CHAPTER – 5

REVISED ANNUAL REVENUE REQUIREMENT FOR FY19

5.0 Revised Annual Revenue Requirement (ARR) for FY19

CESC's Application:

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

TABLE – 5.1

Revised ARR for FY19-CESC's Submission

Rs. Crores

Sl. No.	Particulars	Amount
1	Energy at Gen Bus in MU	7991.81
2	Transmission Losses in %	3.27%
3	Energy at Interface in MU	7730.48
4	Distribution Losses in %	12.75%
	Sales in MU	
5	Sales to other than IP & BJ/KJ installations	3323.89
6	Sales to BJ/KJ installations	89.25
7	Sales to IP-sets	3331.70
	Total Sales	**6744.84**
	Revenue from tariff, in Rs. Crores	
8	Revenue from Tariff and Misc. Charges	2362.04
9	Tariff Subsidy from BJ/KJ installations	55.16
10	Tariff Subsidy from IP-sets	1773.27
	Total Revenue	**4190.47**
	Expenditure in Rs. Crores.	
11	Power Purchase Cost	3028.61
12	Transmission charges of KPTCL	377.82
13	SLDC Charges	3.03
14	**Power Purchase Cost including cost of transmission**	**3409.46**
15	Employee Cost	438.99
16	Repairs & Maintenance	51.96
17	Administration & General Expenses	89.05
18	**Total O&M Expenses**	**580.00**
19	Depreciation	227.62
	Interest & Finance charges	
20	Interest on Loans	205.23
21	Interest on Working capital	73.85
22	Interest on belated payment on PP Cost	0.00
23	Interest on consumer security deposits	38.37

24	Other Interest & Finance charges	0.52
25	Less: interest & other expenses capitalised	24.00
	Total Interest & Finance charges	**293.97**
26	Other Debits	6.79
27	Net Prior Period Debit/Credit	2.00
28	Return on Equity	0.00
29	Funds towards Consumer Relations/Consumer Education	0.00
30	Provision for income tax	25.75
31	Other Income	89.43
32	**ARR**	**4456.16**
33	Surplus/deficit for FY19	**-265.69**
34	Deficit for FY17 carried forward	-496.55
	Net ARR	**4952.71**

The CESC has requested the Commission to approve the revised Annual Revenue Requirement of Rs.4952.71 Crores for FY19. Considering the estimated revenue of Rs.4190.47 Crores based on the existing retail supply tariff, CESC estimated a revenue gap of Rs.762.23 Crores inclusive of carried forward gap of revenue of Rs.496.55 Crores of FY17. In order to bridge this gap in revenue, CESC, in its application has proposed increase in retail supply tariff by 17.1299% over the existing tariff which will result in average increase of 113 paise per unit for all the categories of consumers including BJ/KJ and IP set consumers for FY19.

5.1 Annual Performance Review for FY17:

As discussed in the preceding chapter of this Order, the Commission as per the provisions of the MYT Regulations has carried out the Annual Performance Review for FY17 based on the audited accounts submitted by CESC. Accordingly, a deficit of **Rs.491.45 Crores** of FY17 is carried forward into the ARR of FY19.

5.2 Revised Annual Revenue Requirement for FY19:

The item wise revenue and expenditure proposed by CESC and as approved by the Commission for FY19 is discussed in this Chapter as follows:

5.2.1 Capital Investments for FY19:

CESC's Submission:

The CESC has proposed a capex of Rs**.972.25** Crores for FY19 as against Rs.677 Crores approved by the Commission in the Tariff Order dated 30th March,

2016. The CESC has stated that, it has carried out the works according to the **"Capital Expenditure Guidelines for ESCOMs"** issued by the Commission. The overall goal of CESC for taking up projects under E&I or any other scheme is stated to achieve the following:

a. The network strengthening and expansion requirement,
b. Improvement of power supply reliability
c. The target date for each of the project
d. Loss reduction trajectory

Further, the CESC has furnished the action plan for the proposed major category of works in capex for FY19 as follows:

a) **Extension and Improvement Works**: During the Financial year 18-19, in CESC's area of operation, various new works are planned under E&I head. It has proposed to install about 2000 nos. of additional transformers, as well as 500 nos. of transformers of different capacities for capacity enhancement works. Construction of new link lines are planned for evacuation of power from New sub-stations as well as to reduce HT:LT ratio. Because of vast forest area covered in the CESC with Elephant habitation, the existing 7.5/8.0 M poles are proposed to be replaced by 9.0 M poles during 2018-19.

b) **Nirantara Jyothi Yojana (NJY):** Action plan was meant to construct 135 feeders for bifurcation and 130 feeders have been commissioned under NJY Phase-1 scheme, as at the end of October-2017. Out of 235 proposed feeders, work of 224 feeders have been completed, out of which 222 feeders have been commissioned under NJY Phase-2 scheme, as at the end of October, 2017. The third party analysis of the benefit of NJY has been carried out by M/s CPRI and the benefits are quantified.

c) **RGGVY and DDG:** The electrification of BPL households under RGGVY 12th Plan of Mysuru and Mandya districts has already been awarded for Rs.34.50 Crores and works are under progress. For electrification of households in non-conventional method under DDG project, work award has been issued and work is under progress.

d) Integrated Power Development Scheme (IPDS): The GoI has introduced IPDS in urban areas. In CESC, 33 towns are included under this scheme. The work is awarded and the DPR amount is Rs.170.00 Crores. It is planned to complete the work during FY19. Hence Budget provision is made for Rs.100 crores for FY19.

e) Deen Dayal Upadyay Grameena Jyothi Yojana (DDUGJY): Under improvement works will be taken up in rural areas of five districts in CESC jurisdiction. These works are awarded and planned to be completed during FY19. Hence, the provision is made for Rs.150 crores for FY19.

The revised capital expenditure proposed by CESC for FY19 is as under:

TABLE-5.2

Capital Expenditure of CESC for FY19

Rs. Crores

SL NO	Schemes	MYT Approved capex for FY19	CESC's proposal for FY-19
1	Extension & improvement	350.00	180.00
2	NJY	25.00	20.00
3	HVDS	15.00	0
4	R-APDRP	10.00	20.00
5	IPDS		100.00
6	DDUGJY	100.00	150.00
7	RGGVY (Restructured) +DDG	0	40.00
8	Replacement of failed Transformers	5.00	5.00
9	Service Connections	50.00	90.00
10	Rural Electrification (General)		
A	Electrification of Hamlets/HB/JC under RGGVY	50.00	3.00
B	Providing infrastructure to Irrigation Pump sets & Energization of IP SETS		160.00
C	Kutir Jyothi (RGGVY)		2.00
11	Tribal Sub Plan		
A	Electrification of Tribal Colonies (RGGVY)	3.00	0
B	Energization of IP sets		2.00
C	Kutir Jyothi (RGGVY)		0
12	Special Component Plan		
A	Electrification of HB/JC/AC (RGGVY)	10.00	0

