

CHAPTER – 4

ANNUAL PERFORMANCE REVIEW FOR FY16

4.0 GESCOM's Application for APR for FY16:

GESCOM 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. The GESCOM has sought the Annual Performance Review (APR) for FY16 based on the Audited Accounts and approval of a revised ARR thereon.

The Commission in its letter dated 20th December, 2016 had communicated its preliminary observations on the application of the GESCOM. In its letter dated 30th December, 2016, the GESCOM has furnished its replies to the preliminary observations of the Commission. Further, the Commission had sought additional information /details, through a rejoinder, vide its letter dated 10th January, 2017. The GESCOM has furnished its replies in its letters dated 16th and 31st January, 2017.

The Commission in its Multi Year Tariff (MYT) Order dated 6th May, 2013 had approved the GESCOM'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.

As per the application filed by the GESCOM, the Annual Performance Review to revise the Annual Revenue Requirement of the GESCOM for FY16, based on the audited accounts, is discussed in this Chapter.

4.1 GESCOM's Submission:

The GESCOM has submitted its proposals for revision of ARR as per APR for FY16 based on the Audited Accounts as follows:

TABLE – 4.1
ARR for FY16 – GESCOM's Submission

Amount in Rs. Crores

Sl. No	Particulars	As Filed
1	Energy at Gen Bus in MU	8260.75
2	Energy at Interface in MU	7946.02
3	Distribution Losses in %	18.10
	Sales in MU	
4	Sales to other than IP & BJ/KJ	3159.39
5	Sales to BJ/KJ	123.85
6	Sales to IP	3224.55
	Total Sales	6507.79
	Revenue	
7	Revenue from other than IP & BJ/KJ and Misc. Charges	2514.03
8	Tariff Subsidy to BJ/KJ	63.54
9	Tariff Subsidy to IP	1492.13
	Total Revenue	4069.70
	Expenditure	
10	Power Purchase Cost	2971.91
11	Transmission charges of KPTCL	331.53
12	SLDC Charges	2.65
	Power Purchase Cost including cost of transmission	3306.09
13	Employee Cost	312.40
14	Repairs & Maintenance	37.68
15	Admin. & General Expenses	70.99
	Total O&M Expenses	421.07
16	Depreciation	97.62
	Interest & Finance charges	
17	Interest on Loans	89.98
18	Interest on Working capital	99.83
19	Interest on belated payment of PP Cost	126.60
20	Interest on consumer deposits	36.66
21	Other Interest & Finance charges	2.82
22	Less: interest & other expenses capitalised	0.00
	Total Interest & Finance charges	355.89
23	Other Debits	28.09
24	Net Prior period Debit/Credit	33.69
25	Return on Equity	0.00
26	Provision for taxation	0.00
27	Funds towards Consumer Relations/Consumer Education	0.00
28	Other Income	39.31
	Net ARR	4203.14

Considering the revenue of Rs.4069.70 Crores against the net ARR of Rs.4203.14 Crores, the GESCOM has reported a gap in revenue of Rs.133.44 Crores for FY16.

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

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

TABLE – 4.2
Financial Performance of GESCOM for FY16

Amount in Rs. Crores

Sl. No.	Particulars	FY16
	Receipts	
1	Revenue from Tariff and misc. charges	1975.80
2	Tariff Subsidy	1524.97
	Income on account of Regulatory Asset/Truing up Subsidy	577.39
	Total Revenue	4078.16
	Expenditure	
3	Power Purchase Cost	2972.44
4	Transmission charges of KPTCL	331.53
5	SLDC Charges	2.65
	Power Purchase Cost including cost of transmission	3306.62
6	O&M Expenses	422.65
7	Depreciation	102.22
	Interest & Finance charges	
8	Interest on Loans	89.96
9	Interest on Working capital	0.82
	Interest on belated payment of power purchase	225.62
10	Interest on consumer deposits	36.66
11	Other Interest & Finance charges	2.82
12	Less: Interest and other expenses capitalized	0.00
	Total Interest & Finance charges	355.88
13	Other Debits	28.07
14	Net Prior Period Debit/Credit	33.28
15	Other income	39.31
16	Income tax	0.00
	Total Expenditure	4209.41

As per the Audited Accounts, the GESCOM has incurred loss of Rs.131.25 Crores for FY16. The yearly profits / losses reported by the GESCOM in its audited accounts in the previous years are as follows:

TABLE – 4.3
GESCOM's Accumulated Profit / Losses

Particulars	Amount in Rs. Crs
Accumulated losses as at the end of FY10	(216.60)
Profit earned in FY11	61.30
Losses incurred in FY12	(4.62)
Losses incurred in FY13	(188.58)
Profits earned in FY14	37.52
Losses incurred in FY15	(109.86)
Losses incurred in FY 16	(131.25)
Accumulated losses as at the end of FY16	(552.10)

As seen from the above table, the GESCOM has accumulated losses of Rs. 552.10 Crores, as at the end of FY16.

Commission's analysis and decisions:

The Annual Performance Review for FY16 has been taken up duly considering the actual revenue and expenditure as per the Audited Accounts, vis-à-vis 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:

I. Sales other than IP sets:

The Commission in its Tariff Order 2015 dated 02.03.2015 had approved total sales to various consumer categories at 6435.91 MU as against the GESCOM's proposal of 6542.05 MU. The actual sales of the GESCOM as per the current APR filing [D-2 Format] is 6507.78 MU indicating an increase in sales to the extent of 71.87 MU as against the approved sales. There is an increase in sales to LT-categories by 158.61 MU and there is a reduction in sales to HT-categories by 86.74 MU. As against the approved sales of 3172.41 MU to categories other than BJ/KJ and IP sets, the GESCOM has

achieved actual sales of 3174.99 MU, resulting in marginal increase of sales to these categories by 2.58 MU. Further, the GESCOM is stated to have sold 3332.79 MU to BJ/KJ and IP set categories against approved sales of 3263.50 MU resulting in increased sales to these categories by 69.29 MU.

The category-wise sales approved by Commission in its Tariff Order dated 02.03.2015 and the actuals for FY 16 are indicated in the table below:

TABLE-4.4**Approved and Actual Sales for FY16**

Million Units

Category	Approved as per 2015 Tariff Order	Actuals	Difference
LT-2a*	1000.68	1043.01	42.33
LT-2b	9.04	9.64	0.60
LT-3	264.41	274.89	10.48
LT-4b	24.67	2.98	-21.69
LT-4c	0.78	1.28	0.50
LT-5	158.39	166.37	7.98
LT-6	172.10	183.23	11.13
LT-6	174.39	210.84	36.45
LT-7	15.91	17.45	1.54
HT-1	78.72	84.14	5.42
HT-2a	1047.88	1003.50	-44.38
HT-2b	66.10	70.32	4.22
HT-2c	21.74	13.27	-8.47
HT-3a & b	118.70	76.19	-42.51
HT-4	12.07	12.87	0.80
HT-5	6.83	5.01	-1.82
Sub total	3172.41	3174.99	2.58
BJ/KJ**	124.13	108.24	-15.89
IP	3139.37	3224.55	85.18
Sub total	3263.50	3332.79	69.29
Grand total	6435.91	6507.78	71.87

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

**BJ/KJ break-up as per replies furnished to observations.

The major categories contributing to the reduction in sales with respect to the estimates are HT industries (44.38 MU), HT-3(42.51 MU) and LT -4(b) (21.69 MU). Further, it is observed that there is increase in sales to LT-6(Street Lights) (36.45 MU), LT-2a (42.33 MU) and IP sets (85.18 MU).

The observations of the Commission on sales for FY16 and the replies furnished by the GESCOM are discussed below:

- i. The GESCOM was directed to analyze the reasons for reduction in sales to HT industries (44.38 MU), HT-3(42.51 MU) and LT-4(b) (21.69 MU) and increase in sales to LT-6 SL (36.45 MU), LT-2a (42.33 MU) and IP sets (85.18 MU).

The GESCOM in its replies has stated that sale to HT-2a has decreased due to consumers opting for open access and in the case of HT-3 and LT-4b, the sales depend on water availability and usage and that HT-5 sales depend on usage.

The Commission notes that the above statements made by the GESCOM are not substantiated by any data analysis.

