

CHAPTER – 4

ANNUAL PERFORMANCE REVIEW FOR FY16

4.0 MESCOM's Application for APR for FY16:

MESCOM has filed its application for Annual Performance Review (APR) for FY16 and revision of Annual Revenue Requirement (ARR) along with revision of retail supply tariff for FY18 on 30th November, 2016. MESCOM has sought the Annual Performance Review (APR) for FY16 and approval of a revised ARR thereon based on the Audited Accounts of FY16.

The Commission in its letter dated 21st December, 2016, had communicated its preliminary observations on the application of MESCOM. In its letter dated 30th December, 2016, MESCOM has furnished its replies to the preliminary observations of the Commission. The Commission had issued rejoinders on the replies furnished by the MESCOM vide its letter date 10th January, 2017 and MESCOM has furnished replies to the rejoinders in its letter dated 13th January, 2017.

The Commission in its Multi Year Tariff (MYT) Order dated 6th May, 2013 had approved MESCOM's Annual Revenue Requirement (ARR) for FY14 – FY16. Further, in its Tariff Order dated 2nd March, 2015, the Commission had approved the APR for FY14 and had revised the ARR along with Retail Supply Tariff for FY16.

The revised Annual Revenue Requirement (ARR) of MESCOM for FY16, based on the audited accounts, is discussed in this Chapter.

4.1 MESCOM's Submission:

MESCOM has submitted its proposals for revision of ARR for FY16 based on the Audited Accounts as follows:

TABLE – 4.1

ARR for FY16 – MESCOM's Submission

Amount in Rs. Crores

Sl. No	Particulars	As Filed
1	Energy at Gen Bus in MU	5027.72
2	Energy at Interface in MU	4869.12
3	Distribution Losses in %	11.50
	Sales in MU	
4	Sales to other than IP & BJ/KJ	3097.96
5	Sales to BJ/KJ	13.78
6	Sales to IP & BJ/KJ	1197.43
	Total Sales	4309.17
	Revenue	
7	Revenue from other than IP & BJ/KJ and Misc. Charges	1852.20
8	RE Subsidy to BJ/KJ	9.25
9	RE Subsidy to IP	501.77
	Total Revenue	2363.22
	Expenditure	
10	Power Purchase Cost	2010.15
11	Transmission charges of KPTCL	218.70
12	SLDC Charges	1.71
	Power Purchase Cost including cost of transmission	2230.56
13	Employee Cost	249.24
14	Repairs & Maintenance	33.04
15	Admin. & General Expenses	67.41
	Total O&M Expenses	349.69
16	Depreciation	63.74
	Interest & Finance charges	
17	Interest on Loans	62.68
18	Interest on Working capital	37.74
19	Interest on belated payment of PP Cost	0.29
20	Interest on consumer deposits	35.55
21	Other Interest & Finance charges	1.21
22	Less: interest & other expenses capitalised	1.30
	Total Interest & Finance charges	136.17
23	Other Debits	5.03
24	Return on Equity	76.87
25	Provision for taxation	2.31
26	Funds towards Consumer Relations/Consumer Education	0.11
27	Other Income	47.74
	Net ARR	2816.74

Considering the revenue of Rs.2363.22 Crores against a net ARR of Rs.2816.74 Crores, MESCOM has reported a gap in revenue of Rs.453.52 Crores for FY16.

4.2 MESCOM's Financial Performance as per the Audited Accounts for FY16:

An overview of the financial performance of MESCOM for FY16 as per its Audited Accounts is given below:

TABLE – 4.2

Financial Performance of MESCOM for FY16

Amount in Rs. Crores		
Sl. No.	Particulars	FY16
	Receipts	
1	Revenue from Tariff and misc. charges	2201.30
2	Tariff Subsidy	510.43
	Total Revenue	2711.73
	Expenditure	
3	Power Purchase Cost	2010.15
4	Transmission charges of KPTCL	218.70
5	SLDC Charges	1.71
	Power Purchase Cost including cost of transmission	2230.56
6	O&M Expenses	350.82
7	Depreciation	64.08
	Interest & Finance charges	
8	Interest on Loans	51.37
9	Interest on Working capital	23.50
10	Interest on belated payment of power purchase	0.29
11	Interest on consumer deposits	35.55
12	Other Interest & Finance charges	1.20
13	Less: Interest and other expenses capitalized	2.32
	Total Interest & Finance charges	109.59
14	Other Debits	4.69
15	Net Prior Period Debit/Credit	(8.67)
16	Exceptional Items	(2.70)
17	Other income	47.75
18	Income tax	0.00
	Total Expenditure	2700.62

As per the Audited Accounts, MESCOM has earned a profit of Rs.11.11 Crores for FY16. The profits / losses reported by MESCOM in its audited accounts in the previous years are as follows:

TABLE – 4.3

MESCOM's Accumulated Profit / Loss

Particulars	Amount in Rs.Crs
Accumulated profits as at the end of FY10	50.73
Profit earned in FY11	1.70
Profit earned in FY12	6.41
Profit earned FY13	12.60
Profits earned in FY14	0.20
Profits earned in FY15	13.93
Profits earned in FY16	11.11
Accumulated losses as at the end of FY16	96.68

As seen from the above table, the accumulated profits are Rs.96.68 Crores.

APR Exercise by the Commission:

The Annual Performance Review for FY16 has been taken up duly considering the actual revenue and expenditure booked as per the Audited Accounts against the revenue and expenditure approved by the Commission in its Tariff Order dated 2nd March, 2015. The item-wise review of expenditure and the decisions of the Commission thereon are as discussed in the following paragraphs:

4.2.1 Sales for FY16:**a) Sales - Other than IP sets:****I. Annual Performance Review for FY-16**

The Commission in its Tariff Order 2015 dated 02.03.2015, had approved total sales to various consumer categories at 4431.33 MU as against the MESCOM's proposal of 4433.40 MU, excluding the sales of 80.84 MU to MSEZ and 11.33 MU to KPCL. The actual sales of the MESCOM as per the current APR filing [D-2 FORMAT] is 4226.67 MU indicating a short fall in sales to an extent of 204.66 MU, as compared to the approved sales. The reduction in sales is 35.15 MU in LT-categories and 169.52 MU in HT-categories. It is noted that, as against approved sales [excluding KPCL

sales and supply to MSEZ] of 3227.44 MU to the categories other than BJ/KJ and IP sets, the actual sales achieved by the MESCOM is 3015.46 MU, resulting in the reduction of sales to these categories by 211.98 MU. Further, the MESCOM has sold 1211.21 MU to BJ/KJ and IP categories against approved sales of 1203.89 MU resulting in increased sales to these categories by 7.32 MU.

The category-wise sales approved by Commission in its Tariff Order 2015, and the actuals for the FY 16 are indicated in the table below:

TABLE-4.4
Approved and Actual Sales for FY16

Category	Approved	Actuals**	Units in MU
			Actuals - Approved
LT-2a*	1341.96	1292.56	-49.40
LT-2b	12.74	13.68	0.94
LT-3	324.48	329.87	5.39
LT-4b	0.98	0.92	-0.06
LT-4c	7.17	6.40	-0.77
LT-5	131.41	135.47	4.06
LT-6	115.05	111.93	-3.12
LT-6	64.06	63.97	-0.09
LT-7	19.02	19.63	0.61
HT-1	87.99	85.01	-2.98
HT-2a	782.85	586.43	-196.42
HT-2b	152.12	180.07	27.95
HT-2c	126.97	155.05	28.08
HT-3a & b	24.98	8.60	-16.38
HT-4	13.78	16.90	3.12
HT-5	21.86	8.98	-12.88
Sub total	3227.44	3015.46	-211.98
BJ/KJ	12.63	13.78	1.15
IP	1191.26	1197.43	6.17
Sub total	1203.89	1211.21	7.32
Grand total**	4431.33	4226.67	-204.66

*Including BJ/KJ installations consuming more than 18 units/month

**Excludes sale of 9.59 MU to KPCL and 13.88 MU to MSEZ as filed by MESCOM.

The Commission has noted that the major categories contributing to the reduction in sales with respect to the estimates are HT-2a Industries (196.42 MU) and LT2a (49.40 MU). The MESCOM, while analyzing the reasons for reduction in HT -2a sales, has stated that out of the total reduction of 196.44 MU in HT-2a category, twelve EHT consumers had consumed energy losses by 125.67 MU in the FY16 as compared with the energy consumption in the FY15.

While taking note of the analysis carried out by the MESCOM regarding reduction in sales, to further validate the sales, the Commission in its preliminary observations had requested MESCOM to furnish certain information. The information directed and the replies furnished are discussed below:

- a) MESCOM was directed to furnish the data in respect of sales to HT2(a) and HT2(b) categories along with the consumption from open access / wheeling for the period 2011-12 to 2015-16 in a specified format.

MESCOM in its replies has furnished the details from 2012-13 to 2015-16, without furnishing the category-wise break up for HT-2a and HT-2b. Subsequently, in its replies to the Rejoinder, MESCOM has furnished the details, which has been analyzed by the Commission while arriving at sales for these categories for FY18.

- b) To estimate the impact of shifting of installations from HT2a, HT2b and HT-4 to HT-2c, MESCOM was directed to furnish the number of installations shifted from these categories and also furnish the corresponding sales figures for FY14, FY15 and FY16.