B	Energization of IP sets		7.00
C	Kutir Jyothi (RGGVY)		0
13	Tools & Plants	4.00	5.00
14	Civil Engineering Works	5.00	10.00
15	Providing Meters to DTC, BJ/KJ, Street Light for replacement of electromechanical meters, providing modems to meters for communication	50.00	20.00
16	Software Development and smart grid project	0	1.50
17	Providing control wire and switches for street lighting, Timer switches, Providing LED lights etc., in 5 model villages in each MLA/MP constituency	0	48.00
18	Model Sub-division	0	100.00
19	Mahamastakabhishekha Works	0	3.75
20	Ag DSM works	0	5.00
	Total	**677.00**	**972.25**

Commission's analysis and decision:

i. CESC has reduced the capex of E&I works for FY19, since the distribution loss reduction and improvement of reliability are main contributions out of E&I works. The CESC in its replies to the Commission's observations has stated that, in the previous years, the works related to providing infrastructure to regularized IP sets were considered under E&I works and the proposal were submitted accordingly. From FY18, these works were considered under Service Connection category. Hence, there is an increase in capex for this category and decrease in capex proposed for E&I works in FY19.

ii. In case of Providing infrastructure to Irrigation Pump sets & Energization of IP SETS, the CESC has increased the capex from Rs.50 Crores to Rs.160 crores, whereas in FY17, CESC has achieved a very poor progress in this category. The CESC in its replies on the Commission's observations has stated that, due to segregation of the E&I work and Service connection works under which the above category is being taken up, the cost is increased.

iii. In case of **IPDS and DDUGJY** works, CESC has proposed Rs.100 Cores and Rs.150 Crores respectively. The CESC in its replies on the observations made by the Commission has stated that, the Works are awarded between February, 2017 and March, 2017 with a completion period of 2 years from the date of award and works are in progress.

iv. CESC should furnish the status of initiation of the works of **Providing control wire and switches for street lighting, Timer switches, Providing LED lights etc., in 5 model villages in each MLA/MP constituency.** The CESC in its replies on the Commission's observations has stated that, these works are being taken up in accordance with the Budget announcement for 2017-18 by the GOK. DPRs for the works in respect of all constituencies of the MLA have been received and DPRs are at approval stage.

v. Further, the CESC had sought for additional capex for Model subdivisions to be taken up in four subdivisions at a cost of Rs.340 Crores for FY18, but has proposed only Rs.100 Crores for FY19. The CESC in its replies on the Commission's observations has stated that, as per GOK directions, DPR for Model sub divisions has been prepared and sanctioned. The works are still under tendering stage as at the end of December,2017. It is proposed to complete the entire work in 3 years and hence a capex of Rs.100 Crores is made in FY19.

The Commission notes that, the performance of CESC in incurring capex has improved over the years and the following table shows the details of approved vs actual capex incurred by the CESC during the past four years.

Table –5.3

Approved Vs. Actual capital investment

Rs. Crores

Particulars	FY13	FY14	FY15	FY16	FY17
Capital Investment Proposed & Approved	560	575.5	455	317	522
Capital Investment actually incurred	195.87	321.75	318.83	488.52	467.64
Short fall (-)/ Excess outlay	-364.13	-253.75	-136.17	171.52	54.36
% Achievement	**34.98%**	**55.91%**	**70.07%**	**154.10%**	**89.58%**

Thus, with the above observations, the Commission decides to consider the capex of Rs.972.25 Crores, as proposed by CESC for FY19, which will be subjected to Prudence check during the APR of FY19.

5.2.2 Sales:

A. Sales other than IP sets for the FY19:

The CESC in its filing has stated that for estimating sales for the FY18 and the FY19, three years or five year CAGR is considered. The Commission had observed that the CAGR has been applied for the half-year data of the FY18 for estimating the sales for second half of the FY18, which is not appropriate, as the CAGR stands for compounded annual growth rate and is to be applied for annual data and not on half-year data. For the current year, where the half-year data is available, the estimate could be done on pro-rata basis or considering the actual sales up to 30.09.2017 and estimating the sales for remaining period based on the growth rate of the previous year for the corresponding period.

The observations of the Commission on sales forecast for the FY19 are as follows:

i) LT (1) – BJ/KJ category:

The CESC had proposed 461735 number of installations under installations consuming up to 40units/month and 34962 installations towards installations consuming more than 40units/month for the FY19. The Commission had noted that the CESC has retained the same number of installations consuming up to 40 units/month and more than 40units/month, as on 30.09.2017 for both the previous years, namely the FY18 and for the FY19, for the reason that the breakup of data is not available for the previous years. The Commission while taking note of the explanation submitted by the CESC, had observed that, though the number of installations has been retained at the FY18 level, the proposed energy sales has been increased in the FY19 to 125.95 MU from 121.62 MU in the FY18.

CESC in its replies to preliminary observations has stated that both the 3-year CAGR and the 5-year CAGR are positive and hence, it has adopted a growth rate of 3.15%.

The Commission notes that, the energy sales to BJ/KJ are computed based on the specific consumption and when there is no addition to the number of installations, the sales cannot increase as proposed by CESC, unless the specific consumption itself increases. CESC has not indicated that the specific consumption has increased. The approach of the Commission on BJ/KJ sales is dealt in the subsequent paragraphs.

ii) Growth Rate for No. of Installations:

The Commission had noted that the growth rate considered for the number of Installations for HT-2c is on lower side when compared to the CAGR of 41% and the previous year's growth of 11% and had suggested the CESC to consider revising the figures for this category.

CESC in their replies, furnishing details of number of installations from FY-14 to FY18, has stated that it has considered 10% growth.

The Commission has noted the replies and the approach of the Commission is discussed in subsequent paragraphs.

iii) Growth Rate for Energy Sales:

a) The Commission had noted that, though the CAGR and the previous year's growth rate is negative, the CESC had considered a positive growth rate for HT-2a and HT-4 categories, stating that it has considered a conservative growth rate of 1%.

b) For HT2(a) category, the sales estimate based on the analysis of open access impact should be considered. The CESC should have computed the growth rates considering the total energy sold to this category including OA/wheeling and should have estimated the sales considering the ratio of energy sold by the CESC in the FY17 to the total sales of the FY17 including OA/wheeling sales. the CESC may compute the HT-2a sales on the above method and furnish the data.

CESC, with respect to the observations on energy sales to HT-2a and HT-4, has furnished details of OA/wheeling transactions from Apr17 to Nov17 and has stated that OA sales vary from month to month and therefore, it is not possible to estimates OA sales.

The Commission has taken note of the replies and the approach of the Commission is discussed in subsequent paragraphs.

To validate the sales, the CESC was directed to furnish category-wise information on the number of installations and energy sales in the specified format. The CESC has furnished the above details.

