

CHAPTER – 4

ANNUAL PERFORMANCE REVIEW FOR FY19

4.0 BESCOM's Application for APR for FY19:

The BESCOM has filed its application on 28th November, 2019, for Annual Performance Review (APR) of FY19, based on the Audited Accounts and for approval of the revised Annual Revenue Requirement and Determination of Retail Supply Tariff for FY21.

The Commission, in its letter dated 11th December, 2019, had communicated its preliminary observations to the application. The BESCOM, has submitted its replies on 21st December, 2019, to the Commission's preliminary observations.

The Commission, in its Order dated 14th May, 2018, had approved BESCOM's revised Annual Revenue Requirement (ARR) of Rs.19236.16 Crores for FY19, including the carry forward gap of FY17. The revised Annual Revenue Requirement (ARR) of the BESCOM under APR for FY19, based on the Audited Accounts, is discussed in this Chapter.

4.1 BESCOM's Submission:

BESCOM has submitted its proposals for Annual Performance Review and for revision of ARR for FY19, based on the Audited Accounts as follows:

TABLE – 4.1
APR for FY19 – BESCOM's Submission

Sl. No.	Particulars	Amount in Rs. Crores	
		As approved in Tariff Order dt.14.05.2018	As Filed
1	Energy at Generation Bus-in MU	33261.05	32960.38
2	Transmission Losses of KPTCL in %	3.08%	3.70
3	Energy at Interface Points with KPTCL - in MU	32235.61	31742.35
4	Distribution Losses in %	12.25%	12.54%
	Sales in MU:		
5	Sales to other than IP Set & BJ/KJ in MU	21035.86	20388.86
6	Sales to BJ/KJ	127.68	171.29
7	Sales to IP Sets	7123.21	7202.32

Sl. No.	Particulars	As approved in Tariff Order dt.14.05.2018	As Filed
	Total Sales in MU	28286.75	27762.47
	Revenue in Rs. Crores		
8	Revenue from tariff and Misc. Charges	16513.75	16790.00
9	Revenue from Subsidy to BJ/KJ	86.82	115.96
10	Revenue from Subsidy to IP Sets	2635.59	2632.78
	Total Revenue	19236.16	19538.74
	Expenditure in Rs Crores:		
11	Power Purchase Cost including PGCIL Charges	14457.09	17160.31
12	Transmission charges of KPTCL	1528.66	1539.27
13	SLDC Charges	15.03	15.03
	Power Purchase Cost including cost of transmission:	16000.78	18714.61
14	Employee Cost		1513.41
15	Repairs & Maintenance		122.69
16	Admin, & General Expenses		347.00
	Total O&M Expenses	1654.99	1983.10
17	Depreciation	440.68	530.18
	Interest & Finance charges:		
18	Interest on Loans	415.16	373.05
19	Interest on Working capital	360.75	366.41
20	Interest on belated payment on PP Bills	0.00	0.00
21	Interest on consumer deposits	246.94	210.56
22	Other Interest & Finance charges	11.63	11.52
23	Less: interest & other expenses capitalized	-86.00	-118.25
	Total Interest & Finance charges:	948.48	843.29
24	Other Debit/ Extraordinary Items	0.00	19.72
25	Net Prior Period Debit/Credit	0.00	0.00
26	Return on Equity	179.13	143.51
27	Provision for taxation	0.00	9.30
28	Funds towards Consumer Relations/Consumer Education	1.00	0.00
29	Less: Other Income	-223.00	-479.97
	ARR	19002.06	21,763.74
30	Deficit for FY17 carried Forward	-234.10	0.00
	Net ARR	19236.16	21,763.74
31	Surplus / (-) Deficit for FY19	0.00	2224.99

Considering the Revenue Requirement of Rs.21,763.74 Crores, BESCOM has reported a revenue deficit of Rs.2224.99 Crores for FY19.

4.2 BESCOM's Financial Performance as per Audited Accounts for FY19:

An overview of the financial performance of BESCOM for FY19 as per its Audited Accounts is given below:

TABLE – 4.2
Financial Performance of BESCOM for FY19

Amount in Rs. Crores		
Sl. No.	Particulars	FY19
	Receipts	
1	Revenue from Tariff and misc. charges	19538.74
2	Other income	584.65
3	Total Revenue	20123.39
	Expenditure	
4	Power Purchase including transmission charges	18714.60
5	Other Operating Expenses	128.87
6	Employee Benefit Expenses	1364.83
7	Finance Cost	802.09
8	Depreciation	530.18
9	Other Expenses	337.10
10	Exceptional Items	9.21
11	Current Tax	9.30
12	Deferred Tax liability	221.11
13	Total Expenses	22117.29
14	Net loss before movement of Regulatory Asset	-1993.90
15	Net Movement in Regulatory Deferral account balance	2078.67
16	Net Profit	84.77

As per the Audited Accounts, BESCOM has indicated a net profit of Rs.84.77 Crores for FY19, after considering Regulatory deferral income of Rs.2078.67 Crores.

The profits / losses reported by BESCOM in its audited accounts in the previous years, are as follows:

TABLE – 4.3
BESCOM's Accumulated Profits / Losses

Particulars	Rs. In Crores
Accumulated losses as at the end of FY15	(-)457.77
Profits for FY16	108.01
Profits for FY17	77.20
Profits for FY18	84.77
Profit for FY19	84.77
Restated balance upto FY18	(-)44.65
Accumulated losses as at the end of FY19	-147.67

As per the Audited Accounts of BESCOM the balance of the accumulated profits/ Losses is Rs. (-)147.67 Crores, as at the end of FY19.

As per the provisions of the MYT Regulations, the Commission has taken up the Annual Performance Review of FY19, duly considering the actual revenue and expenditure as per the Audited Accounts vis-à-vis the revenue/expenditure approved by the Commission, in its Tariff Order dated 14th May, 2018. The item-wise review of expenditure and the decisions of the Commission thereon are discussed in the following paragraphs:

4.2.1 Sales for FY19:

A. Sales -other than IP Sets:

The Commission's observations on sales for FY19 and BESCOM's Reply thereon are discussed below:

1. Data Inconsistency:

- i. At page-11 of the Tariff Petition, for FY19, the sales to BJ/KJ consuming less than 40 units/month/installation is indicated as 169.56 MU, whereas as per D-2 Format the sales to this category is shown as 171.29 MU. Similarly, for installations consuming more than 40 units per month per installations, it is indicated as 47.20 MU at page-11 and as 45.46 MU in D-2 Format. BESCOM shall reconcile the data and accordingly correct the sub-total and Total figures.

BESCOM, in its replies has submitted that the data as per D-2 Format is correct, as LT-1 Metered category units correspond to sales to BJ/KJ installations consuming less than 40 units/month/installation and that at page -11, this was included under BJ/KJ installations consuming more than 40 units/month/installation.

- ii. The number of installations and consumption under Open Access in Table 1.7 and Table 1.8 are different. The data shall be reconciled.

BESCOM has submitted that Table 1.7 in the Petition includes wheeled energy under captive mode, whereas Table 1.8 excludes the Same.

The Commission has taken note of the above replies furnished by BESCOM and has considered the data accordingly.

2. The Commission, in its Tariff Order, 2018, dated 14.05.2018, had approved total sales to various consumer categories at 28286.75 MU as against the BESCOM's proposal of 27993.29 MU. The actual sales of BESCOM, as per the current APR filing [D-2 Format] is 27762.47 MU, indicating a shortfall in the sales to the extent of 524.28 MU as compared with the approved sales. The category-wise sales approved by Commission and the actuals as filed for FY19 are as shown in the following Table:

TABLE - 4.4
Sales for FY19 as per APR Filing

Tariff Category	Consumer Category	Actual Sales-MU	Approved Sales-MU	Difference (3-4) MU
(1)	(2)	(3)	(4)	(5)
LT1	BJ/KJ <=40 units/month	171.29	127.68	43.61
LT1	BJ/KJ >40 units/month	45.46	47.83	-2.37
LT-2a	Domestic / AEH	6919.35	7139.20	-219.85
LT-2b	Pvt. Educational Institutions	51.57	52.37	-0.80
LT-3	Commercial	2083.65	2190.77	-107.12
LT-4 (a)	IP <= 10 HP	7202.32	7123.21	79.11
LT-4 (b)	IP > 10 HP	1.53	2.96	-1.43
LT-4 (c)	Pvt. Nurseries, Coffee & Tea	5.08	5.95	-0.87
LT-5	LT Industries	1243.08	1190.52	52.56
LT-6	Water Supply	1193.64	934.94	258.70
LT-6	Public Lighting	499.92	452.74	47.18
LT-7	Temporary Supply	135.03	166.07	-31.04
HT-1	Water Supply & Sewerage	726.15	702.42	23.73
HT-2 (a)	Industrial	4512.96	4928.94	-415.98
HT-2 (b)	Commercial	2448.41	2624.34	-175.93
HT-2(c)	Govt./Aided Hospital & Edu. Institutions	321.44	365.31	-43.87
HT-3(a) & (b)	Lift Irrigation & Agriculture	45.67	17.96	27.71
HT-4	Residential Apartment, Colonies	70.04	109.76	-39.72
HT-5	Temporary supply	85.87	103.78	-17.91
Grand total		27762.47	28286.75	-524.28
Sales to categories other than BJ/KJ <= 40 units/month & IP sets		20388.86	21035.86	-647.00
Sales to BJ/KJ <= 40 units/month & IP sets		7373.61	7250.89	122.72

The Commission, noted that the major categories contributing to the reduction in sales with respect to the estimates are LT2a, LT3, all HT categories excluding HT-3. On the other hand, major categories contributing to the

increase in sales with respect to the estimates are BJ/KJ consuming less than or equal to 40 units/month/installation and LT-6 Water Supply installations.

BESCOM in its Tariff Petition has submitted that:

- i. The reduction in sales to LT-2a is due to demand side management initiatives like installation of LED lights, solar water heaters etc. While BESCOM has computed the energy savings of 1148.13 MU, considering the cumulative numbers of LED bulbs, 5 - star rated ceiling fans and solar heaters, the actual reduction in LT2a sales is only 219.85 MU. Hence, BESCOM was directed to compute the incremental savings due to DSM program during FY19 and furnish the same to the Commission.

BESCOM, while furnishing the details, has submitted that 138.38 MU of energy has been saved due to DSM for FY19, which partially explains the LT-2(a) category sales reduction.

- ii. BESCOM was directed to furnish the reasons for reduction in LT-3 category sales and increase in sales to LT-6 category water supply category.

BESCOM has submitted that even though the LT-3 sales have reduced with respect to the estimated value, the actual sales in FY19 have increased by 77.68 MU, as compared with sales of FY18.

The Commission notes that in LT-3 category there is a reduction of 17,656 number of installations with respect to the approved figures, which partially explains the reduction in sales to this category when compared to approved figures.

Further, the increase in sales to LT-6 Water Supply category is attributed by BESCOM to replacement of CTs and meters, depletion in water level in bore wells, increase in water table and metering of DC connections.

The Commission notes the submissions made by BESCOM that the increase in sales is due to depletion in water level in bore wells as well as increase in water table, is contradicting.

- iii. The reduction in HT sales is attributed by BESCOM to consumers opting for Open access/group captive.

The Commission notes that the total sales under open access has increased by 706.29 MU (4259.98-3553.69) in FY19, which explains the reduction in HT sales.

- iv. BESCOM was directed to confirm as to whether the category-wise sales as indicated in D-2 Format, is excluding unbilled sales. If unbilled sales are included, category-wise break up of unbilled sales shall be furnished.

BESCOM has confirmed that there are no unbilled sales in FY19 and is not depicted in D-2 Format also.

B. Sales to IP sets for FY19:

- 1) Specific consumption of IP sets for FY19 as approved by the Commission in the Tariff Order dated 14.05.2018 is 8,037 units / IP / Annum. As per the feeder-wise data of NJY feeders furnished by BESCOM, the specific consumption for FY19 works out to 8,107.6 units / IP / Annum. It is observed that there is an increase in specific consumption by 70.60 units / IP / Annum i.e., the specific consumption has increased by 0.87%.
- 2) Total sales to IP sets approved by the Commission for FY19 in the Tariff Order is 7,123.21MU for 8,93,803 number of IP installations. As reported by BESCOM in the D2 Format of tariff filing, the actual consumption is 7,202.32 MU for 9,04,463 number of IP set installations, indicating an increase of 79.11 MU, i.e., the sales have increased by 1.11%.
- 3) As reported by BESCOM, the number of IP set installations in service at the end of FY19 are 9,04,463 as against the approved numbers of 8,93,803 which corresponds to an increase of 10,660 i.e., the number of installations have increased by 1.19%.