MESCOM has furnished the details, which has been analyzed by the Commission while arriving at sales for these categories for FY18.

b) Sales to IP sets

In its Tariff Order dated 2nd March, 2015, the Commission had approved a specific consumption of IP-sets as 4,597 units/installation/annum for FY16, whereas, as per the data of IP-set consumption reported by the MESCOM in its Tariff filing for APR of FY16, the specific consumption works out to 4,447 units /installation/annum, which indicates a decrease in the specific consumption by 150 units/installation/annum when compared to the approved figure. The total IP-set consumption reported by the MESCOM for the FY16 was 1,197.43 MU as against 1,191.26 MU approved by the Commission which indicates that overall sales have increased by 6.17 MU compared to the sales quantum approved.

Further, the Commission had approved 2,63,139 as number of IP-set installations for FY16; whereas the actual number of installations serviced as reported by the MESCOM in its Tariff filing is 2,78,171. This indicates an increase in number of installations by 15,032 and this corresponds to around 6 per cent increase in the number of installations as compared to number of installations approved for the FY16. Also, it is noted that the increase in number of installations has resulted in increase in sales by 6.17 MU.

In the Tariff Order dated 2nd March, 2015, the MESCOM was directed to furnish to the Commission, every month, the IP-set consumption by considering the actual meter readings of individual IP-set installations due to the fact that substantial progress has been reported in metering of IP-sets and the MESCOM was also instructed do away with the methodology for assessing the IP-set consumption as per the meter readings of sample DTCs feeding predominantly IP-set loads,. However, the MESCOM in its Tariff filing has not submitted the IP-set consumption based on the meter reading data of individual IP-set installations, but, it has submitted the IP-consumption based on the meter readings of sample DTCs supplying power predominantly to IP-set loads.

- I. In view of this, the Commission, in its preliminary observations on the MESCOM's Tariff application, had directed it to justify its claims of IP-set consumption of 1,197.43 MU reported for the FY16 with necessary data in support of the same.
- II. The MESCOM, in its reply to the preliminary observations, has submitted the consolidated month-wise data in respect of IP-set consumption for FY16 along with the details of assessment based on the meter readings of sample DTCs feeding predominantly to IP-set loads. However, the MESCOM has not submitted the IP-set consumption based on the meter reading data of individual IP-set installations despite reporting that substantial IP-set installations are provided with meters. Also, it has not furnished the reasons for not considering the meter readings of individual IP-set installations to

arrive at an overall consumption of 1,197.43 MU reported for the FY16.

- III. Further, the MESCOM, in its replies dated 13.12.2016 to the rejoinder of the Commission, has stated that the meters provided to IP-set installations are not functioning as most of the them have been unauthorizedly removed by the farmers opposing the installation of meters, resulting in non-availability of consumption data based on the meter reading of individual IP-set installations. It is also stated that the data regarding number of meters existing in the IP-set installations is proposed to be collected along with the work of enumeration of IP-sets. It is further stated that it will try to convince the farmers to obtain the meter readings and then compute the IP-set consumption based on the actual meter readings of individual installations after completion of enumeration of IP sets.

Therefore, citing the non-availability of metered consumption data of individual IP-set consumers, the MESCOM has requested the Commission to allow assessing the IP-set consumption based on the readings of the sample meters provided to DTCs feeding predominantly to IP-sets, as per the methodology being followed hitherto. Accordingly, MESCOM has requested the Commission to approve the sales of 1,197.43 MU as reported in the format D2 of its Tariff filing, for APR of FY16. The Commission has therefore accepted the MESCOM's request to consider the consumption recorded as per the DTC meter reading data.

- IV. The Commission notes that the specific consumption of IP-sets has decreased by 150 units/installation/annum as compared to the quantity approved by the Commission for the FY16. However, the sales have increased marginally when compared to the quantity approved by the Commission, which can be attributed to the fact that, more number of installations has been serviced by the MESCOM than the approved quantity in FY16. Further, it is also noted that unlike in other ESCOMs, NJY scheme (for bifurcating the

11 kV feeders as separate rural and agricultural feeders) is not implemented in the jurisdiction of the MESCOM in order to compute the IP-set consumption on the basis of metered data of segregated agricultural feeders at the substations.

However, the MESCOM is directed that in future it shall consider only the actual meter readings of individual IP-set installations duly ascertaining the correct number of working meters in the field, as discussed above and report the consumption of IP-sets on the basis of meter reading data from such IP-set installations every month, to the Commission, as this would enable accurate measurement of IP-set consumption as compared to assessing the consumption based on the meter readings of sample DTCs feeding predominant IP loads.

Hence, in the absence of 100 per cent meter reading data of individual IP-set installations, but considering the figures furnished being reasonable the Commission decides to approve the sales to IP-sets for the APR of FY16, as 1197.43 MU as reported by the MESCOM in its Tariff filing.

In the light of the above discussion, the Commission approves the total sales of 4226.67 MU for FY16 and the category-wise sales as indicated in the table below. In addition to the above, Sales to KPCL at 9.59 MU and to MSEZ at interface point at 13.88 MU are also approved.

TABLE – 4.5
Approved Sales for FY16

Figures in MU

Category	Approved	Actuals
LT-2a*	1341.96	1292.56
LT-2b	12.74	13.68
LT-3	324.48	329.87
LT-4b	0.98	0.92
LT-4c	7.17	6.40
LT-5	131.41	135.47
LT-6	115.05	111.93
LT-6	64.06	63.97
LT-7	19.02	19.63
HT-1	87.99	85.01

HT-2a	782.85	586.43
HT-2b	152.12	180.07
HT-2c	126.97	155.05
HT-3a & b	24.98	8.60
HT-4	13.78	16.90
HT-5	21.86	8.98
Sub total	3227.44	3015.46
BJ/KJ	12.63	13.78
IP	1191.26	1197.43
Sub total	1203.89	1211.21
Grand total**	4431.33	4226.67

* Including BJ/KJ installations consuming more than 18 units/month

**Excludes sale of 9.59 MU to KPCL, 13.88 MU to SEZ at interface point and wheeled energy of 59.04 MU.

4.2.2 Distribution Losses for FY16:

MESCOM's Submission:

The Commission in its Tariff Order dated 2nd March, 2015 had approved distribution losses for FY16 as shown in the table below:

Range	FY16
Upper limit	11.50%
Average	11.25%
Lower Limit	11.00%

MESCOM, in its annual accounts, has reported distribution losses of 11.50% for FY16.

1	Energy at Interface Points in MU	4869.12
2	Total sales in MU including wheeled energy	4309.17
3	Distribution losses as a percentage of input energy at IF points	11.50%

Commission's analysis and decisions:

The distribution loss of 11.50% reported by MESCOM exceeds the targeted losses fixed by the Commission for FY16 by 0.25 percentage points. However, the actual overall distribution loss of 11.50% is within the approved range of losses for FY16. Hence no penalty/incentive has been factored in the APR for FY16.

4.2.3 Power Purchase for FY16:**MESCOM Submission:**

The Commission in its Tariff order dated 2nd March,2015, had approved source- wise quantum and cost of power purchase for FY16. MESCOM, in its application has submitted the details of actual power purchase for FY16 for the purpose of reviewing its Annual Performance. The details of power purchase are as under:

**TABLE-4.6
MESCOM's POWER PURCHASE FOR FY16**

Source of Generation	Actuals for FY16			Approved for FY16			Difference-between Actuals and Approved-for FY16			% increase (+)/decrease (-) over an approved figures	
	Energy in MUs	Cost in Rs Cr.	Rate in Rs per Unit	Energy in MUs	Cost in Rs Cr.	Rate in Rs per Unit	Energy in MUs	Cost in Rs Cr.	Rate in Rs per Unit	Energy	Cost
KPCL Hydel Stations	541.1	78.69	1.45	869.33	59.15	0.68	-328.23	19.54	0.77	-37.76	33.03
KPCL-Thermal Stations	1734.68	758.27	4.37	2064.76	800.77	3.88	-330.08	-42.50	0.49	-15.99	-5.31
CGS	1165.49	387.70	3.33	1009.42	327.48	3.24	156.07	60.22	0.08	15.46	18.39
Major IPPs	381.47	159.83	4.19	373.15	154.2	4.13	8.32	5.63	0.06	2.23	3.65
IPPs -Minor (NCE Projects)	554.24	208.82	3.77	842.73	311.63	3.70	-288.49	-102.81	0.07	-34.23	-32.99
Other States Projects	0.75	4.79	63.87	15.54	2.80	1.80	-14.79	1.99	62.06	-95.17	71.07
Short /Medium term	520.30	273.98	5.27	112.65	59.14	5.25	407.63	214.84	0.02	361.86	363.27
UI Charges	44.42	13.44	3.03								
Transmission Charges (KPTCL & PGCIL)		290.51			269.14			21.37			7.94
SLDC Charges (POSOOC & SLDC)		1.98			2.77			-0.79			-28.51
Energy Balancing	36.15	32.30	8.93								
Others Charges	49.14	20.25	4.12								
TOTAL	5027.72	2230.56	4.44	5287.58	1987.08	3.76	-259.86	243.43	0.68	4.91	12.25

* Source : D1 format

Commission's analysis and decisions:

1. The actual power purchase for FY16 as filed by MESCOM for approval of Annual Performance Review is 5027.72MU amounting to Rs 2230.56 Crores, as against the approved quantum of 5287.58MU amounting to

Rs1987.08 Crores. There is reduction in quantum of power purchase to an extent of 259.86 MU and increase in cost by Rs. 243.43 Crores. This has been reflected in reduced sales of 204.66 MU in FY16.