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

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

i) No. of Installations:

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

a. The base year number of installations for FY18 is modified duly validating the revised estimate furnished by CESC in the current filing and the data available as on 30.11.2017. The Commission has validated both the number of installations and energy sales to various categories considering the actuals as on 30.11.2017 and has estimated the number of installations and sales for the remaining period reasonably, keeping in view the number of installations and sales as on

31.03.2017 also. Accordingly, the base year estimation has been revised which has an impact on the estimates on number of installations and sales for the year FY19.

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

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

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

e. For LT-7, HT (4) and HT-5 categories, the estimates of CESC are retained, as the growth rate for these categories is not consistent.

Based on the above approach, the total number of installations (Excluding BJ/KJ consuming less than 40 units/month and IP sets) estimated by the Commission for FY 19 is 23,68,349 as against 24,06,139 proposed by CESC.

ii) Energy Sales:

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

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

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

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

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

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

f. For HT2(a) average of CAGR method specified above and that based on OA analysis is considered by the Commission as reasonable.

g. HT2(b) categories, the sales estimate based on OA analysis is adopted by the Commission as reasonable.

h. For HT-4 category, the sales are estimated based on the specific consumption of FY17.

Based on the above approach, the sales (Excluding BJ/KJ consuming less than 40 units/month and IP sets) estimated by the Commission for FY19 is 3415.93 MU, as against 3323.90 MU proposed by CESC.

iii) Sales to BJ/KJ Installations:

i) Sales to BJ/KJ:

The break-up of sales to BJ/KJ installations furnished by CESC, as on 30th September 2017 is as indicated below:

TABLE-5.4

Specific Consumption of BJ/KJ Installations

Particulars	No. of Installations	Consumption in MU	Specific consumption per installation per month (kWh)
Installations consuming less than or equal to 40 units*	461735	42.59	15.37
Installations consuming more than 40 units and billed under LT2(a)	34962	17.16	81.80

The specific consumption works out to 15.37 units /installation/month for BJ/KJ installations consuming less than or equal to 40 units per month and 81.80 units /installation/month for BJ/KJ installations consuming more than 40 units per month.

CESC has retained the total number of installations for both FY18 and FY19 at 496697 which were existing as on 30.09.2017. However, as per on 30.11.2017, the total BJ/KJ installations is 496780, which is less than the FY17-year end figure of 496789. Therefore, the Commission has considered 496789 number of installations for both the years FY18 and FY19. Considering the breakup of BJ/KJ installations as on 30.09.2017 as furnished by CESC, the sales is worked out as per the above specific consumption for the year FY 19 as indicated below:

Particulars	No. Of Installations	Sales MU
Installations consuming less than or equal to40 units	461821	85.20
Installations consuming more than 40 units and billed under LT2(a)	34968	34.33

B. IP set sales projections for ARR for FY19

The Commission, in its Tariff Order dated 30th March, 2016, had approved a specific consumption of IP-sets as 7,843 units/installation/ annum for FY19. However, based on the data of sales to IP-sets, as indicated by the CESC in its Tariff filing, the specific consumption works out at 9,578 units/installation/annum, for the FY17. Further, the sale to IP sets reported in its Tariff filing by the CESC was 3,143.13 MU as against the approved sales quantum of 2,622.39 MU, for FY17. This indicates a huge increase in sales to an extent of 520.74 MU between the IP consumption reported by the CESC in its Tariff filing and the IP consumption approved by the Commission for FY17. This huge difference in consumption between the approved and reported may be due to increased hours of power supply given on the exclusive agriculture feeders segregated under NJY, in excess of the scheduled hours of power supply fixed by the Government. In view of increased hours of power supply on the exclusive agricultural feeders, the IP consumption has increased enormously, resulting in higher specific consumption of 9,578 units/installation/annum. Therefore, it is an aberration and these figures should not be considered for estimating the future consumption.

It is noted that the specific consumption approved by the Commission for the CESC for FY19 was 7,843 units/installation/annum, as per the MYT Order for the control period FY17 to FY19. Hence, it will be most appropriate to consider the specific consumption of 7,843 units/ installation/annum for the FY19. In view of this, the Commission decides to approve the specific consumption of 7,843 units/installation/ annum for the ARR of FY19.

Further, it is noted that the CESC has estimated the number of IP-set installations as 3,90,834 for the FY19 in the current Tariff filing. In view of this, the Commission has considered the number of IP-sets as reported by the CESC, for the ARR of FY19 without any modifications. Hence, based on the estimated number of installations for the FY18 and the FY19 as reported by the CESC, the mid-year number of installations is calculated and the sales to IP-set consumers are indicated as follows:

TABLE-5.5
Computation of sales to IP Sets

Particulars	As filed by the CESC		As approved by the Commission
	FY18	FY19	FY19
No of installations	3,68,955	3,90,834	3,90,834
Mid-Year no. of installations		3,79,895	3,79,895
Specific consumption in units/installation/annum		8,770	7,843
Sales in MU		3,331.70	2,979.51

Accordingly, the Commission approves 2,979.51 MU as energy sales to IP-sets as against the CESC's sales projections of 3,331.70 MU, for the FY19. The number of installations approved for FY19 is 3,90,834.

This approved IP-set consumption of 2,979.51 MU for FY19 is with the assumption that the Government of Karnataka would release full subsidy to cover the approved quantum of IP-sales. However, if there is any reduction in the subsidy allocation by the GoK, the quantum of sales to IP-sets of 10 HP and below shall be proportionately regulated.

As regards conducting GPS survey of IP sets to identify the defunct IP sets in the field, the CESC has reported that it has completed GPS survey of around 90 per cent of the feeders and has identified 10,486 as defunct installations and considering such defunct installations, it has arrived at the correct number of IP sets for FY17. In this regard, the CESC is directed to complete the GPS survey of IP-sets and compliance thereon shall be submitted to the Commission. Hence, on completion of the GPS survey, the CESC shall arrive at correct number of IP-sets in the field for FY18 and FY19, duly deducting from its account the number of defunct wells, based on the GPS survey results. Any variation in sales due to change in number of installations would be trued up during the Annual Performance Review, for the FY19.

Further, it is noted that the CESC has already segregated 372 agriculture feeders from rural loads under NJY phase1&2. Therefore, energy consumed by the IP-sets could be more accurately measured at the 11 KV feeder level at the sub-stations after allowing for distribution system losses in 11 KV lines, distribution transformers and LT lines calculated considering the actual sketches.