The details of sales to IP sets for FY19, as approved by the Commission in its tariff order 2018 and as furnished by BESCOM in its current Tariff Filing for FY21 are as indicated below (FY19 approved Vs Actuals);

Particulars	As approved by the Commission	As submitted by BESCOM
Number of installations	8,93,803	9,04,463
Mid-year number of installations	8,86,303	8,88,346
Specific consumption in units / installation / annum	8,037	8,107.6
Sales in MU	7,123.21	7,202.32

- 4) The Commission, in its Tariff Order dated 30th March, 2016, had directed the BESCOM to compute the IP-set consumption on the basis of meter readings of agricultural feeders segregated under NJY, for the reason that the energy consumed by the IP-sets could be measured at 11 kV level at the substations after allowing for the losses prevailing in the distribution system, and to report the same in the format, prescribed by the Commission, every month regularly to the Commission. The Commission has noted that, **the BESCOM has not been submitting the required data of IP-set consumption regularly. Instead, it has submitted the month wise / feeder wise / sub-division wise details of IP set consumption for FY19 vide letter No BESCOM/D(F)/DGM(RA)/BC-26/F-2411/2019-20/686-687 dated 04.12.2019 and for FY20 up to September 2019 vide e-mail dated 09.12.2019.**
- 5) From the data furnished, while assessing the IP consumption, it is observed that, BESCOM has considered 10% as the distribution losses uniformly for all the feeders, prevailing in 11kV lines, distribution transformers and LT systems for FY19. The Commission has noted the difficulty in arriving at the feeder-wise losses and directs BESCOM to consider the actual losses for the year of assessment as approved by the Commission in the Tariff Orders, as per the energy flow diagram.
- 6) BESCOM had furnished two different sets of data in respect of number of IP installations and sales to IP sets for the period April 2018 to September 2018. In its reply to the observation, BESCOM has furnished that, only live installations data was furnished during December 2018, whereas, the total number of installations were furnished during December 2019 and sales figures were arrived after deducting the number of disconnected IP sets. As the data furnished during December 2019 matches with the

DCB figures BESCOM requested the Commission to consider the data furnished during December 2019. The Commission, after verifying the data of the audited accounts, the DCB and the data submitted in previous year's Tariff Filing has considered the data of BESCOM as furnished during December 2019.

- 7) The Commission, in its preliminary observations, had directed BESCOM to furnish the reasons for the difference in number of IP installations as per GPS survey and the IP set assessment data submitted, the action taken to reconcile the number of IP installations with the DCB figures. In its reply, BESCOM made submissions that the difference in number of IP installations as per GPS survey pertains to IP set installations existing in the BMAZ area of BESCOM which are not shown in the GPS survey data.
- 8) As per the GPS survey data furnished by BESCOM, the Commission notes with displeasure that, the GPS survey data is incomplete and BESCOM has not taken any stringent action to complete the work. Looking into the facts reported by BESCOM, progress in GPS survey of IP installations during FY19 is very poor and is yet to submit the report giving details of the actual number of IP installations existing in the field, working IP sets, permanently disconnected IP sets for both the authorized and unauthorized categories, action taken to regularize the unauthorized IP sets etc., and to match the data of the GPS survey with the DCB figures. **The Commission, finally directs BESCOM to complete the survey work at the earliest and submit the details without ambiguity in data of total number of IP sets existing, defunct / dried up etc., within 3 months from the date of this Order.** If the data is not received within the stipulated time the Commission would restrict the sales to IP sets for FY20, on the basis of the GPS survey data received during the Tariff Filing for APR FY19 and revision of ARR for FY21 and pass orders accordingly.
- 9) Based on the above discussions and the feeder-wise, month-wise, sub-division-wise data submitted by BESCOM subsequently on 04.12.2019 and 09.12.2019, by considering the initial and final readings with appropriate multiplying constants of the energy meters in the prescribed format and on detailed verification of the data, it is noted that the BESCOM has

substantiated the overall IP set sales to an extent of 7202.32 MU for FY19 as submitted in its Tariff application. Thus the Commission considers the IP set consumption of 7202.32 MU for FY19.

Hence, the Commission decides to allow the consumption of 7202.32 MU claimed by the BESCOM, in its tariff filing for FY19, with the details as follows:

Particulars	Approved sales of IP sets for FY19
Number of installations	9,04,463
Mid-year number of installations	8,88,346
Specific consumption in units / installation / annum	8,107.60
Sales in MU	7,202.32

In view of the above, based on the audited accounts, the Commission approves the sales for FY19, as indicated in the following Table:

TABLE - 4.5
Approved Sales as per APR for FY21

Approved Sales as per APR for FY19 Category	Consumer Category	Actual Sales-MU
LT1	BJ/KJ <=40 units/month	171.29
LT1	BJ/KJ >40 units/month	45.46
LT-2a	Domestic / AEH	6919.35
LT-2b	Pvt. Educational Institutions	51.57
LT-3	Commercial	2083.65
LT-4 (a)	IP <= 10 HP	7202.32
LT-4 (b)	IP > 10 HP	1.53
LT-4 (c)	Pvt. Nurseries, Coffee & Tea	5.08
LT-5	LT Industries	1243.08
LT-6	Water Supply	1193.64
LT-6	Public Lighting	499.92
LT-7	Temporary Lighting	135.03
HT-1	Water Supply & Sewerage	726.15
HT-2 (a)	Industrial	4512.96
HT-2 (b)	Commercial	2448.41
HT-2(c)	Govt./Aided Hospital & Edu.	321.45
HT-3(a) & (b)	Lift Irrigation & Agriculture	45.67
HT-4	Residential Apartment, Colonies	70.04
HT-5	Temporary Supply	85.87
Total		27762.47
Sales to categories other than BJ/KJ <= 40units/month & IP sets		20388.86
Sales- to BJ/KJ <= 40units/month & IP sets		7373.61

4.2.2 Distribution Losses for FY19:

BESCOM's Submission:

The Commission, in its Tariff Order dated 14th May, 2018 had approved the average targeted distribution losses of 12.25% for FY19. As against this, the BESCOM, in its Tariff application, has reported the actual distribution loss as 12.54% for FY19. While arriving at the above loss BESCOM has considered the input energy for the present month and energy sales for present month as per DCB statement.

BESCOM has informed during the internal meeting held in June, 2018, that the method opted to arrive at the distribution loss is technically not accurate and distribution losses should be worked out by considering previous month input energy and present month sales as per DCB statement (i.e. for April month, the energy input shall be taken from March month and the DCB figures of April month shall be considered). Thus, based on the internal discussions held during June, 2018, BESCOM has computed the distribution losses at 12.27% for the year 2018-2019. Thus, the energy input for FY19 was considered from March-18 to Feb-19 (i.e. 31616.53 MUs including SRTPV input of 92.18 MU) and DCB figures of April-18 to March-19 (i.e. 27736.005 MU). BESCOM, in its Annual Report 2018-19 has considered the distribution loss as 12.27% for FY19.

Commission's Analysis and Decisions:

The Commission, in its Tariff Order dated 14th May, 2018, had approved the range of distribution loss for the FY19 as under:

Figures in Percentage	
Range of Distribution loss	FY19
Upper limit	12.50
Average	12.25
Lower Limit	12.00

The BESCOM, in its current tariff application has reported an average distribution loss of 12.54%, considering the energy input at interface points and sales as per DCB statement.

The Commission, in its preliminary observations had noted that, the BESCOM has changed the methodology for computation of the distribution losses for

FY19 and has computed the distribution losses by considering previous month's input energy and energy sales as per the present month's DCB statement (i.e., energy input of the month of March, 2018 and energy sales from DCB statement for the month of April, 2018). Further, BESCOM has not considered the sale of energy of 26 MU to the IPPs during non-generation period, for calculation of the distribution losses.

Since, the distribution losses for FY19 approved by the Commission were computed based on the present month's input energy and energy sales as per the present month's DCB statement, BESCOM was directed to re-compute the distribution losses based on the methodology previously adopted by the BESCOM and submit revised loss levels. Further, as per Table.3.8 on page no. 15 of the filing, the total distribution loss for FY19 is shown as 12.27%, whereas in the filing the loss is indicated as 12.54%. BESCOM was directed to furnish month-wise loss calculation to arrive at the loss figure of 12.54% as per the methodology being followed earlier.

BESCOM, in its reply to the preliminary observation, has submitted the month-wise loss calculation to arrive at the loss figure of 12.54% (including 26 MU of consumption by IPPs) as per the methodology being followed by the Commission earlier. However, BESCOM added that the loss calculated by considering:

- i. Present month Input (April input energy) and sales of next month DCB statement (May DCB) is 12.27%; and
- ii. Previous month Input (March input energy) and present month DCB statement (April DCB) is 12.19%;

The Commission notes that, the revised methodology adopted by BESCOM is not approved by the Commission. Further, while approving the loss targets, the Commission has determined the losses based on the earlier methodology (based on the present month's input energy and energy sales as per the present month's DCB statement), in all its Tariff Order issued earlier. Thus, the Commission, for the purpose of Annual Performance Review, has considered the actual distribution loss as per the earlier methodology at 12.54%. Hence, the actual losses of 12.54% are above the approved upper limit of the losses of

12.50% for FY19. Therefore, as per the MYT Regulations, the Commission decides to impose penalty for non-achievement of approved loss target, to an extent of shortfall of 0.04 percentage point, which is worked out as indicated below:

TABLE - 4.6**Penalty payable due to non-reduction in Distribution Losses**

Particulars	FY19
Actual input at IF points as per audited accounts in MU	31742.35
Retail sales in MU	27762.47
Distribution loss after rounding off	12.54%
Target Upper limit of distribution loss	12.50%
Target distribution loss	12.25%
Target Lower limit of distribution loss	12.00%
Excess loss – in percentage point	0.04
Input energy at upper limit of target loss for actual sales in MU	31728.54
Increase in input energy due to higher in distribution loss in MU	13.812
Average cost of power purchase in Rs. /unit	5.63
Penalty due to increase in losses Rs. Crores	7.77

Accordingly, the Commission considers the distribution losses at 12.54% and levies Rs.7.77 Crores, as penalty for non-achievement of approved distribution loss target for FY19.

4.2.3 Power Purchase for FY19:**BESCOM's Submission:**

BESCOM, in its application for Annual Performance Review (APR) for FY19, has submitted the details of actual power purchase made during FY19. As per these details, BESCOM has purchased 32,960.38 MU at a cost of Rs.18714.61 Crores for FY19.

The following table indicates the source-wise variation statement as per D1 Format:

TABLE - 4.7
Power Purchase for FY19 – Actuals as per filing -
BESCOM's Submission

NAME OF THE GENERATING STATION	Actuals as per filing		
	ENERGY ALLOWED (MU)	TOTAL COST (Rs. Crs.)	PER UNIT RATE (Rs/Kwh)
KPCL THERMAL	8452.32	4787.22	5.66
CGS Energy @ KPCTL periphery	11306.10	4831.31	4.27
UDUPI POWER CORPORATION LIMITED_UPCL (2x600)	3188.38	1965.18	6.16
KPCL HYDRO	776.17	89.53	1.15
OTHER HYDRO	12.33	5.61	4.55
RE sources	7502.83	3288.71	4.38
Solar Park at Pavagada- Bundled with Thermal power of NTPC	176.67	77.87	4.41
Power purchase from Co- gen - Medium Term/Energy balancing/Inter ESCOM	1477.69	655.61	4.44
Short term power purchase May 2018	67.89	207.26	30.53
TRANSMISSION CHARGES			
PGCIL CHARGES		1252.01	
KPTCL CHARGES		1539.27	
SLDC		15.03	
POSOCO CHARGES		0.00	
TOTAL INCLUDING TRANSMISSION & LDC CHARGES	32960.38	18714.61	5.68

Commission's analysis and decisions:

1. The Commission, in its Tariff Order dated 14th May, 2018 had approved power purchase quantum of 33,261.05 MU at a cost of Rs.16,000.78 Crores for FY19 against which, the actual power purchase for FY19, as per the BESCOM is 32,960.38 MU at a cost of Rs.18714.60 Crores. As submitted by BESCOM, it has sold 391.50 MU through IEX at a cost of Rs.165.04 Crores and the said amount has been shown as the Other income in the Audited Accounts for FY19. However, the same has to be considered as net of the total power purchase cost since, the sale of a small quantum of surplus energy cannot be treated as income. Hence, an amount of Rs.165.04 crores towards sale of surplus energy has been deducted from the total

power purchase cost of Rs.18714.60 Crores for FY19. As per the Audited accounts, the energy purchased is 32960.66 MU net of 391.50 MU energy sold at IEX and the power purchase cost is Rs.18714.60 crores. After deducting an amount of Rs.165.04 Crores towards sale of power at IEX as per Schedule-2.29 of the audited accounts, the net power purchase cost would be Rs.18549.56 Crores. Based on the above data, the Statement of power purchase quantum and costs as per audited accounts is as detailed below:

TABLE - 4.8
Power Purchase for FY19 – Approved Vs Actuals

Sl. No.	Source	KERC Approved for 2018-19			Actuals as per audited accounts			Difference		
		Energy in MU	Amount in Cr	Avg cost in Rs	Energy in MU	Amount in Cr	Avg. cost in Rs	Energy in MU (3-6)	Amount in Cr (4-7)	Avg. cost in Rupees (5-8)
1	2	3	4	5	6	7	8	9	10	11
1	KPCL-Hydro	714.09	91.43	1.28	776.17	89.60	1.15	-62.08	1.83	0.13
2	KPCL-Thermal	11145.65	4789.09	4.30	8452.31	4787.22	5.66	2693.34	1.87	-1.37
3	Central Projects	9995.81	3808.30	3.81	10327.25	4526.58	4.38	-331.44	-718.29	-0.57
4	Major IPP(UPCL)	4381.93	2085.80	4.76	3188.38	1965.18	6.16	1193.55	120.62	-1.40
5	RE Projects	4771.16	2066.71	4.33	6090.32	2581.24	4.24	-1319.16	-514.57	0.09
6	Bundled power	1272.30	422.25	3.32	1831.52	757.59	4.14	-559.20	-335.34	-0.82
7	Other Hydro	22.08	8.33	3.77	12.33	5.61	4.55	9.75	2.72	-0.78
8	Short term and medium term	958.04	425.40	4.44	1311.90	583.09	4.44	-353.86	-157.69	0.00
9	KPTCL transmission charges		1528.66			1539.27		0.00	-10.61	0.00
10	SLDC charges		15.03			15.03		0.00	0.00	0.00
11	POSOCO, PCKL charges		1.08			6.50		0.00	-5.42	0.00
12	PGCIL charges		758.70			1252.01		0.00	-493.31	0.00
13	Energy Balancing				1319.74	481.00		-1319.73	-481.00	0.00
14	Sale of energy only to IEX				-391.50	-165.04			165.04	
15	Inter ESCOM energy charges				13.64	4.72		-13.65	-4.72	0.00
16	Banked Energy				51.64	0.00		-51.75	-2.35	0.00
17	UI (Open Access UI And SLDC UI)				-22.95	12.58		22.95	--10.23	0.00
18	prior period expenditure					123.50		0.00	-123.50	0.00
19	prior period income					-16.11		0.00	16.11	0.00
20	Grand total	33261.05	16000.78	4.81	32960.66	18549.56	5.63	300.39	- 2548.78	-0.82

Note: 1. sale of energy to IEX is deducted in the power purchase cost.

2. (-) indicate excess over approved values.

2. As per the actuals for FY19 vis-à-vis the approved figures, there is decrease in the quantum of power purchased to an extent of 300.39 MU but the cost has increased by Rs.2548.78 Crores.
3. The analysis of the source-wise approved and actual power purchases is indicated in the following Table:

TABLE - 4.9**Power Purchase from major sources – Approved and Actuals**

Sl no	Source	KERC Approved for 2018-19			Actuals as per audited accounts		
		Energy in MU	Amount in Cr	Avg. cost in Rs.	Energy in MU	Amount in Cr	Avg. cost in Rs.
1	2	3	4	5	6	7	8
1	KPCL-Hydro	714.09	91.43	1.28	776.17	89.60	1.15
2	KPCL-Thermal	11145.65	4789.09	4.30	8452.31	4787.22	5.66
3	Central Projects	9995.81	3808.30	3.81	10327.25	4526.58	4.38
4	UPCL	4381.93	2085.80	4.76	3188.38	1965.18	6.16
5	RE Projects	4771.16	2066.71	4.33	6090.32	2581.24	4.24

It is seen from the above that while the RE energy procured is more by 1319.16 MU, the procurement from KPCL thermal and UPCL is lower than the approved quantum of energy.

4. The short fall from KPCL Thermal projects and UPCL, has been made good by procuring power on short term/medium term basis and un-requisitioned surplus power from CGS at an additional cost.
5. As per the actual power purchase cost, there is overall increase in the per unit cost of energy purchased, due to the following:
 - a) The power from the new thermal projects viz. BTPS Unit-3 and YTPS was considered as infirm power while approving the ARR for FY19. The actual cost per unit of energy has increased due to declaration of Commercial Operation of these thermal plants and consequential to payment of fixed charges;
 - b) Increase in power purchase quantum, change in the source-wise mix of supply and the energy balancing during reconciliation of energy and its cost among ESCOMs;

- c) Payment of additional PGCIL transmission charges of Rs.493.31 Crores from the BESCOM towards PoC charges, over and above approved amount.

As the State was paying abnormally high POC charges to PGCIL, the Commission, in its Tariff Order dated 30th May, 2019 had directed BESCOM to take appropriate action immediately, to resolve the issues with the appropriate authorities regarding the PGCIL transmission tariff. The ESCOMs/PCKL were required to constitute a dedicated team, to study the pros and cons of methodologies/amendments proposed to PGCIL's Transmission tariff or in any such other relevant matters, and to effectively communicate the same to the concerned authorities, at the draft stage itself.

In response to the above directions, the BESCOM has stated that the CERC had framed Draft CERC (Sharing of Inter State Transmission Charges and Losses) Regulation and has invited the comments/suggestions and that the KPTCL had constituted a Coordination Committee and comments/suggestion have been submitted to the CERC. Once this is finalized the transmission charges of PGCIL are likely to be reduced.

The Commission notes that, CERC has issued the final notification on CERC (Sharing of Inter State Transmission Charges and Losses) Regulations. Hence, the Commission directs the KPTCL/ESCOMs to settle the PGCIL charges as per the CERC Regulations and intimate the same.

6. In view of the above reasons, the Commission notes that, the per unit average power purchase cost has increase by 82 paise (from Rs.4.81 paise per unit to Rs.5.63 paise per unit).
7. The Commission notes that, KPTCL is issuing the regular bills to ESCOMs under ABT mechanism and none of the ESCOMs are making payments as per the above bills. Hence, the Commission directs the ESCOMs to take immediate action to make payments as per the bills raised by the KPTCL. Further, KPTCL and ESCOMs shall host the details of implementation of ABT thereof, on their respective websites.

In view of the above facts, the Commission hereby decides to approve the actual power purchases of 32,960.66 MU at a cost of Rs.18549.56 Crores, for the purpose of Annual Performance Review for FY19.

4.2.4 RPO Compliance for FY19:

1. BESCOM in its petition has furnished the details of RPO compliance for solar and non-solar RPO for 2018-19 as shown in the following Table:

TABLE - 4.10

BESCOM's RPO Compliance for FY19

Particulars	Million Units
Power purchase at Generating. Bus	31,627.35
Add: Energy Balancing excluding Hydel energy of 189.22 MU	1,143.43
Less: Hydel Energy	788.50
Net energy for calculation of RPO	31,982.28
RPO	-
Non-Solar energy to be procured at 12%	3,837.87
Solar energy to be procured (at 6%)	1,918.94
Compliance	-
Non-Solar energy procured	4,313.24
Solar energy procured	3,333.67
Non-Solar RPO achieved (%)	13.49%
Solar RPO achieved (%)	10.42%

2. BESCOM has stated that it has exceeded both the Non-Solar RPO and solar RPO target during FY19.
3. The Commission in its preliminary observation, had directed/observed the following:
 - a. BESCOM was directed to clarify the methodology for arriving at total energy of 31982.28 MU for computation of RPO compliance, since as per D-1 Format, the net energy after deducting the Hydel sources is 32171.78 MU [i.e. 32960.28-776.17 (KPCL)-12.33 (Other Hydro)].

BESCOM, in its reply to the preliminary observations, has submitted that in the D1 Format for FY19, the total energy indicated as 32960.28 MU includes Inter ESCOM energy exchange (below 33kV) which is not considered by TBC, SLDC in energy balancing. However, while computing RPO the SLDC has considered the energy as 31982.28 MU.

Hence there is a difference of 788.5 MU. The details furnished by BESCOM for the power purchased net of hydro is as follows:

Particulars	Energy (MU)
Total energy purchased	32960.28
Less: Hydel Energy	776.17
Less: Other Hydro	12.33
Less: Hydel Energy from Energy balancing	176.30
Net Total Energy	31995.48

- b. The Commission had directed BESCOM to furnish the break-up of energy procured from Shivanasamudram and Shimsha projects separately.

BESCOM has submitted that it has procured 38.69 MU from Shivanasamudram project and 12.60 MU from Shimsha project.

- c. The Commission had noted that as per D-1 Format, Non-solar energy purchased is 5771.18 MU (2939.71+5.11+456.69+828.98+63.62+1477.69), whereas for RPO, it is indicated as 4313.24 MU. Similarly, as per D-1 Format, the Solar energy purchased is shown as 3385.38 MU (2528.94+675.98+3.79+176.67), whereas for RPO it is indicated as 3333.67 MU. Hence, BESCOM was directed to reconcile the above figures. Further, BESCOM was directed to consider the energy procured from Shimsha Hydro Station for compliance of Non-solar RPO.

BESCOM, in its reply to the preliminary observation, has informed that BESCOM has wrongly considered 1477.69 MU as non-solar energy (as co gen in D-1 Format). BESCOM has attributed 1477.69 MU towards energy balancing, inter ESCOM purchase, solar roof top and banked energy (1319.73 MU + 13.65 MU + 92.18 MU + 51.64 MU = 1477.69 MU). Hence, the actual non-solar energy for FY-19 is submitted as indicated below:

Source	Energy in MU
Co Gen	828.98
Bio Mass	63.62
Mini Hydel	456.96
Wind	2939.71
KPCL Wind	5.11
Banked Energy (Wind	18.86
Shimsha (Mini Hydel)	12.60
Total	4325.84

Hence, BESCOM requested the Commission to consider 4325.84 MU towards non-solar RPO compliance for FY19.

BESCOM also submitted that in the break up details of solar energy, 176.67 MU is towards energy from coal of NTPC NVVN, wrongly mentioned as solar park at Pavagada – Bundled with thermal of NTPC in D1 format. BESCOM informed that the actual solar energy for FY19 is as below.

Source	Energy in MU
Solar IPPS	2528.94
Bundled Solar Power	675.98
KPC Solar	3.79
Solar roof top	92.18
Banked Energy (Solar)	32.78
Total	3333.67

Hence, BESCOM requested the Commission to consider 3333.67 MU towards solar RPO for FY19.

- d. BESCOM was directed to furnish the data as per the format indicated below for validating the RPO compliance and to work out APPC, duly reconciling the data with audited accounts of FY19.