- ii. In order to analyze reduction in HT sales, the GESCOM was requested to furnish the data of sales to HT2(a) and HT2(b) categories along with the consumption from open access / wheeling for the period 2011-12 to 2014-16 in the specified format.

The GESCOM in its replies to the preliminary observations has furnished the details. But it has not furnished the breakup of wheeled energy between HT-2a and HT-2b. In the absence of break up, the Commission has attributed the wheeled energy to HT-2a category.

- iii. The GESCOM was asked to furnish the number of installations shifted from HT2a, HT2b and HT-4 categories to HT-2c category and the corresponding sales figures for FY14, FY15 and FY16, in order to estimate the impact of shifting of these installations.

The GESCOM has furnished the above information in its replies to the rejoinder and the Commission has considered the same for the purpose of analysis.

- iv. The GESCOM was requested to furnish, the breakup of installations for FY16 to FY18, consuming less than or equal to 18 units and above 18

units to assess the sales in BJ/KJ category in the specified format and the same was furnished by the GESCOM.

II. Sales to IP-sets :

- i) The Commission in its Tariff Order dated 2nd March, 2015, had approved the specific consumption of IP-sets at 9,503 units/installation/annum for FY16, whereas as per the data of IP-sets' consumption submitted by the GESCOM in its Tariff filing for APR of FY16, the specific consumption works out to 10,131 units / installation / annum, which corresponds to an increase in the specific consumption by 628 units/installation / annum. The total IP-set consumption reported for FY16 as per the Format D-2 is 3,224.55 MU, whereas the IP-set consumption approved by the Commission is 3,139.37 MU. The difference in consumption between the approved and reported for FY16 is 85.18 MU. Thus, the quantum of sales to the IP-sets has exceeded the approved quantum by 2.7 per cent and the specific consumption has also increased by 6.6 per cent for FY16.
- ii) Further, the Commission had approved 3,38,881 as the number of IP-set installations for the FY16, but, the actual number of installations existing, as reported by the GESCOM, is 3,30,873. The difference in the number of installations is 8,008 and this corresponds to decrease in the number of installations by about 2.4 per cent as against the approved number of installations for the FY16.
- iii) The Commission in its Tariff Order dated 2nd March, 2015, had directed the GESCOM to furnish to the Commission, the month-wise IP-set consumption based on the specific consumption arrived at as per the data from 11 kV feeders' energy meter, in respect of exclusive agricultural feeders segregated under NJY scheme, for the reason that the energy consumed by the IP-sets can be accurately measured at the 11 kV level at the substations after allowing the losses prevailing in the distribution system, as per the following format prescribed by the Commission.

TABLE-4.5

Format for IP set Consumption as per feeder-wise data

Month	Name of Sub-division	No. Segregated Agricultural Feeders in the subdivision	Monthly Consumption in MU as recorded in all the agricultural feeders at the substations pertaining to the 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 & LT) & any other loads if any	No. of IP sets connected to the agricultural feeders in the subdivision	Average consumption of IP / month (specific cons in units /IP/month)	Total no of IP sets in the subdivision (as per DCB)	Total sales of IP sets in MU
1	2	3	4	5	6=(4-5)	7	8	9	10=8*9
April to March	Subdivision-1 Subdivision-2 Subdivision....								

iv) The Commission has been following this methodology since 2015 (Tariff Order dated 12th May, 2014, for FY15), considering the fact that ESCOMs have bifurcated the 11 KV feeders into separate rural and agricultural feeders. Earlier to the year 2015, in the absence of universal metering of IP-set installations, the Commission had allowed the ESCOMs to assess the IP-set consumption, based on the specific consumption arrived at from the readings of the sample meters fixed to the distribution transformer Centers (DTCs) feeding predominantly IP-set loads. The sample was selected in such a way that, per O&M section, two to three DTCs feeding predominantly IP-set loads, were covered so that in each subdivision about ten such DTCs were covered. As per the methodology, the overall IP- set consumption for the Company was being assessed on the basis of specific consumption arrived at from the meter reading data of such sample meters provided to the DTCs.

v) As per the IP-set data for FY13 submitted to the Commission by the GESCOM, total 388 DTCs covering 3,872 IP-sets of the total 2,77,707 IP-sets in its jurisdiction was considered for assessing the overall IP-set consumption for the Company. The Commission notes that the sample IP-sets considered to arrive at the specific consumption and in-turn to assess the total IP-consumption for FY13, based on the sample DTCs meter readings, constituted only 1.4 per cent. This means a smaller number of IP-sets were considered while computing the total list consumption as compared to a large sample (47.34% of the feeders in March 2016) being considered now after segregating the feeders

under NJY. Therefore, there is a better representation of samples in terms of metered consumption for arriving at the specific consumption and the overall IP-set consumption, as compared to the methodology followed earlier.

- vi) Accordingly, the GESCOM was directed to furnish month-wise, 11 kV feeder-wise IP-set consumption based on the energy meter reading data in respect of agriculture feeders segregated under NJY scheme, duly deducting the prevailing distribution loss in 11 kV lines distribution transformers and LT system, to the Commission.

However, the GESCOM has not submitted the month-wise IP-set consumption based on the feeder-wise meter reading data of 11 kV lines from the segregated agricultural feeders regularly, to the Commission. Also, the GESCOM did not submit, in its Tariff filing, the data indicating as to the amount of loss in 11 kV lines, distribution transformers & LT system, has been deducted from the gross consumption to arrive at the net IP sets consumption and the methodology adopted to arrive at the loss figures for FY 16.

- vii) The Commission, in its preliminary observations, had raised the issue of increase in both sales and the specific consumption of IP-set category and had also directed the GESCOM to furnish necessary month-wise feeder-wise consumption data as per the energy recorded in the segregated agricultural feeders, in support of its claims of IP-set consumption for the FY16.
- viii) The GESCOM, in its reply to the preliminary observations, has submitted the consolidated month-wise IP-set consumption data in respect of the exclusive agricultural feeders segregated under NJY but it has not indicated the basis for arriving at the energy losses in feeders while computing the IP-set consumption. Further, in its data furnished by the GESCOM, many inconsistencies have been observed in the subdivision-wise computation and the company's overall IP-set consumption.

- ix) Accordingly, the Commission's observations were communicated to the GESCOM through rejoinders vide Commission's letter dated 10th January, 2017, directing it to rectify the discrepancies pointed out duly computing the overall IP-set consumption on the basis of specific consumption arrived at from the meter readings of segregated agricultural feeders by deducting the allowable losses in its distribution system.
- x) In response, the GESCOM has submitted the consolidated month-wise IP-set consumption data in respect of the exclusive agricultural feeders segregated under NJY. On a verification of the said data, it is observed that the percentage of distribution loss in the feeders'/LT lines reckoned to compute the net IP-set consumption, is not based on actual calculation considering the distribution network sketches. Further, there were inconsistencies in the IP-set consumption data of agricultural feeders.
- xi) Subsequently, the GESCOM vide its communication No. GESCOM / CEE(CP)/SEE(MIS)/EE(RA)/AEE-1/16-17/54000-04, dated 31st January 2017, has submitted the revised IP-set consumption for FY16 as 3,167.91 MU, based on segregated agricultural feeders duly revising the energy losses instead of 3,224.55 MU claimed in the Format D-2 of its Tariff application. On a verification of the month-wise IP-set consumption based on the segregated agricultural feeders' meter readings, submitted by the GESCOM, it is found that the overall IP-consumption is 3,167.91 MU. This results in a difference in consumption to an extent of 56.64 MU for which the GESCOM did not submit any justification in support of it. **Hence, the Commission decides to disallow the consumption of 56.64 MU out of 3,224.55 MU claimed by the GESCOM in its Tariff filing for APR of FY16.**
- xii) In view of the above, the Commission decides to approve 3,167.91 MU towards sales to IP-sets on the basis of the revised meter readings data of the segregated agricultural feeders, reported for the FY16, as against 3,224.55 MU claimed by the GESCOM, in its Tariff filing dated 30th November, 2016, after disallowing sales to an extent of 56.64 MU,

In the light of the above discussion, the Commission approves total sales of 6451.15 MU for FY16 against the category wise sales as indicated in the following:

TABLE-4.6
Approved Sales for FY16

Category	Million Units	
	Approved as per T.O.2015	Approved-as per APR for FY16
LT-2a*	1000.68	1043.01
LT-2b	9.04	9.64
LT-3	264.41	274.89
LT-4b	24.67	2.98
LT-4c	0.78	1.28
LT-5	158.39	166.37
LT-6	172.10	183.23
LT-6	174.39	210.84
LT-7	15.91	17.45
HT-1	78.72	84.14
HT-2a	1047.88	1003.50
HT-2b	66.10	70.32
HT-2c	21.74	13.27
HT-3a & b	118.7	76.19
HT-4	12.07	12.87
HT-5	6.83	5.01
Sub total	3172.41	3174.99
BJ/KJ**	124.13	108.24
IP	3139.37	3167.91
Sub total	3263.50	3276.15
Grand total	6435.91	6451.15

4.2.2 Distribution Losses for FY16:

GESCOM's Submission:

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

Range	FY16
Upper limit	17.00%
Average	16.50%
Lower Limit	16.00%

GESCOM, in its annual accounts, has reported the distribution losses at 18.10% for FY16 as under:

1	Energy at Interface Points in MU	7936.21
2	Total sales in MU including wheeled energy	6507.80
3	Distribution losses as a percentage of input energy at IF points	18.00%

Commission's analysis and decisions:

The distribution loss of 18.00% reported by GESCOM is above the targeted losses fixed by the Commission for FY16 by 1.50% percentage points. Further, as per the revised consumption of IP sets as discussed in the preceding paragraphs of this Chapter, the distribution loss works out to 18.71%.

In the above context, the Commission notes that the overall actual distribution losses of 18.71% exceeds the approved upper limit of losses for FY16. Hence, in terms of the MYT Regulations, the penalty for exceeding the targeted loss levels is computed below:

TABLE-4.7

Penalty for exceeding targeted loss levels in FY16

Particulars	FY14
Actual input at IP points as per audited accounts in MU	7936.21
Retail sales as per audited accounts in MU	6451.15
Percentage distribution losses	18.71%
Target upper limit of distribution loss	17.00%
Increase in percentage points loss	1.71%
Input at target loss for actual sales in MU	7772.47
Increase in input due to increase in distribution losses in MU	163.74
Average cost of power purchase at IF points in Rs./unit	4.00
Penalty for Increase in power purchase cost due to increased losses	65.67

Thus, the Commission decides to levy penalty of Rs.65.67 Crores for exceeding the distribution loss levels targeted for FY16. This has been factored in the APR for FY16.

4.2.3 Power Purchase for FY16:

GESCOM Submission:

The Commission in its Tariff order dated 30th March,2016, had approved source-wise quantum and cost of power purchase for FY16. GESCOM, in its

application has submitted the details of actual power purchase for FY16 for the purpose of Annual Performance Review. The details of power purchase is detailed hereunder:

TABLE – 4.8
Power Purchase for FY16- Approved and Actuals

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	1247.89	122.27	0.98	1995.04	144.9	0.73	-747.15	-22.63	0.25	-37.45	-15.62
KPCL-Thermal Stations	2932.32	1196.35	4.08	3147.2	1220.36	3.88	-214.88	-24.01	0.20	-6.83	-1.97
CGS	2258.97	693.05	3.07	1995.75	594.62	2.98	263.22	98.43	0.09	13.19	16.55
Major IPPs	83.92	35.09	4.18	82.09	33.92	4.13	1.83	1.17	0.05	2.23	3.45
IPPs -Minor (NCE Projects)	350.67	138.64	3.95	587.31	221.19	3.77	-236.64	-82.55	0.19	-40.29	-37.32
Other States Projects	0.95	4.85	51.05	21.96	3.95	1.80	-21.01	0.90	49.25	-95.67	22.78
Short /Medium term	560.17	283.74	5.07	182.79	95.96	5.25	377.38	187.78	-0.18	206.46	195.69
Section 11	475.31	241.46	5.08				475.31	241.46	5.08		
UI Charges	80.66	24.37	3.02				80.66	24.37	3.02		
Transmission Charges (KPTCL & PGCIL)		459.00			409.55			49.45			
SLDC Charges (POSOOC & SLDC)		2.65			4.23			-1.58			
Energy Balancing	225.47	96.05	4.26								
Others Charges	28.04	9.10									
TOTAL	8244.38	3306.62	4.01	8012.14	2728.71	3.41	232.24	577.38	0.60	2.90	21.16

* Source : D1 format

Commission's analysis and decisions;

1. The actual power purchase for FY16 as filed by GESCOM for approval of Annual Performance Review is 8244.38 MU amounting to Rs.3306.62 Crores, as against the approved quantum of 8012.14MU amounting to

Rs.2728.71 Crores. This represents a reduction in the quantum of power purchase to an extent of 232.24 MU and an increase in the cost by Rs.577.38 Crores.

2. As against the approved quantum of 8012.13 MU, the actual power purchased by GESCOM is 8244.38 MU for **FY16**, which is about **2.90 %** more 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 shortfall in supply from sources of power like KPCL Hydel, KPCL Thermal and RE/NCE to an extent of:

TABLE-4.9
Shortfall in Supply of Power from KPCL/ RE Sources

Source of Generation	Energy Difference (shortfall) between actual and approved in MU	Cost Difference between actual and approved in Rs Cr.
KPCL Hydel	-747.15	-22.63
KPCL Thermal	-214.88	-24.01
RE/NCE	-236.64	-82.55

To make good the shortfall from the conventional /RE sources, the GESCOM has sourced power from un-requisitioned surplus power from CGS and major IPPs apart from purchases through short-term / medium-term procurement besides procurement under Section 11 of the EA,2003 to a tune of 560.17 MU and 475.31 MU respectively, at a cost of Rs.283.74 Crores and Rs.241.46 Crores respectively. GESCOM has incurred an additional cost Rs.577.38 Crores towards meeting the overall deficit in the availability of power, resulting in an increase in per unit cost by 60 Paise.

- ii. The change in the source-wise mix of supply, reconciliation of energy and its cost among the ESCOMs have resulted in higher average power purchase cost of the GESCOM at the rate of Rs.4.01 per KWh as against the approved rate of Rs.3.41 per KWh.

4. To ensure proper accounting of energy and its cost, the GESCOM is directed to reconcile the inter-ESCOM energy exchanges and its costs every month. It shall collect/pay the amounts due to from other ESCOMs out of the tariff subsidy received from the Government of Karnataka, with a view to avoid accumulation of large balances under Inter-ESCOMs Receivable/ Payable accounts.
5. 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
6. The Commission therefore directs the SLDC, the KPCL and the GESCOM to take appropriate action immediately to implement intra-state ABT and to host the details thereof, on their respective websites.

The Commission decides to approve the power purchases of 8244.38 MU at a cost of Rs.3306.62 Crores, for the purpose of Annual Performance Review for FY16.

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

GESCOM submission:

The GESCOM in its replies to the rejoinder has filed the details of RPO compliance for solar and non-solar RPO for 2015-16 as indicated below:

TABLE-4.10

RPO Compliance by GESCOM for FY16

Energy Purchased-MU	8244.385
Non-Solar energy required to be procured at 5% target-MU	412.22
Non-Solar energy actually procured -MU	560.95
Non-Solar compliance as percentage of energy purchased	6.80%
Solar energy required to be procured at 0.25% target-MU	20.61
Solar energy actually procured -MU	45.28
Solar compliance as percentage of energy purchased	0.55%

The Commission in its preliminary observations had noted that the quantum of energy purchased is indicated as 8244.385 MU in page 110 of the filing, whereas the same is indicated as 8260.75 MU in the A-1 Format. Therefore, the GESCOM was directed to reconcile the figures. Further for validating the RPO compliance, the Commission had directed the GESCOM to furnish the data as per prescribed format, duly reconciling the data with the audited accounts.