Hence, the Commission reiterates its directive that the CESC shall report the total IP-set consumption on the basis of specific consumption arrived at from the consumption data from energy meters at the substations in respect of agriculture feeders segregated under NJY only, to the Commission, every month regularly, as per the following format:

Month	Name of Sub-division	Name of. Segregated Agriculture Feeders in the subdivision	Initial energy meter reading in the feeder	Final energy meter reading in the feeder	Meter constant	Monthly Consumption in MU as recorded in all the agricultural feeders at the substations pertaining to the Sub division	Distribution loss(11kV line, DTCs,& LT line) Plus sales to other consumers if any, in MU (losses in all the agri. feeders only to be considered)	Net consumption duly deducting the Distribution loss (11kV & LT) & any other loads if any	No. of IP sets (total-dried up) connected to the agri. feeders in the subdivision			Average consumption of IP / month (specific cons in units /IP/month)	Total no of IP sets in the subdivision			Total sales of
									Beginning of the month	Serviced at the end of month	Mid-month		Beginning of the month	Serviced at the end of month	Mid-month	
1	2	3	3a	3b	3c	4 =(3b-3a) *3c	5	6=(4-5)	7a	7b	7c= (7a+7b)/2	8=6/7c	9a	9b	9c =(9a+ 9b) /2	10 = 8 * 9c
Apr- 18 To Mar-19	Subdiv-1 Subdiv-2 Subdiv-3															
TOTAL																

Note:

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

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

(3) The values under column 9b (number of installations) & column 10 (total sales) shall be considered for DCB of the subdivision.

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

TABLE-5.6

Approved Sales for FY19

Category	CESC's Estimates for FY19		Approved Sales for FY19	
	Installations	Sales	Installations	Sales
	No.	MU	No.	MU
BJ/KJ-more than 40 units/month	34962	36.70	34968	34.33
LT-2a	1959178	1046.43	1928348	1046.43
LT-2b	3357	11.28	3357	11.08
LT-3	259104	309.00	253791	309.01
LT-4 (b)	208	0.89	205	1.05
LT-4 (c)	9036	26.11	8747	24.78
LT-5	43520	143.29	42961	148.58
LT-6-WS	29582	302.11	29093	302.10

LT-6-PL	23535	118.96	23226	118.97
LT-7	41396	18.16	41396	18.16
HT-1	158	434.18	158	434.18
HT-2 (a)	1014	617.78	1013	701.80
HT-2 (b)	640	125.62	640	125.18
HT2C	305	53.32	305	53.32
HT-3(a)& (b)	102	72.32	99	79.11
HT-4	12	3.65	12	3.74
HT-5	30	4.10	30	4.10
Sub-Total other than BJ/KJ and IP sets	**2406139**	**3323.90**	**2368349**	**3415.93**
BJ/KJ-upto 40 units/month	461735	89.25	461821	85.20
IP sets	390834	3331.70	390834	2979.51
Sub Total BJ/KJ and IP sets	**852569**	**3420.95**	**852655**	**3064.71**
Total	**3258708**	**6744.85**	**3221003**	**6480.63**

Thus, the Commission approves 6480.63 MU as sales for FY19.

5.2.3 Distribution Losses for FY19:

CESC's Submission:

The CESC has reported the distribution losses of 13.16 per cent as against the approved distribution loss level of 13.25 per cent as per the audited accounts for the FY17. The Commission, in its Tariff Order dated 30th March, 2016, had fixed distribution target losses for FY19 at 12.75 per cent. The CESC in its current Tariff application has proposed to retain the average distribution loss levels of 12.75 percent for FY19, as per the MYT Order dated 30th March, 2016.

Commission's Analysis and Decisions:

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

TABLE –5.7

Approved & Actual Distribution Losses-FY12 to FY17

Figures in % Losses

Particulars	FY12	FY13	FY14	FY15	FY16	FY17
Approved Distribution losses	15.24	15.00	15.50	15.00	14.50	13.25
Actual distribution losses	16.20	15.07	14.73	13.88	13.60	13.10

The Commission notes that except in FY12 and FY13, the distribution loss levels achieved by the CESC from FY14 to FY17 are within the approved loss level targets. Further, the Commission is of the view that any investments made for improving the existing distribution network should reduce the distribution losses significantly besides increasing the reliability and quality of supply of electricity to the consumers. The Commission, considering the substantial capital expenditure being incurred by the CESC, has allowed the capex as proposed by it. While, the Commission decides to retain the distribution loss levels as approved in the Tariff Order dated 30th March, 2016 for FY19 as indicated below, CESC is directed to take action to further reduce the losses in FY 19:

TABLE-5.8

Approved Distribution Losses for FY19

Figures in % Losses

Distribution Loss Range	**FY19**
Upper limit	13.00
Average	**12.75**
Lower limit	12.50

5.2.4 Power Purchase for FY19

a. CESC's Proposal;

In its application for revision of ARR for FY19, the CESC has proposed power purchases of 7991.81MU a cost of Rs.3409.46 Crores (including Transmission and System Operation charges). The CESC has made the following source-wise projections to meet the power purchase requirement for FY19:

Table: 5.9

Energy Projection & Power Purchase Cost of CESC -FY19				
	Source	**Energy in Mus**	**Cost in Rs. Crs.**	**Cost per Unit in Rs.**
1	KPCL Hydel Energy	1537.23	123.47	0.80
2	KPCL Thermal Energy	1403.27	604.31	2.47
3	CGS Energy	2303.03	897.42	3.90
4	IPP	824.86	382.08	4.63
5	RE	1305.16	570.83	4.37

6	Other State Hydel	14.63	5.55	3.79
7	Total Medium Term &Short Term	216.53	96.33	890.42
8	Allocation to Other ESCOMs	387.10	152.73	3.94
9	KPTCL Transmission Charges		377.82	
10	SLDC Charges		3.03	
11	PGCIL Charges		195.65	
12	POSOCO charges		0.25	
13	**Grand Total**	**7991.81**	**3409.46**	**4.26**

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

1. CESC has proposed to purchase power from different sources viz., KPCL Hydel, KPCL Thermal, Central Generating Stations, IPPs, NCE projects and other through short term purchases to meet the deficit.

2. The Energy availability of Hydel and Thermal stations of State Owned Power plants are considered as per the projections made by KPCL.

3. The energy projected by KPCL in respect of hydro stations is based on inflows anticipated as per moving average of the past ten years reduced by 1% towards auxiliary consumption in terms of the PPA. Energy availability in respect of Thermal Stations is as per the targeted availability defined in the PPA/ Regulations, wherever applicable and reduced by the applicable auxiliary consumption of each station

4. Though the KPCL has projected the Energy from Yermarus Thermal Station units I & II, BTPS Unit III and Yelahanka Combined Cycle thermal station, CESC has not considered the energy from these stations since these plants were commissioned after 2016 and there was minimal energy generation from these stations.

5. The rates considered by the KPCL are based on the Commission's Order dated 03.08.2009 for hydel stations except for Shivasamudram, Shimsha, Munirabad & MGHE

6. In respect of thermal stations viz: RTPS units 1 to 7 and BTPS unit-1, the rates worked out by the KPCL are based on various parameters defined in the tariff orders.

7. In respect of Central Generating stations of NTPC, Neyveli Lignite Corporation(NLC), Nuclear power stations and other Joint Venture Projects,the ESCOMs have a share. The allocation of capacity entitlement from these stations includes both firm and unallocated share. The unallocated share would vary depending upon the allocation made by the Ministry of Power, GoI.