2. As against the approved quantum of 5287.58MU the actual power purchased by MESCOM is 5027.72MU for **FY16**, which is about **4.91%** less than the approved quantum.
3. On an analysis of the source-wise approved and actual power purchases, the following deviations in the quantum of energy and its cost of purchase are observed:
 - i. There is a shortfall in supply from sources of power like KPCL Hydel, KPCL Thermal and IPP Minor to an extent of:

TABLE- 4.7
Short fall in Availability of Power in FY16

Source of Generation	Energy Difference between actual and approved in MU**	Cost Difference between actual and approved in Rs Crs.**
KPCL Hydel	-328.23	19.54
KPCL Thermal	-330.08	-42.50
IPP Minor	-288.49	-102.81

****Difference between Source-wise approved and Actual Energy Purchase**

Consequently, after partially making good the shortfall through additional procurement from CGS & major IPP sources, MESCOM has purchased short-term power to a tune of 564.70 MU at a cost of Rs.287.42 Crores. MESCOM has incurred an additional cost Rs.243.43 Crores towards short-term/medium-term power purchase, resulting in an increase in per unit cost by 68 Paise.

- ii. The change in the source-wise mix of supply, reconciliation of energy and its cost among ESCOMs have resulted in increased average power purchase cost of MESCOM at the rate of Rs.4.44 per KWh as against the approved rate of Rs.3.76 per KWh.
5. **In order to ensure proper accounting of energy drawn by the ESCOMs, the MESCOM is directed to reconcile the inter-ESCOM energy**

exchanges and its costs every month and it shall collect/pay any difference amounts out of the tariff subsidy received from Government of Karnataka.

6. The Commission notes that, the SLDC has not implemented the intra-state ABT. As per the directions issued by the Government of Karnataka vide its letter dated 28th January, 2016, intra state ABT has to be implemented immediately by the KPTCL and ESCOMs. **The Commission therefore directs the SLDC, KPCL and the MESCOM to take appropriate action immediately to implement intra-state ABT and to host the details thereof, on their respective websites.**
7. On an analysis of Power Purchase cost for FY16 in respect of KPCL Hydel Stations it is observed that the per unit rates allowed by ESCOMs, significantly vary among ESCOMs as shown below:

BESCOM	Rs 0.90 per unit.
MESCOM	Rs 1.45 per unit.
CESC	Rs 1.11 per unit.
HESCOM	Rs 0.91 per unit.
GESCOM	Rs 0.97 per unit.

It is seen from the above that, MESCOM has allowed a rate of Rs.1.45 per unit for the power purchased from KPCL Hydro stations whereas for the same source, BESCOM has paid at the rate of RS. 0.90 per unit. This indicates that while making payment for the power purchase bills, adequate checks have not been exercised by MESCOM.

Commission also notes that the ESCOMs had paid the following rates to the KPCL Hydro stations in FY15. below:

BESCOM	Rs 0.57 per unit.
MESCOM	Rs 0.56 per unit.
CESC	Rs 0.58 per unit.
HESCOM	Rs 0.56 per unit.
GESCOM	Rs 0.59 per unit.

It is seen from the above that there is no significant variation in the rates among the ESCOMs, as compared with the rates paid in FY16. There should be justifiable reasons for the variations, which are not available in the tariff applications.

In the light of this, MESCOM is directed to verify the correctness of the payment made by it at the rate of Rs.1.45 per unit towards KPCL Hydel power. The excess payment if any, may be recovered from KPCL under intimation to the Commission.

Thus, the Commission decides to approve the power purchases of 5027.72 MU at a cost of Rs 2230.56 Crores for the purpose of Annual Performance Review for FY16.

4.2.4 Renewable Purchase Obligation (RPO) compliance by MESCOM for FY16:

1. MESCOM in its petition has filed the details of RPO compliance for solar and non-solar RPO for 2015-16 as indicated below:

TABLE-4.8

RPO Compliance for FY16-MESCOM's Submission

Energy Purchased-MU	5027.71
Non-Solar energy required to be procured at 10% target-MU	502.77
Non-Solar energy actually procured excluding energy sold under green tariff -MU	693.93
Non-Solar compliance as percentage of energy purchased	13.80%
Solar energy required to be procured at 0.25% target-MU	12.57
Solar energy actually procured -MU	42.15
Solar compliance as percentage of energy purchased	0.84%

For validating the RPO compliance, the Commission had directed MESCOM to furnish the data as per a specified format, duly reconciling the data with the audited accounts.

MESCOM in its replies has furnished the following data:

TABLE-4.9
Non-solar RPO for FY16

No.	Particulars	Quantum in MU	Cost- Rs. Crs.
1	Total Power Purchase quantum from all sources	5027.72	2230.56
2	Non-solar Renewable energy purchased under PPA route at Generic tariff including Non-solar RE purchased from KPCL	522.13	182.37
3	Non-solar Short-Term purchase from RE sources, excluding sec-11 purchase	90.20	45.82
4	Non-solar Short-Term purchase from RE sources under sec-11	94.29	47.90
5	Non-solar RE purchased at APPC	0	0
6	Non-solar RE pertaining to green energy sold to consumers under green tariff	12.69	0.63
7	Non-solar RE purchased from other ESCOMs	0	0
8	Non-solar RE sold to other ESCOMs	0	0
9	Non-solar RE purchased from any other source like banked energy purchased at 85% of Generic tariff	0	0
10	Total Non-Solar RE Energy Purchased [No 2+ No.3+No.4+No.5 +No.7+No.9]	706.62	276.09
11	Non-Solar RE accounted for the purpose of RPO [No.10- No.5-No.6-No.8]	693.93	275.46
12	Non-solar RPO complied in % [No11/No1]*100	13.80	

TABLE-4.10
Solar RPO for FY16

No.	Particulars	Quantum in MU	Cost- Rs. Crs.
1	Total Power Purchase quantum from all sources	5027.72	2230.56
2	Solar energy purchased under PPA route at Generic tariff including solar energy purchased from KPCL	32.11	26.45
3	Solar energy purchased under Short-Term, excluding sec-11 purchase	0	0
4	Solar Short-Term purchase from RE under sec-11	0	0
5	Solar energy purchased under APPC	0	0
6	Solar energy pertaining to green energy sold to consumers under green tariff	0	0
7	Solar energy purchased from other ESCOMs	0	0
8	Solar energy sold to other ESCOMs	0	0

9	Solar energy purchased from NTPC (or others) as bundled power	10.04	10.65
10	Solar energy purchased from any other source like banked energy purchased at 85% of Generic tariff	0	0
11	Total Solar Energy Purchased [No.2+ No.3+No.4+No.5+No.7+No.9+No.10]	42.15	37.10
12	Solar energy accounted for the purpose of RPO [No.11- No.5-No.6-No.8]	42.15	37.10
13	Solar RPO complied in % [No.12/No.1]*100	0.84	

The Commission has perused the data submitted by MESCOM. The Commission has approved total input energy of 5027.72 MU for FY16 in its APR. Thus, MESCOM was required to purchase 502.77 MU of Non-Solar energy and 12.57 MU of solar energy to meet its RPO targets. Based on the information furnished, the Commission notes that MESCOM has achieved 13.80% of Non-Solar and 0.84% of solar RPO targets for FY16. Thus, MESCOM has over-achieved its non-solar and solar RPO targets by 3.80 percentage points and 0.59 percentage points respectively.

4.2.5 Operation and Maintenance Expenses:

MESCOM's Submission:

In its application, MESCOM, as per its audited accounts has sought approval of O&M expenditure of Rs.349.69 Crores for FY16. The break-up of O&M expenses are as follows:

TABLE – 4.11
O & M Expenses – MESCOM's submission

Amount in Rs. Crores	
Particulars	FY16
Employee cost	249.24
Administrative & General Expenses	67.41
Repairs and Maintenance	33.04
Total O & M Expenses	349.69

Commission's analysis and decisions:

The Commission in its Tariff Order dated 2nd March, 2015 had approved O&M expenses for FY16 as detailed below:

TABLE – 4.12**Approved O&M Expenses as per Tariff Order dated 02.03.2015**

Particulars	FY16
No. of installations as per actuals as per Audited Accts	2156749
Weighted Inflation Index	6.69%
CGI based on 3 Year CAGR	3.86%
Actual O&M expenses for FY13 - in Rs. Crores.	260.06
Total approved O&M Expenses for FY16 – in Rs. Crores.	344.83

The Commission in its preliminary observations, on the application of MESCOM, had sought the details of the certain expenses booked under A & G expenses during FY16 and noted the replies furnished.

