/KJ and IP), the following approach is adopted:

a. The base year number of installations for FY18 is modified duly validating the revised estimate furnished by MESCOM in the current filing and the data available as on 30.11.2017. The Commission has validated both the number of installations and sales to various categories considering the actuals as on as on 30.11.2017 and has estimated the number of installations and sales for the remaining period reasonably, keeping in view the number of installations and sales as on 31.03.2017 also. Accordingly, the base year estimation has been revised which has an impact on the estimates on number of installations and sales for the year FY19.

b. Wherever the number of installations estimated by MESCOM for the FY19 is within the range of the estimates based on the CAGR for the period FY12 – FY17 and for the period FY14 - FY17, the estimates of MESCOM are retained.

c. Wherever the number of installations estimated by MESCOM for the FY19 is lower than the estimates based on the CAGRs for the period FY12 – FY17 and for the period FY14 - FY17, the estimate based on the lower of the CAGRs are considered.

d. Wherever the number of installations estimated by MESCOM for FY19 is higher than the estimates based on the CAGRs for the period FY12 – FY17 and for the period FY14 - FY17, the estimate based on the higher of the CAGRs are considered.

e. For LT 4(b) and HT-1, the number of installations as on 30.11.2017 is retained for FY-18 as furnished by MESCOM, as the year end installations estimated by MESCOM for FY-18 is lower than the number of installations as on 30.11.2017. For FY-19 the estimate is based on CAGR methodology explained above.

f. For LT-7, and HT-5 categories, the estimates of MESCOM are retained, as the growth rate for these categories is not consistent.

g. For HT-2c category, CAGR for the period FY14 to FY17 is considered.

h. For HT-4, number of installations as proposed by MESCOM is retained.

Based on the above approach, the total number of installations (Excluding BJ/KJ consuming upto 40 units/month and IP sets) estimated by the Commission for FY19 is 18,68,254 as against 18,76,154 proposed by MESCOM.

ii) Energy Sales:

For categories other than BJ/KJ installations and IP sets, generally the sales are estimated considering the following approach:

a. The base year sales for FY18 as estimated by MESCOM are validated duly considering the actual sales up to November, 2017 and modified suitably as stated earlier.

b. Wherever the sales estimated by MESCOM for the FY19 is within the range of the estimates based on the CAGR for the period FY12 – FY17 and for the period FY14 - FY17, the estimates of MESCOM are retained.

c. Wherever the sales estimated by MESCOM for the FY19 is lower than the estimates based on the CAGRs for the period FY12 – FY17 and for the period FY14 - FY17, the estimate based on the lower of the CAGRs are considered.

d. Wherever sales estimated by MESCOM for the FY19 is higher than the estimates based on the CAGRs for the period from FY12 to FY17 and for the period from FY14 to FY17, the estimate based on the higher of the CAGRs are considered.

e. For LT4(b) the sales are worked out considering the specific consumption of FY17.

f. For LT-5, MESCOM's estimate is retained, as the same is considered as reasonable.

g. For HT2(a) category the sales are estimated considering the average of CAGR method and that based on the analysis of open access impact. is considered. It is noted that based on methodology specified at paras b, c and d above, the sales growth would be lower, in spite of positive growth in the number of installations and based on OA analysis it would be higher. As such, the sales estimate based on the average of above methods is adopted.

h. For HT2(c) category, sales estimate based on the OA transaction impact analysis, is adopted as it is reasonable.

i. For HT-3, sales are estimated based on specific consumption of FY17.

j. For LT-7 and HT-5 categories, the estimates of MESCOM are retained, as the growth rate for these categories is not consistent.

Based on the above approach, the sales (excluding BJ/KJ installations consuming upto 40 units/month and IP sets) estimated by the Commission for FY 19 is 3314.91 MU, as against 3204.17 MU proposed by MESCOM.

iii) Sales to BJ/KJ:

The MESCOM has furnished that as on 30.11.2017, there are 15854 installations consuming 9.35 MU under BJ/KJ installations who consume more than 40 units/month. Thus considering the total BJ/KJ installations as proposed by MESCOM, the break-up of sales to BJ/KJ installations as on 30.11.2017 would be:

TABLE-5.4
Specific consumption of BJ/KJ installations

Particulars	No. of Installations	Consumption in MU	Specific consumption per installation per month (kWh)
Installations consuming less than or equal to 40 units	176782	22.07	15.61
Installations consuming more than 40 units and billed under LT2(a)	15854	9.35	73.72
Total	**192636**	**31.42**	

The specific consumption as above is considered for estimating BJ/KJ sales for FY19.

Considering the breakup of BJ/KJ installations as on 30.11.2017, the number of installations consuming less than or equal to 40units/month and those consuming more than 40 units/month is worked out for FY19. Thus the estimated number of installation and sales under this category for FY19 is as indicated below:

TABLE-5.5
BJ/KJ SALES ESTIMATE

Million units

Particulars	FY19 installations	FY-19 sales-MU
Installations consuming less than or equal to 40 units	177457	33.23
Installations consuming more than 40 units and billed under LT2(a)	15915	14.08

b. Sales to BJ/KJ and IP sets:

5. Sales to IP-sets- sales projections for FY19:

In its Tariff Order dated 30th March, 2016, the Commission had approved a specific consumption of IP-sets as 4,280 units/installation/annum for FY17. The MESCOM has reported the overall sales of 1,628.06 MU which translates into a specific consumption of 5,720 units / installation / annum. It is observed that the specific consumption worked out based on the sales reported for the FY17 is more than the approved specific consumption by 1,440 units /installation/annum. The approved sales quantum for the FY17 was 1,217.69 MU. This indicates a huge increase in sales to an extent of 410.37 MU to that of approved quantum for the FY17.

The Commission notes that the specific consumption projected by the MESCOM for FY19 is 5720 units/installation/annum, as it has retained the specific consumption achieved by it for FY17. However, it is noted that the specific consumption of 5,720 units/installation/annum achieved by the MESCOM on the basis of IP-sales reported by it for the FY17 is on higher side compared to the specific consumption achieved in previous years. This may be due to supplying of more hours of power supply than the hours of supply scheduled. Obviously the specific consumption achieved for FY17 is an aberration and hence not normal which cannot be considered for projection of sales for FY19. Therefore, the Commission decides to continue the specific consumption at 4,447 units / installation / annum, as reported by the MESCOM during the FY16, for estimation of IP-set consumption for the FY19 also.