8. The actual generation of NCE projects for the year 2016-17 has been considered for 2018-19, including the Solar, Co-generation, Bio-mass, Wind Mills and Mini Hydel projects.

b. Commission's analysis and decisions;

Energy Availability:

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

i. Karnataka Power Corporation Limited (KPCL),
ii. Central Generating Stations (CGS);
iii. Major Independent Power producers (Major IPPs);
iv. Renewable Energy sources (Minor IPPs- NCE Sources);
v. Medium and short-term purchase on need basis through competitive bidding.

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

While the availability in respect of all the existing KPCL thermal units has been considered as per the projections, the energy availability from unit 3 of the

BTPS thermal station and from 2x800 MW units of Yeramaras has been considered partly, since these units are yet to stabilize.

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

Power Purchase Rates:

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

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

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

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

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

Based on the energy sales and the approved transmission and distribution losses in the system, the consolidated power purchase requirement of the State for FY 19 is enclosed in Annexure-1

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

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

Table-5.10

CESC's Approved Power Purchase for FY19

Source of power	Allowed Energy in MUs	Cost of Energy Rs. Crores	Cost per unit in Rs.
KPCL THERMAL	1032.75	444	4.30
CGS Energy	2270.15	859.29	3.79
IPPs	335.60	159.75	4.76
KPCL Hydel Stations	2466.32	157.34	0.64
Other Hydro	14.36	5.42	3.77
RE Sources	1000.22	466.07	4.66
NTPC Bundled power	313.73	104.12	3.32
Power purchase from Co-gen - Medium Term	107.28	51.75	4.82
Short term power purchase	123.53	50.40	4.08
PGCIL CHARGES		167.28	
KPTCL CHARGES		312.87	
SLDC		3.01	
POSOCO CHARGES		0.25	
TOTAL INCLUDING TRANSMISSION & LDC CHARGES	**7663.94**	**2781.54**	**3.63**

Thus the Commission approves 7663.94 MU at cost of Rs2781.54 Crores towards purchase of CESC for FY19.

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

5.2.5 RPO target for FY19:

The Commission has approved power purchase quantum of 5170.82 for FY19, net of hydro energy. The Non-solar RPO target at 12% would be 620.50 MU. The Commission has approved purchase of 512.49 MU from non-solar RE sources. Thus, there would be shortfall of 108.01 MU, which could be met by the anticipated surplus of solar energy of 284.75 MU, as discussed in this Chapter. Therefore, CESC would be able to meet its Non-solar RPO in FY19.

The Commission has approved power purchase quantum of 5170.82 MU for FY19, net of hydro energy. The Solar RPO target at 6.00 % would be 310.25 MU. The Commission has approved purchase of 595.00 MU of Solar energy. Thus, CESC would exceed the solar RPO by 284.75 MU, which shall be utilized to meet the shortfall in non-solar RPO.

5.2.6 O & M Expenses for FY19:

CESC's Proposal:

The CESC, in its application, has considered the corrected base year (FY16) O&M expenses of Rs.418.40 Crores which includes the uncontrollable contribution to P&G trust expenses of Rs.64.31Crores for computation of proposed O&M expenses of Rs.431.45 Crores, by considering the inflation index of 7.64% and consumer growth index on three years CAGR at 4.57% for FY19. Also the CESC has indicated a sum of Rs.55.81 Crores towards the pay scale impact during FY18.

Based on the above, the CESC has sought the O & M expenses of Rs.580 Crores for FY19 as detailed below:

TABLE – 5.11

O & M Expenses for FY19- CESC's Submission

Rs. Crores

Particulars	FY17 Actuals	FY18	FY19
No. of Installations	2964880	3131213	3258708
Consumer Growth Index (CGI) based on 3 year CAGR		4.6%	4.57%
Weighted Inflation index		7.64%	7.64%
Base year O& M Cost (as per actual of FY16) in Rs. Crores	431.45	431.45	475.62
O&M Expenses in Rs. In Crores	**431.45**	**475.62**	**524.18**
Pay scale impact during FY-18		**50.64**	**55.81**
Total		**526.26**	**580.00**

Commission's analysis & decision:

The Commission, in its MYT Order dated 30th March, 2016, while deciding the ARR for each year of the control period FY17-19, had approved O&M expenses of Rs.527.01 Crores for FY19 considering the base year O&M expenses of FY16, determined on the base data of the actual O&M expenses inclusive of contribution to P&G Trust of FY15 being the latest available as per the audited accounts, three years compounded annual growth rate (CAGR) of consumers of 3.98% and the weighted inflation index of 7.24%. The approved O&M expenses for FY19 were as follows:

Table-5.12

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

Sl No	Particulars	FY16	FY17	FY18	FY19
1	No. of Installations		2963000	3070460	3182981
2	CGI based on 3 Year CAGR		3.98%	3.92%	3.63%
3	Weighted Inflation index		7.24%	7.24%	7.24%
4	Base Year O&M expenses (as per actuals of FY16)-Rs. Crores	406.02			
6	**Total O&M Expenses-Rs. Crores**		**443.46**	**484.09**	**527.01**

The O & M expenses are controllable as per the MYT Regulations, and the distribution licensee is required to incur these expenses within the approved limits.

The Commission notes that, the CESC in its application has claimed additional O&M expenses of Rs.55.81 Crores for FY19 on account of revision of pay scales liability.

Further, the CESC in its letter dated 27th March 2018 has submitted that the pay scale of the employees/officers of KPTCL/ESCOMs has been revised with effect from 1st April, 2017. Hence, the liability an account of the payment of pay revision arrears of Rs.72.18 Crores for FY 18 and the additional employee expenditure on pay revision of Rs.79.39 Crores for FY 19 may be included as additional employee cost in computation of O & M expenditure for FY 19. The Commission notes that the additional employee cost projected by the CESC for FY 18 and FY 19 an account of revision of pay scales is on ad-hoc basis without taking in to account the retirement of employee/officers during FY 18 and FY 19. Thus the Commission decides that the additional employee cost due to revision of pay scale during FY19 could be factored and considered only at the time of approving APR for FY19, when the actual impact of revision of pay scales is reported in detail by CESC as per its audited accounts. Further, the Commission notes that, CESC while computing the O&M expenses for FY19, has considered the weighted inflation index of 7.64%by reckoning the WPI and CPI data of 13 years from 2004 to 2016 as against the 12year data adopted by CERC in its Notifications issued from time to time and the same methodology is being adopted by the Commission in various Tariff Orders.

The Commission, as per the provisions of MYT Regulations, has computed the O & M expenses for FY19 duly considering the base year actual O & M expenses of Rs.418.40 Crores which is inclusive of contribution to P&G trust as per the audited accounts for FY16. Considering the Wholesale Price Index (WPI) as per the data available from the Ministry of Commerce & Industry, Government of India and Consumer Price Index (CPI) as per the data available from the Labour Bureau, Government of India and adopting the methodology followed by CERC with CPI and WPI in a ratio of 80:20, the allowable annual escalation rate for FY19 is 8.1059%.