The Commission notes that the actual O&M expenses reported by MESCOM are more than the approved O&M expenses by Rs.4.86 Crores. The Commission, in accordance with the methodology adopted while approving the ARR for FY14-16 and subsequent APRs, proceeds with the determination of normative O&M expenses based on the 12 Year data of WPI and CPI besides considering 3 year compounded annual growth rate (CAGR) of consumers. 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, Government of India and adopting the methodology followed by the CERC with CPI and WPI in a ratio of 80 : 20, the allowable rate of inflation for FY16 is computed as follows:

TABLE-4.13
Allowable inflation for FY16

Year	WPI	CPI	Composite Series	Yt/Y1=Rt	Ln Rt	Year (t-1)	Product [(t-1)* (LnRt)]
2004	98.72	111.1	108.624				
2005	103.37	115.8	113.314	1.04	0.04	1	0.04
2006	109.59	122.9	120.238	1.11	0.10	2	0.20
2007	114.94	130.8	127.628	1.17	0.16	3	0.48
2008	124.92	141.7	138.344	1.27	0.24	4	0.97
2009	127.86	157.1	151.252	1.39	0.33	5	1.66
2010	140.08	175.9	168.736	1.55	0.44	6	2.64
2011	153.35	191.5	183.87	1.69	0.53	7	3.68
2012	164.93	209.3	200.426	1.85	0.61	8	4.90
2013	175.35	232.2	220.83	2.03	0.71	9	6.39
2014	182.00	246.90	233.92	2.15	0.77	10	7.67
2015	177.03	261.42	244.542	2.25	0.81	11	8.93
A= Sum of the product column							37.56
B= 6 Times of A							225.37
C= (n-1)*n*(2n-1) where n= No of years of data=12							3036.00
D=B/C							0.07
g(Exponential factor)= Exponential (D)-1							0.0771
e=Annual Escalation Rate (%)=g*100							7.71

For the purpose of determining the normative O & M expenses for FY16, the Commission has considered the following:

- The actual O & M expenses allowed for FY13 excluding contribution to Pension and Gratuity Trust.
- The three year compounded annual growth rate (CAGR) of the number of installations considering the actual number of installations as per the audited accounts up to FY16.
- The weighted inflation index (WII) at 7.71% as computed above.
- Efficiency factor at 1% as considered in the earlier two control periods.

Thus, the normative O & M expenses for FY16 will be as follows:

TABLE-4.14
Normative O & M Expenses

Particulars	FY16
No. of Installations As per actuals as per Audited Accts	2152546
Weighted Inflation Index	7.71%
Consumer Growth Index (CGI) based on 3 Year CAGR	3.79%
Base year O & M expenses for FY13 excluding P&G contribution - Rs. Crores	217.49
O&M Index= O&M (t-1)*(1+WII+CGI-X)- Rs. Crores.	292.06

The above normative O & M expenses have been computed without considering the contribution to Pension and Gratuity Trust for FY 16.

The Commission has treated the employee costs on account of contribution to P&G Trust as uncontrollable O&M expenses. This component has been allowed beyond the normative O&M expenses to enable the ESCOMs to meet their actual employee costs.

MESCOM, as per the audited accounts has incurred an amount of Rs.46.40 Crores towards contribution to Pension and Gratuity Trust for FY 16. Considering the request of MESCOM to treat the pension and gratuity contribution as uncontrollable O & M expenses, the Commission computes the allowable O & M expenses for FY16 as follows:

TABLE – 4.15
Allowable O & M Expenses for FY16
Amount in Rs. Crores

Sl. No.	Particulars	FY16
1	Normative O & M expenses	292.06
2	Additional employee cost (uncontrollable O & M expenses)	46.40
	Allowable O & M expenses for FY16	338.46

Thus, the Commission decides to allow an amount of Rs.338.46 Crores as O&M expenses for FY16.

4.2.6 Depreciation:

MESCOM's Submission:

MESCOM in its application as per the audited accounts has claimed an amount of Rs.63.74 Crores as depreciation worked out after deducting an amount of Rs.26.34 Crores being the depreciation on account of assets created out of consumers' contributions / grants as per Accounting Standards (AS) – 12.

As per the audited accounts for FY 16, the asset-wise depreciation is as follows:

TABLE – 4.16
Depreciation for FY16- MESCOM's Submission

Amount in Rs. Crores			
Particulars	Opening Balance of Asset as on 01.04.2015	Closing Balance of Asset as on 31.03.2016	Depreciation for FY16
Land :Freehold	4.79	6.58	-
Buildings	30.95	36.93	1.16
Civil	2.42	2.53	0.16
Other Civil	0.64	0.72	0.02
Plant & M/c	319.94	364.32	18.05
Line, Cable Network	1504.76	1662.20	72.51
Vehicles	3.96	4.63	0.12
Furniture	3.28	3.59	0.18
Office Equipment	0.78	0.85	0.03
Sub Total	1871.52	2082.35	92.23
Less: Depreciation on account of Assets created out of grants/Consumer contribution	482.68	515.17	26.34
Less: Excess/under provided Depreciation during previous years	1388.84	1567.18	(2.15)
Net Depreciation			63.74

Commission's analysis and decisions:

In accordance with the provisions of the KERC (Terms and Conditions for Determination of Tariff) Regulations, 2006 and amendments thereon, the depreciation for FY16 has been determined by the Commission. Based on the opening and closing balances of gross blocks of fixed assets for FY16 and the depreciation as per annual accounts, the weighted average rate of depreciation works out to 4.70%.

Further, as per the Accounting Standards (AS) – 12, an amount of Rs.26.34 Crores of depreciation is towards the assets created out of consumer contribution / grants. Also, there is excess/under provision of depreciation of the previous years to the extent of Rs.2.15 Crores.

Accordingly, the approved asset wise depreciation for FY16 is as follows:

TABLE – 4.17
Allowable Depreciation for FY16

Particulars	Amount in Rs. Crores		
	Opening Balance of Asset as on 01.04.2015	Closing Balance of Asset as on 31.03.2016	Depreciation for FY16
Buildings	30.85	35.63	1.16
Civil	2.43	2.53	0.16
Other Civil	0.63	0.72	0.13
Plant & M/c	221.33	254.84	12.65
Line, Cable Network	1120.70	1256.52	49.66
Vehicles	3.98	4.63	0.12
Furniture	3.28	3.59	0.18
Office Equipment	0.76	0.85	0.03
Net Depreciation	1383.96	1559.30	64.08

Thus, the Commission decides to allow the net depreciation of Rs.64.08 Crores for FY16.

4.2.7 Capital Expenditure for FY16:

MESCOM's Submission:

MESCOM has reported the category-wise actual capital expenditure at Rs.230.10 Crores for FY16 as against the capital expenditure approved by the Commission at Rs.353.89 Crores. MESCOM has indicated a capital expenditure of Rs.274.73 Crores in format D-17. The category-wise expenditure submitted by MESCOM is shown below:

Table -4.18
Capital expenditure of MESCOM for FY16

Amount in Rs. Crores			
SI No	Particulars	CAPEX approved by the Commission	Actual Capex
1	E&I Works (Addl. Transformers, Link-Lines, HT/LT Re-conductoring, HVDS)	41.56	84.44
2	DTC metering,	50.00	1.22
3	Replacement of MNR/DC & Electromagnetic meters by Static meters & providing SMC meter protection box wherever required	25.00	2.86
4	Nirantara Jyothi Yojane	90.00	-
5	R - Accelerated Power Development and Reform Programme	10.00	4.78
6	Replacement of faulty Distribution Transformers	30.00	5.37
7	Service Connection including promoter vanished layout Works	20.00	27.48
8	Rural Electrification (General)		
a	Rural Electrification (RGGVY 12th Plan)	10.00	14.97
b	RGGVY(DDG)		
c	Electrification of Hamlets	2.00	0.54
d	Energization of IP sets Including providing Infrastructure to regularized UIP	50.00	51.44
e	Kutir Jyothi		0.01
f.	Sheegra Samparka Yojane	0.25	1.66
g.	Naxal package		0.03
9	Tribal Sub-Plan		
a	Electrification of Tribal Colonies	0.60	0.16
b	Energization of IP sets	0.38	0.24
c	Kutir Jyothi	0.02	-
10	Special Component Plan		
a	Electrification of S.C Colonies	1	0.24
b	Energization of IP sets	0.98	0.36
c	Kutir Jyothi	0.1	-
11	Tools & Plants & Computers	2.00	9.41
12	Civil Engineering Works	5.00	14.35
13	33 KV Station and Line Works	15.00	10.54
	Grand Total	353.89	230.10

Commission's analysis and decision:

The Commission notes that, though, the overall capital expenditure of Rs.230.10 Crores for FY16 is within the approved capex of Rs.353.89 Crores, MESCOM has exceeded its capex limit in respect of a few categories of works. Some of the major categories exceeding the limit are shown below:

- i) In respect of **“E&I Works (Addl. Transformers, Link-Lines, HT/LT Re-conductoring, HVDS)”**, MESCOM has incurred a capex of Rs.84.44 Crores, in which Rs.42.88 Crores is over and above the approved capex of Rs.41.56 Crores. MESCOM in its replies to the preliminary observations made by the Commission has stated that, the increased capex in this category was due to completion of spill-over works of earlier years as well as some of the additional works, it has taken up for improvement of the distribution system during FY16.
- ii) In respect of **“DTC metering, replacement of MNR/DC & Electromagnetic meters by Static meters & providing SMC meter protection box, wherever, required”**, MESCOM has achieved a meagre capex of Rs.1.22 Crores and Rs.2.86 Crores, against the approved capex of Rs.50 Crores and Rs.25 Crores respectively. The Commission has been directing MESCOM to complete DTC metering and energy audit, but, MESCOM has failed to achieve its own set targets. MESCOM in its replies to the preliminary observations made by the Commission has stated that, MESCOM has awarded the tenders and achieved 66% physical progress of implementation of metering works, for which, the expenditure would be reflected in FY17, after the works are fully completed and paid for.
- iii) In the category of **“Tools, Plants & Computers”**, the MESCOM has achieved a capex of Rs.9.41 Crores against the approved capex of Rs.2 Crores. MESCOM in its replies to the preliminary observations has stated that, some of the major items like, five Lorries, four Energy meter testing benches, high visibility reflective rain wear, ten Lenovo laptops, safety helmets and chain saw have been procured during FY16 along with the other minor T&P materials.