Further, the Commission notes that the MESCOM has projected the number of IP-set installations as 3,04,087and 3,17,045 for FY18 and FY19 respectively in its Tariff filing taking into account the growth and number of installations to be serviced under regularization. It is therefore reasonable to accept the number of installations projected by the MESCOM for FY19. Accordingly, the Commission has considered the number of IP-sets as furnished by the MESCOM for the FY19 without any modifications.

Hence, based on the estimated number of installations for FY18 and FY19, the mid-year number of installations is calculated and the sales to IP-set category of consumers for FY19 are indicated as below:

TABLE-5.6

Projection of IP sales for FY19

Particulars	As filed by the MESCOM		As approved by the Commission
	FY18	FY19	FY19
No of installations	3,04,087	3,17,045	3,17,045
Mid-Year no. of installations		3,10,566	3,10,566
Specific consumption in units/installation/annum		4,447	4,447
Sales in MU		**1,776.44**	**1,381.08**

Accordingly, the Commission approves 3,17,045 as the number of IP-set installations and energy sale of 1,381.08 MU for the FY19.

This approved IP-set consumption of 1381.08 MU is with the assumption that the Government of Karnataka would release the amount of subsidy to fully cover the approved quantum of IP-sales. However, if there is any reduction in the subsidy allocation by the GoK, the quantum of supply/sales to IP-sets of 10 HP and below shall be proportionately regulated.

Further, it is noted here that the MESCOM was directed to take up GPS survey of IP-sets in order to identify the defunct/dried up installations in the field and to take necessary action to arrive at correct number of IP-sets by deducting such IP-sets from its account on the basis of GPS survey report. The MESCOM has reported that this work is in fast progress and likely to take some more time to complete this exercise in its jurisdiction. In this regard, the MESCOM is directed to complete the GPS survey of IP-sets at the earliest and compliance thereon shall be submitted to the Commission, immediately thereafter. In view of the GPS survey of IP-sets not completed by the MESCOM, the number of installations and sales estimated for FY18 as well as for FY19 are subject to change, based on the GPS survey. Accordingly, on completion of the GPS survey, the MESCOM shall arrive at correct number of IP-sets in the field duly deducting from its account the number of defunct/dried up wells based on the

GPS survey results. Therefore, on account of this, any variation in sales due to change in the number of installations in the FY19 would be trued up during the Annual Performance Review, for FY19.

Further, wherever the segregation of 11 kV feeders is not taken up, the MESCOM shall consider the actual meter readings of individual IP-set installations duly ascertaining the correct number of such meters working in the field and report the consumption of IP-sets on the basis of energy meter reading data from IP-set installations every month, to the Commission, as this would be an accurate measure of IP-set consumption compared to assessing the consumption based on the meter readings of sample DTCs feeding predominant IP-set loads.

However, the MESCOM shall compute the IP set consumption on the basis of meter reading data of exclusive agricultural feeders wherever the segregation of 11 kV feeders under NJY/DDUGJY is taken up, as per the following format:

Month	Name of Sub-division	No. of Segregated Agricultural Feeders in the subdivision	Monthly Consumption in MU as recorded in all the agricultural feeders at the substations pertaining to the sub-division	Distribution loss(11kV line, DTCs,& LT line) Plus sales to other consumers if any, in MU (losses in all the agricultural feeders only to be considered)	Net consumption duly deducting the Distribution loss (11kV line, DTCs &LT line) & any other loads if any	No. of IP sets (total-dried up) connected to the agricultural feeders in the subdivision			Average consumption of IP sets/ month (specific cons in units	Total no of IP sets(total-dried up) in the subdivision (as per DCB)			Total sales of IP sets in MU
						Beginning of the Month	Serviced during Month	Mid-Month		Beginning of the Month	Serviced during Month	Mid-Month	
1	2	3	4	5	6=(4-5)	7 a	7 b	7c = (7a+7b) /2	8=6/7c	9 a	9 b	9c = (9a+9 b)/2	10= 8*9c
April to March	Subdivision-1 Subdivision-2 Subdivision….												

Note:

(1) **If the agricultural feeders are not yet segregated under NJY in any sub-division, then the specific consumption of the division / circle / zone / company (where NJY is taken up) shall be considered to compute the IP consumption of such sub-division.**

(2) **No. of dried up IP-set installations shall be deducted from the accounts, while arriving at the month-wise and subdivision-wise specific consumption and total sales.**

Based on the above discussions, the category wise approved number of installations and sales for the year FY 19 vis-à-vis the estimates made by MESCOM is indicated below:

TABLE-5.7

Approved Sales for FY19

Category	FY19		FY-19 Approved	
	Installations	Sales	Installations	Sales
	No.	MU	No.	MU
BJ/KJ-more than 40 units	15915	0.00	15915	14.08
LT-2a	1551766	1400.07	1544434	1406.98
LT-2b	3595	16.67	3540	14.80
LT-3	214988	368.86	213525	375.73
LT-4 (b)	289	1.21	367	1.81
LT-4 (c)	4336	9.69	4416	9.69
LT-5	30826	143.13	31403	143.13
LT-6-WS	15525	134.05	15512	131.39
LT-6-PL	22679	76.23	22808	73.72
LT-7	14153	19.40	14153	19.40
HT-1	111	89.59	111	90.54
HT-2 (a)	905	548.29	905	616.09
HT-2 (b)	698	198.66	698	198.66
HT2C	264	154.85	358	172.35
HT-3(a)& (b)	26	16.03	32	19.93
HT-4	62	21.94	62	21.11
HT-5	16	5.50	16	5.50
Sub-Total other than BJ/KJ	**1876154**	**3204.17**	**1868254**	**3314.91**
BJ/KJ-up to 40	177457	41.62	177457	33.23
IP	317045	1776.44	317045	1381.08
Sub Total BJ/KJ and IP sets	**494502**	**1818.06**	**494502**	**1414.31**
Total	**2370656**	**5022.23**	**2362756**	**4729.22**

In addition to the above, sales to KPCL at 5.89 MU and to MSEZ at interface point of 45.32 MU is also approved for FY19.