As such, BESCOM submitted the following details:

TABLE - 4.11
Compliance of Non-solar RPO for FY19

Sl. No.	Particulars	Quantum in MU	Cost Rs. Crores
1	Total Power Purchase quantum from all sources excluding Hydro energy	31995.48	18454.47
2	Non solar Renewable energy purchased under PPA ROUTE AT Generic tariff including Non solar RE Purchased from KPCL	4306.98	1646.54
3	Non-Solar Short-Term Purchase from RE sources excluding Sec 11 purchase	-	-
4	Non-Solar Short-Term Purchase from RE sources under Sec 11 purchase	-	-
5	Non solar RE purchased at APPC	-	-
6	Non solar RE pertaining to green energy sold to consumers under green tariff	-	-
7	Non solar RE purchased from other ESCOMs	-	-
8	Non solar RE sold to other ESCOMs	-	-

Sl. No.	Particulars	Quantum in MU	Cost Rs. Crores
9	Non solar RE purchased from any other source like banked energy purchased at 85% of generic tariff	18.86	
10	Total non-solar RE Energy purchased (No 2+3+4+5+7+9)	4325.84	1646.54
11	Non solar RE accounted for the purpose of RPO (No 10-5-6-8)	4325.84	1646.54
12	Non solar RE complied in % (No 11/No 1) *100	13.52	

TABLE-4.12**Compliance of Solar RPO for FY19**

Sl. No.	Particulars	Quantum in MU	Cost Rs Crores
1	Total Power Purchase quantum from all sources excluding Hydro energy	31995.48	18454.47
2	Solar Renewable energy purchased under PPA ROUTE AT Generic tariff including solar RE Purchased from KPCL	2624.91	1320.79
3	Solar Short-term Purchase from RE sources excluding Sec 11 purchase	-	-
4	Solar Short-term Purchase from RE sources under Sec 11 purchase	-	-
5	Solar energy purchased at APPC	-	-
6	Solar energy pertaining to green energy sold to consumers under green tariff	-	-
7	solar energy purchased from other ESCOMs	-	-
8	Solar energy sold to other ESCOMs	-	-
9	Solar Energy purchased from NTPC or others as bundled power	675.98	375.01
10	Solar Energy purchased from any other source like banked energy purchased at 85% of generic tariff	32.78	
11	Total solar Energy purchased (No 2+3+4+5+7+9+10)	3333.67	1695.81
12	Solar energy accounted for the purpose of RPO (No 11-5-6-8)	3333.67	1695.81
13	Solar RPO complied in % (No 12/No 1) *100	10.42	

The Commission notes the replies furnished by BESCOM. The Commission has approved the source-wise power purchase quantum and cost as discussed earlier. Therefore, for the purpose of RPO compliance, the Commission has considered the power purchase quantum as considered in APR for FY19. The Commission has approved power purchase quantum of 32008.46 MU [32960.66 (Total power purchase)- 776.17 (KPCL Hydro)-12.33 (Other Hydro)

+12.60 (Shimsha)- 176.30 (energy balance)], excluding procurement from hydro sources, based on the audited accounts. The details of Non-solar energy procured is indicated below:

Energy in Million Units	
Co-generation (Power Purchase) (medium term)	828.98
Mini Hydel	456.97
Wind power projects incl. KPCL 2939.62 MU(Other than KPCL)+5.11 MU(KPCL)	2944.73
Bio mass	63.62
Shimsha	12.60
Non-Solar Short-term purchase	0
Less Previous year FY18 adjustment as per TO 2019	Nil.
Banked energy purchased	18.86
Non-solar Total	4325.76

Regarding the Non-Solar RPO, considering the input energy (excluding procurement from hydro sources) of 32008.46 MU, the Non-solar RPO target at 12.00% works out to 3841.015 MU (3841015 MWh after rounding off). BESCOM has purchased 4325.760 MU (4325760 MWh) of Non-solar energy including purchase of 18.86 MU of banked energy. Thus, BESCOM has purchased 484.745 MU (484745 MWh) excess non-solar energy beyond the target specified. The Commission holds that BESCOM has met its Non-Solar RPO target of 12% for FY19, in terms of the prevailing Regulations.

Regarding the Solar RPO, the details of solar energy purchased is as indicated below:

Energy in Million Units	
Solar PPA Route	2476.97
Solar Rooftop	92.18
Solar KPCL	3.79
Solar Bundled Power	675.98
Solar New Park	51.97
Solar Short /medium term purchase	0
Less Previous year FY18 adjustment as per TO 2019	0
Banked energy purchased	32.78
Solar Total	3333.67

Considering the input energy (excluding procurement from hydro sources) 32008.46 MU, the Solar RPO target at 6% works out to 1920.508 MU (19,20,508 MWh). BESCOM has purchased 3333.670 MU (33,33,670 MWh) of Solar energy

including 32.78 MU of banked energy purchased. Thus, BESCOM has purchased 1413.162 MU (14,13,162 MWh) excess solar energy beyond the target specified. Therefore, the Commission holds that BESCOM has met its Solar RPO target of 6% for FY19, in terms of the prevailing Regulations.

4.2.5 Operation and Maintenance Expenses:

BESCOM's Submission:

The BESCOM in its filing has submitted that as per the audited accounts the O&M expenses, net of capitalisation, as Rs.1830.79 Crores. BESCOM has stated that expenses which were separately approved as per regulatory formats had been added in the A&G expenses. Hence, based on the regulatory formats, BESCOM has worked out Rs.1805.68 Crores towards O&M expenses for FY19 as per the annual accounts, as against the approved O&M expenses of Rs.1654.99 Crores.

Further, BESCOM has computed Rs.1983.10 Crores as the O&M expenses on normative basis for FY19, considering inflation rate of 8.26% with 80% weightage to CPI and 20% weightage to WPI and consumer growth rate of 5.19% as detailed in the following Table:

TABLE – 4.13

Normative O & M Expenses – BESCOM's submission

Particulars	FY19
3- year Consumer growth rate as per actual (CGI) (FY16 to FY19)	5.19%
Weighted Inflation Index (WII)	8.26%
O&M Cost of FY18 as per APR (base year) in Rs. Crores (Adjusted).	1499.62
O&M Expenditure for FY19 = O&M (t-1) $\times (1+WII+CGI-X)$ in Rs. Crores.	1686.39

BESCOM has submitted that, as the base year (FY18) data of the O & M expenses and exclusive of contribution to the P & G Trust, it has considered the contribution to the P & G Trust as an additional employees' cost. Hence, the total O & M expenses claimed by BESCOM for FY19 on normative basis is as indicated below:

Amount in Rs. Crores.

Particulars	FY19
Normative O&M expenses	1686.39
Additional employees Cost (uncontrollable expenses-P&G Trust)	296.72
Allowable O&M expenses for FY19	1983.11

Commission's analysis and decisions:

The Commission in its Tariff Order dated 14th May, 2018 had approved O&M expenses inclusive of contribution to the P&G Trust for FY19 as detailed below:

TABLE – 4.14
Approved O&M Expenses for FY19

Particulars	FY19
No. of installations	11922900
Inflation Index	8.1059%
CGI based on 3 Year CAGR	5.52%
FY-18 O & M expenses in Rs. Crores	1469.41
Total Approved O&M Expenses for FY19– in Rs. Crores	1654.99

The Preliminary observations of the Commission and replies furnished by BESCOM on O & M expenses are as discussed below:

a. Employee Cost:

The Commission in its preliminary observations had noted that the BESCOM, in its application of APR for FY19, has claimed an amount of Rs.1983.11 Crores towards O&M expenses for FY19, which includes the additional employee cost on account of contribution to P&G Trust of Rs.296.72 Crores towards Terminal Benefits.

The Commission, in its Tariff Order 2019, while undertaking APR for FY18, had allowed the provisions made for the arrears of revision of pay scale to the employees from 01.04.2017 to 31.03.2018 amounting to Rs.129.63 Crores as an additional employees cost and Rs.28.41 Crores towards the additional contribution to P&G Trust on the arrears of pay revision, as per the audited accounts for FY18. Hence, the Commission directed BESCOM to furnish the

details of the actual arrears paid to its employees on account of pay revision for FY18 during FY19 and the additional contribution made thereon to the P&G Trust. Further, BESCOM was also directed to furnish the actual employees cost incurred during FY19 by excluding the arrears of pay revision and contribution to P&G Trust, for the FY18.

BESCOM, in its replies to the preliminary observations, has submitted that as against the provisions created for pay revision arrears and also to the contribution to the P&G Trust for the FY18, which were reversed in FY19, the actual arrears paid to the employees on account of pay revision is Rs.129.63 Crores and Contribution to P&G trust is Rs.28.41 Crores in FY19, totaling to Rs.158.04 Crores.

Further, BESCOM has submitted the actual employee cost incurred during FY19 excluding the arrears of pay revision and contribution to P&G trust as indicated below:

Details of Employee benefits expenses

(Rs.in Crores)

Particulars	For the year ended on 31st March 2019 (Ind AS)
A) Salaries and Wages	
Salaries	700.94
Over Time	9.99
Dearness Allowance	102.59
Other Allowances	162.19
Payment to helpers/employees of Monsoon gang	3.66
Sub total	979.38
B) Bonus	11.70
C) Terminal Benefits	296.72
D) Staff Welfare	
Medical Expenses reimbursement	10.31
Leave travel assistance	0.02
Earned Leave Encashment - For employees covered under Contributory Pension Scheme.	22.19
Earned leave encashment	22.28
E.L. Encashment - Retirement / Deceased Employees	21.24
Staff Welfare expenses	5.66
Compensation for injuries, death and damages – Staff	-
Sub total	81.69

Particulars	For the year ended on 31st March 2019 (Ind AS)
E) Workmen compensation	
Payment under workmen's compensation Act	0.25
Total	1,369.74
Less: -Employees cost charged to capital works (Credit Account)	(4.91)
TOTAL (A) Employee costs for FY19	1,364.83

BESCOM has also submitted that the total employee cost of Rs.1364.83 Crores is incurred as per the book of accounts for FY19 after reversing the provisions made in FY18 towards salaries and other terminal benefits, as indicated below:

Particulars	In Crs.
Salaries - Regular Employees – Others	-129.63
Terminal Benefits (Gratuity)	-28.41
Total (B)	-158.04

Regarding the Status of appointment, BESCOM has submitted that application for the recruitment of 479 employees has been called.

b. Contribution to P & G Trust:

The Commission, in its preliminary observation had observed that BESCOM, in its filing of APR for FY19, had claimed an amount of Rs.296.72 Crores towards contribution to P&G Trust for FY19. The Commission directed BESCOM to furnish the computation sheet for factoring Rs.296.72 Crores duly considering the contribution to the employees recruited up to 31.03.2006 and employees recruited after 31.03.2006 separately for FY19. BESCOM was also directed to furnish the same details towards its claim for FY21.

BESCOM, in its reply to the preliminary observations has submitted the details for Rs.296.72 Crores contribution of Pension and Gratuity to P&G Trust for FY19 as per audited accounts. The contribution to the employees recruited up to 31.03.2006 is indicated as Rs.282.15 Crores and for

employees recruited after 31.03.2006 covered under NDCP it is Rs.40.26 Crores for FY19 (Total Rs.322.41 Crores). After reversing Rs.28.41 Crores, being the provisions created in FY18 towards the pay revision arrears, the net amount is Rs.294.00 Crores. As per audited accounts, Rs.2.73 Crores is the contribution towards PF, EPF, Family benefit fund and other contributions made to different authorities on behalf of employee, during FY19. Thus, BESCOM has submitted that out of Rs.296.72 Crores, the contribution towards P & G Trust is Rs.294.00 Crores for FY19.

c. A & G expenses:

The Commission had observed that BESCOM, in its application for APR for FY19, had claimed an amount of Rs.206.95 Crores towards Remuneration to contract agencies and Rs.80.53 Crores towards conveyance and travel expenses for FY19. BESCOM was directed to furnish the reasons for incurring huge amount of expenditure under this head of account along with breakup details for FY19, besides re-examining and revising the amount proposed for FY21.

BESCOM in its replies to the preliminary observation, has submitted that the proposed administration and general expenses for FY19 are computed on normative basis and that, out of total O&M expenses of Rs.1983.10 Crores, A&G expenditure is computed as Rs.347 Crores. The Remuneration to contract agencies, conveyance and travel expenses are computed at the ratio of the total expenditure of FY18. Also, the BESCOM has computed A&G expenses for FY21, on normative basis. As directed by the Commission, BESCOM has furnished the details of remuneration paid to the contract agencies and Conveyance & Travel expenses.

The Commission has taken note of the replies furnished by BESCOM on the O&M expenses and the approach of the Commission in determination of O&M expenses is discussed in the following paragraphs.

Commission's analysis and decisions:

The Commission proceeds with the determination of the normative O & M expenses based on the 12-year data of WPI and CPI and three-year CAGR of consumers in accordance with the methodology adopted while approving the ARR for FY19 and also in the previous years' APR.