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

a) The actual O & M expenses incurred as per the audited accounts inclusive of contribution to the Pension and Gratuity Trust to determine the O & M expenses for the base year FY16.

b) The three year compounded annual growth rate (CAGR) of the number of installations of 4.16% considering the actual number of installations as per the audited accounts up to FY17 and as projected by the Commission for FY18 and FY19.

c) The weighted inflation index (WII) at 8.1059%.

d) Efficiency factor at 2% as considered in the MYT Order.

The above said parameters are computed duly considering the same methodology as is being followed in the earlier Tariff Orders of the Commission and the relevant Orders issued by the Commission on Review Petitions.

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

TABLE – 5.13

Approved O & M expenses for FY19

Particulars	FY16	FY17	FY18	FY19
No. of Installations	2850039	2964880	3092932	3221003
CGI based on 3 Year CAGR	3.94%	4.00%	4.17%	4.16%
Weighted Inflation index	7.71%	8.1059%	8.1059%	8.1059%
Base Year O&M expenses (as per actuals of FY16)-Rs. Crores	418.40			
Total allowable O&M Expenses-Rs. Crores		**444.67**	**490.38**	**540.74**

Since, the base year data includes the O & M expenses inclusive of contribution to the P & G Trust, the Commission has not considered allowing contribution to the P & G Trust separately.

Thus, the Commission decides to approve O&M expenses of Rs.540.74 Crores for FY19.

5.2.7 Depreciation:

CESC's Proposal:

The CESC, in its application has claimed the depreciation of Rs.227.62 Crores for FY19 as detailed below:

TABLE – 5.14

Depreciation for FY19- CESC's Submission

Rs. Crores

Particulars	Amount
Land and Rights	0.03
Buildings	4.28
Civil	0.20
Other Civil	0.06
Plant & M/c	31.70
Line, Cable Network	189.29
Vehicles	0.90
Furniture	0.60
Office Equipment	0.57
Total	**227.62**

The CESC in its applications has claimed Rs.49.85 Crores towards depreciation on assets created out of consumer contribution and grants as per the AS-12 under Other Income head.

Commission's analysis and decision:

The Commission notes that, the depreciation amount claimed by CESC is gross depreciation on gross fixed assets. The depreciation of Rs.49.85 Crores on the assets created out of consumer contribution/ grants has been factored under other income for FY19. The Commission in computation of depreciation on gross fixed assets has reckoned the new assets closing balance of GFA as per the audited accounts for FY17 and the assets likely to be created out of the approved capex duly considering the balance of works in progress for FY18 and FY19.

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

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

b) The actual rate of depreciation, so arrived at, is considered to allow the depreciation on the gross block of opening and closing balance of fixed assets projected for FY19 duly factoring the retirement of assets also.

c) The depreciation on account of assets created out of consumer contribution / grants are deducted based on the opening and closing balance of such assets duly considering the addition of assets as proposed by the CESC, at the weighted average rate of depreciation as per actuals in FY17.

Accordingly, the depreciation for FY18 is arrived at as follows:

TABLE – 5.15

Approved Depreciation for FY19

Rs. Crores

Particulars	Amount
Buildings	3.10
Civil	0.20
Other Civil	0.05
Plant & M/c	46.95
Line, Cable Network	136.23
Vehicles	0.10
Furniture	0.50
Office Equipment's	1.00
Sub Total	**188.14**
Intangible assets	**4.05**
Total	**184.09**
Less: Deprecation on Assets created out of Consumer Contribution / Grants	56.64
Net Depreciation	**127.45**

Thus, the Commission decides to approve an amount of Rs.127.45 Crores towards depreciation for FY19.

5.2.8 Interest on Capital Loans:

CESC's proposal:

CESC in its application has claimed Rs.205.23 Crores towards interest on capital loan by considering the opening balance of capital loan and the loan amount required to meet its proposed revised capex of Rs.972.25 Crores for FY19. The CESC has requested to approve interest on capital loan for FY19 as follows:

TABLE – 5.16

Interest on Capital Loan– CESC's Submission

Rs. Crore

Particulars	Amount
Opening Balance of Capital Loans	2,087.90
Add : New Loans	1,001.75
Less : Repayments	601.70
Total Loan at the end of the year	**2,487.95**
Average Loan for the year	2287.93
Weighted average interest rate	8.97%
Total Interest on Capital Loans	**205.23**

Commission's analysis and decision:

The Commission in its Order dated 30th March, 2016 had approved capex of Rs.677 Crores for FY19. CESC in its present application has proposed the revised capex of Rs.972.25 Crores for FY19. The Commission notes the new loan barrowings and repayment proposed by CESC is not commensurate with the revised capex proposed for FY18 and FY19. The Commission notes that, in the revised capex proposed by CESC many Central/State Government sponsored schemes of works having capital grants have been included. The Commission took note of the same and after having considered the consumer contribution and internal resources to fund the proposed capex has considered the new loan requirement of CESC for FY19. Hence, the Commission has reckoned capex of Rs.680.58 Crores at 70% of the proposed capex of CESC for FY19 for the purpose of Tariff Computation.

As per the audited accounts and as per the APR of FY17, the CESC had incurred interest on capital loan at a weighted average rate of interest of 11.08% p.a. This rate of interest is considered for the existing loan balances for which interest has to be factored during FY18. Further, for the year FY19, the weighted average rate of interest of the preceding year has been considered on the existing loan balances. The Commission has considered new loan, in compliance of the debt equity ratio of 70:30 as in MYT Regulations.

The present interest rates by commercial banks and financial institutions are charged mainly on the basis of Marginal Cost of fund based Lending Rates (MCLR). These rates are comparatively lower than the base rates considered earlier in approval of ARR for the control period FY17 to FY19. Further, in view of the changing economic situation, it is observed that there is a considerable reduction in the MCLR and also downward trend is evident in the interest rates. Hence, in such a situation, the Commission is of the view that, the ESCOMs can avail Capital loans at competitive interest rates. The Commission notes that, the present SBI MCLR rate for capital loans with tenure of 3 years is 8.35%. Considering the present MCLR, the Commission decides to allow an interest rate of 11.00% for FY19 for new Capital loans. It shall be noted that, the rate of interest now considered by the Commission on the new capital loans is subject to review during APR.

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

TABLE – 5.17

Approved Interest on Loans for FY19

Rs. Crores

Particulars	Amount
Opening Balance long term loans	**1199.19**
Add : New loans	408.35
Less : Repayments	120.62
Total loan at the end of the year	1486.92
Average Loan	**1343.05**
Weighted average rate of interest in %	11.06%
Interest on long term loans	**148.49**

Thus, the Commission decides to approve interest of Rs.148.49 Crores on Capital loans for FY19.

5.2.9 Interest on Working Capital:

CESC's proposal:

CESC has claimed interest on working capital of Rs.73.85 Crores based on the norms prescribed in the MYT Regulations.