5.2.3 Distribution Losses for FY19:

MESCOM's Submission:

The MESCOM has reported the actual distribution loss of 11.40 per cent, as against the approved loss level of 11.35 per cent as per the audited accounts for FY17. The Commission in its Tariff Order dated 30th March, 2016 had fixed the target losses of 10.95% for FY19. The MESCOM in its Tariff application has stated that it has taken up various improvement works to strengthen the distribution system and indicated the revised distribution losses of 11.15% for FY19.

Commission's Analysis and Decisions:

The performance of MESCOM in achieving the distribution loss targets approved by the Commission in the previous six years is as follows:

TABLE – 5.8

Approved & Actual Distribution Losses-FY12 to FY17

Figures in % Losses

Particulars	FY12	FY13	FY14	FY15	FY16	FY17
Approved distribution losses	12.10	12.00	11.75	11.50	11.25	11.15
Actual distribution losses	12.09	11.88	11.93	11.56	11.50	11.40

The Commission notes that the MESCOM has been consistently incurring substantial capital expenditure for strengthening of its distribution network aimed at reducing the loss levels further downwards. Therefore, it is clear that the investments made for improving the existing distribution system would not only enable the MESCOM to reduce the distribution losses but also increase the reliability and quality of power supply to the consumers. However, despite such investments, the loss levels achieved by the MESCOM are not significantly reduced and has not achieved the targets set by the Commission in the respective previous years as seen from the above table. Even the distribution losses reported for FY17 are marginally lower than the losses reported for FY16. Further any investments made to improve the distribution network should translate into reduction of the distribution losses justifying the capex.

Hence, based on the achievement made by the MESCOM in reduction of losses in the previous years and looking at the current loss levels, besides considering the capex incurred so far and the proposed capex for FY19, the Commission decides to fix the following distribution loss targets with the direction to achieve the set target for FY19:

TABLE-5.9
Approved Distribution Losses for FY19

Figures in % Losses

Particulars	FY19
Upper limit	11.20
Average	**10.95**
Lower limit	10.70

5.2.4 Power Purchase for FY19

a. MESCOM's Proposal:

In its application for revision of ARR for FY19, the MESCOM has proposed power purchases of 5966.22MU a cost of Rs.2661.37 Crores (including Transmission and System Operation charges). The MESCOM has made the following source-wise projections to meet the power purchase requirement for FY19:

Table: 5.10

Energy Projection & Power Purchase Cost of MESCOM -FY19				
	Source	Energy in MUs	Cost in Rs. Crs.	Cost per Unit in Rs.
1	KPCL Hydel Energy			
2	KPCL Thermal Energy	1612.17	676.82	4.19
3	CGS Energy	1670.72	651.02	3.90
4	IPP	598.39	277.17	4.63
5	RE	954.61	380.70	3.98
6	Other State Hydel	10.61	4.03	3.79
7	Total Medium Term &Short Term	157.08	69.88	4.44
8	Allocation to Other ESCOMs	357.89	141.20	3.94
9	KPTCL Transmission Charges		251.83	
10	SLDC Charges		2.02	
11	PGCIL Charges		141.94	
12	POSOCO charges		0.18	
13	**Grand Total**	**5966.22**	**2661.43**	**4.46**

The above estimates are based on the following assumptions made by MESCOM:

1. MESCOM has proposed to purchase power from different sources viz., KPCL Hydel, KPCL Thermal, Central Generating Stations, IPPs, NCE projects and others through short term purchases to meet the deficit.
2. The Energy availability of Hydel and Thermal stations of State Owned Power plants are considered as per the projections made by KPCL.
3. The energy projected by KPCL in respect of hydro stations is based on inflows anticipated as per moving average of the past ten years reduced by 1% towards auxiliary consumption in terms of the PPA. Energy availability in respect of Thermal Stations is as per the targeted availability defined in the PPA/ Regulations, wherever applicable and reduced by the applicable auxiliary consumption of each station
4. Though the KPCL has projected the Energy from Yermarus Thermal Station Units I & II, BTPS Unit III and Yelahanka Combined Cycle thermal station, MESCOM has not considered the energy from these stations since these plants were commissioned after 2016 and there was minimal energy generation from these stations.
5. The rates considered by the KPCL are based on the Commission's Order dated 03.08.2009 for hydel stations except for Shivasamudram, Shimsha, Munirabad & MGHE
6. In respect of thermal stations viz RTPS units 1 to 7 and BTPS unit-1, the rates worked out by the KPCL are based on various parameters defined in the tariff orders.
7. In respect of Central Generating stations of NTPC, Neyveli Lignite Corporation (NLC), Nuclear power stations and other Joint Venture Projects, the ESCOMs have a share. The allocation of capacity entitlement from these stations includes both firm and unallocated share. The unallocated share would vary depending upon the allocation made by the Ministry of Power, GoI.
8. The actual generation of NCE projects for the year 2016-17 has been considered for 2018-19, including the Solar, Co-generation, Bio-mass, Wind Mills and Mini Hydel projects.

b. Commission's analysis and decisions;

Energy Availability:

The energy requirement of the ESCOMs is being met from the following sources:

i. Karnataka Power Corporation Limited (KPCL),

ii. Central Generating Stations (CGS);

iii. Major Independent Power producers (Major IPPs);

iv. Renewable Energy sources (Minor IPPs- NCE Sources);

v. Medium and short-term purchase on need basis through competitive bidding.

The available quantum of energy from these sources has been projected by the PCKL based on the data furnished by KPCL, SRPC and SLDC. The month wise availability of electricity in terms of Mega Watts and Million Units for FY19 has also been furnished by the PCKL.

While the availability in respect of all the existing KPCL thermal units has been considered as per the projections, the energy availability from unit 3 of the BTPS thermal station and from 2x800 MW units of Yeramaras has been considered partly, since these units are yet to stabilize.

The Energy availability from 1x800 MW of Kudgi plant of NTPC is considered at a lower quantum due to high variable cost as compared with all the other thermal generation plants.

Power Purchase Rates:

The rates for the long term sources and the renewable sources are considered at the rates considered by the ESCOMs as per the PPAs executed with the individual generators. The power procurement from the short term sources, at the rates as discovered by PCKL through competitive bidding has been considered. For the medium term power procurement from Co- generation plants, the tariff as determined by the Commission for the period from FY17 to 21 has been considered.

While approving the cost of power purchase, the Commission has determined the quantum of power from various sources in accordance with the principles of merit order schedule and dispatch based on the ranking of all approved sources of supply according to the merit order of the variable cost.