Considering the Wholesale Price Index (WPI) as per the data available from the Ministry of Commerce and Industries, Government of India (GoI) and Consumer Price Index (CPI) as per the data available from the Labour Bureau, Government of India (GoI), and adopting the methodology followed by the CERC, with CPI and WPI in the ratio of 80:20 and as per the provisions of MYT Regulations, the allowable inflation for FY19 is shown in the following Table:

TABLE - 4.15
Allowable Inflation for FY19

Year	WPI	CPI	Composite Series	Yt/Y1=Rt	Ln Rt	Year (t-1)	Product [(t-1)* (LnRt)]
2008	80.0	141.70	129.36	1.08	0.08	1	0.08
2009	81.9	157.10	142.06	1.19	0.17	2	0.35
2010	89.7	175.9	158.66	1.33	0.28	3	0.85
2011	98.2	191.5	172.84	1.45	0.37	4	1.48
2012	105.7	209.3	188.58	1.58	0.46	5	2.29
2013	111.1	232.2	207.98	1.74	0.56	6	3.33
2014	114.8	246.9	220.49	1.85	0.61	7	4.30
2015	110.3	261.4	231.20	1.94	0.66	8	5.29
2016	110.3	274.3	241.50	2.02	0.70	9	6.34
2017	114.1	281.2	247.78	2.08	0.73	10	7.30
2018	118.9	294.8	259.62	2.18	0.78	11	8.55
A= Sum of the product column							40.16
B= 6 Times of A							240.97
C= (n-1)*n*(2n-1) where n= No of years of data=12							3036.00
D=B/C							0.08
g(Exponential factor)= Exponential (D)-1							0.0826
e=Annual Escalation Rate (%)=g*100							8.2604

Note: As per CERC Notification No. Eco T1/2019-CERC dated 02.04.2019, inflation is computed with 80% on CPI and 20% on WPI

While determining the normative O & M expenses for FY19, the Commission has considered the following aspects:

- The actual O & M expenses as per the audited accounts for FY16 as the base year expenses and the approved normative O & M expenses for FY17 and FY18 excluding contribution to Pension and Gratuity Trust.

- b) The three-year compounded annual growth rate (CAGR) 5.19% of the number of installations considering the actual number of installations as per the audited accounts up to FY19.
- c) The weighted inflation index (WII) at 8.2604% as computed above.
- d) Efficiency factor at 1% as considered in the earlier control periods.

Thus, the normative O & M expenses for FY19 are as shown in the following Table:

Particulars	FY19
No. Of Installations	1,18,10,542
CGI based on 3 Year CAGR	5.19%
Inflation index	8.2604%
Base Year O&M Cost excluding contribution to P & G Trust FY16 as per actuals, (Rs. In Crores)	1017.15
Approved O&M Expenses excluding P&G contribution for FY17 (Rs.in Crores)	1154.68
Approved O&M expenses excluding P&G contribution and inclusive of arrears pay revision amount for FY18 (Rs.in Crores)	1437.46
Normative O&M expenses for FY19, O&M Index= O&M (t-1)*(1+WII+CGI-X) (Rs. In Crores)	1616.45

The above normative O & M expenses have been computed without considering the contribution to the Pension and Gratuity Trust. The allowance of O&M expenses and the contributions to P & G trust are discussed below:

- i. The Commission notes the replies / details submitted by the BESCOM to the preliminary observations on employee cost, A&G expenses contribution to P&G Trust and the actual employee cost incurred during FY19.

The Commission, in its Tariff Order dated 30th May, 2019, as per the audited accounts of FY18 has reckoned and allowed the provisions created for pay revision arrears payable from 01.04.2017 to 31.03.2018 of Rs.129.63 Crores and Rs.28.41 Crores towards Pension and Gratuity contribution to P&G Trust on account of pay revision and revision of contribution rates, in approved APR for FY18. The Commission, as per the audited accounts, notes the actual net employee cost including the pay revision arrears incurred during

FY19 and the reversal entry passed for the provisions made for the pay revision arrears during FY18. The Commission also notes the actual repairs and maintenance expenses and the Administration and general expenses incurred during FY19.

- ii. The Commission further notes that BESCOM, as per its audited accounts, has booked an amount of Rs.296.72 Crores towards Contribution to Pension and Gratuity Trust for FY19, which is inclusive of Rs.2.73 Crores being the payment of contribution to PF, EPF, FBF and other contributions to the concerned statutory authorities as required under the statute. The Commission notes the replies furnished by BESCOM and has reckoned the actual net contributions towards P&G Trust of Rs.293.99 Crores duly considering the reversal entry of Rs.28.41 Crores being the provisions created during FY18, Rs.2.73 Crores of contribution to PF, EPF, FBF and other contributions has been reckoned along with other O & M expenses for FY19.

Thus, the Commission as per the provisions of the MYT Regulations, decides to treat employee costs on account of Contribution to P&G Trust as uncontrollable O&M expenses. This component has been allowed in addition to the normative O&M expenses to enable BESCOM to meet its actual employee costs for FY19.

Based on the above, the allowable O&M expenses for FY19 are indicated in following Table:

TABLE – 4.16
Allowable O & M Expenses for FY19

Amount in Rs. Crores		
Sl. No.	Particulars	FY19
1	Normative O & M expenses	1616.45
2	Additional employee cost (uncontrollable O & M expenses) towards contribution to P & G trust FY18 & FY19	293.99
	Allowable O & M expenses for FY19	1910.14

The Commission notes that as per the audited accounts, the actual O & M expenses inclusive of additional O & M expenses of Terminal Benefits and the additional employee cost on account of revision of pay scale as Rs.1809.80 Crores for FY19. The allowable O & M expenses of Rs.1910.14 Crores for FY19 computed as above are more than the actual total O & M expenses by Rs.100.34 Crores.

The Commission notes that the revenue gap projected by the BESCOM as per APR for FY19 and revision of ARR for FY21 with the proposed increase of Rs.1.96 per unit in the retail supply tariff for FY21 is going to be a huge burden on the end consumers. BESCOM has not properly exercised due diligence in controlling the O&M expenditure during FY19. Further, the Commission has been consistently stressing the need to control the O&M expenses which are controllable and opines that allowing O&M expenses, beyond the actual amount incurred and accounted in the audited accounts, will burden the end consumers when the same is passed on in the retail supply tariff to be approved for FY21.

Hence, the Commission, in order to reduce the burden on the consumers, decides to limit the O & M expenses, to the actuals and approve Rs.1809.80 Crores towards O & M expenses for FY19.

4.2.6 Depreciation:

BESCOM's Submission:

BESCOM in its application has claimed an amount of Rs.530.20 Crores as depreciation after deducting an amount of Rs.202.80 Crores being the depreciation amount on the assets created out of consumers' contribution / grant as per Indian Accounting Standards (AS) – 20. BESCOM has submitted that as per IND AS 20, Government Grants/subsidies received from the Government or other authorities towards CAPEX as well as consumers' contribution towards CAPEX are treated initially under deferred income and taken to fixed assets based on commissioning of the assets and depreciation is charged in accordance with the class of assets it belongs to.

The details of depreciation approved in the Tariff Order 2018 and the actuals as per audited accounts for FY19 is as indicated below:

TABLE – 4.17
Depreciation for FY19 – BESCOM's Submission

Amount in Rs. Crores

Particulars	FY19		
	Approved	Actual	Deviation
Buildings	10.69	7.99	-2.70
Civil Works	0.28	0.27	-0.01
Other Civil works	0.08	0.13	0.05
Plant & Machinery	144.99	166.15	21.16
Line, Cable Network	454.89	503.81	48.92
Vehicles	1.62	1.52	-0.10
Furniture	0.72	0.90	0.18
Office Equipment	0.66	0.98	0.32
Intangible assets		48.31	48.31
Released assets re-issued to works	2.65	2.92	0.27
Sub Total	616.58	732.98	116.34
Less: Depreciation Withdrawn as per IND.AS.20	175.90	202.80	26.90
Total	440.68	530.18	89.50

The BESCOM has requested the Commission to allow the net depreciation amount of Rs.530.18 Crores for FY19.

Commission's analysis and decisions:

In accordance with the provisions of the KERC (Terms and Conditions for Determination of Tariff) Regulations, 2006, the allowable depreciation for FY19 has been determined by the Commission duly considering the value of assets as per the audited accounts, as shown in the following Table:

TABLE – 4.18
Allowable Depreciation for FY19

Amount in Rs. Crores

Particulars	FY18	FY19	
	Closing Balance of Gross Fixed Asset as on	Closing Balance of Gross fixed Asset as on 31.03.2019	Depreciation

Particulars	FY18	FY19	
	31.03.2018		
Buildings	183.70	257.79	7.99
Civil works	5.17	5.65	0.27
Other Civil works	2.90	4.35	0.13
Plant & M/c	2589.05	3029.15	166.15
Line, Cable Network	9039.69	11140.57	503.81
Vehicles	25.44	33.93	1.52
Furniture	17.21	19.55	0.90
Office Equipment	15.70	18.70	0.98
Released assets reused & depreciation	65.82	64.59	2.92
Intangible Assets	18.63	189.84	48.31
Land & Rights	10.93	12.01	
Sub Total:	11974.24	14776.13	732.98
Less Depreciation on Assets from Grants/Consumer Contribution			-202.80
Total	11974.24	14776.13	530.18

Considering the opening and closing balance of gross blocks of fixed assets for FY19 and the depreciation as per audited accounts, the weighted average rate of depreciation works out to 5.48%.

As per the audited accounts for FY19, an amount of Rs.202.80 Crores towards depreciation on assets created out of consumer's contribution and grants on actual basis has been deducted for computation of allowable depreciation for FY19.

Accordingly, the Commission decides to allow the actual net depreciation of Rs.530.18 Crores for FY19.

4.2.7 Capital Expenditure for FY19:

A. Annual Performance Review for FY19:

The BESCOM, in its application for APR for FY19, has indicated a capital expenditure of Rs.2869.37 Crores. The capital expenditure of Rs.2869.37 Crores for FY19 is against the Commission approved capex of Rs.2836.44 Crores for the FY19. The breakup of category-wise expenditure as furnished by BESCOM

for having incurred an amount of Rs.2869.37 Crores for FY19, is as shown below:

TABLE-4.19
Capital expenditure of the BESCOM for FY19

Sl. No.	Head of Works	Capex approved by KERC in T.O. 2018 (Rs. in Crores)	Actual Expenditure (Rs. in Crores)	% of Approved Budget utilized
1	Ganga kalyana Works	80.30	168.67	210.05
2	Service connection works	94.08	85.95	58.01
3	Water Works	54.09		
4	11 KV New line / Link lines	88.84	125.10	140.81
5	Providing Additional DTC's /Enhancement of DTCs	79.26	39.80	50.21
6	Strengthening of HT Circuit using Conductor/UG Cable/Covered Conductor/AB Cable	123.16	104.69	85.00
7	Strengthening of LT Circuit using Conductor/UG Cable/AB Cable	120.90	180.35	149.17
8	Local planning, Safety works, Emergency / Calamity Works	165.51	99.64	60.20
9	SDP works	39.48	Utilized under 11 kV evacuation, providing additional DTC, Strengthening of HT/LT network etc.	
10	Meters	91.60	55.07	60.12
11	Providing Infrastructure to Un authorised IP sets	418.00	341.79	81.77
12	NJY	183.96	286.97	156.00
13	HVDS	120.00	241.37	201.14
14	RGGVY 12th plan	0.00	-7.36	
15	RAPDRP B	0.00	-8.73	
16	DDUGJY	60.00	118.43	197.38
17	IPDS	266.00	215.49	81.01
18	Erection of distribution transformer centres using 11 meters Spun poles	20.00	112.55	562.75
19	RAPDRP Part A	5.90	-8.30	
20	DAS	-	22.01	
21	DSM	67.57	2.94	4.35
22	Civil Engineering Works	64.16	74.24	115.71
23	IT initiative	56.63	11.51	20.32
24	Technology Innovation Centre-TIC	7.01	15.57	222.11
25	Auto reclosure	70.00	0.07	0.09
26	Model Sub division	520.00	258.40	49.69
27	Smart City	-	134.69	
28	Model village	-	15.11	

Sl. No.	Head of Works	Capex approved by KERC in T.O. 2018 (Rs. in Crores)	Actual Expenditure (Rs. in Crores)	% of Approved Budget utilized
29	System improvement works of Indiranagar division	-	16.58	
30	Replacement of DTC by similar capacity	-	134.90	
31	Corporate office reserve fund	40.00	31.90	79.75
	Grand Total	2836.44	2869.37	101.16

Commission's Analysis and Decision:

For the deviations in the capex incurred against the approved amounts, BESCOM has submitted that, generally during submission of budget proposals for MYT filing, the budget is being provisioned based on previous year's achievements. But the no. of works and budget proposed to be taken up in each of the financial year for the control period cannot be ascertained exactly. The number of works and the budget requirement under different head of accounts are being planned on priority, based on then existing field conditions/ requirement / undertaking new projects. BESCOM has further submitted that, if any new projects/proposals are approved by Govt. of Karnataka/Govt. of India then anticipated budget will increase accordingly.

Further, it has submitted that, the delay in execution of the works, if any, are due to field constraints such as Right of Way problem, litigation, objections by the consumers, poor response in participation in tenders, foot path corridor not handed over to BESCOM by BBMP to take up the cable laying work etc.