Commission's analysis and decision:

The Commission in its MYT Order dated 30th March, 2016, while deciding the ARR for each year of the control period FY17-19, had approved Interest on working capital of Rs.79.76 Crores at an interest rate of 11.75% by considering the prevailing base rate. The Commission notes that, the CESC in its application has not furnished the basis calculation for claiming the interest on working capital and the rate of interest considered for FY19.

The Commission has been computing the interest on working capital as per the norms specified under the MYT Regulations and amendments thereon, which consists of one month's O & M expenses, 1% of opening GFA and two months' revenue. As discussed earlier, the interest regime is based on MCLR. The present MCLR for loans with tenure of one year is 8.15%. the Commission notes that, the short term working capital loans /Overdraft availed from the commercial Banks is in the range OF 10% TO 11.25%. As such, the Commission having taken note of the present downward trend in rate of interest decides to considered interest on working capital at 11% p.a. for FY19.

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

TABLE – 5.18
Approved Interest on Working Capital for FY19

Rs. Crores

Particulars	Amount
One-twelfth of the amount of O&M Expenses	45.06
Opening Gross Fixed Assets (GFA)	3491.82
Stores, materials and supplies 1% of Opening balance of GFA	34.92
One-sixth of the Revenue	655.82
Total Working Capital	735.80
Rate of Interest (% p.a.)	11.00%
Interest on Working Capital	**80.94**

Thus, the Commission decides to approve the interest on working capital of Rs.80.94 Crores for FY19.

5.2.10 Interest on Consumer Security Deposit:

CESC's proposal:

CESC in its application has claimed interest on consumer security deposit of Rs.38.37 Crores for FY19 duly considering the addition of deposits for FY19.

Commission's analysis and decision:

The Commission notes that, CESC while claiming the interest on consumer security deposit of Rs.80.94 Crores, in its application has not furnished the details of deposits and rate of interest and the computation methodology for FY19.

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

The Commission has considered the consumer security deposits as per audited accounts of FY17 for projection for FY18 and FY19. Also, the Commission has considered the average of the opening and closing balances of consumer deposits of the relevant year. Accordingly, the interest on consumer deposits for FY19 is computed as follows:

TABLE – 5.19

Approved Interest on Consumer Security Deposits for FY19

Rs. Crores

Particulars	Amount
Opening balance of consumer security deposits	562.23
Addition of deposits during FY19	41.07
Closing balance of consumer security deposits	603.30
Average Consumer Security Deposits for FY19	582.77
Rate of Interest at bank rate to be allowed as per Regulations	6.25%
Approved Interest on average Consumer Security Deposit	**36.42**

Thus, the Commission decides to approve an interest amount on consumer security deposits of Rs.36.42 Crores for FY19.

5.2.11 Other Interest and Finance Charges:

CESC in its application has claimed an amount of Rs.0.52 Crores towards other interest and finance charges for FY19. Considering, the expenditure on this item in the earlier years, the Commission decides to allow an amount of Rs.0.52 Crores towards interest and finance charges for FY19.

5.2.12 Interest and other expenses Capitalized:

CESC in its application on capital loan has claimed an amount of Rs.24.00 Crores towards capitalization of interest and other expenses during FY19. Considering, the capital expenditure incurred and capitalized in the previous years, the Commission decides to allow capitalization of interest on capital loan and other expenses of Rs.24.00 Crores as proposed by CESC for FY19.

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

TABLE – 5.20

Approved Interest and finance charges for FY19

Rs. Crores

Particulars	Amount
Interest on Loan Capital	148.49
Interest on Working Capital	80.94
Interest on Consumers Security Deposit	36.42
Other Interest & Finance Charges	0.52
Less : Interest & other expenses capitalized	(24.00)
Total Interest & Finance Charges	**242.37**

5.2.13 Other Debits and Prior period charges:

CESC, in its application has claimed an amount of Rs.6.79 Crores towards Other Debit and Rs.2 Crores towards prior period debit/credit for FY19.

Commission's analysis and decision:

The Commission notes that, CESC has claimed expenditure of Rs.6.79 Crores towards Other Debits and Rs.2.00 Crores towards Prior period debit/credit for FY18. The Commission notes that, these items of expenditures/income cannot be estimated upfront and included in the proposed ARR for FY19. However, as per the provisions of the MYT Regulations, the Commission would consider the allowable expenditure /income based on the actuals as per the audited accounts while approving APR for FY19.

5.2.14 Return on Equity:

CESC's proposal:

CESC in its application has not claimed RoE for FY19 as there is negative equity on account of accumulated losses.

Commission's analysis and decision:

The Commission notes the actual amount of share capital, share deposits and accumulated surplus/deficit under reserves & surplus as per the audited accounts for FY17 and the amount of equity released by Government of Karnataka during FY18 for arriving at the allowable equity base for the control period FY18 and FY19.

The Commission, in accordance with the provisions of the MYT Regulations, and amendments thereon, has considered 15.5% of Return on Equity duly grossed up with the applicable Minimum Alternate Tax (MAT) of 21.342%. This works out to 19.706% per annum. Further, as per the decision of the Commission in the Review Petition No.6/2013 and Review Petition 5/2014, and the provisions of amended Regulations the Return on Equity is to be computed based on the opening balances of share capital, share deposits and accumulated balance of surplus / deficit under reserves and surplus account. Further, an amount of Rs.36.42Crores of recapitalized consumer security deposit as net-worth is considered as per the orders of the Hon'ble Appellate Tribunal for Electricity in Appeal No.46/2014. The Commission has considered the additional equity of Rs.147.15 Crores released by GoK in various Government Orders during FY18 to arrive at the opening amount of equity for FY19.

Further, in compliance with the Orders of the Hon'ble ATE in Appeal No.46/2014, wherein it is directed to indicate the opening and closing balances of gross fixed assets along with break-up of equity and loan component in the Tariff Order henceforth, the details of GFA, debt and equity (net-worth) for FY19 are indicated as follows:

TABLE – 5.21

Status of Debt Equity Ratio for FY19

Rs. Crores

Year	Particulars	GFA	Debt	Equity (Net-worth)	Normative Debt @ 70% of GFA	Normative Equity @ 30% of GFA	%age of actual debt on GFA	%age of actual equity on GFA
FY19	Opening Balance	3491.82	1199.19	176.06	2444.27	1047.54	34.34%	5.04%-
	Closing Balance	3936.83	1486.92	203.35	2755.78	1181.04	37.76%	5.17%

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

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

TABLE – 5.22

Return on Equity for FY19

Rs. Crores

Particulars	Amount
Opening Balance of Paid Up Share Capital	508.57
Share Deposit	299.44
Reserves and Surplus (Accumulated deficit)	(608.94)
Less Recapitalised Security Deposit	(23.00)
Total Equity	**176.06**
RoE grossed up with MAT at 19.70556%	**34.69**

Thus, the Commission decides to approve Return on Equity of Rs.34.69 Crores for FY19.

5.2.15 Other Income:

CESC's proposal:

CESC in its application has claimed an amount of Rs.89.43 Crores as other income for the FY19, which also include depreciation on assets created out of consumer contribution / grants.