The fixed charges and the variable charges for the Central Generating Stations, UPCL, Stations and the DVC Stations have been considered based on the Tariff determined by the CERC as per the CERC norms.

In respect of new stations, only variable charge has been considered. The variable costs of State thermal stations and UPCL, are considered based on the recent power purchase bills passed by the BESCOM.

The Commission is yet to approve the tariff and the Power Purchase agreements in respect of the new KPCL thermal stations/ units and hence the rates now allowed are only provisional and subject to determination of tariff and approval the PPAs.

Based on the energy sales and the approved transmission and distribution losses in the system, **the approved consolidated power purchase requirement of the State is enclosed in Annexure-1.**

Considering the ESCOMs' approved energy sales, the available energy from individual sources is assigned to each of the ESCOMs, as per the allocation made by the Government of Karnataka. Any variations in actual quantum of energy and its cost against the quantum allocated as per the Government Order will be reviewed at the time of Annual Performance Review for FY19.

Based on the allocation of available power from KPCL Hydro and Thermal stations, Central Generating Stations, Major IPPs, Minor IPPs, and Medium term sources for FY19, the approved Power Purchase quantum and cost of MESCOM for FY19 is as follows:

Table-5.11

MESCOM's Approved Power Purchase for FY19

Source of power	Allowed Energy in MUs	Cost of Energy Rs Cr	Cost per unit in Rs.
KPCL THERMAL	306.17	133.07	4.35
CGS Energy	1576.89	586.16	3.72
IPPs	322.18	153.36	4.76
KPCL Hydel Stations	2139.07	173.99	0.81
Other Hydro	24.65	9.29	3.77
RE Sources	747.11	299.58	4.00
NTPC Bundled power	215.85	71.64	3.32
Power purchase from Co-gen - Medium Term	77.84	37.55	4.82
Short term power purchase	123.53	50.40	4.08
PGCIL CHARGES		125.34	
KPTCL CHARGES		224.37	
SLDC		2.09	
POSOCO CHARGES		0.18	
TOTAL INCLUDING TRANSMISSION & LDC CHARGES	**5533.28**	**1867.02**	**3.374**

Thus the Commission approves 5533.28MU at cost of Rs1867.02 Crores towards purchase of MESCOM for FY19.

The breakup of source-wise availability and the cost thereon, is shown in Annexure-2 respectively of this Order.

5.2.5 RPO target for FY19:

The Commission has approved power purchase quantum of 3175.68 MU for FY19, net of hydro energy. The Non-solar RPO target at 13% would be 412.84 MU. The Commission has approved purchase of 589.84 MU from non-solar RE sources. Thus, MESCOM would be able to meet its non-solar RPO in FY19.

The Commission has approved power purchase quantum of 3175.68 MU for FY19. The Solar RPO target at 6.00% would be 190.54 MU. The Commission has approved purchase of 235.11 MU of Solar energy. Thus, MESCOM would be able to meet its solar RPO in FY19.

5.2.6 O & M Expenses for FY19:

MESCOM's Proposal:

The MESCOM, in its application, has proposed revised O&M expenses of Rs.509.83 Crores as against the Commission's approved amount of Rs.477.89 Crores vide its Tariff Order dated 30.03.2016, while projecting the O&M expenses for FY19. The MESCOM has considered base year and i.e., FY16 corrected the O&M expenses of Rs.350.70 Crores and uncontrollable contribution to P&G trust expenses o Rs.46.40 Crores for computation proposal of O&M expenses of Rs.509.83 Crores by considering inflation index of 8.1059% and consumer growth index of 3.15% and efficiency factor of 1% as being considered by the Commission in its Tariff Order dated 30th March, 2016.

Accordingly, MESCOM has claimed the O&M expenses of Rs.509.93 Crores which includes normative plus additional employee cost towards new recruitment of Rs.31.04 Crores on account of recruitment of 441 employees during FY18.

Based on the above, the MESCOM has sought the O & M expenses for FY19 as detailed below:

TABLE – 5.12
Revised O&M Expenses for FY19- MESCOM's Submission

Rs. Crores

Sl. No.	Particulars	Amount
1	Employee cost including P&G contribution	372.28
2	Other Expenses (Administrative and General expenses)	92.30
3	Repairs and Maintenance expenses	45.25
	Total O & M Expenses	**509.83**

Commission's analysis &decision:

The Commission in its MYT Order dated 30th March, 2016 while deciding the ARR for each year of the control period FY17-19, had approved O&M expenses of Rs.477.89 Crores for FY19 based on the actual O&M expenses including the contribution to P&G trust as per the available audited accounts for FY15 to arrive at the expenses for the base year FY16 as follows:

TABLE-5.13

Approved O&M Expenses for FY19 as per Order dated 30th March, 2016

Particulars	FY16	FY17	FY18	FY19
No. of Installations		2246171	2342309	2442772
CGI based on 3 Year CAGR		4.04%	4.13%	4.28%
Weighted Inflation Index		7.24%	7.24%	7.24%
Base Year O&M expenses (as per actuals of FY15)-Rs. Crs.	355.27			
Total O&M Expenses-Rs. Crs		**391.78**	**432.40**	**477.89**

As per the norms specified under the MYT Regulations, the O & M expenses are controllable expenses and the distribution licensee is required to incur these expenses within the approved limits.

The Commission notes that, the MESCOM, in its application while computing the O&M expenses, has considered the consumer growth rate (CGI) based on 3 year CAGR and inflation index based on the methodology followed by CERC with CPI and WPI in a ratio of 80:20, which is in line with the methodology followed by the Commission, in its Tariff Orders issued earlier.

The Commission, as per the provision of MYT Regulations, has computed the normative O & M expenses of Rs.460.29 Crores for FY19, duly considering the base year actual O & M expenses of Rs.350.71 Crores, inclusive of contribution to P&G Trust of Rs.46.24Crores of FY16, as per the audited accounts and the allowable O&M expenses of Rs.378.31 Crore and Rs.417.44 Crores respectively for FY17 and FY18 respectively.

The Commission, in accordance with the methodology adopted in approving the ARRs and subsequent APRs, proceeds with the determination of O&M expenses based on 12-year data of WPI and CPI and three years CAGR of consumer growth to compute the allowable O&M expenses for FY19.