The GESCOM, duly reconciling the data with energy balance account, in list replies have furnished the following data:

TABLE-4.11**Non-solar RPO Compliance by GESCOM:**

No.	Particulars	Quantum in MU	Cost- Rs. Crs.
1	Total Power Purchase quantum from all sources	8244.385	3291.27
2	Non-solar Renewable energy purchased under PPA route at Generic tariff including Non-solar RE purchased from KPCL	289.736*	110.24
3	Non-solar Short-Term purchase from RE sources, excluding sec-11 purchase	107.124	56.04
4	Non-solar Short-Term purchase from RE sources under sec-11	164.086	86.46
5	Non-solar RE purchased at APPC	8.920	2.76
6	Non-solar RE pertaining to green energy sold to consumers under green tariff	0	0
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]	569.866	255.50
11	Non-Solar RE accounted for the purpose of RPO [No.10- No.5-No.6-No.8]	560.946	252.74
12	Non-solar RPO complied in % [No11/No1]*100	6.804	

* As per D-1 Format, the total non-solar RE purchased is 310.94 MU. After deducting 8.92 MU of purchases under APPC, the Commission has reckoned 302.02 MU for the purpose of Non-solar RPO.

TABLE-4.12
Solar RPO Compliance by GESCOM

No.	Particulars	Quantum in MU	Cost- Rs. Crs.
1	Total Power Purchase quantum from all sources	8244.385	3291.270
2	Solar energy purchased under PPA route at Generic tariff including solar energy purchased from KPCL	28.998	22.53
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	16.282	17.270
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]	45.280	39.80
12	Solar energy accounted for the purpose of RPO [No.11- No.5-No.6-No.8]	45.280	39.80
13	Solar RPO complied in % [No.12/No.1]*100	0.549	

The Commission has considered the data and the explanation submitted by the GESCOM. The Commission has approved total input energy of 8244.38 MU for FY16 in its APR. Thus, the GESCOM was required to purchase 412.22 MU of Non-solar energy and 20.61 MU of solar energy to meet its RPO targets. Based on the information furnished as per the revised D-1 Format, the Commission notes that GESCOM has purchased 573.23 MU of Non-Solar energy (302.02 MU of Non-Solar energy under PPA after deducting 8.92 MU purchased under APPC, 164.09 MU under Sec-11 and 107.12 MU under Short-term purchase, including purchase from Tata Power Trading Company). Thus the GESCOM has achieved 6.95% of non-solar RPO.

Further, as per the revised D-1 Format, the Solar energy purchased by GESCOM is 45.28 MU resulting in achievement of 0.55% of solar RPO for

FY16. Thus, GESCOM has over-achieved its non-solar and solar RPO targets by 1.95 percentage points and 0.30 percentage points respectively.

4.2.5 Operation and Maintenance Expenses:

GESCOM's Submission:

In its application, GESCOM, as per its provisional accounts has sought approval of O&M expenditure of Rs.421.07 Crores for FY16. The break-up of O&M expenses are as follows:

TABLE – 4.13

O & M Expenses – GESCOM's submission

Amount in Rs. Crores

Particulars	FY16
Employee cost	312.40
Administrative & General Expenses	70.99
Repairs and Maintenance	37.68
Total O & M Expenses	421.07

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 – 4.14

Approved O&M Expenses as per Tariff Order dated 02.03.2015

Particulars	FY16
No. of installations as per actuals as per Audited Accts	2812302
Weighted Inflation Index	6.69%
CGI based on 3 Year CAGR	4.86%
Actual O&M expenses for FY13 - in Rs. Crs.	364.39
Total approved O&M Expenses for FY16 – in Rs .Crs.	416.86

The Commission in its preliminary and subsequent observations, on the application of GESCOM, had sought the details of certain expenses booked under A & G expenses during FY16 and has noted the replies furnished. As per the audited accounts of GESCOM has incurred actual O&M expenses of Rs.422.65 Crores for FY16.

The Commission notes that the actual O&M expenses reported by GESCOM are more than the approved O&M expenses by Rs.1.58 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-4.15**Computation of Allowable Inflation Rate**

Year	WPI	CPI	Compo site 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) at 4.13% of the number of installations considering the actual number of installations as per the audited accounts upto FY16.
- The weighted inflation index (WII) at 7.71% as computed above.
- Efficiency factor at 2% as considered in the earlier two control periods.

Thus, the normative O & M expenses for FY16 are computed as follows:

TABLE-4.16
Normative O & M Expenses

Particulars	FY16
No. of Installations As per actuals as per Audited Accts	2754376
Weighted Inflation Index	7.71%
Consumer Growth Index (CGI) based on 3 Year CAGR	4.13%
Base year O & M expenses for FY13 excluding P&G contribution - Rs. Crores	272.62
O&M Index= O&M (t-1) *(1+WII+CGI-X)- Rs. Crores.	350.74

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.

The GESCOM has incurred an amount of Rs.60.38 Crores towards contribution to the Pension and Gratuity Trust for FY16. Considering the request of the GESCOM to treat the pension and gratuity contribution as uncontrollable O & M expenses and as per the provisions of the MYT Regulations, the computation of the allowable O & M expenses for FY16, is as under:

TABLE – 4.17
Allowable O & M Expenses for FY16

Amount in Rs. Crores		
Sl. No.	Particulars	FY16
1	Normative O & M expenses	350.74
2	Additional employee cost (uncontrollable O & M expenses)	60.38
	Allowable O & M expenses for FY16	411.12

Thus, the Commission decides to allow an amount of Rs.411.12 Crores as O&M expenses for FY16.

4.2.6 Depreciation:

GESCOM's Submission:

The GESCOM in its application, as per the provisional accounts for FY16, has claimed an amount of Rs.97.62 Crores as the net depreciation, after deducting an amount of Rs.30.14 Crores towards the depreciation on account of assets created out of consumers' contributions / grants as per Accounting Standards (AS) – 12.

Commission's analysis and decisions:

The Commission notes that, as per the audited accounts of GESCOM for FY16, the amount of depreciation factored is Rs.132.36 Crores and depreciation withdrawn on assets created out of consumer contribution and grants is Rs.30.14 Crores.

In accordance with the provisions of the KERC (Terms and Conditions for Determination of Tariff) Regulations, 2006 and amendments thereon, the Commission has determined the depreciation for FY16. Based on the opening and closing balances of gross blocks of fixed assets for FY16 and the depreciation as per the audited accounts, the weighted average rate of depreciation works out to 4.68%.

Further, the Commission as per the Accounting Standards (AS) – 12, has recognized an amount, of Rs.30.14 Crores of depreciation on assets created out of consumer contribution / grants.

The computation of asset-wise depreciation is as follows:

TABLE – 4.18
Allowable Depreciation for FY16

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
Buildings	31.55	48.77	1.46
Civil	5.89	6.69	0.07
Plant & M/c	471.63	526.67	23.95
Line, Cable Network	2082.46	2448.34	106.27
Vehicles	5.38	5.38	0.19
Furniture	4.28	4.81	0.20
Office Equipment	2.91	6.01	0.22
Sub Total	2604.10	3046.67	132.36
Less: Depreciation on account of Assets created out of grants/Consumer contribution			30.14
Net Depreciation			102.22

Based on the above, the Commission decides to allow a net depreciation of Rs.102.22 Crores for FY16.

4.2.7 Capital Expenditure for FY16:

a) Capital Investments-GESCOM Submission

As per the tariff application filed by the GESCOM, it has incurred a capex of Rs. 299.70 Crores, as against the approved capex of Rs.376 Crores, for FY16. The details of category-wise capital expenditure submitted by GESCOM for FY16 is shown below:

Table –4.19
Capital expenditure of GESCOM for FY16:

Amount in Rs. Crores

Sl.No.	Details of Works	Approved capex for FY16	Actual Expenditure for FY16
1	33 kV Sub-Stations, 33 kV Line works & Augmentation of 33 kV Sub-Station.	25	5.92
2	RGGVY Works	75	0
3	RAPDRP Works	0	13.6
4	Non-RAPDRP Works	0	36.55
5	Reconductoring works	18	3.2
6	DTC Metering works	2	4.22
7	Water Supply Works.	5	19.84
8	Additional DTC's Works.	9	16.31
9	Replacement failed 11 kV Transformers & 33 kV Power Transformers.	5	4.99
10	Replacement of MNR Meters.	5	7.26
11	Providing ETV Meters.	1	0
12	Providing HT Metering Cubicles for Ring Fencing.	0.5	0
13	Service Connection Works.	17	4.38
14	System Improvement (SI) Works (33kV Link Line / Express Feeders) & (11kV Link Line / Express Feeders).	22	10.54
15	Nirantara Jyothi Works.	0	33.6
16	a) Major Replacement in Sub-Stations & Lines, R&M to 33kV Stations & Lines, 11kV DTC's & Lines.	10.5	0
17	Civil Engineering works.	8	2.92
18	IT Initiatives	5	0.27
19	HVDS works.	75	0
20	Providing ABC, UG Cables & RMUs.	1	0
21	SCADA Works	1	0
22	SCP & TSP Works.	3.5	1.81
23	Ganga Kalyan Scheme works.	25	41.41
24	T&P Articles.	0.5	1.07
25	Replacing of Electro Magnetic Meters by Static Meters	1	5.03
26	Metering of IP / Street Lights/ BJ & KJ Sets.	1	1.30
27	Providing Infrastructure to Regularization of Unauthorized IP Sets.	30	15.64
28	R.E. General Works.	20	0
29	Prevention of Electrical Accident & Safety.	5	60.96
30	Electrification of Rehabilitation Villages.	5	0
31	LT Line Conversion, Fixing of SMC Box to DTC and Replacement of Broken Poles.	0	7.76
32	Energization of IP Sets General Electrification of HB/JC's and KJ's	0	1.12
33	Providing Times Switches to Street Lights.	0	0
34	Shifting of Meters to Outside Premises.	0	0
35	Taluka Wise Segregation.	0	0
Total		376	299.70

Commission's analysis and decision:

It is seen from the above data that the overall capital expenditure of the GESCOM for FY16 is within the approved capex of Rs.376 Crores. But, in respect of a few major categories of works, the GESCOM has exceeded its approved capex as indicated below:

- i. In respect of “**DTC Metering, water supply works and additional DTCs works**”, the GESCOM has achieved capex exceeding the approved figures. The GESCOM has not explained the reasons for such excess capex. The GESCOM is yet to conduct energy audit in all the feeders covering all the areas in its jurisdiction. The Commission has been directing GESCOM to complete DTC metering and conduct DTC-wise energy audit and reduce the distribution losses. The GESCOM in its replies to the preliminary observations has stated that, the energy audit of 11 kV feeders has been conducted and DTC-wise energy audit is also being conducted and the information in Format A and B is being submitted to the Commission.
- ii. In respect of “**Nirantara Jyothi Works**”, the GESCOM has achieved a capex of Rs.33.60 Crores. The GESCOM in its replies to the preliminary observations has stated that, there is a saving in the energy sent out in the segregated feeders as compared to the original mixed feeder, the failure rate of distribution transformers has come down, interruptions have been reduced, there is reduction in the distribution loss level and the voltage at the tail end has improved.
- iii. In respect of “**System Improvement (SI) Works (33kV Link Line / Express Feeders) & (11kV Link Line / Express Feeders)**”, the GESCOM has achieved a capex of Rs.10.54 Crores as against the approved capex of Rs.22 Crores. The GESCOM should note that, the system improvement works are to be completed on priority as they help in network strengthening and expansion as well as loss reduction and improvement of system reliability. The GESCOM in its replies to the preliminary observations has stated that, the works which were expected to be

completed during FY16, have spilled over to FY17, due to which the capex could not be achieved as expected.

- iv. In respect of "**Ganga Kalyan Scheme works**", the GESCOM has incurred a capex of Rs.41.41 Crores as against the approved capex of Rs.25 crores. The GESCOM in its replies to the preliminary observations has stated that, the excess capex achievement is attributed to the target of completion given by the Government of Karnataka.
- v. In respect of "**Providing Infrastructure to Regularization of Unauthorized IP Sets**", the GESCOM has achieved capex of only Rs.15.64 Crores against the approved capex of Rs.30 Crores. Creation of infrastructure to regularize the Un-authorized IP Sets should have been taken up on priority by the GESCOM to provide reliable and quality power supply to the IP Set consumers and reduce the losses. But, GESCOM has not achieved its own target of capex. The GESCOM in its replies to the preliminary observations, has stated that, around 4342 Nos of IP set applicants have not paid the charges, but, the GESCOM is taking action to complete all the infrastructure works, in order to reduce the losses and improve the reliability.
- vi. In the case of capex on "**Prevention of Electrical Accident & Safety**", the GESCOM has achieved a capex of Rs.60.96 Crores as against the approved capex of Rs.5 Crores. The GESCOM in its replies to the preliminary observations, has stated that, the budget re-appropriation has been approved by the GESCOM Board with a provision of Rs.103.06 Crores for prevention of accidents, based on which the capex has been achieved.

In light of the above discussions, the Commission accepts the reasons furnished by the GESCOM for excess capex achieved in respect of the above categories of works. Further, recognizing the fact that the GESCOM's capex is well within the approved limit of Rs.376 Crore for FY16, the Commission decides to consider the capital expenditure of Rs.299.7 Crores as indicated by the GESCOM for APR of FY16, subject to

disallowance if any, as per the prudence check conducted for FY16, indicated in the following paragraphs.

b) The prudence check of capital expenditure and material procurement of GESCOM 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 GESCOM during FY16. This was taken up in two parts:

- i. Prudence check of execution of the capital works of FY16:
- ii. Prudence check of material Procurement process of FY16:

i. Prudence check of execution of the capital works of FY16:

The Commission has taken up prudence check of the capital expenditure incurred by GESCOM for the period FY16, by engaging the services of **M/s. Deloitte Touche Tohmatsu India Private Limited (M/s. Deloitte)** as consultant, being the lowest bidder for the said job, through a transparent process of e-tendering to evaluate the prudence of the capital expenditure incurred by the GESCOM for FY16, in respect of categorized works.

M/s Deloitte, after necessary validations on the data made available by GESCOM, has found 3542 numbers of capital works amounting to a total cost of Rs.20864 Lakh for the prudence check of capital expenditure for FY16. The break-up of the works is shown below:

TABLE -4.20
Summary of categories of works

Type of work	Number of works	Cost of works Rs.Lakh
Ganga Kalyan	1,102	1,981
E&I	753	4,263
NJY	151	7,238
RAPDRP	77	2,000
Civil	290	1,500
Meter	106	2,127
UNIP	151	245
Emergency	47	67
Others	865	1,443
Total	3,542	20,864

M/s Deloitte has selected the samples as per the guidelines and the requirements specified in the bid documents. The summary of sampling process is stated as follows:

TABLE -4.21
Summary of sampling process for conducting prudence check

Category	Master List		Sample List	
	Number of works	Cost of works Rs.Lakh	Number of works	Cost of works Rs. Lakh
Work costing above Rs.6 Lakh	305	15,602	127	12,744
Work costing between Rs.3 – 6 Lakh	279	1,115	58	302
Work costing below Rs.3 Lakh	2,958	4,147	24	57
Total	3,542	20,864	209	13,102

Also, the comparison of the samples considered with respect to the category of works in the master list is as below:

TABLE -4.22
Category wise details of the works in the selected sample

Type of work	Master List of Works		Sample List of Works	
	Number of works	Cost of works [Rs. Lakh]	Number of works	Cost of works [Rs. Lakh]
Ganga Kalyan	1,102	1,981	15	86
E&I	753	4,263	40	2,337
NJY	151	7,238	64	6,821
RAPDRP	77	2,000	26	1,528
Civil	290	1,500	12	515
Meter	106	2,127	28	1,251
UNIP	151	245	6	25
Emergency	47	67	2	4
Others	865	1,443	16	535
Total	3,542	20,864	209	13,102

M/s Deloitte has stated that, based on the prudence check guidelines and the scope of the work as per the bid document, a methodology consisting of **five**

stages was adopted for conducting prudence check of capital expenditure of GESCOM as mentioned below:

Stage I: Collection of master list of projects from GESCOM through KERC:

In the initial stage, the collection of the full list of categorized works for FY16 from GESCOM with the assistance of KERC carried out. The list provides various details such as category of capital work, actual date, cost of completion etc.

Stage II: Preparation of representative sample of projects as per KERC guidelines:

In the second stage, with the master list as base, projects were arranged in the descending order of cost and the samples were prepared as per KERC guidelines and the terms mentioned in the letter of award.

Stage III: Collection of data for selected projects as per KERC format from GESCOM:

In the third stage, the project specific details were collected in the detailed format which was already prepared by KERC. Wherever required, copies of various supporting documents were also collected such as approved estimates, detailed work award, C register entries etc.