Further, looking at the capital expenditure of MESCOM against the approved amounts during the past five years, it is observed that, the percentage achievement is ranging from 36.55% to 68.64%, which is not very encouraging except in FY15, which is 96.09% of the target capex. The details of the expenditure targets achieved by MESCOM for the last five years is shown below:

TABLE –4.19

Approved Vs Actual capital investment

Particulars	Amount in Rs. Crores				
	FY12	FY13	FY14	FY15	FY16
Capital Investment Proposed & Approved	348.55	249.85	281.44	262.33	353.89
Capital Investment actually incurred	127.4	130.92	193.17	252.07	230.10
Short fall	221.15	118.93	88.27	10.26	123.79
% Achievement	36.55%	52.40%	68.64%	96.09%	65.02%

In light of the above discussions and considering the explanation furnished by MESCOM, the Commission decides to consider the capital expenditure of Rs.230.10 Crores incurred by MESCOM, for APR of FY16, subject to disallowance if any, as per the results of the prudence check conducted for FY16, indicated in the following para.

The prudence check of capital expenditure and material procurement of MESCOM for FY16:

The Commission has got the Prudence check of capital expenditure for FY16, done through third party verification of the capital works categorized and also the material procurement of MESCOM during FY16. This was taken up in two parts:

- a) Prudence check of execution of the capital works of FY16:
- b) Prudence check of material procurement process of FY16:

a) Prudence check of execution of the capital works of FY16:

The Commission has taken up prudence check of the capital expenditure incurred by MESCOM pertaining to FY16 by engaging the services of **M/s. The Energy and Resources Institute (M/s TERI)** as consultant, being the lowest bidder for the said job, through a transparent process of e-tendering, to evaluate the capital expenditure incurred during FY16 in respect of the categorized works.

M/s TERI has stated that, the capital expenditure of MESCOM for FY16 was Rs.274.13 Crores and the total asset categorized as per the annual accounts was Rs.228.81 Crores. This included the spill over works of previous year as well as new works of FY16. In the total assets categorized for FY16, Plants & Machinery accounted for Rs.73.51 Crores and lines & cables accounted for Rs.146.25 Crores.

M/s TERI has received the list of works data from MESCOM towards categorized works of 11,688 Nos. with Rs.186.93 Crores, in which 550 works belonged to Rs.6 Lakhs and above accounting to 35.3% of the entire assets categorized. The remaining works belonged mainly to a very low value for each work, but with a huge number of 11,138 works. The details of capitalization of assets from the annual audited accounts are as below:

TABLE - 4.20**Details of Assets created during FY16**

Particulars	Amount [Rs. Crores]
Total addition in Gross Fixed Assets (GFA)	228.81
Addition in assets created out of grants and consumer contributions	43.99
Total addition in GFA, excluding those created out of grants and consumer contributions	184.82

M/s TERI has considered a total sample of 215 Nos of works costing Rs.38.04 Crores as against the total works and cost as shown below:

TABLE – 4.21**Selection of samples for prudence check**

Cost Category	Master List		Samples Selected	
	No. of Projects	Actual Cost (Rs. Lakhs)	No. of Projects	Actual Cost (Rs. Lakhs)
Above Rs. 6 Lakhs	550	6615.83	121	3460.2
Rs 3 Lakhs to 6 Lakhs	2450	6173.92	52	297.0
Rs 1 Lakh to Rs 3 Lakhs	8688	5903.71	42	46.5
Total	11688	18693.48	215	3803.86

M/s TERI has stated that, as per the detailed guidelines by KERC, the prudence check was carried out for selected 215 projects by conducting

field visits. The following data was collected on the technical and financial details for the analysis.

- i. Collection of DPRs/estimates (for project objectives, energy savings, cost benefits etc.)
- ii. Details of technical parameters like peak load, monthly energy handled, tail end voltage etc. were collected from the substations & consumer premises.
- iii. Details of finance incurred were collected from respective O&M division & circle offices.

M/s TERI has stated that, the individual works were reviewed by duly verifying the primary/major objective of investment as envisaged in the Detailed Project Report (DPR) / project estimates, spread of planned expenditure, merits of alternatives for the proposed work, details of financing, cost benefit analysis, schedule of implementation and time & cost overrun (with specific reasons) etc. Based on these technical and financial parameters, each of the works was analyzed taking into account the realized benefits and capacity utilization. Thereafter, evaluation of each project was carried out by assigning the score/marks as per the KERC guidelines and concluded with remarks. Based on the analysis carried out, 212 numbers of projects were found to be satisfying the prudence norms and the 3 projects didn't satisfy the prudence norms. Some of the salient features are stated as follows:

TABLE – 4.22

Gist of Prudence check findings for FY16

Particulars		Numbers	Amount in Rs. Crores
Works costing Rs.6 Lakhs and above considered as samples		121	34.602
Works costing between than Rs.6 Lakhs and Rs.3 Lakhs considered as samples		52	2.97
Works costing below Rs.3 Lakhs considered as samples		42	0.462
Works not meeting the norms of prudence	Rs.6 Lakhs and above		
	Rs.6 Lakhs and Rs.3 Lakhs	03	0.1538
	below Rs.3 Lakhs	Nil	
Total works not meeting the norms of prudence as stipulated in the guidelines issued by this Commission and cost		03	0.1538

M/s TERI has furnished the details of works not meeting prudence norms and the works which are conditionally prudent as follows:

TABLE – 4.23
Details of works not meeting prudence norms

Sl. No	Project Name	Cost of project in Rs.Lakh	Remarks
1	Sagara: Sulugodu Drinking Water Supply	4.75	Infrastructure created exclusively for Grama Panchayath water supply system, but at present many illegal IP sets are connected to DTC and actual water supply scheme is not in use from more than a year.
2	Kunchebailu: A/P/S to 35*2 HP IP set inst. of M/s Rajendra Coffee Estate, Gantanaika, Kunchebailu, Jayapura.	5.82	Work was completed in all respects, since the consumer has not installed proposed IP sets, line and transformer was not charged for nearly one year.
3	Ajjampura: Providing quality power supply to IP set of Sri. B. Lingaraju S/O Basappa at Gadirangapura in Shivani Section, Ajjampura sub division under ganga kalyana scheme	4.81	Work was completed in all respect, but, due to non-availability of water, the pump set was not installed and the lines and transformer could not be energised. From the same 25kVA transformer, 2 numbers of un-authorized pump set were found to be connected.

TABLE – 4.24
Details of works which are conditionally prudent

Sl. No	Project Name	Remarks
1	Ishwarakatte and Perara feeders: Formation of new express feeder Iswarakatte and Perara feeders from 220/110/33/11KV MSEZ MUSS	Out of the two new express feeders, Ishwarakatte line was charged and only some load was transferred on this new line from Kaikamba feeder and the present peak load on this new line is 0.85 MW. Perara line was idle charged and presently no load was transferred as it is yet to be completed. HT conductoring work of more than 2 Kms is pending on this feeder.

The summary of works which are having cost overrun as well as time overrun are shown as follows:

TABLE – 4.25
Summary of Works having cost overrun

Particulars	No Cost overrun	Within 25%	26-50%	Above 50%
Rs.6 Lakhs and above	76	15	3	0
Rs.6 Lakhs and Rs.3 Lakhs	52	8	0	1
below Rs.3 Lakhs	36	6	0	1
Total	164	29	3	2

Note: For 17 works, the actual cost of completion was not available.

TABLE – 4.26
Division-wise summary of Works having cost overrun

Division	Cost over-run analysis			
	No over run	<25%	26 - 50%	>50%
Chikkmagalur	6	4	2	2
Kadur	5	3	5	9
Bantwal	18	12	10	4
Mangaluru-1	2	6	4	2
Mangaluru-2	2	7	5	1
Puttur	14	15	7	0
Bhadravathi	3	2	2	1
Shikaripura	-	2	7	1
Sagar	2	5	1	1
Shivamogga	-	2	4	3
Kundapura	4	6	2	-
Udupi	8	10	3	1
Total	64	74	52	25

TABLE – 4.27
Summary of Works having Time overrun

Particulars	No Delay	Within one month	Between one and six months	Above 1Year
Rs.6 Lakhs and above	53	15	4	0
Rs.6 Lakhs and Rs.3 Lakhs	36	33	4	3
below Rs.3 Lakhs	32	12	2	0
Total	164	60	10	3

TABLE – 4.28
Division-wise summary of Works having Time overrun

Division	Time over-run analysis					
	No delay	<1month	1 - 3 months	3 - 6 months	6 - 12 months	>1year
Chikkamagalur	1	3	7	3	-	-
Kadur	22	-	-	-	-	-
Bantwal	20	11	9	2	1	1
Mangaluru-1	13		1			
Mangaluru-2	2	10	1	1	1	
Puttur	17	8	4	4	2	1
Bhadravathi	5	-	1	1	1	-
Shikaripura	8	-	2	-	-	-
Sagar	8			1		
Shivamogga	9					
Kundapura	11		1			
Udupi	9	5	3	2	2	1
Total	125	37	29	14	7	3

The Commission had forwarded the copy of the Report on the Prudence check submitted by the consultant to MESCOM, seeking its views as well as any justification towards the projects termed as non-prudent to be meeting to the norms of prudence to reach the Commission on or before 20th March, 2017.