Considering the Wholesale Price Index (WPI) as per the data available from the Ministry of Commerce & Industry, Government of India and Consumer Price Index (CPI,) as per the data available from the Labour Bureau, the Government of India and adopting the methodology followed by CERC with

CPI and WPI in a ratio of 80: 20, the allowable annual escalation rate for FY19 is 8.1059%.

Further, the MESCOM in its letter dated 27th March 2018 has submitted that the pay scale of the employees/officers of KPTCL/ESCOMs has been revised with effect from 1st April, 2017. Hence, the liability an account of the payment of pay revision arrears of Rs.83.67 Crores for FY 18 and the additional employee expenditure on pay revision of Rs.97.98 Crores for FY 19 may be included as additional employee cost in computation of O & M expenditure for FY 19. The Commission notes that the additional employee cost projected by the MESCOM for FY 18 and FY 19 an account of revision of pay scales is on ad-hoc basis without taking in to account the retirement of employee/officers during FY 18 and FY 19. Thus the Commission decides that the additional employee cost due to revision of pay scale during FY19 could be factored and considered only at the time of approving APR for FY19, when the actual impact of revision of pay scales is reported in detail by MESCOM as per its audited accounts.

For the purpose of determining the normative O & M expenses for FY19, the Commission has considered the following:

a) The actual O & M expenses incurred as per the audited accounts, inclusive of contribution to the Pension and Gratuity Trust to determine the O & M expenses for the base year FY16.
b) The three year compounded annual growth rate (CAGR) of the number of installations considering the actual number of installations as per the audited accounts and as projected by the Commission for FY18 and FY19 at 3.15%.
c) The weighted inflation index (WII) at 8.1059%.
d) Efficiency factor at 1% as considered in the MYT Order.

The above parameters are arrived at, duly adopting the same methodology as is being followed in the earlier Tariff Orders of the Commission and the relevant Orders issued by the Commission on the Review Petitions filed by the ESCOMs.

Accordingly, the normative O & M expenses for FY19 works out as follows:

TABLE – 5.14

Approved O & M expenses for FY19

Particulars	FY16	FY17	FY18	FY19
No. of Installations	2152546	2220040	2282390	2362756
CGI based on 3 Year CAGR	3.79%	3.63%	3.23%	3.15%
Weighted Inflation index	7.71%	8.1059%	8.1059%	8.1059%
Base Year O&M expenses (as per actuals of FY16)-Rs. Crores.	350.706			
Total allowable O&M Expenses- in Rs. Crores		**378.31**	**417.44**	**460.29**

Since, the base year data includes the O & M expenses inclusive of contribution to the P & G Trust, the Commission has not considered allowing contribution to the P & G Trust separately. The MESCOM in its application has claimed an amount of Rs.31.04 Crores towards additional employees cost of new recruitment of 441 employees during FY18. Since, the additional employees recruited during FY18 was not included in the base year O&M expenses, the Commission decides to allow the same as an additional O&M expenses for FY19 subject to furnishing the actual expenses details while carrying the APR for FY19.

Thus, the Commission decides to approve O&M expenses of Rs.491.33 Crores for FY19.

5.2.7 Depreciation:

MESCOM's Proposal:

The MESCOM, in its application has claimed the revised depreciation of Rs.106.86 Crores as against the Commission approved amount of Rs.95.29 Crores in Tariff Order dated 30.3.2016 for FY19, after deducting deprecation on assets created out of grants and consumer contribution as detailed below:

TABLE – 5.15

Depreciation-FY19 – MESCOM's submission

Rs. Crores

Particulars	Amount
Buildings	4.45
Civil	0.17
Other Civil	0.03
Plant & Machinery	22.25
Line, Cable Network	78.72
Vehicles	0.20
Furniture	0.75
Office Equipment	0.29
Total	**106.86**

Commission's analysis and decision:

The Commission, in accordance with the provisions of the MYT Regulations and amendments issued thereon, has determined the depreciation for FY19 considering the following:

a) The actual weighted average rate of depreciation of category--wise assets has been computed considering the depreciation and gross block of opening and closing balance of fixed assets, as per the audited accounts for FY17.

b) The rate of depreciation so arrived at, has been considered to allow the depreciation on the gross block of opening and closing balance of fixed assets projected and considered for FY19.

c) The depreciation on the assets created out of consumer contribution / grants has been deducted, based on the opening and closing balance of such assets, duly considering the addition of assets as proposed by the MESCOM, Accordingly, the depreciation for FY19 is arrived at as follows:

TABLE – 5.16

Approved Depreciation for FY19

Rs. Crores

Particulars	Amount
Buildings	2.51
Civil	0.16
Other Civil	0.03
Plant & M/c	29.53
Line, Cable Network	98.18
Vehicles	0.20
Furniture	0.58
Office Equipment	0.30
Lease hold assets	0.13
Sub Total	**131.23**
Depreciation on the released assets re-used	**0.62**
Total	**131.86**
Less: Assets created out of consumer contributions/grants	**34.83**
Net depreciation	**97.02**

Thus, the Commission decides to approve an amount of Rs.97.02 Crores towards depreciation for FY19.

5.2.8 Interest and Finance Charges:

a) Interest on Capital Loans:

MESCOM's proposal:

MESCOM in its application has stated that, based on the approved capex of Rs.289.90 Crores for FY19 as per Tariff Order dated 30th March,2016 and the proposed revised capex of Rs.803.50 Crores, considering the closing balances of capital loans as per the audited accounts for FY17 and new barrowings and repayments of capital loan for FY18 and FY19 has claimed an amount of Rs.80.19 Crores as gross interest on capital loan at the average interest rate of 11.00% for FY19.

The MESCOM has requested to approve interest on capital loan for FY19 as follows:

TABLE – 5.17
Interest on Capital Loan– MESCOM's Submission
Rs. Crores

Particulars	Amount
Opening Balance of Capital Loans	669.89
Add: New Loans	288.54
Less: Repayments	170.29
Total Loan at the end of the year	788.14
Average Loan for the year	729.02
Rate of Interest	11.00%
Total Interest on Capital Loans	**80.19**

Commission's analysis and decision:

The Commission in its Order dated 30th March, 2016 had approved capex of Rs.289.90 Crores for FY19. MESCOM in its present application has revised its capex to Rs.803.50 Crores stating that, it is taking up New Schemes like, Deen Dayal Upadyaya Grama Jyoti Yojana (DDUGJY), R - Accelerated Power Development and Reform Programme (IPDS: System improvement & Strengthening works in R-APDRP/statutory towns) and Energization of IP-sets Including providing Infrastructure to regularized UIP which amounts to an additional cost of Rs.471 Crores for FY19. The Commission notes that, the new schemes proposed by MESCOM will be fully financed by the Government through grants. The Commission for the purpose for tariff determination has reckoned the new barrowings and repayment of capital loans as proposed by MESCOM.