Stage IV: Physical inspection of projects:

The fourth stage, comprised of the field visit and verification exercise which was conducted to analyse the achievement of objectives after the execution of the capital works are actually met or not.

Stage V: Analysis of data and preparation of report:

In the final stage, the projects were assigned a score based on various parameters such as planning, implementation, achievement of primary objectives and achievement of secondary objectives. Based on the score obtained by each project, the project's status of meeting with the norms of prudence was calculated by following guidelines issued by KERC.

As per the report submitted by the consultant, the following are the salient features of prudence check:

TABLE -4.23**Gist of Prudence check findings for FY16**

Particulars		Numbers	Amount in Rs. Lakhs
Works costing Rs.6 Lakhs and above considered as samples for validation		127	12,744
Works costing between than Rs.6 Lakhs and Rs.3 Lakhs considered as samples		58	302
Works costing below Rs.3 Lakhs considered as samples		24	57
Works not meeting the norms of prudence	Rs.6 Lakhs and above	01	153.14
	Rs.6 Lakhs and Rs.3 Lakhs	Nil	-
	below Rs.3 Lakhs	Nil	-
Total works not meeting the norms of prudence		01	153.14

The following project was found to be not meeting the norms of prudence:

TABLE -4.24**Details of non-prudent project**

No.	Division	Work	Category	Actual Cost Rs. Lakh	Actual Completion	Categorization
1	Raichur Rural	Establishment of Mamadoddi substation	E&I	153.14	-	31-03-16

Further, M/s Deloitte has stated that, there are 30 numbers of projects, which include establishment of 33/11kV substation, Water works and DTC metering treated as conditionally prudent due to reasons stated below:

- 1. Establishment of Idapnur substation in Raichur Rural division at a cost of Rs.526.79 Lakh;**

The substation was commissioned on 17th November, 2016. However, in spite of the substation not being commissioned in FY16, the amount corresponding to expenditure passed in FY16 was categorized by the division. This categorisation is to be reversed and posted to the relevant year.

2. **Establishment of Thappanadagagi substation in Shorapur subdivision of Yadgir division at a cost of Rs.317.79 Lakh (DWA No 42365-74 Dt 19.01.2012);**

It was noticed that, out of the two 5 MVA transformers present in the substation, only one was utilized, while the second one was on idle charge. The station currently has only two outgoing feeders with the station peak load of only 2 MW. GESCOM should utilise the 2nd transformer, by drawing 11kV lines to the nearest load centres to reap the benefit.

3. **A-42890/09.10.15: Water Works in Bidar division at a cost of Rs.2.91 Lakh;**

The infrastructure (extension of HT line and installation of transformer) was created to supply power to the water service connection is currently idle. The bore well has now been connected from a newly extended LT line emanating from another nearby feeder. GESCOM should monitor such cases and should make use of the infrastructure to avoid wasteful expenditure.

4. **27 Number of DTC Metering works at 5 divisions at a total cost of Rs.851.96 Lakh;**

In FY14, GESCOM had started wide-spread implementation of DTC metering with AMR using thread-through meters. During the field inspections, it was observed that though the DTC Meters with modems are working satisfactorily and energy audit reports are being compiled, the reports are not being utilized to their full potential. GESCOM needs to take necessary action to make use of the energy audit reports.

Some of the other findings of the prudence check are summarized below:

TABLE -4.25

Summary of Works having cost overrun

Particulars	Within 10%	10-25%	Above 25%
Rs.6 Lakhs and above	1	0	5
Rs.6 Lakhs and Rs.3 Lakhs	7	0	1
below Rs.3 Lakhs	8	2	6

TABLE -4.26

Summary of cost over-run of projects in the category of works

Type of Work	No cost overrun	Cost overrun up to 10%	Cost overrun of 10-25%	Cost overrun of 25-50%	Cost overrun beyond 50%
Ganga Kalyan	9	5	-	-	-
E&I	23	1	-	-	1
NJY	4	-	-	-	5
RAPDRP	3	-	-	-	-
Civil	6	-	-	-	-
Meter	12	-	-	-	-
UNIP	3	-	1	-	-
Emergency	2	-	-	-	-
Others	7	2	1	-	-
Total	69	8	2	-	6

TABLE -4.27

Summary of Works having Time overrun

Particulars	Time overrun up to 3 months	Time overrun of 3-6 months	Time overrun beyond 6 months
Rs.6 Lakhs and above	1	0	5
Rs.6 Lakhs and Rs.3 Lakhs	8	2	3
below Rs.3 Lakhs	4	0	1

TABLE - 4.28

Summary of time over-run of projects in the category of works

Type of work	No time overrun	Time overrun up to 3 months	Time overrun of 3-6 months	Time overrun beyond 6 months
Ganga Kalyan	7	4	2	2
E&I	20	2	-	1
NJY	26	-	-	5
RAPDRP	10	-	-	1
Civil	6	-	-	-
Meter	25	1	-	-
UNIP	5	1	-	-
Emergency	2	-	-	-
Others	5	5	-	-
Total	106	13	2	9

The Commission has forwarded the copy of the Report on the Prudence check to the GESCOM for its views/comments and justification if any on the non-prudent works as meeting to norms of prudence on or before 20th March, 2017. But, GESCOM has not furnished the replies as sought by the Commission.

The Commission after verifying the project termed as not meeting the prudence norms by the consultant, has decided to disallow the capex and the weighted average interest and weighted average depreciation is disallowed 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	208.64
2	Total cost of the sample works	131.02
3	Cost of sample works not meeting prudence norms (01 work with cost of Rs.48.59 Lakh) in E& I category	1.5314
4	Cost of sample works not meeting prudence norms (01 work with cost of Rs.153.14Lakh against a sample basket of 40 works with Rs.2337 Lakhs in the category of E&I works of 753 Nos. of works and total cost of Rs.4263 Lakhs)	2.793
8	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.	0.343

Thus, the Commission decides to deduct an amount of Rs.0.343 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.

ii. Prudence check of material Procurement process of FY16:

The GESCOM has been executing capital works both on turnkey as well as partial turnkey contracts. In the process, the GESCOM procures major

materials like, distribution transformers, poles and conductor etc. and issues them to the partial turnkey contractor for carrying out the labour contract work as per award. The contractor would also invest on some of the smaller materials associated with the works viz., cross arm, bolt & nuts, earthing materials etc., if necessary.

In view of the fact that, a large quantity of major materials is being procured by the ESCOMs, the Commission decided to review material procurement process of major materials as a part of prudence check carried out, to ensure that, the procurement is carried out in a cost effective manner without compromising with the operational needs. Hence, the consultant was directed to look into the procurement process of the GESCOM, and analyze the process.

The Commission suggests that, the GESCOM has to take steps to utilize the materials in a systematic way and reduce inventory by planning the delivery schedule of the material to synchronize with the work execution. The inventory level should be around 25% of the consumption, at any given time, to avoid idle stock.

M/s Deloitte has stated that, the analysis of procurements in FY16 revealed that a considerably higher level of inventory with respect to actual requirement seems to be maintained in the case of

- BEE 3 star rated Distribution Transformers
- Insulators
- Cross Arms
- Transformer Oil

In some of the divisions, it was revealed that there was an increase in inventory due to non-completion / abandonment of NJY works by some contractors. For example, in Humnabad, there were a significantly large number of new distribution transformers in the store. Some of materials with huge stock are shown below:

TABLE –4.30
Inventory levels and utilization

Material	Unit	Average Inventory	Utilization	Inventory as % of utilization
RCC Pole 9 Mtrs.long	Nos.	4,383	9,815	45%
RCC Pole 9.5 Mtr long	Nos.	58	108	54%
Pin Insulator Shell 11 KV	Nos.	76,254	2,292	3327%
45 KN Disc Insulator	Nos.	65,821	1,642	4009%
Guy Strain Insulator No. 08	Nos.	3,687	2,612	141%
Weasel ACSR Conductor	Kms	3,029	8,753	35%
Rabbit ACSR Conductor	Kms	2,535	7,400	34%
DTC 25 KVA 3 Star	Nos.	3,172	875	362%
DTC 63 KVA 3 Star	Nos.	1,947	313	622%
DTC 100 KVA 3 Star	Nos.	583	92	634%
Cross Arm - 2 Pin	Nos.	8,198	1,676	489%
Cross Arm - 4 Pin	Nos.	20,612	28,298	73%
Transformer oil	KL	929	608	153%

It may be noted that, the critical items may have been overstocked if their order lead time is higher, so as to avoid affecting the continuity of supply. Therefore, mere existence of higher stock of some of the items may not by itself be treated as a proof of inefficiency.