MESCOM in its replies dated 20th March, 2017 has furnished the justifications on three projects identified as not meeting the prudence norms as indicated below:

1. **Sagara:** Sulugodu Drinking Water Supply

MESCOM's reply: Infrastructure created exclusively for Grama Panchayath water supply system, is presently operational. The 3 Nos IP Sets on this transformer are authorised IP Sets.

The Commission notes that, MESCOM cannot claim IP Sets connected to a water supply TC as authorised installations as the water supply TC would be supplied with 24 Hours of power supply and connecting IP Sets to such TCs would be against the policy of Government, which stipulates power supply of only 6-7 Hrs to IP sets. This project is to be treated as non-prudent. The Commission directs MESCOM to shift the IP Sets to some other TC and make the water supply TC as exclusive installation and report compliance.

2. **Kunchebailu:** A/P/S to 35*2 HP IP set inst. of M/s Rajendra Coffee Estate, Gantanaika, Kunchebailu, Jayapura.

MESCOM's reply: The Transformer and line are charged on 3.2.2017. Power supply could not be charged as the consumer had delayed installing metering equipment.

The Commission notes that, MESCOM has not taken any action over one year and has not even taken initiative to issue notice to the consumer and treat the installation as deemed to have been serviced. For this lapse in the project of MESCOM, it is to be treated as non-prudent.

3. **Ajjampura:** Providing quality power supply to IP set of Sri. B. Lingaraju S/o Basappa at Gadirangapura in Shivani Section, Ajjampura sub division under ganga kalyana scheme.

MESCOM's reply: Work was completed in all respects, but, due to non-availability of water, the pump set was not installed and the lines and transformer could not be energised.

From the same 25kVA transformer, one authorised IP Set is connected and an un-authorised pump set which was connected by the farmer has been disconnected.

The Commission notes that, since, the infrastructure is used for providing power supply to the authorised IP set, the project can be treated as prudent.

In light of the above discussions, the Commission decides that, two works are not meeting norms of prudence check and decides to disallow the weighted average interest and depreciation on the capex of works not meeting the norms of prudence as stated below:

TABLE – 4.29
Details of Amounts disallowed in APR FY16

SI No	Particulars	Amount in Rs. Crores
1	Total cost of categorized works eligible for prudence check	186.93
2	Total cost of the sample works	38.04
3	Cost of sample works in the category of Service connections, not meeting prudence norms (02 work with cost of Rs.4.75+5.82 Lakh)	0.1057
4	Cost of sample works not meeting prudence norms (02 work with cost of Rs.4.75+5.82 Lakh against a sample basket of 12 works with Rs.34 Lakhs in the category of Service connection work escalated to a total size of category of 977 Nos. and total cost of Rs.11.16Crores)	3.47
5	Amount to be disallowed towards works not meeting prudence norms calculated on the basis of weighted average interest & weighted average depreciation on the capex to be disallowed.	0.402

Thus, the Commission decides to deduct an amount of Rs.0.402 Crores towards disallowance of interest and depreciation on the imprudent capital works for FY16 in the revised approved ARR for FY18 as discussed in the subsequent Chapter of this Order.

Some of the general observations and suggestions made by the consultant on the execution of works are listed below.

- a) Most of the projects are taken up due to load growth and for improving the voltage levels. The primary aim of most of these completed projects is to minimize distribution loss and to handle additional load growth.

- b) Most of the grant funded projects are not executed in specified time, which consequently get converted as loan. For those projects, interest has been enforced by the funding agency that has capitalized burden on the consumers.
- c) It was observed that there was either delay in asset categorization of the projects or projects were partially categorized due to various reasons such as non-submission of bills, price variation, liquidated damages & accounting procedures adopted.
- d) For planning of a new project, MESCOM should consider not only the connected load of a particular location, but also the actual recorded peak load of the area which can be accessed through DTC metering.
- e) In some of the distribution transformers, the connected load is more than the rated capacity. Due to this overloading of the transformers leading to increased transformer failures.
- f) In some of the areas of RGGVY scheme, it was observed that feeders are lengthy with very few beneficiaries. The energy consumption pattern is very minimal associated with significant line losses (annual line losses is more than the total energy consumption of the hamlet/villages).
- g) It is also suggested to provide energy efficient lighting schemes for Hamlet electrification village consumers.
- h) To avoid ambiguity and effective utilization of R-APDRP, it is recommended to provide training for all the urban staffs.
- i) In some of the areas of MESCOM, auto re-closers with sectionalizer were installed which has resulted in reduction of interruptions. Such schemes can be implemented on a larger scale in high interruption areas.

- j) DTC metering allows the officials to know the current load and peak load on a particular area whenever they required. But in many places particularly in Shivamogga and Chikkamagalur circle, DTC metering of IP sets are not installed or installed systems are faulty. Hence, MESCOM officials should conduct frequent checks of the performance of DTC metering and ensure their correct operation.

b) Prudence check of material procurement process of FY16

MESCOM is executing the capital works through total turnkey as well as partial turnkey works. In some cases, the agency or the contractor assigned with the partial turnkey would also invest in some of the smaller materials whenever it is necessary. While procuring the materials at large quantities, it is very essential for MESCOM to see that, no stock is kept idle for a longer period and the material procurement is carried out in a prudent manner as per the requirement. The Commission has been instructing the consultants to check the material procurement process in all the ESCOMs along with the prudence check of execution of works.

M/s TERI has stated that, the capital works is mainly divided into two categories.

- a) Main capital works and
- b) general capital works

The "Main Capital works" broadly comprises of the following;

- a) Construction of new sub-station with associated lines and also exclusive lines to link the distribution system.
- b) Augmentation of station capacity and distribution lines capacity.
- c) Service connections such as water supply, GK –IP sets
- d) RGGVY under social responsibility scheme
- e) Pure civil works such as construction of buildings, etc.,

The "General capital works" includes works related to replacement of faulty transformers, breakers, CT's, PT's, Relays, station battery & battery chargers, providing new/additional switchgears, and other associated equipment, etc.

The Main capital works are carried out on total turnkey or Partial turnkey based concept, which are covered under contractor's scope. The procurement of materials for general capital works has been planned by MESCOM.

M/s TERI has made observations on procurement of major materials as follows:

- i. MESCOM is following the procedure of procurement of major materials according to the specified norms. Bulk of the procurement cost is accounted for procurement of extension and improvement works along with augmentation and replacement of faulty transformer and lines.
- ii. For the augmentation and replacement of transformers actual planned works (along with their estimated cost) are given in the MESCOM annual progress works and utilized transformers are reported in the Annual reports.
- iii. Significant portion of investment has been incurred towards the procurement of circuit breakers, CTs', PT's and other auxiliary protection equipment for maintenance.

M/s TERI has stated that, from the prudence check of material procurement of major materials, it was observed that inventory level stocks of conductors, insulators and line supports are maintained at higher level than the required quantities when compared with actual utilization. M/s has discussed this issue with the MESCOM officials, and it was understood that procurement of such items are very tedious and most essential for timely execution of projects, as some of the materials procurement lead time is very high due to market conditions.

The Commission after noting the above discussions:

- i. **Directs MESCOM to take action to make the conditionally prudent works to meet the norms of prudence and furnish compliance.**

- ii. Directs MESCOM to take action to rectify the work termed as not meeting prudence check and report.
- iii. Directs MESCOM to monitor the works, complete and categorize the works within the target time.
- iv. Directs MESCOM to monitor the stock position continuously and plan procurement in stages to avoid keeping huge stock of materials.

4.2.8 Interest and Finance Charges:

a) Interest on Capital loan:

MESCOM's Submission:

MESCOM in its application has claimed an amount of Rs.62.68 Crores towards interest on capital loans drawn from Banks/Financial Institutions for FY16.

Considering the opening balance of loans, new borrowings and the repayment of capital loans during FY16, the weighted average rate of interest on the average loan amount works out to 13.16%.

Commission's analysis and decisions:

The Commission has noted the status of opening and closing balances of capital loans as per the audited accounts for FY16 and format D9 of the filings as shown below:

TABLE – 4.30

Allowable Interest on Loans – FY16

Amount in Rs. Crores	
Particulars	FY16
Opening Balance Secured Loans	442.39
Opening Balance Un-secured Loans	17.64
Total opening balance of loans	460.03
Add: New Loans	120.00
Less: Repayments	102.65
Total loan at the end of the year	477.38
Average Loan	468.70
Allowable Interest on Capital Loans	51.37

As per the audited accounts for FY16, the actual interest on capital loans is Rs.51.37 Crores. MESCOM has claimed interest on capital loans of

Rs.62.68 Crores which includes interest on short term loans. The Commission has been allowing the interest on working capital separately, duly considering the actual interest on short term loans. The actual interest on capital loans as per audited accounts is Rs.51.37 Crores only.