As per the audited accounts and as per the Annual Performance Review of FY17, the MESCOM had incurred interest on capital loan at a weighted average rate of interest of 11.09% p.a. This rate of interest is considered for the existing loan balances for which interest has to be factored during FY18. Further, for FY19, the weighted average rate of interest of the preceding year has been considered on the existing loan balances. The Commission has considered new loan, in compliance of the debt equity ratio of 70:30 as per MYT Regulations.

The Commission notes that, the present interest rates by commercial banks and financial institutions are charged mainly on the basis of Marginal Cost of fund based Lending Rates (MCLR). These rates are comparatively lower than the base rates considered earlier. Further, in view of the changing economic situation, it is observed that there is a considerable reduction in the MCLR and also downward trend is evident in the interest rates. Hence, in such a situation, the Commission is of the view that, the ESCOMs can avail Capital loans at competitive interest rates of 11.00% as proposed by MESCOM. The Commission notes that, the present SBI MCLR rate for capital loans with tenure of 3 years is 8.15%. Considering the present MCLR, the Commission decides to allow an interest rate of 11.00% for FY19 for new loans. It shall be noted that, the rate of interest now considered by the Commission on the new capital loans is subject to review during the APR for FY19.

Accordingly, the approved interest on loans for FY19 is as follows:

TABLE – 5.18

Approved Interest on Loans for FY19

Rs. Crores

Particulars	Amount
Opening Balance long term loans	**670.79**
Add new Loans	288.54
Less: Repayments	170.29
Total loan at the end of the year	789.04
Average Loan	**729.91**
Weighted average rate of interest in %	11.06%
Interest on long term loans	**80.75**

Thus, the Commission decides to approve interest of Rs.80.75 Crores on Capital loans for FY19.

b) Interest on Working Capital:

MESCOM's proposal:

An amount of Rs.65.55 Crores has claimed by MESCOM towards interest on working capital, based on the norms prescribed in the MYT Regulations at a rate of interest of 11.00% p.a. The interest on working capital computed by MESCOM are as follows:

TABLE – 5.19
Interest on Working Capital-
MESCOM's Submission

Rs. Crores

Particulars	Amount
1/12th Operation and Maintenance	42.23
Opening GFA	2081.60
1% of Gross fixed assets at the beginning of the year	20.82
1/6th of Revenue	532.87
Estimated Working Capital	595.92
Rate of Interest	11.00%
Interest on working capital	**65.55**

Commission's analysis and decision:

The Commission in its MYT Order dated 30th March, 2016, while deciding the ARR for each year of the control period FY17-19, had approved Interest on working capital at Rs.63.11 Crores at a rate of 11.75% for FY19.

The Commission has been computing the interest on working capital as per the norms specified under the MYT Regulations and amendments thereon, which consists of one month's O & M expenses, 1% of opening GFA and two months' revenue. As discussed earlier, the current interest regime is based on MCLR. The present MCLR for loans with tenure of one year is 8.15%. Therefore, the Commission decides to consider interest on working capital at 11% p.a. for FY19.

Accordingly, the approved interest on working capital for FY19 is as follows:

TABLE – 5.20

Approved Interest on Working Capital for FY19

Rs. Crores

Particulars	Amount
One-twelfth of the amount of O&M Expenses	40.94
Opening Gross Fixed Assets (GFA)	2644.95
Stores, materials and supplies 1% of Opening balance of GFA	26.45
One-sixth of the Revenue	517.28
Total Working Capital	584.67
Rate of Interest (% p.a.)	11.00%
Interest on Working Capital	**64.31**

Thus, the Commission decides to approve interest of Rs.64.31 Crores on the working capital for FY19.

c) Interest on Consumer Security Deposit:

MESCOM's proposal:

MESCOM in its application has claimed Rs.44.30 Crores towards the interest on the average balance of consumer security deposit amount of Rs.571.57 Crores by considering the closing balance of the deposit as per the audited accounts for FY17 and the projected addition of deposit for FY18 and FY19 at Bank rate of 7.75 %. MESCOM has requested to consider average of the opening and closing balances of consumer deposits in the respective years, for computation of the interest on consumer security deposits. The interest on consumer deposit projected for FY19 is as follows:

TABLE – 5.21

**Interest on Consumer Security Deposits-
MESCOM's Submission**

Rs. Crores

Particulars	Amount
Opening Balance of Consumer Security Deposit	550.74
Add: Deposits collected during the year	41.65
Closing Balance of Consumer Security Deposit	592.39
Average Consumer Security Deposit	571.57
Rate of Interest	7.75%
Interest on consumer security deposit	**44.30**

Commission's analysis and decision:

The Commission notes that, the MESCOM has claimed interest on the average balance of consumer security deposit for FY19 at 7.75% as against the applicable rate of interest of 6.25%. In accordance with the KERC (Interest on Security Deposit) Regulations 2005, the interest rate on consumer security deposit to be allowed is the bank rate prevailing as on the 1st of April of the financial year for which interest is due. As per the Reserve Bank of India notification dated 2nd August, 2017, the applicable bank rate is 6.75%. The Commission has considered the same, for computation of interest on consumer security deposits for FY19.

The Commission has considered the consumer security deposits as per the audited accounts of FY17 for further projection for FY19. further, the Commission is considering the average of the opening and closing balances of consumer deposits of the relevant year. Accordingly, the interest on consumer deposits that could be approved for FY19 works out as follows:

TABLE – 5.22

Interest on Consumer Security Deposits for FY19

Rs. Crores

Particulars	Amount
Opening balance of consumer security deposits	549.09
Addition of deposits during FY18	40.00
Closing balance of consumer security deposits	589.09
Average Consumer Security Deposits for FY18	569.09
Bank rate to be allowed as per Regulations	6.25%
Approved Interest on average Consumer Security Deposit	**35.57**

Thus, the Commission decides to approve interest on consumers' security deposits at Rs.35.57 Crores for FY19.

d) Other Interest and Finance Charges:

MESCOM has claimed an amount of Rs.3.95 Crores towards other interest and finance charges for FY19. Keeping the expenditure under this item in the earlier years, the Commission decides to allow an amount of Rs.3.95 Crores towards interest and finance charges for FY19.

e) Interest and other expenses Capitalized:

MESCOM has claimed an amount of Rs.2.39 Crores towards capitalization of interest and other expenses during FY19. Considering the capital expenditure incurred and capitalized in the previous years, the Commission decides to allow capitalization of interest on capital loans and other expenses of Rs.2.39 Crores for FY19.