Prudence of procurement costs:

The study of purchase costs in FY16 reveals that on an overall basis, the purchases were at an average of 0.29% below the Schedule of Rates. However, it has to be noted that the ESCOMs are still using the Schedule of Rates prepared in December, 2014 as the reference, which has not been updated further in the last two years.

GESCOM has gone for open tendering under e-procurement mode for all the purchases, except in case of the orders placed with Govt. owned firms, for which exemption is made under KTPP. Though purchase under KTPP exemption for Govt. owned firms may be Govt. policy, the purchase rates in such cases are mutually negotiated and seem to be at higher side.

Probably, some savings can be realised if competitive procurement of transformers is conducted.

The Commission based on the above discussions on the prudence check of GESCOM:

- a) Directs, GESCOM to properly plan, execute and monitor the projects to see that, there will not be any slippage in terms of time overrun, cost overrun and also, the works are completed and categorized to reap the objectives set out by the company. Also, there should not be any instance, by which, the works will have to be treated as not meeting the prudence norms.
- b) Directs, GESCOM to analyze and bring 30 numbers of projects to meet prudence norms, which have been treated as conditionally prudent as mentioned above.
- c) Directs, GESCOM to monitor the material procurement, deployment to the field and track the stock position to see that, no idle stock of materials is kept for a longer period.

4.2.8 Interest and Finance Charges:

a) Interest on Capital loan:

GESCOM's Submission:

The GESCOM in its application has claimed an amount of Rs.89.98 Crores towards interest on capital loans drawn from Banks/Financial Institutions for FY16.

Commission's analysis and decisions:

The status of opening and closing balances of capital loans as per the audited accounts for FY16 and Format D-9 as filed by the GESCOM, is shown below:

TABLE – 4.31
Allowable Interest on Loans – FY16

Particulars	Amount in Rs. Crores	
	FY16	
Opening balance of capital loans	695.28	
Add: New Loans	133.18	
Less: Repayments	63.65	
Total loan at the end of the year	764.81	
Average Loan	730.05	
Allowable Interest on Capital Loans	89.96	

As per the audited accounts of the GESCOM for FY16, the actual interest on both capital and short term loans is Rs.90.79 Crores. The interest on capital loan is Rs.89.96 Crores and interest on short term loan is Rs.0.83 Crores. Considering the average loan of Rs.730.05 Crores and an amount of Rs.89.96 Crores incurred towards interest on capital loans, the weighted average of interest works out to 12.32%.

Thus, the Commission decides to allow an amount of Rs.89.96 Crores towards interest on capital loans for FY16.

b) Interest on Working Capital:

GESCOM's Submission:

The GESCOM in its application has claimed an amount of Rs.99.83 Crores as interest on short term loans and overdrafts for FY16.

Commission's analysis and decisions:

As per the audited accounts and replies to the preliminary observations of the Commission, the GESCOM has incurred an interest of Rs.0.83 Crores on short term loans for FY16. The Commission notes that the GESCOM has claimed the interest on working capital on normative basis.

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 for Distribution and Retail sale of electricity) Regulations, 2006 and amendments thereon, the Commission has computed the allowable interest on working capital for FY16 as follows:

TABLE – 4.32
Allowable Interest on Working Capital for FY16

Amount in Rs. Crores	
Particulars	FY16
One-twelfth of the amount of O&M Expenses	34.26
Opening GFA	2610.55
Stores, materials and supplies 1% of Opening balance of GFA	26.11
One-sixth of the Revenue	579.17
Total Working Capital	639.54
Rate of Interest (% p.a.)	11.75
Normative Interest on Working Capital	75.15
Actual interest on WC as per audited accounts for FY16	0.83
Allowable Interest on Working Capital	37.98

The Commission, therefore, decides to allow an amount of Rs.37.98 Crores towards interest on working capital for FY16.

c) Interest on Consumers' Security Deposits:

GESCOM's Submission:

The GESCOM in its application as per provisional accounts has claimed an amount of Rs.36.66 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.36.66 Crores claimed by the GESCOM as per its audited accounts works out to a weighted average rate of interest of 8.80%. As per the KERC (Interest on Security Deposit) Regulations, 2005, the interest on consumers' security 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 the GESCOM as per the

audited accounts is above the applicable bank rate. Hence, the allowable interest on consumers' security deposits is limited to 8.50% of the average amount of deposits held by the GESCOM for FY16.

Thus, the Commission decides to allow an amount of Rs.35.43 Crores towards interest on consumers' security deposits for FY16.

d) Other Interest and Finance charges:

The GESCOM has claimed an amount of Rs.2.82 Crores towards other interest and finance charges for FY16, paid to banks / financial institutions. The Commission decides to allow the same for FY16.

Interest on belated payment of Power Purchase Cost:

The GESCOM in its application has claimed an amount of Rs.126.60 Crores towards Interest on belated payment of Power Purchase Cost for FY16. As per the audited accounts, an amount of Rs.225.62 Crores is indicated as interest on power purchase dues. 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. Therefore, there is no justification for claiming interest on power purchase dues separately. The Commission notes that, inspite of providing adequate working capital to meet its power purchase commitments, GESCOM has been incurring substantial amount of interest on belated payment of power purchase bills in the present and previous years. The Commission directs GESCOM to initiate action to settle power purchase bills in time by availing the working capital and avoid any interest burden thereon. Hence, the Commission decides not to allow any interest on power purchase dues in the APR for FY16.

The total allowable interest and finance charges for FY16 are as follows:

TABLE – 4.33

Allowable Interest and Finance Charges

Amount in Rs. Crores		
Sl. No.	Particulars	FY16
1.	Interest on Loan capital	89.96
2.	Interest on working capital	37.98
3.	Interest on consumers' security deposits	35.43
4.	Interest on Power Purchase dues	0.00
5.	Other interest and finance charges	2.82
	Total interest and finance charges	166.19

4.2.9 Other Debits:

GESCOM's Submission:

The GESCOM, in its application has claimed an amount of Rs.28.09 Crores towards other debits for FY16.

Commission's analysis and decisions:

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

TABLE – 4.34
Allowable Other Debits

Amount in Rs. Crores		
SI No	Particulars	FY16
1	Compensation for death, injuries and damages	2.17
3	Assets decommissioning cost	(1.21)
4	Miscellaneous losses and write offs	0.20
	Total	1.16

Thus, the Commission decides to consider an amount of Rs.1.16 Crores as other debits for FY16.

4.2.10 Net Prior Period Charges:

GESCOM's Submission:

GESCOM in its application has claimed Prior Period credit of Rs.33.69 Crores for FY16.

Commission's analysis and decisions:

As per the Audited Accounts for FY16, the prior period expenses (debit) are shown as Rs.42.75 Crores on account of employee costs, under-provision of depreciation, A&G expenses, interest and finance charges and expenses in the previous years. Further the prior period income (credit) of Rs.9.47 Crores is on account of income relating to prior period.

The Commission therefore decides to allow a net prior period credit of Rs.33.28 Crores for FY16.

4.2.11 Return on Equity:**GESCOM's Submission:**

The GESCOM in its application has not claimed any Return on Equity 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 the actual data as per the audited accounts are indicated as follows:

**TABLE – 4.35
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
3053.29	764.81	202.67	2137.30	915.99	25.05	6.64

From the above table it is evident that the amounts of debt equity are within the normative debt equity amounts in of 70:30 ratio on the closing balances of GFA for FY16.