Considering the average loan of Rs.468.70 Crores and an amount of Rs.51.37 Crores incurred towards interest on capital loans, the weighted average of interest works out to 10.96%. The actual weighted average rate of interest is comparable with the prevailing rate of interest for long term loans.

Hence, the Commission decides to allow an amount of Rs.51.37 Crores towards interest on capital loans for FY16.

b) Interest on Working Capital:

MESCOM's Submission:

MESCOM in its application has stated that it has borrowed short term loans and overdrafts to meet its day to day expenditure (working capital) during FY16. As per the audited accounts, MESCOM has incurred an amount of Rs.23.50 Crores towards interest on short term loans/overdrafts during FY16. However, MESCOM in its application under format D9 has claimed an amount of Rs.37.74 Crores an interest on working capital and has sought approval of the Commission for the same.

Commission's analysis and decisions:

As per the audited accounts MESCOM has incurred an interest of Rs.23.50 Crores on short term loans/over drafts for FY16.

As per the MESCOM's replies to the Commission's preliminary observations, it is stated that short term loans are availed at an interest rate of 10% to 10.90% and overdraft at 10.70% during FY16. As decided in the Tariff Order dated 2nd March, 2015 while approving the revised ARR for FY16, the Commission decides to allow working capital loans at a normative interest rate of 11.75% for FY16.

As per the KERC (Terms and Conditions for Determination of Tariff) Regulations, 2006 and amendments thereon, the Commission has computed the allowable interest on working capital for FY16 as follows:

TABLE – 4.31
Allowable Interest on Working Capital for FY16
Amount in Rs. Crores

Particulars	FY16
One-twelfth of the amount of O&M Expenses	28.20
Opening GFA	2082.35
Stores, materials and supplies 1% of Opening balance of GFA	20.82
One-sixth of the Revenue	393.87
Total Working Capital	442.90
Rate of Interest (% p.a.)	11.75
Normative Interest on Working Capital	52.04
Actual interest on WC as per audited accounts for FY16	23.50
Allowable Interest on Working Capital	37.77

The Commission therefore decides to allow an amount of Rs.37.77 Crores towards interest on working capital for FY16.

c) Interest on Consumers' Security Deposits:

MESCOM's Submission:

MESCOM in its application as per audited accounts has claimed an amount of Rs.35.55 Crores towards payment of interest on consumers' security deposits for FY16.

Commission's analysis and decisions:

The Commission notes that, based on the average amount of consumer security deposits, the interest on consumer security deposits amounting to Rs.35.55 Crores claimed by MESCOM works out to a weighted average rate of interest of 8.23%. As per the KERC (Interest on Security Deposit) Regulations, 2005, the interest on consumer deposits is to be allowed as per the bank rate prevailing on the 1st of April of the relevant year. The bank rate as on 1st April, 2015 was 8.50%. The weighted average rate of interest claimed by MESCOM as per the audited accounts is within the applicable bank rate.

Thus, the Commission decides to allow an amount of Rs.35.55 Crores towards interest on consumer security deposits for FY16.

d) Other Interest and Finance charges:

MESCOM has claimed an amount of Rs.1.21 Crores towards other interest and finance charges for FY16, paid to banks / financial institutions as per format D9. As per the audited accounts for FY16, MESCOM has incurred Rs.1.20 Crores as interest and finance charges. The Commission decides to allow the same for FY16.

e) Interest on belated payment of Power Purchase Cost:

MESCOM in its application has claimed an amount of Rs.0.29 Crores towards Interest on belated payment of Power Purchase Cost for FY16. As per the audited accounts, an amount of Rs.0.29 Crores is indicated as interest on power purchase dues payable to KPCL. The Commission has been consistently allowing the interest on working capital as per the norms under MYT Regulations to meet the day to day expenses of the ESCOMs. Hence, there is no justification for claiming interest on power purchase dues separately. Hence, the Commission decides not to allow any interest on power purchase dues in the APR for FY16.

f) Capitalization of Interest and other expenses:

MESCOM in its filing and as per the audited accounts for FY16 has capitalized interest of Rs.1.30 Crores on funds used during construction and Rs.1.02 Crores towards A&G expenses during FY16. The Commission has considered an amount of Rs. 2.32 Crores towards capitalization of Interest and other expenses for computation of APR for FY16.

As per the above discussions, the allowable interest and finance charges for FY16 are as follows:

TABLE – 4.32
Allowable Interest and Finance Charges

Amount in Rs. Crores		
Sl.No.	Particulars	FY16
1.	Interest on Loan capital	51.37
2.	Interest on working capital	37.77
3.	Interest on consumer deposits	35.55
4.	Interest on Power Purchase dues	0.00
5.	Other interest and finance charges	1.20
6.	Less Interest and other expenses capitalized	2.32
	Total interest and finance charges	123.57

4.2.9 Other Debits:**MESCOM's Submission:**

MESCOM, in its application has claimed an amount of Rs.5.03 Crores towards other debits for FY16.

Commission's analysis and decisions:

The Commission notes that as per the audited accounts, the allowable other debits excluding the provision for bad and doubtful debts for FY16 are as detailed below:

TABLE – 4.33
Allowable Other Debits

Amount in Rs. Crores		
SI No	Particulars	FY16
1	Small and Low value items written off	0.08
2	Losses relating to fixed assets	1.89
3	Assets decommissioning cost	0.13
4	Miscellaneous losses and write offs	1.29
5	Bad debts written off excluding provisions	1.07
6	Interest paid to Income Tax Department	0.07
	Total	4.53

Thus, the Commission decides to consider an amount of Rs.4.53 Crores as other debits for FY16.

4.2.10 Net Prior Period Charges:**MESCOM's Submission:**

MESCOM in its application has not claimed Prior Period income/expenses for FY16.

Commission's analysis and decisions:

As per the Audited Accounts for FY16, the prior period debit is Rs.0.53 Crores on account of employee costs, A&G expenses, interest and finance charges and expenses of earlier years. Further the prior period credit of Rs.9.20 Crores is on account of income relating to prior period.

Thus, the Commission decides to consider a net prior period credit of Rs.8.67 Crores for FY16 for the purpose of APR.

4.2.11 Return on Equity:

MESCOM's Submission:

MESCOM in its application has claimed Return on Equity at Rs.76.87 Crores for FY16.

Commission's analysis and decisions:

The closing balances of gross fixed assets along with break-up of equity and loan component and the details of GFA, debt and equity (net-worth) for FY16 as per actual data as per the audited accounts are indicated as follows:

TABLE – 4.34

Status of Debt Equity Ratio for FY16

Amount in Rs. Crores						
GFA (Closing Balance)	Debt (Closing Balance)	Equity (Net- worth) (Closing Balance)	Normative Debt @ 70% of GFA	Normative Equity @ 30% of GFA	%age of actual debt on GFA	%age of actual equity on GFA
1871.52	477.38	351.04	1310.06	561.46	25.51	18.76

From the above table it is evident that the debt and equity amount lie within the amounts as per the normative debt equity ratio of 70: 30 on the closing balances of GFA for FY16.

As per the KERC (Terms and Conditions for Determination of Tariff) Regulations, 2006 and amendments thereon, the Commission has computed the allowable Return on Equity at 15.5% on equity plus the accumulated balance of profit/loss as per audited accounts as at the beginning of the year and also factoring recapitalization of security deposit of Rs.26.00 Crores in compliance with the Orders of the Hon'ble ATE in appeal No.46/2014. The allowable RoE for FY16 is determined as follows:

As per the KERC (Terms and Conditions for Determination of Tariff) Regulations, 2006 and amendments thereon, the Commission has computed the allowable Return on Equity at 15.50% on equity plus reserves and surplus as at the beginning of the year and also factoring

recapitalization of security deposit of Rs.26.00 Crores in compliance with the Orders of the Hon'ble ATE in appeal No.46/2014. The allowable RoE for FY16 is determined as follows:

TABLE – 4.35
Allowable Return on Equity

Amount in Rs. Crores	
Particulars	FY16
Paid Up Share Capital	216.07
Share deposit	36.66
Reserves and Surplus as on 31.03.2015	85.57
Recapitalization of Consumers' security deposit	(26.00)
Total Equity	312.30
Allowable RoE @ 15.50%	48.41

Further, as reported by MESCOM an additional equity of Rs.27.63 Crores has been received during the year from Government of Karnataka. Considering the actual date of receipt of this additional equity, the Commission as per provisions of the MYT Regulations, has determined the allowable return on additional equity as detailed below:

TABLE – 4.36
Return on equity for the additional equity received during FY16

Additional Equity received during FY16	Amount in Crs	Received on	No. of Months	RoE allowed in Rs. Crores
EN 16 PSR 2015 dated 26.06.2015	0.95	10.7.2015	8	0.10
EN 16 PSR 2015 dated 26.06.2015	0.30	10.7.2015	8	0.03
EN 11 PSR 2015 dated 25.08.2015	1.43	8.9.2015	6	0.11
EN 10 PSR 2015 P1 dated 9.11.2015	1.90	27.11.2015	4	0.10
EN 10 PSR 2015 P1 dated 9.11..2015	0.60	27.11.2015	4	0.03
EN 16 PSR 2015 P1 dated 3.12.2015	10.00	15.12.2015	3	0.39
EN 11 PSR 2015 dated 30.12.2015	0.75	8.1.2016	2	0.02
EN 16 PSR 2015 P1 dated 10.2..2016	1.20	24.02.2016	1	0.02
EN 11 PSR 2015 P1 dated 18.2.2016	0.67	5.3.2016	0	0.00
EN 16 PSR 2015 dated 29.02.2016	9.83	10.3.2016	0	0.00
TOTAL	27.63			0.79

Thus, the Commission decides to allow Return on Equity of Rs.49.20 Crores for FY16.