The abstract of approved interest and finance charges for FY19 are as follows:

TABLE – 5.23

Approved Interest and finance charges for FY19

Rs. Crores

Particulars	Amount
Interest on Loan Capital	80.75
Interest on Working Capital	64.31
Interest on Consumers Security Deposit	35.57
Other Interest & Finance Charges	3.95
Less Interest & other expenses capitalized	(2.39)
Total Interest & Finance Charges	**182.19**

5.2.9 Other Debits, Prior period charges and extraordinary item:

MESCOM, in its application has claimed an amount of Rs.3.95 Crores towards other debits, net prior period debit / credit of Rs.1.93 Crores for FY19.

Commission's analysis and decision:

The Commission notes that, MESCOM has claimed expenditure towards Other Debits, Prior period debit/credit. It is to be noted that, these items of expenditures/income cannot be estimated upfront and included in the proposed ARR for FY19. But, as per the provisions of the MYT Regulations, the Commission would consider the same based on the actuals as per the audited accounts while approving APR for FY19.

5.2.10 Return on Equity:

MESCOM's proposal:

MESCOM in its application has claimed RoE of Rs.117.50 Crores for FY19 based on the Share Capital, Share Deposits, Accumulated balance of surplus/deficit under Reserves and surplus account as detailed below:

TABLE-5.24
Return on Equity- MESCOM Submission

Rs. Crores

Particulars	Amount
Opening balance of share capital	358.07
Share deposit	14.00
Reserves and Surplus	250.22
Recapitalized Security Deposit	(-)26.00
Total Equity	596.29
Return on Equity @ 15.50% with MAT(19.71 %)	**117.50**

Commission's analysis and decision:

The Commission has considered the actual amount of share capital, share deposits and the accumulated balance of surplus /deficit under reserves & surplus as per the audited accounts for FY17, as the allowable base for arriving at the RoE for FY19.

The Commission, in accordance with the provisions of the MYT Regulations, has considered 15.5% of Return on Equity duly grossed up with the applicable Minimum Alternate Tax (MAT) of 21.342%. This works out to 19.706% per annum. Further, as per the decision of the Commission in the Review Petition No.6/2013 and Review Petition 5/2014, the Return on Equity shall be computed based on the opening balances of share capital, share deposits and the accumulated balance of surplus /deficit under reserves and surplus. Further, an amount of Rs.26.00 Crores of recapitalized consumer security deposit as net-worth is considered as per the orders of the Hon'ble Appellate Tribunal for Electricity in Appeal No.46/2014. The Commission has also considered an amount of Rs.91.71 Crores of equity released by the Government of Karnataka in various Orders during FY18, to arrive at the opening balance of equity for FY19.

Further, in compliance with the Orders of the Hon'ble ATE in Appeal No.46/2014, wherein it was directed to indicate the opening and closing balances of gross fixed assets along with break-up of equity and loan component in the Tariff Order henceforth, the details of GFA, debt and equity (net-worth) for FY18 are indicated as follows:

TABLE – 5.25

Status of Debt Equity Ratio for FY19

Rs. Crores

Year	Particulars	GFA	Debt	Equity (Net-worth)	Normative Debt @ 70% of GFA	Normative Equity @ 30% of GFA	%age of actual debt on GFA	%age of actual equity on GFA
FY19	Opening Balance	2644.95	670.79	617.45	1851.46	793.48	25.36%	23.34%
	Closing Balance	2948.41	789.04	713.15	2063.89	884.52	26.76%	24.19%

From the above table it is seen that the amounts of debt equity are within the normative debt equity ratio of 70:30 on the closing balances of GFA for FY19. Further, the Commission would review the same during the Annual Performance Review for FY19, based on the actual data, as per the audited accounts.

Accordingly, the allowable Return on Equity that could be approved for FY19, is works out as follows:

TABLE – 5.26

Return on Equity for FY19

Rs. Crores

Particulars	Amount
Opening Balance of Paid Up Share Capital	358.07
Share Deposit	105.13
Reserves and Surplus	180.25
Less Recapitalised Security Deposit	(26.00)
Total Equity	**617.45**
Return on Equity with MAT	**121.67**

Thus, the Commission decides to approve Return on Equity grossed up with MAT of Rs.121.67 Crores for FY19.

5.2.11 Other Income:

MESCOM's proposal:

MESCOM has claimed an amount of Rs.28.77 Crores as other income for the FY19.

Commission's analysis and decision:

The other income received by the MESCOM mainly includes rebate from collection of electricity duty, income from miscellaneous recoveries, interest on bank deposits, rent from staff quarters and sale of scrap, profit on sale of stores besides incentives for timely payment of power purchase bills. The actual 'other income' as per the audited accounts for FY17 is Rs.27.10 Crores.

The Commission notes that the other income earned by the MESCOM in the past three years includes income received from sale of power to MSEZ which needs to be factored as non-tariff income. As per the approved power purchase for MSEZ, the income available to MESCOM will be Rs.27.12 Crores.

Accordingly, the Commission decides to approve other income of Rs.67.87 Crores for FY19.

5.2.12 Fund towards Consumer Relations / Consumer Education:

The Commission has been allowing an amount of Rs.0.50 Crore per year towards consumer relations / consumer education. This amount is earmarked to conduct consumer awareness and grievance redressal meetings periodically and institutionalize a mechanism for addressing common problems of the consumers. The Commission has already issued guidelines for consumer education and grievance redressal activities.

The Commission decides to continue providing an amount of Rs.0.50 Crore for FY19, towards meeting the expenditure on consumer relations / consumer education.

Further, the Commission directs MESCOM to furnish a detailed plan of action for utilization of this amount within a month of this Order and also maintain a separate account of these funds and furnish the details at the time of APR.