As per the KERC (Terms and Conditions for Determination of Tariff for Distribution and Retail sale of electricity) Regulations, 2006 and amendments thereto, the Commission has computed the allowable Return on Equity at 15.5% on equity plus reserves and surplus as at the beginning of the year and also factoring the recapitalization of consumers' security

deposit of Rs.22.00 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 – 4.36
Allowable Return on Equity

Amount in Rs. Crores	
Particulars	FY16
Paid Up Share Capital	305.14
Share deposit	372.02
Accumulated losses as on 01.04.2015	(420.84)
Recapitalization of Consumers' security deposit	(22.00)
Total Equity	234.32
Allowable RoE @ 15.50%	36.32

Further, as reported by the GESCOM an additional equity of Rs.92.05 Crores has been received during the year from Government of Karnataka. Considering the actual date of receipt of this additional equity as reported and as per the documents furnished by the GESCOM, the Commission as per provisions of the MYT Regulations has determined the allowable return on additional equity as detailed below:

TABLE-4.37
Return on equity for the additional equity received during FY16

Additional Equity received during FY16	Amount in Rs. Crores	Date of Receipt	No. of Months Equity put to use	RoE allowed Rs. Crores
EN 11 PSR 2015 dated 25.08.2015	20.00	9.9.2015	6	1.55
EN 16 PSR 2015 P1 dated 3.12.2015	15.00	15.12.2015	3	0.58
EN 13 PSR 2015 dated 10.12.2015	22.05	29.12.2015	3	0.85
EN 11 PSR 2015 dated 30.12.2015	10.00	8.1.2016	2	0.26
EN 11 PSR 2015 P1 dated 18.02.2016	10.00	5.3.2016	0	0.00
EN 11 PSR 2015 dated 29.02.2017	15.00	10.03.2016	0	0.00
TOTAL	92.05			3.24
Return on Equity allowed on Additional Equity Infusion in FY16				3.24

Thus, the Commission decides to allow Return on Equity of Rs.39.56 Crores for FY16.

4.2.12 Income Tax:

GESCOM, in its application has not factored any Income Tax liability for FY16. Hence, the Commission has also not considered any income tax liability in the APR for FY16.

4.2.13 Other Income:

GESCOM's Submission:

The GESCOM in its application has claimed an amount of Rs.39.31 Crores as Other Income for FY16.

Commission's analysis and decisions:

As per the audited accounts, the other income is Rs.39.31 Crores for FY16. This amount includes income from sale of scrap, income from rent, rebate for collection of electricity duty, income relating to prior period, and miscellaneous recoveries. Also an amount of Rs.17.00 Crores pertaining to incentive received for early payment of power purchase bills is considered as other income. Further, as decided in the earlier Tariff Orders, to encourage and bring in financial discipline by ensuring timely payment of monthly power purchase bills, the Commission continues to allow 10% of the total incentive amounting to Rs.1.70 Crores towards early payment of power purchase bills, to be retained by GESCOM for FY16.

Thus, the Commission decides to allow an amount of Rs.37.61 Crores as other income for FY16.

4.2.14 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. The GESCOM in its filing has not claimed any expenditure for FY16. Hence, the Commission

has not considered any expenditure towards Consumer Relations / Consumer Education for FY16.

4.2.15 Carrying Cost on Regulatory Asset:

GESCOM in its application has not claimed any amount towards carrying cost on the Regulatory Assets kept by the Commission in its earlier Tariff Orders. The Commission in its Tariff Order dated 12.05.2014 had kept an unmet gap in revenue of Rs.151.73 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 APRs of FY16 and FY17.

Accordingly, the Commission had factored Rs.75.87 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 in allowing the Carrying cost of Rs.9.10 Crores at 12% per annum on the Regulatory Asset of Rs. 75.87 Crores kept for FY16, and carried forward the gap in revenue to the ARR of FY18 and recover in the retail supply tariff for FY18.

4.2.16 Revenue for FY16:

The GESCOM, in its application has considered Rs.4069.70 Crores as revenue from sale of power from consumers and miscellaneous charges and Regulatory income. As per the audited accounts for FY16, the revenue from sale of power is Rs. 4078.16 Crores. However, as discussed earlier, the sale to IP sets is reckoned as 3167.91 MU instead of 3224.55 MU, a reduction of 56.64 MU. Based on the approved CDT of Rs.4.55 per unit, an amount of Rs.25.77 Crs is deducted from the earlier approved revenue from sale to IP Sets. Also, the Commission has not considered the notional regulatory income of Rs.577.39 Crores factored by the GESCOM in its audited accounts for FY16 as the same is not actually realized by GESCOM during FY16.

Accordingly, the Commission decides to consider Rs.3475.00 Crores as revenue from sale of power to consumers in the approval of revised ARR as per APR of GESCOM for FY16.

4.2.17 Subsidy for FY16:

The Commission in its tariff order dated 2nd March, 2016 has approved tariff subsidy of Rs. 1494.70 Crores towards sale of power to BJ/KJ and IP sets for FY16 in accordance with the prevailing Government Order. The Commission in computation of APR for FY16 has approved the revised tariff subsidy of Rs.1499.20 Crores towards sale of power to BJ/KJ and IP sets for FY16.

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 – 4.38
Approved revised ARR for FY16 as per APR

Amount in Rs. Crores

Sl. No	Particulars	FY16		
		As Appd. 02.03.2015	As filed 30.11.2016	As per APR
1	Energy at Gen Bus in MU	8012.14	8260.75	8244.38
2	Transmission Losses in %	3.80%	3.81%	3.93%
3	Energy at Interface in MU	7707.66	7946.02	7936.21
4	Distribution Losses in %	16.50%	18.10%	18.71%
5	Sales in MU			
6	Sales to other than IP & BJ/KJ	3172.40	3159.39	3175.00
7	Sales to BJ/KJ	124.13	123.85	108.24
8	Sales to IP	3139.37	3224.55	3167.91
11	Total Sales	6435.90	6507.79	6451.15
	Revenue at existing tariff in Rs Crs			
12	Revenue from tariff and Misc. Charges	1941.17	2514.03	1975.80
13	Tariff Subsidy for BJ/KJ	66.29	63.54	57.80
14	Tariff Subsidy for IP	1428.41	1492.13	1441.40
15	Total Existing Revenue	3435.87	4069.70	3475.00
	Expenditure in Rs Crs			
16	Power Purchase Cost	2393.33	2971.91	2972.44
17	Transmission charges of KPTCL	331.53	331.53	331.53
18	SLDC Charges	3.85	2.65	2.65

	Power Purchase Cost including cost of transmission	2728.71	3306.09	3306.62
19	Employee Cost		312.4	
20	Repairs & Maintenance		37.68	
21	Admin & General Expenses		70.99	
	Total O&M Expenses	416.86	421.07	411.12
22	Depreciation	105.04	97.62	102.22
	Interest & Finance charges			
23	Interest on Loans	100.20	89.98	89.96
24	Interest on Working capital	72.19	99.83	37.98
25	Interest on belated payment on PP Cost	0.00	126.60	0.00
26	Interest on consumer deposits	38.45	36.66	35.43
27	Other Interest & Finance charges	0	2.82	2.82
28	Less : interest capitalised	8.00	0.00	0.00
	Total Interest & Finance charges	202.84	355.89	166.19
29	Other Debits	0.00	28.09	1.16
18	Net Prior Period Debit/Credit	0.00	33.69	33.28
30	Return on Equity	61.49	0.00	39.56
31	Provision for taxation	0.00	0.00	0.00
32	Funds towards Consumer Relations/Consumer Education	0.50	0.00	0.00
33	Less : Other Income	50.00	39.31	37.61
	ARR	3465.44	4203.14	4022.54
34	Surplus/Deficit		-133.44	-547.54
35	Surplus for FY14 carried forward	43.37	0.00	0.00
36	Carrying Cost on Regulatory asset of FY13 to be recovered in FY16 & FY17	151.74	0.00	9.10
37	Net of Disallowance on account of prudence check of capex and incentives for loss reduction in FY14	14.99		0.00
38	Regulatory asset carried forward to FY17	152.94		0.00
39	Less : Penalty for excess losses beyond target loss levels			65.67
40	Net ARR	3435.87	4203.14	3965.97

4.3.1 Gap in Revenue for FY16:

As against an approved ARR of Rs.3435.87 Crores, the Commission, after the Annual Performance Review of GESCOM, decides to allow a revised ARR of Rs.3965.97 Crores for FY16. Considering the revenue of Rs.3475.00 Crores, the deficit in revenue of Rs.490.97 Crores is determined for the year FY16.

The Commission decides to carry forward the deficit of Rs.490.97 Crores of FY16 to the proposed ARR for FY18 as discussed in the subsequent Chapter of this Order.