4.2.12 Exceptional Items:

MESCOM in its applications has not claimed any expenses as exceptional items. However, as per the audited accounts a credit amount of Rs.2.70 Crores is indicated as exceptional item.

The Commission notes that, the amount of Rs.2.70 Crores as stated under Note 32 of the audited accounts pertains to income on account of MAT credit entitlement of previous years. Thus, the Commission decides to allow the credit amount of Rs.2.70 Crores as exceptional item in the APR for FY16.

4.2.13 Income tax:

As per the audited accounts, MESCOM has factored Rs.2.31 Crores towards payment of Income Tax for FY16. Further, as per the profit and loss statement, credit entitlement of MAT is indicated as Rs.2.31 Crores. Thus, the allowable tax to be factored in ARR is nullified.

4.2.14 Other Income:

MESCOM's Submission:

MESCOM in its application has claimed an amount of Rs.47.74 Crores as Other Income for FY16.

Commission's analysis and decisions:

As per the audited accounts, the other income is Rs.76.92 Crores for FY16. This includes income from sale of scrap, income from rent, rebate for collection of electricity duty, delayed payment charges from consumers, income relating to prior period and miscellaneous recoveries. The delayed payment charges from consumers amounting to Rs.48.57 Crores are considered as revenue and an amount of Rs.9.20 Crores of income relating to prior period is included in prior period debit/credit. Also an amount of Rs.21.81 Crores pertaining to incentive received for early payment of power purchase bills and an amount of Rs.6.77 Crores being other income related to power purchase which is wrongly included under

revenue head, is considered as other income. Further, as decided in the earlier Tariff Orders, to encourage and bring in financial discipline in timely payment of monthly power purchase bills, the Commission continues to allow 10% of the total incentive amounting to Rs.2.18 Crores on account of early payment of power purchase bills, to be retained by MESCOM for FY16. Further, as per the APR of MSEZ for FY16, the power purchase cost is reckoned as Rs. 7.96 Crores as against Rs. 7.28 Crores factored in the power purchase cost by MESCOM. The Commission has considered the difference of Rs.0.68 Crores as other income to be received by MESCOM from MSEZ.

Thus, the Commission decides to allow an amount of Rs.46.25 Crores as other income for FY16.

4.2.15 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. MESCOM in its filing has reported that an amount of Rs.0.11 Crores has been incurred towards Consumer Relations / Consumer Education for FY16. The Commission decides to allow an amount of Rs.0.11 Crores as expenditure towards Consumer Relations / Consumer Education for FY16.

4.2.16 Carrying Cost on Regulatory Asset:

MESCOM in its application has not claimed any amount of carrying cost on the Regulatory Assets kept by the Commission in its earlier Tariff Orders. The Commission in its Tariff Order dated 12th May, 2014 had treated the unmet gap in revenue of Rs.101.02 Crores as Regulatory asset to be recovered in FY16 and FY17 and also decided to allow carrying cost at 12% per annum on the Regulatory Asset to be assessed at the time of APR of FY16 and FY17.

Accordingly, the Commission had factored Rs.50.50 Crores being the 50% of Regulatory Asset in the ARR of FY16 and allowed it to be recovered in the revised retail supply tariff.

The Commission while computing the revised ARR as per APR of MESCOM for FY16, has arrived at a gap of Rs.396.42 Crores after duly allowing the Carrying cost of Rs.6.06 Crores at 12% per annum on the amount of Regulatory Asset of Rs. 50.50 Crores kept for FY16 and carried forward the gap in revenue to the approved the ARR for FY18 and allows it to be recovered in the retail supply tariff for FY18.

The Commission has considered Regulatory Asset of Rs. 92.25 Crores while approving the ARR of FY17 and the same has been passed on to the consumers in the retail supply tariff for FY17. Hence, no Regulatory Asset is remaining to be recovered after the issue of this Tariff Order.

4.2.17 Revenue for FY16:

MESCOM, in its application has considered Rs.2363.22 Crores as revenue from sale of power from consumers and miscellaneous charges.

The Commission notes that as per the audited accounts for FY16, the revenue from sale of power is Rs. 2691.75 Crores. This amount includes the notional income on account of Regulatory asset/ Truing up subsidy of Rs.348.52 Crores which is not a revenue amount to be considered in real terms.

The incentives amount on account of early payment of power purchase bill amounting to Rs.21.81Crores and other income relating to purchase of power of Rs.6.77 Crores not being the revenue from sale of power to consumers has been included under revenue head of account. Further, Rs. 48.56 Crores being the delayed payment charges from consumers which has been included in the audited accounts under other income, has been factored as a part of revenue.

After factoring in the above aspects, the Commission decides to consider Rs.2363.21 Crores as revenue from sale of power to consumers for the purpose of approval of revised ARR as per the APR of MESCOM for FY16.

4.2.18 Subsidy for FY16:

The Commission in its tariff order dated 2nd March, 2016 has approved tariff subsidy of Rs. 513.12 Crores towards sale of power to BJ/KJ and IP sets

for FY 16 in accordance with the prevailing Government Order. The Commission in computation of APR for FY16 has approved the revised tariff subsidy of Rs.511.02 Crores towards sale of power to BJ/KJ and IP sets for FY 16.

4.3 Abstract of Approved ARR for FY16:

As per the above item-wise decisions of the Commission, the consolidated Statement of revised ARR for FY16 is as follows:

TABLE – 4.37

Approved revised ARR for FY16 as per APR

Sl. No	Particulars	Amount in Rs. Crores		
		FY16		
		As Appd. 02.03.2015	As Filed 30.11.2016	As per APR
1	Energy at Gen Bus (With MSEZ)	5287.58	5027.72	5027.72
2	Transmission Losses in %	3.80%	3.15%	3.43%
3	Energy at Interface in MU	5086.65	4869.12	4869.12
4	Distribution Losses in %	11.25%	11.50%	11.50%
5	Sales in MU			
	Sales to other than IP & BJ/KJ	3227.38	3097.96	3038.92
	Sales to BJ/KJ	12.69	13.78	13.78
	Sales to IP	1191.26	1197.43	1197.43
	Total Sales	4431.33	4309.17	4250.13
6	Revenue from tariff in Rs Crs			
	Revenue from tariff and Misc. Charges	1935.68	1852.20	1852.19
	RE Subsidy to BJ/KJ	6.83	9.25	9.25
	RE Subsidy to IP	506.29	501.77	501.77
	Total Revenue	2448.80	2363.22	2363.21
	Expenditure in Rs Crs			
7	Power Purchase Cost	1767.35	2010.15	2010.15
	Transmission charges of KPTCL	217.21	218.70	218.70
	SLDC Charges	2.52	1.71	1.71
	Power Purchase Cost including cost of transmission	1987.08	2230.56	2230.56

8	Employee Cost		249.24	
	Repairs & Maintenance		33.04	
	Admin & General Expenses		67.41	
	Total O&M Expenses	344.83	349.69	338.46
9	Depreciation	72.37	63.74	64.08
10	Interest & Finance charges			
	Interest on Loans	67.17	62.68	51.37
	Interest on Working capital	51.11	37.74	37.77
	Interest on belated payment on PP Cost	0.00	0.29	0.00
	Interest on consumer deposits	38.30	35.55	35.55
	Other Interest & Finance charges	3.33	1.21	1.20
	Less interest capitalised	2.51	1.30	2.32
	Total Interest & Finance charges	157.39	136.17	123.57
11	Other Debits	0.00	5.03	4.53
12	Exceptional Items			-2.70
13	Net Prior Period Debit/Credit	0.00	0.00	-8.67
14	RoE	61.71	76.87	49.20
15	Taxation/MAT Credit	0.00	2.31	0.00
16	Funds towards Consumer Relations/Consumer Education	0.50	0.11	0.11
17	Other Income	95.97	47.74	46.25
	ARR	2527.91	2816.74	2752.89
18	Surplus of FY14 carried forward	86.00	0.00	0.00
19	Regulatory asset of FY16 & FY17	101.02	0.00	0.00
20	Carrying cost on Regulatory asset of Rs.50.50 crores as per TO dated 02.03.2015	0.00	0.00	6.06
21	Disallowance due to prudence check of capex	1.89		
22	Net Regulatory asset to be recovered in FY17	-92.25		
	Net ARR	2448.80	2816.74	2758.95

- The wheeled energy of 59.04 MU has been considered for computation of distribution losses.

4.3.1 Gap in Revenue for FY16:

As against an approved ARR of Rs.2448.80 Crores, the Commission, after the Annual Performance Review of MESCOM, decides to allow a revised ARR of Rs.2758.95 Crores for FY16. Considering the revenue of Rs.2363.21 Crores, the revenue gap for the year FY16 is Rs.395.74 Crores.

Thus, the Commission decides to carry forward the deficit of Rs.395.74 Crores of FY16 to the ARR for FY18, as discussed in the subsequent Chapter of this Order.