5.3. Abstract of revised ARR for FY19:

In the light of the above analysis and decisions of the Commission, the following is the approved revised ARR for the control period FY19:

TABLE – 5.27
Approved revised ARR for FY19

Rs. Crores

Sl. No	Particulars	Amount		
		As Appd 30.03.2016	As Filed 30.11.2017	As approved Revised ARR
1	Energy at Gen Bus (With MSEZ)	6135.00	5966.22	5533.27
2	Transmission Losses in %	3.27%	3.27%	3.08%
3	Energy at Interface in MU	5821.33	5771.12	5317.36
4	Distribution Losses in %	10.95%	11.15%	10.95%
5	**Sales in MU**			
	Sales to other than IP-sets & BJ/KJ installations	3798.40	3222.48	3320.80
	Sales to BJ/KJ installations	16.01	41.62	33.23
	Sales to IP -sets	1369.48	1776.44	1381.08
	Total Sales	**5183.89**	**5040.54**	**4735.11**
6	**Revenue at existing tariff in Rs. Crores**			
	Revenue from tariff and Miscellaneous Charges		2244.62	2362.48
	Tariff Subsidy to BJ/KJ installations		27.09	21.63
	Tariff Subsidy to IP-sets		925.53	719.54
	Total Existing Revenue	**0.00**	**3197.24**	**3103.65**
	Expenditure in Rs. Crores			
7	Power Purchase Cost	2172.91	2407.58	1640.56
0.56	Transmission charges of KPTCL	251.83	251.83	224.37
	SLDC Charges	2.02	2.02	2.09
	Power Purchase Cost including cost of transmission	**2426.76**	**2661.43**	**1867.02**
8	Employee Cost		372.28	
	Repairs & Maintenance		45.25	
	Admin & General Expenses		92.3	
	Total O&M Expenses	**477.89**	**509.83**	**491.33**
9	Depreciation	95.29	106.86	97.02
10	**Interest & Finance charges**			
11	Interest on Capital Loans	70.99	80.19	80.75
12	Interest on Working capital loans	63.11	65.55	64.31
13	Interest on belated payment on PP Cost	0	0	0

14	Interest on consumer security deposits	45.04	44.3	35.57
15	Other Interest & Finance charges	2.19	3.95	3.95
16	Less interest & other expenses capitalised	2.39	2.39	2.39
	Total Interest & Finance charges	**178.94**	**191.60**	**182.19**
17	Other Debits	0	3.95	0
	Extra-ordinary items	0	0	0
18	Net Prior Period Debit/Credit	0	1.93	0
19	Return on Equity	95.53	117.50	121.67
20	Funds towards Consumer Relations/Consumer Education	0.50	0.50	0.50
21	Other Income (Including income from MSEZ)	95.36	28.77	67.87
	ARR	**3179.54**	**3564.82**	**2691.87**
22	Surplus of FY19		-367.58	411.78
23	Deficit for FY17 carried forward		-537.82	-553.83
24	Regulatory Assets		283.9	0.00
25	**Net ARR**	**3179.54**	**3818.75**	**3245.70**

Thus the Commission approves ARR of Rs. 3245.70 Crores which includes the deficit of FY17

5.4. Segregation of ARR into ARR for Distribution Business and ARR for Retail Supply Business:

MESCOM in its application has proposed the segregation of ARR into ARR for Distribution Business and ARR for Retail Supply Business as approved by the Commission in its Tariff Order dated 30th March, 2016. The Commission decides to continue with the same ratio of segregation of ARR as detailed below:

TABLE – 5.28

Approved Segregation of ARR – FY19

Particulars	Distribution Business	Retail Supply Business
O&M Expenses	39%	61%
Depreciation	84%	16%
Interest on Loans	100%	0%
Interest on Consumer Deposits	0%	100%
RoE	78%	22%
GFA	84%	16%
Non-Tariff Income	7%	93%

Accordingly, the following is the approved ARR for Distribution Business and Retail supply business:

TABLE – 5.29

APPROVED REVISED ARR FOR DISTRIBUTION BUSINESS – FY19

Rs. Crores

Sl. No	Particulars	Amount
1	R&M Expenses	
2	Employee Expenses	
3	A&G Expenses	191.62
4	Depreciation	81.50
5	**Interest & Finance Charges**	
6	Interest on Capital Loans	80.75
7	Interest on Working capital loans	8.18
8	Other Interest & Finance charges	3.95
9	Less interest & other expenses capitalised	(2.39)
	Total	**363.61**
10	ROE	94.90
11	Other Income	4.75
	NET ARR	**453.76**

TABLE – 5.30

APPROVED ARR FOR RETAIL SUPPLY BUSINESS – FY19

Rs. Crores

Sl. No	Particulars	Amount
1	Power Purchase	1640.56
2	Transmission Charges	226.46
3	R&M Expenses	
4	Employee Expenses	299.71
5	A&G Expenses	
6	Depreciation	15.52
	Interest & Finance Charges	
7	Interest on Working capital loans	56.13
8	Interest on consumer security deposits	35.57
	Total	
9	ROE	26.77
10	Other Income	63.12
11	Fund towards Consumer Relations / Consumer Education	0.5
	NET ARR	**2238.10**

5.5. Gap in Revenue for FY19:

As discussed above, the Commission decides to approve the revised Annual Revenue Requirement (ARR) of MESCOM for its operations in FY19 at Rs.3245.70 Crores as against MESCOM's application proposing the revised ARR of Rs.3818.75 Crores by including the revenue deficit of Rs.537.82 Crores and the Regulatory Asset (income) of Rs.283.90 Crores for FY17. This approved revised ARR includes an amount of Rs.553.83 Crores which is determined as the deficit as per the APR for FY17 as discussed in Chapter-4. Based on the existing retail supply tariff, the total realization of revenue will be Rs.3103.65 Crores which is Rs.142.05 Crores less than the projected revenue requirement for FY19.

The net ARR and the gap in revenue for FY19 are shown in the following table:

TABLE – 5.31

Revenue gap for FY19

Particulars	Amount
Net ARR including carry forward gap of FY17 (in Rs. Crores)	3245.70
Approved sales (in MU)	4735.11
Average cost of supply (in Rs./unit)	6.85
Revenue at existing tariff (in Rs. Crores)	3103.65
Gap in revenue (in Rs. Crores)	**(142.05)**

The determination of revised retail supply tariff on the basis of the above approved ARR is detailed in the following Chapter.