In the preliminary observations, the BESCOM was directed to provide the year on year physical and financial progress of major schemes taken up by BESCOM. It is observed that, BESCOM is not analyzing the benefits from the schemes. For example, the objectives for taking up works under Niranthara Jyothi Scheme are to give 24X7 supply to Non-Agricultural loads in Rural areas, reduction in transformer failure rate, increase in metered sales, reduction in technical losses, improved load management and reduction in interruption of Power supply. However, BESCOM in the objectives achieved under the scheme has only indicated that total 966 feeders work have been undertaken

without giving the details of any analysis of the achievement of objectives for which the scheme was executed.

Further, BESCOM is implementing most of the schemes without analyzing the financial feasibility and precise benefits derived from it. BESCOM is spending amount on majority of these schemes through loans and its own funds, as indicated in the Table below. Further, if the schemes are not implemented within the timeframe, it will result in time over run and cost overrun.

Name of the Scheme	Total Cost of the Scheme (Rs. in Crores)	Contribution borne by BESCOM in the total capex of the scheme	Scheduled Date of Completion	Target Date of Completion	Cost to Benefit Ratio
HVDS	1286.88	Loan:90% and Own Funds:10% *	September-2019	May-2020	1.31 to 1.54 (for Phase 2 to Phase 4)
DAS	563.73	JICA Loan and Own Funds	June 2019	March 2020	Not Indicated
Model Sub Division	831.61	Loan: 90% and Own Funds:10%	Feb-2020	Feb-2020	Not Indicated
Model Village	55.174	Own Funds:100%	May-2017	March-2020	Not Indicated
Auto Reclosure & Sectionalizer	108.68	Own Funds: 100%	March-2020	March-2021	Not Indicated
Note: *On an average considering all phases					

In the light of the above observations, BESCOM is directed to analyze the financial feasibility of any scheme and precise benefits to be achieved from such schemes before taking up any such schemes. In future, BESCOM shall submit the Capex request for any new work/scheme duly supported by the details of the benefits anticipated/ to be achieved so that the end consumers, who ultimately bear the burden of the cost of investment are kept aware of the benefits of the schemes they are going to get.

The Commission, after reviewing the capex achieved by BESCOM for FY19, decides to allow capex of Rs.2869.37 Crores, which is in excess by 1.16% over the approved capex of Rs.2836.44 for FY19, subject to Prudence Check.

B. Prudence Check of Capital Expenditure incurred by BESCOM during FY-17 and FY-18:

The Commission, in its Tariff Orders dated 30th March 2016 and 11th April 2017 had allowed Capital expenditure incurred by the BESCOM for the period FY17 and FY18 respectively subject to carrying out the prudence check of the various works undertaken by BESCOM. Accordingly, the Commission had entrusted conducting prudence check work of BESCOM to M/s Power Research Development Consultants Pvt. Ltd. (PRDC), Bengaluru.

M/s PRDC have submitted the report in the matter. As per their report, the following is the summary of findings in respect of work of Prudence Check for FY17 and FY18:

Financial Year	FY17		FY18	
Particulars of works executed and selected for prudence check	(no.s)	(Rs in Cr)	(no.s)	(Rs in Cr)
Works executed, costing above Rs. 5 Lakhs	1415	310.88	2433	572.14
Works Selected for carrying out prudence check	120	96.69	130	134.37
Percentage of works selected for carrying out prudence check	8.48%	31.10%	5.34%	23.49%
Abstract of Prudent / Non-Prudent works	(no.s)	(Rs in Cr)	(no.s)	(Rs in Cr)
Total no. of Prudent works	119	96.54	121	120.21
Total no. of Prudent works subject to conditions	0	0	6	10.94
Total no. of works non-prudent including those not completed	1	0.15	3	3.23
Abstract of Cost over run works	(no.s)	(Rs in Cr)	(no.s)	(Rs in Cr)
No. of works with no cost over-run	78	65.19	95	62.37
No. of works with cost over-run upto 10%	25	11.68	18	34.94
No. of works with cost over-run between 10% and 25%	17	19.84	16	36.78
No. of works with cost over-run exceeding 25%	0	0	1	0.28
Abstract of Time over Run works	(no.s)	(Rs in Cr)	(no.s)	(Rs in Cr)
No. of works with no time over-run	97	79.67	104	117.72
No. of works with time over run of upto 1 year	23	17.02	25	12.26
No. for works with time over run of between 1 to 2 years	0	0	1	4.40

Financial Year	FY17		FY18	
No. of works with time over run more than 2 years	0	0	0	0

The Commission had forwarded a copy of the Report of the Consultant to BESCOM for information and to submit its comments on the findings of the report in the matter of imprudent works.

After analyzing BESCOM's replies on the findings of the Consultant on the non-prudent works and justifications furnished by BESCOM, the Commission has decided that, One work amounting to Rs. 0.1490 Crores for FY17 and Two works amounting to Rs.3.32 Crores for FY18 among the samples selected by the consultant, do not qualify for being treated as prudent. However, the Two works listed as imprudent for FY18 for reasons attributable to KPTCL. The compliance of KPTCL on these two imprudent works for FY18 were obtained and analyzed. The Commission accepted force majeure event in one case and in another case, the Commission felt to take up the comments of BESCOM on compliance provided by KPTCL before deciding on levying penalty and to take up the matter in the next tariff order. Similarly, one work which is not meeting the prudence norms in KPTCL for FY17, for the reasons attributable to BESCOM (for Rs.7.23 Crores) have been considered for disallowance into the account of imprudent works in APR of BESCOM for FY19.

Accordingly, the corresponding depreciation and interest on loans allowed by the Commission in the earlier Tariff Order have to be disallowed as detailed below:

The amount to be disallowed for BESCOM due to imprudent works of FY17 (Amount (Rs in Crores))		
1	Total cost of capital works categorized during the year as per Annual report of BESCOM for FY17	1370.03
2	Total cost of categorized works costing more than Rs. 5 Lakhs considered for prudence check	310.88
3	Total cost of sample works out of Rs 310.88 Crores	96.69
4	Cost of sample works not meeting prudence norms	0.15
5	Cost of sample works not meeting prudence norms attributable to KPTCL and other ESCOMs	0.00
6	Net Capex which is not meeting prudence norms as per the Report of Prudence check of BESCOM	0.15

7	Name of the imprudent Work: Construction of new 11 KV link line from 66/11 kV Kempanahalli MUSS to Uragahalli Crusher limits for bifurcation of Overloaded F1 Namadhari feeder from 66/11 KV kempanahalli MUSS in Uragahalli O&M Section of Bidadi Sub Division.	0.15
8	Target date for completion, Year of completion and categorization	20.11.2015, 20.11.2015 and 12.12.2016
9	The capex not meeting the prudence norms at 0.15 Crores is 0.3633% (0.15/41.2815) of cost of total sample of Rs.41.2815 Crores in category of E&I works/11kV Evacuation & UG Cable works/ additional DTC/HT < reconductoring/TC failure. When this is escalated to the total categorized amount of Rs.370.3902 Cores in respect of E&I works/11kV Evacuation & UG Cable works/ additional DTC/HT < reconductoring/TC failure for FY17 (0.15*370.3902/41.2815)	1.34
10	Period for which amount to be disallowed towards works not meeting prudence norms calculated on the basis of weighted average interest and weighted average depreciation on the amount in the above item	21st November 2015 to March- 2019
11	Amount to be disallowed for 21st November 2015 to March-2016	0.07
	Amount to be disallowed for FY17	0.18
	Amount to be disallowed for FY18	0.18
	Amount to be disallowed for FY19	0.18
	Sub-total amount to be disallowed	0.61
12	The capex not meeting prudence norms in KPTCL attributable to BESCOM	
13	Name of the imprudent Work: 2x8MVA, 66/11kV substation, Devarabelekere	8.48
14	Year of completion	28.10.2016
15	The capex not meeting prudence norms in KPTCL (Rs 8.48*(1-2/13.6)=7.233 Cr*) attributable to BESCOM^^	7.23
16	Period for which amount to be disallowed towards works not meeting prudence norms calculated on the basis of weighted average interest on loan and weighted average depreciation rate on the amount in above item	28th October 2016 to March- 2019
17	Amount to be disallowed for 28th October 2016 to March-2017	0.42
	Amount to be disallowed for FY18	0.91
	Amount to be disallowed for FY19	0.94
	Sub-total amount to be disallowed	2.27
18	Total amount to be disallowed	2.88
^^	In respect of KPTCL's capex work for FY 2016-17, in respect of 2x8MVA, 66/11kV substation, Devarabelekere, total capex for the work as on 31.03.2017 is Rs.8.48 Crores. It was observed by the	

	<p>Consultant that one transformer out of 2 transformers remained unutilised as sufficient load was not provided by BESCOM. The work was commissioned on 28.10.2016, however, only one 11kV feeder was charged to take load on the 2nd Transformer recently on 23.03.2019 but the same still remains underutilised. In this regard, consultant, in their final report considered the work as partly prudent and submitted that, the final decision on the prudence may be taken by the Hon'ble Commission. The KPTCL in its compliance dated 19th November 2019 has also attributed the imprudence to BESCOM.</p> <p>Calculations for arriving capex amount that is attributable towards non-prudence: since, one 11 kV feeder is charged, considering initial load of 2 MW is evacuated out of $2 \times 8 \times 0.85 = 13.6$ MW. Proportionately the imprudent capex amount works out to Rs. 7.233 Cr $(= 8.48 \text{ Cr} \times (1 - 2/13.6))$.</p>
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While arriving at the above amounts for disallowance, the weighted average rate of interest on loans and depreciation considered is as follows:

Company	FY16		FY17		FY18		FY19	
	Wt. Avg. Dep.	Wt. Avg. Interest on loan	Wt. Avg. Dep.	Wt. Avg. Interest on loan	Wt. Avg. Dep	Wt. Avg. Interest on loan	Wt. Avg. Dep	Wt. Avg. Interest on loan
BESCOM	5.24%	8.82%	5.17%	8.51%	5.11%	8.13%	5.48%	8.28%
KPTCL	NA	NA	4.34%	9.21%	4.44%	8.20%	4.70%	8.25%

BESCOM is directed to note the following observations made in respect of prudence check and take suitable actions/measures in future while implementing a scheme / project in order to avoid disallowance of amounts towards imprudent works:

- i) Estimates are being prepared without proper details/data just for fulfilling the targets or for implementation of schemes.
- ii) The reports enclosed to the DPRs/Estimates are very brief (in a number of cases, repetition of nomenclatures only) and do not convey details of the work involved.
- iii) The sketch accompanying the estimates does not depict the existing network system, details of the proposed work and the modified network conditions.

- iv) In a few cases in respect of system improvement works and additional DTC works, the data pertaining to the energy saved, with calculation sheets, and V.R. charts are not available.
- v) In some cases, it is difficult to assess the exact advantages / outcome of work and the extent of benefits derived out of the work, as the data is not completely available.
- vi) Alternative proposals studied before preparing the estimate for a given work are not indicated.
- vii) Lack of coordination between BESCOM and KPTCL resulting in delay in completion and utilization of works.
- viii) Lack of coordination between BESCOM and other public utilities resulting in delay of completion and utilization of work.
- ix) Poor Planning in implementation of major schemes like Distribution Automation Scheme (DAS) and Restructured Accelerated Power Development and Reforms Program (R-APDRP).
- x) Poor workmanship.
- xi) Time overrun and Cost overrun in Projects
- xii) There are anomalies in respect to the data given in PDF format and that furnished in the comprehensive works list. The data did not match with the information given in the supporting documents received from the BESCOM authorities.

In view of the above, the Commission hereby disallows Rs.2.88 Crores for FY17 towards depreciation and interest on loans allowed in respect of imprudent works. Accordingly, the same is ordered to be deducted in BESCOM's APR of FY19.

4.2.8 Interest and Finance Charges;

a) Interest on Capital loan:

BESCOM's Submission:

The BESCOM, in its application has claimed an amount of Rs.373.05 Crores towards interest on capital loans drawn from banks / financial institutions as against the approved amount of Rs.415.16 Crores.

The details of interest on capital loans claimed by the BESCOM are as shown in the following Table:

TABLE – 4.20
Interest on Capital Loans- BESCOM's Submission

Particulars	Amount in Rs. Crores	
	FY19	
Opening balance of the capital Loans	3,753.07	
Add: New Loans availed	1,155.87	
Less: Repayments of Loans	548.56	
Closing balance of capital loans	4360.37	
Less: JICA loan - Audit para	4.19	
Average loan for the year	4,054.63	
Weighted Average Rate of Interest	9.20	
Interest on long term loans	373.05	

BESCOM has submitted that the weighted average interest rate works out at 9.20% and has requested the Commission to allow an amount of Rs.373.05 Crores towards interest on capital loans for FY19.

Commission's analysis and decisions:

The Commission has noted the submission made by BESCOM and has considered the opening and closing balances of long-term capital loans as per the audited accounts for FY19 and repayments of loan during the year as per Format D9 of the Tariff application, and interest thereon as shown in the following Table:

TABLE – 4.21
Allowable Interest on Capital Loans – FY19

	Amount in Rs. Crores	
	FY19	
Opening balance of Secured Loans	3701.26	
Opening balance of Unsecured Loans	430.34	
Total of opening balance of capital loan	4131.60	
Add: new Loans borrowed	1155.87	
Less: Repayments of loans	-408.18	
Total loan at the end of the year (CB)	4879.29	
Average Loan	4505.45	
Interest paid on long term loans as per schedule 22	373.05	
Weighted average rate of interest based on the actual interest paid on long term loans in %	8.28%	
Interest Rate allowed in %	8.28%	
Interest on capital loan allowed	373.05	

Considering the average loan of Rs.4507.54 Crores and an amount of Rs.373.05 Crores incurred towards interest on long term capital loans, the

weighted average interest rate works out to 8.28% which is comparable with the prevailing interest rates for FY19.

Thus, the Commission decides to allow Rs.373.05 Crores towards interest on capital loan for FY19.

b) Interest on Working Capital:

BESCOM's Submission:

The BESCOM, as per the audited accounts, has incurred an amount of Rs.330.62 Crores towards interest on working capital and has claimed Rs.366.41 Crores as per the MYT norms for FY19, for having availed the working capital loans from Commercial banks / Financial Institutions. It is further submitted that the working capital is mainly required to meet the current liabilities by availing short term borrowings and over drafts and Rs.330.62 Crores has been incurred towards interest on short term loans and bank overdrafts as shown in the following table:

TABLE – 4.22

Interest on Working Capital - BESCOM's Submission

Amount in Rs. Crores	
Particulars	FY19
One-twelfth of the amount of O&M Expenses	150.47
Stores, materials and supplies at 1% of Opening balance of GFA	121.22
One-sixth of the Revenue	3256.46
Total Working Capital	3528.15
Allowable Interest on working capital at 11.4%	402.21
Actual interest incurred for working capital	330.62
Savings to the Normative cost	71.59
Allowable interest on working capital (50% of savings+ actual cost) (As per amended version)	366.41

It is also submitted that the Commission, in its Tariff Order 2018, dated 14.05.2018, has considered only 11% as rate of interest on working capital for FY19 and has claimed the working capital interest at the rate of 11.40%.

Commission's analysis and decisions:

As per the audited accounts, the BESCOM has incurred interest on working capital of Rs.330.62 Crores on short term borrowings and Overdrafts during FY19.

The Commission has been computing the interest on working capital by considering the prevailing Marginal Cost of Fund based Lending Rate (MCLR) as at the beginning of the financial year as per the MYT Regulations. The prevailing MCLR rates for short term period as at the beginning of the FY19 is 8.55%. The Commission takes note of both the short term loans and the overdraft availed by BESCOM and the interest rates there on during FY19. The Commission by noting the actual interest rate on the short term / overdraft loans availed by the BESCOM during FY19, as per provisions of the MYT Regulations, decides to consider interest rate of 11% by considering the MCLR rate with the spread of admissible basis points for FY19. Accordingly, 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 FY19 as follows:

TABLE – 4.23
Allowable Interest on Working Capital for FY19

Amount in Rs. Crores	
Particulars	FY19
O & M Expenses	1809.80
One-twelfth of the amount of O&M Exp.	150.82
Opening Balance of Gross Fixed Assets (GFA)	11974.24
Stores, materials and supplies 1% of Opening balance of GFA	119.74
Revenue	19538.74
One-sixth of the Revenue	3256.46
Total Working Capital	3527.02
Rate of Interest (% p.a.)	11.00%
Normative Interest on Working Capital	387.97
Actual Interest on Working Capital	330.62
50% of the difference of interest incurred and interest on normative basis (57.35/2)	28.68
Allowable Interest on Working Capital	359.30

Since the actual interest on working capital is less than the normative interest on working capital, the Commission, as per the provisions of the MYT Regulations, decides to allow the actual interest on working capital plus 50%

of the difference between normative interest on working capital and the actual interest on working capital.

Thus, the Commission decides to allow Rs.359.30 Crores towards interest on working capital for FY19.

c) Interest on Consumer Deposits:

BESCOM's Submission:

BESCOM in its filing as per the audited accounts has claimed an amount of Rs.210.56 Crores towards payment of interest on consumer security deposits for FY19 as follows:

TABLE – 4.24
Interest on consumer security deposits for FY19
BESCOM Submission

Particulars	Amount in Rs. Crores	
	FY19	
Opening balance of Consumer security Deposits	3709.76	
Closing balance of consumer security deposits.	4239.61	
Average Consumer security deposit for FY19	3974.68	
Rate of interest in %	6.40%	
Interest on consumer security Deposit	210.56	

Commission's analysis and decisions:

The Commission, in its preliminary observations, had directed BESCOM to furnish the provision / documentary evidence in support of paying interest at 6.40% towards interest on consumer's security deposit as against the applicable bank rate of 6.25% as per the RBI's Notification for FY19.

BESCOM, in its replies has submitted that interest on consumer security deposit and proposed for true up is Rs.210.56 Crores for FY19 computed at the prevailing bank rate as on 01.04.2018 which is 6.25% p.a as per RBI Notification. Hence, BESCOM has requested to consider the proposed interest on consumer security deposit of Rs.210.56 Crores for FY19.

The Commission has taken note of the reply furnished by BESCOM. As per the audited accounts, the actual opening and closing balance of consumer security deposits for FY19 is Rs.3542.92 Crores and Rs.3974.69 Crores respectively. The actual interest on consumer security deposits factored in the audited accounts of the BESCOM is Rs.210.56 Crores for FY19.

The allowable Computation of interest as per MYT Regulations is as under:

TABLE – 4.25
Allowable interest on Consumer Security Deposit for FY19

Particulars	Rs. Crores
Opening balance of consumer deposits	3542.95
Growth Rate of deposits over previous year	12.19%
Interest on consumer deposits as filed	210.56
Rate of Interest as filed	6.40%
Rate of Interest at bank rate to be allowed as per regulations	6.25%
Interest on consumer security deposit allowed	210.56

Thus, the Commission decides to allow an amount of Rs.210.56 Crores being the actual interest allowed on consumer security deposits for FY19.

d) Other Interest and Finance charges:

The BESCOM has claimed an amount of Rs.11.52 Crores towards other interest and finance charges for FY19, which includes charges payable to banks / financial institutions, guarantee commission payable to GoK and the stamp duty charges.

Commission's analysis and decisions:

The Commission notes that, as per the audited accounts, the other interest and finance charges of Rs.11.63 Crores, consists of bank charges of Rs.8.92 Crores, Stamp Duty of Rs.1.42 Crores guarantee Commission to Gok Rs.0.59 Crores and interest paid to Service Tax Department of Rs.0.60 Crores. These amounts except Guarantee Commission to Government and Stamp Duty are accounted under other operative expenses and the Commission has considered the same as administrative and general expenses under O&M

expenses. The Commission, as per the audited accounts, has worked out the other interest and finance charges, as per the following Table:

TABLE- 4.26
Allowable other Finance Charges for FY19

Amount in Rs. Crores	
Particulars	FY19
Guarantee Commission to GoK	0.59
Stamp Duty	1.42
Total	2.01

Thus, the Commission allows an amount of Rs.2.01 Crores towards other finance charges for FY19.

e) Capitalization of Interest and other expenses:

The BESCOM in its application has claimed, as per the audited accounts, an amount of Rs.118.25 Crores towards capitalization of interest on loan and other operation and maintenance expenses for FY19.

The Commission has considered the said amount of Rs.118.25 Crores towards capitalization of interest and other expenses for FY19

Thus, the total allowable interest and finance charges for FY19 are as shown in the following Table:

TABLE – 4.27
Allowable Interest and Finance Charges

Amount in Rs. Crores		
Sl. No	Particulars	FY19
1	Interest on Loan capital	373.05
2	Interest on working capital	359.30
3	Interest on consumer security deposits	210.56
4	Other interest and finance charges	2.01
5	Less: interest and other expenses capitalized	-118.25
6	Net Interest and Finance Charges	826.67

4.2.9 Other Debits:

BESCOM's Submission:

BESCOM, in its application has claimed an amount of Rs.19.72 Crores towards other debits as detailed below:

TABLE – 4.28
Other Debits-BESCOM's Submission

Amount in Rs. Crores

Sl. No	Particulars	FY19
1	Small and Low value items written off	0.20
2	Assets decommissioning cost	1.47
3	Material cost variance	12.72
4	Miscellaneous losses and write offs including provisions	7.60
5	Provision against receivables	-2.28
	Total	19.72

Commission's analysis and decisions:

The Commission notes that an amount of Rs.19.72 Crores claimed by BESCOM towards Other debits includes amounts towards small and low value items written off, Assets decommissioning cost, material cost variance and miscellaneous losses written off, credit towards Provisions against receivables etc. The Commission has not been allowing any provisions made for either written off of bad debts or receivables. Hence a credit of Rs.2.28 Crores under Provisions against Receivables is not considered. An amount of Rs.3.78 Crores included under A & G Charges towards freight charges has been considered under Other Debits. Hence, the following amounts are considered as other debits:

TABLE – 4.29

Allowable other Debits for FY19

Amount in Rs. Crores

Sl. No	Particulars	FY19
1	Material cost variance	12.72
2	Freight Charges	3.78
3	Small and Low value items written off	0.20
4	Assets decommissioning cost	1.47
5	Miscellaneous losses and write offs including provisions	7.60
	Total	25.77

Thus, the Commission decides to approve an amount of Rs.25.77 Crores as other debits for FY19.

4.2.10 Return on Equity:

BESCOM's Submission:

BESCOM in its application has claimed Return on Equity of Rs.143.51 Crores as against the approved RoE (with MAT) of Rs.179.13 Crores for FY19, on the opening balance of equity amount consisting of share capital, share deposit, accumulated surplus / deficit and recapitalized security deposit and also on the additional equity of Rs.140.00 Crores infused in various Government Orders during FY19, as detailed below:

TABLE – 4.30
Return on Equity – BESCOM's Submission

Amount in Rs. Crores	
Particulars	FY19
Opening Equity	546.915
Share deposit	656.42
RoE on the additional Equity infused during the year	8.71
Reserves and surplus	-231.366
Less: Consumer meter security deposit capitalized	-54.81
Closing equity for the year	925.87
Return on equity @ 15.50%	143.51

Commission's analysis and decisions:

i. Debt-Equity Ratio Vis-à-vis Gross Fixed Assets:

The opening and closing balances of gross fixed assets along with break-up of equity (Net worth) and capital loan component details for FY19 as per actual data as per the audited accounts are indicated in the following Table:

TABLE – 4.31
Status of Debt Equity Ratio for FY19

Amount in Rs. Crores							
	GFA (Actuals)	Debt (Actuals)	Equity (Net- worth) (Actuals)	Normative Debt @ 70% of GFA	Normative Equity @ 30% of GFA	% age of actual debt on GFA	% age of actual equity on GFA
Opening Balance	11974.24	4131.60	869.22	8381.97	3592.27	35.50	7.26
Closing Balance	14776.13	4879.29	1095.87	10343.29	4432.84	33.02	7.42

From the above table, it is evident that the ratio of debt and equity is within the normative limits (in the debt equity ratio of 70:30) on the opening and closing balances of GFA for FY19.

ii. Return on Equity (RoE):

The Commission notes BESCOM's claims of Rs.143.51 Crores towards Return on Equity for FY19. Further the Commission also notes that, BESCOM has considered an accumulated deficit of Rs. (-)231.366 Crores, as against Rs. (-)234.12 Crores as per the audited accounts and Rs. (-)54.81 Crores towards Recapitalized Security Deposits as against Rs. (-)100 Crores. BESCOM has claimed an amount of Rs.8.71 Crores as RoE towards the additional Equity received from the Government during the FY19.

The Commission notes that, as per Clauses 3.9, 3.6.1 and 3.6.2 of the MYT Regulation, the RoE shall be allowed on the opening balance of net worth of the licensee.

As per the KERC (Terms and Conditions for Determination of Distribution and Retail Supply Tariff) Regulations, 2006, the Commission, as has been done in the previous Tariff Orders, has considered the balance of equity as at the beginning of the financial year, for the reason that the capital (equity) that exists at the beginning of the year is what is available during the year as re-investment into the business and has computed the allowable Return on Equity at 15.5% on equity plus the accumulated balance of profit/loss as per the audited accounts, as at the beginning of the year, duly factoring in the

recapitalization of security deposit of Rs.100 Crores, in compliance with the Orders of the Hon'ble ATE, in Appeal No.46/2014.

The allowable RoE for FY19 is determined as indicated in the following Table:

TABLE – 4.32
Allowable Return On Equity for FY19

Amount in Rs.Crores	
Particulars	FY-19
Opening balance of paid up share capital	546.92
O.B of Share deposit	656.42
O.B of Accumulated Deficit	-234.12
Less: Recapitalized Security Deposit	-100.00
Total Opening Balance Equity	869.22
Return on Equity @15.5%	134.73

The Commission has taken note of the additional equity of Rs.140.00 Crores infused by the Government of Karnataka in various Government Orders during FY19. For the equity invested by the Government of Karnataka during the year, the Commission has computed the return on equity on pro-rata basis, as per the provisions of the MYT Regulations, as under:

TABLE – 4.33
Return on Equity on the Additional Equity infused during FY19

Amount in Rs. Crores				
Additional Equity Received	Amount in Rs. Crs.	Date of Receipt	No. of Months	RoE Allowed
EN23 PSR 2018 dated 22.05.2018	25.00	02.06.2018	9	2.91
EN120 PSR 2018 dated 10.08.2018	0.25	27.08.2018	7	0.02
EN120 PSR 2018 dated 10.08.2019	1.22	30.08.2018	7	0.11
EN129 PSR 2018 dated 30.08.2020	16.66	07.09.2018	6	1.29
EN 53 PSR 2018 dated 10.09.2018	23.00	26.09.2018	6	1.78
EN 53 PSR 2018 dated 17.10.2018	23.00	09.11.2018	4	1.19
EN129 PSR 2018 dated 17.10.2018	8.33	09.11.2018	4	0.43
EN120 PSR 2018 dated 31.10.2018	2.24	15.11.2018	4	0.12
EN120 PSR 2018 dated 31.10.2018	0.50	15.11.2019	4	0.03
EN129 PSR 2018 dated 25.01.2019	8.33	04.02.2019	1	0.11
EN53 PSR 2018 dated 25.01.2019	30.00	05.02.2019	1	0.39

Additional Equity Received	Amount in Rs. Crs.	Date of Receipt	No. of Months	RoE Allowed
EN120 PSR 2018 dated 25.01.2019	1.22	04.02.2019	1	0.02
EN120 PSR 2018 dated 25.01.2019	0.25	04.02.2019	1	0.00
Total	140.00			8.39
Return on Equity allowed on Additional Equity Infusion in FY19				8.39

As worked out above the additional RoE allowable on the additional equity infused by the GoK is Rs.8.39 Crores for FY19.

Thus, the Commission decides to allow the total Return on Equity of Rs.143.12 Crores for FY19.

4.2.11 Other Income:

BESCOM's Submission:

The BESCOM, in its filing has indicated an amount of Rs.479.97 Crores as other income, under APR for FY19, as against the actual other income of Rs.584.65 Crores, as per the audited accounts for FY19. By referring to the Tariff Policy, BESCOM has requested the Commission to allow it to retain 50% of the incentive of Rs.209.36 Crores earned for early and prompt payment of power purchase bills and accordingly has requested the Commission to allow other income of Rs.479.97 Crores for FY19.

The details of the other income claimed by the BESCOM for FY19, as per the audited accounts, are as under:

TABLE – 4.34
Other Income – BESCOM's Submission

Particulars	Amount in Rs. Crores	
		FY19
Rent		3.36
Miscellaneous		165.69
Rebate at 0.5% for collection of Electricity Duty		6.35
Interest on Bank Deposits		7.97
Value of materials found excess during physical verification		0.12
Interest subsidy received under National Electricity fund		30.82
50% of Incentive for prompt payment		104.68
Losses/gains relating to fixed assets		-4.05
Revenue from sale of power through IEX		165.04
Total other income		479.97

Commission's analysis and decisions:

The Commission notes that, as per the audited accounts, an amount of Rs.584.65 Crores is indicated as other income for FY19. However, BESCOM has requested the Commission to allow it to retain Rs.104.68 Crores being 50% of the incentive of Rs.209.36 Crores earned on prompt payment of power purchase bills. By considering the said amount BESCOM has considered Rs.479.97 Crores as other income in the APR for FY19. The Commission notes that any income earned during the course of business has to be passed on to the consumers, as they bear the entire cost of operation of the distribution company including the incentive earned for prompt payment of power purchase bills on time. Hence, there is no justification for claiming other income as Rs.479.97 Crores against an amount of Rs.584.65 Crores accounted as other income in the audited accounts for FY19. The Commission's decision on similar claims has been made clear, in its earlier Tariff Orders also.

However, Commission, as decided in the earlier Tariff Orders, in order to encourage and bring in financial discipline in timely payment of monthly power purchase bills, decides to continue to allow 10% of the total incentive amounting to Rs.209.36 Crores earned on account of timely payment of power purchase bills, to be retained by the BESCOM for FY19. Thus, the Commission has allowed an amount of Rs.20.94 Crores as amount to be retained by BESCOM.

Further, the Commission notes that, BESCOM has considered an amount of Rs.165.04 Crores realized through sale of surplus power through IEX, as other income. Whereas the same should have been considered as reduction in power purchase cost. Hence the same is not allowed as other income but considered as reduction in the power purchase cost. After considering the said amounts, the Commission has considered other income as Rs.398.67 Crores.

Thus, the Commission decides to approve Rs.398.67 Crores as other income for FY19.

4.2.12 Fund towards Consumer Relations / Consumer Education:

The Commission has been allowing an amount of Rs.1.00 Crore per year towards consumer relations / consumer education. The BESCOM in its application had not separately claimed any expenditure towards Consumer Relations/ Consumer Education incurred.

The Commission notes the replies furnished by BESCOM to the preliminary observations and the various expenses incurred towards consumer relation and consumer education booked under A&G head of expenditure, as per the audited accounts, for FY19.

Thus, the Commission, in line with the approved amount, decides to allow Re.1.00 Crore towards consumer relations and Consumer Education for FY19.

4.2.13 Revenue Demand for FY19:

BESCOM has considered an amount of Rs.19538.74 Crores as the revenue from the sale of power and miscellaneous charges as per the audited accounts for FY19.

The Commission, as per the audited accounts, has considered the total amount of revenue from sale of power and miscellaneous charges of Rs.19538.74 Crores for FY19.

4.2.14 Subsidy for FY19:

The Commission, in its Tariff Order dated 14th May, 2018 had approved the total tariff subsidy of Rs.2722.41 Crores towards sale of power to BJ/KJ and IP sets for FY19, in accordance with the prevailing Government Order. The BESCOM, in its application has claimed an amount of Rs.2632.78 Crores as tariff subsidy for supply of free power to IP category and Rs.115.96 Crores towards free power supply to BJ/KJ installations, for FY19.

The Commission notes that, as per the audited accounts and the replies furnished to the preliminary observations, an amount of Rs.2632.78 Crores has been factored as tariff subsidy for supply of free power to IP category and

Rs.115.96 Crores for BJ/KJ installations consuming up to 40 units / month respectively (Total subsidy Rs.2748.74 Crores), for FY19.

Thus, the Commission while computing the revised ARR under APR for FY19, has considered the total tariff subsidy of Rs.2748.74 Crores towards IP Set installations and BJ/KJ installations for FY19. The difference in subsidy of Rs.26.33 Crores is treated as receivable from the GoK for FY19.

4.2.15 Income Tax:

BESCOM in its filing has submitted that it has incurred Rs.9.30 Crores and Rs.221.11 Crores towards Current tax and Deferred Tax Liability respectively for FY19. However, BESCOM has claimed an amount of Rs.9.30 Crores towards Income Tax for FY19, as the Commission is allowing only the actual tax paid by BESCOM.

The Commission, in accordance with the provisions of Clause -3.12.6 of the KERC (Terms & Conditions for Determination of Tariff for Distribution and Retail Supply of Electricity) (Second Amendment) Regulations, 2015, has decided to consider the actual payment of current Income Tax of Rs.9.30 Crores as per the audited accounts for FY19.

Thus, the Commission, decides to approve the actual current Income Tax of Rs.9.30 Crores for FY19.

4.3 Abstract of Approved ARR for FY19:

As per the above item-wise decisions of the Commission, the consolidated Statement of revised ARR, as per the APR for FY19, is as follows:

TABLE – 4.35
Approved ARR for FY19 as per APR

Amount in Rs. Crores

Sl. No	Particulars	APR FY19		
		As Appd. in Tariff Order dt.14.05.2018	As Filed	As per APR
1	Energy at Generation Bus-MU	33261.05	32960.38	32960.66
2	Transmission Losses of KPTCL in %	3.08%	3.695%	3.696%
3	Energy at Interface Points with KPTCL in MU	32235.61	31742.35	31742.35
4	Distribution Losses in %	12.25%	12.54%	12.54%
	Sales in MU			
5	Sales to other than IP & BJ/KJ in MU	21035.86	20388.86	20388.86
6	Sales to BJ/KJ	127.68	171.29	171.29
7	Sales to IP Sets	7123.21	7202.32	7202.32
	Total Sales	28286.75	27762.47	27762.47
	Revenue in Rs. Crores			
8	Revenue from tariff and Misc. Charges	16513.75	16790.01	16790.00
9	Revenue from Subsidy to BJ/KJ	86.82	115.96	115.96
10	Revenue from Subsidy to IP Sets	2635.59	2632.78	2632.78
	Total Revenue	19236.16	19538.75	19538.74
	Expenditure in Rs. Crores			
11	Power Purchase Cost	14457.09	17160.31	16995.26
12	Transmission charges of KPTCL	1528.66	1539.27	1539.27
13	SLDC Charges	15.03	15.03	15.03
	Power Purchase Cost including cost of transmission	16000.78	18714.61	18549.56
14	Employee Cost		1513.41	
15	Repairs & Maintenance		122.69	
16	Admin & General Expenses		347.00	
	Total O&M Expenses	1654.99	1983.10	1809.80
17	Depreciation	440.68	530.18	530.18
	Interest & Finance charges			
18	Interest on Loans	415.16	373.05	373.05
19	Interest on Working capital	360.75	366.41	359.30
20	Interest on belated payment on PP Bills	0.00	0.00	0.00
21	Interest on consumer deposits	246.94	210.56	210.56
22	Other Interest & Finance charges	11.63	11.52	2.01

Sl. No	Particulars	APR FY19		
		As Appd. in Tariff Order dt.14.05.2018	As Filed	As per APR
23	Less: Interest & other expenses capitalized	-86.00	-118.25	-118.25
	Total Interest & Finance charges	948.48	843.29	826.67
24	Other Debit/ Extraordinary Items	0.00	19.72	25.77
25	Net Prior Period Debit/Credit	0.00	0.00	0.00
26	Return on Equity	179.13	143.51	143.12
27	Provision for taxation	0.00	9.30	9.30
28	Funds towards Consumer Relations/Consumer Education	1.00	0.00	1.00
29	Other Income	-223.00	-479.97	-398.67
	ARR	19002.06	21763.74	21496.72
30	Deficit for FY17 carried forward	234.10	0.00	0.00
31	Less: Penalties for performance on distribution losses	0.00	0.00	-7.77
32	Less: Disallowance of interest and Depreciation on imprudent investment in FY17 & FY18	0.00	0.00	-2.88
	Net ARR	19236.16	21763.74	21486.08
	Surplus / (-) Deficit in Revenue for FY19	0.00	-2224.99	-1947.34

4.4 Gap in Revenue for FY19:

As against the approved ARR of Rs.19236.16 Crores, the Commission, after Annual Performance Review of BESCOM for FY19 decides to allow a net ARR of Rs.21486.08 Crores for FY19. Considering the revenue of Rs.19538.74 Crores, a deficit of Rs.1947.34 Crores is determined for FY19.

The Commission decides to carry forward the revenue deficit of Rs.1947.34 Crores of FY19 to the revised ARR for FY21 as discussed in the subsequent Chapter of this Order.