Commission's analysis and decision:

The other income received by the CESC mainly includes income from rebate on collection of electricity duty, miscellaneous recoveries, interest on bank deposits, rent from staff quarters and sale of scrap, profit on sale of stores besides incentives for timely payment of power purchase bills. The Commission notes the 'other income' earned by CESC during the previous years as per the audited accounts.

Considering the other income earned by the CESC in the previous years, the Commission decides to approve other income of Rs.89.43 Crores as proposed by CESC for FY19.

5.2.16 Fund towards Consumer Relations / Consumer Education:

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

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

The Commission directs CESC to furnish a detailed plan of action for utilization of this amount within a month of this Order and also maintain a separate account of these funds and furnish the details at the time of filing of APR for FY19.

5.3. Abstract of revised ARR for FY19:

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

TABLE – 5.23

Approved Revised ARR for FY19

Rs. Crores

Sl. No	Particulars	Amount		
		As Appd 30.03.3016	As Filed 30.11.2017	As Revised Approval
1	Energy at Gen Bus	8152.6	7991.81	7663.94
2	Transmission Losses in %	3.27%	3.27%	3.08%
3	Energy at Interface in MU	7886.01	7730.48	7427.66
4	Distribution Losses in %	12.75%	12.75%	12.75%
5	**Sales in MU**			
	Sales to other than IP & BJ/KJ	3845.49	3323.89	3415.92
	Sales to BJ/KJ	37.72	89.25	85.20
	Sales to IP	2997.33	3331.7	2979.51
	Total Sales	**6880.54**	**6744.84**	**6480.63**
6	**Revenue at existing tariff in Rs. Crores**			
	Revenue from tariff and Miscellaneous Charges		2362.04	2329.93
	Tariff Subsidy in BJ/KJ		55.16	52.65
	Tariff Subsidy in IP		1773.27	1552.32
	Total Existing Revenue		**4190.47**	**3934.90**
	Expenditure in Rs. Crores			
7	Power Purchase Cost	2907.05	3028.61	2465.66
	Transmission charges of KPTCL	377.82	377.82	312.87
	SLDC Charges	3.03	3.03	3.01
	Power Purchase Cost including cost of transmission	**3287.9**	**3409.46**	**2781.54**
8	Employee Cost		438.99	
	Repairs & Maintenance		51.96	
	Admin & General Expenses		89.05	

	Total O&M Expenses	**527.01**	**580.00**	**540.74**
9	Depreciation	131.65	227.62	127.45
10	**Interest & Finance charges**			
11	Interest on Capital Loans	148.7	205.23	148.49
12	Interest on Working capital loans	79.76	73.85	80.94
13	Interest on belated payment on PP Cost	0	0	0
14	Interest on consumer security deposits	44.95	38.37	36.42
15	Other Interest & Finance charges	0	0.52	0.52
16	Less interest & other expenses capitalized	26.00	24.00	24.00
	Total Interest & Finance charges	**247.41**	**293.97**	**242.37**
17	Other Debits	0	6.79	0
18	Net Prior Period Debit/Credit	0	2	0
19	Provisions for Income Tax	0.00	25.75	0
20	Return on Equity with MAT	0	0	34.69
21	Funds towards Consumer Relations/Consumer Education	0.5	0	0.5
22	Other Income	44.95	89.43	89.43
	ARR	**4149.53**	**4456.16**	**3637.86**
	Surplus/ Deficit for FY19		**-265.69**	**-297.04**
23	Deficit/Surplus for FY17 carried forward		-496.55	491.45
	Net ARR	**4149.53**	**4952.71**	**4129.32**

Thus the Commission approves an ARR of Rs.4129.32 Crores for FY19 which included carry forward of deficit for FY17.

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

CESC in its application has proposed the segregation of ARR into ARR for Distribution Business and ARR for Retail Supply Business as proposed in MYT application made earlier as detailed below:

TABLE – 5.24

Segregation of ARR – CESC's Submission-FY19

Particulars	Distribution Business	Retail Supply Business
Power Purchase	0%	100%
Repairs & Maintenance	90%	10%
Employee costs	48%	52%
A&G expenses	55%	45%
Depreciation	78%	22%
Interest and Finance charges	100%	0%
Other interest charges	0%	100%
Other debits	48%	52%
Extra-ordinary items	0%	0%
Prior period expenses	91%	9%
RoE	75%	25%
Provision for taxes	50%	50%

Commission's Analysis and Decisions:

The Commission notes that CESC has retained the same ratio as being adopted for the MYT period FY17-19 for segregation of consolidated ARR into ARR for Distribution Business and ARR for Retail Supply. As decided by the Commission in its Tariff Order dated 30th March, 2016, the following ratio of segregation of ARR is adopted for FY19:

TABLE – 5.25

Approved Basis for Segregation of ARR – FY19

Particulars	Distribution Business	Retail Supply Business
O&M Expenses	51%	49%
Depreciation	84%	16%
Interest on Loans	100%	0%
Interest on Consumers' Deposits	0%	100%
Return on Equity	75%	25%
Gross Fixed Assets	84%	16%
Non-Tariff Income	2%	98%

Accordingly, the following is the approved ARR for Distribution Business and Retail Supply Business.

TABLE – 5.26

APPROVED REVISED ARR FOR DISTRIBUTION BUSINESS – FY19

Rs. Crores

Sl. No	Particulars	Amount
1	R&M Expenses	
2	Employee Expenses	
3	A&G Expenses	275.78
4	Depreciation	107.06
	Interest & Finance Charges	
5	Interest on Capital Loans	148.49
6	Interest on Working capital loans	7.20
7	Other Interest & Finance charges	0.52
8	Less interest & other expenses capitalised	24.00
9	**Total**	**515.04**
10	**RoE**	**26.02**
11	Other Income	1.79
12	**NET ARR**	**539.27**

TABLE – 5.27

APPROVED ARR FOR RETAIL SUPPLY BUSINESS – FY19

Rs.Crores

Sl. No	Particulars	Amount
1	Power Purchase including Transmission charges	2781.54
2	R&M Expenses	
3	Employee Expenses	
4	A&G Expenses	264.96
5	Depreciation	20.39
	Interest & Finance Charges	
6	Interest on Working capital loans	73.74
7	Interest on consumers' security deposits	36.42
8	**Total**	**3177.06**
9	**RoE**	**8.67**
10	Other Income	87.64
11	Fund towards Consumer Relations / Consumer Education	0.50
12	**NET ARR**	**3098.59**

5.5. Gap in Revenue for FY19:

As discussed above, the Commission decides to approve the revised Annual Revenue Requirement (ARR) of CESC for its operations for FY19 at Rs.4129.32 Crores as against CESC's application proposing the revised ARR of Rs.4952.71

Crores with the revenue deficit of Rs.762.23 Crores for FY19. The approved revised ARR includes an amount of Rs.491.45 Crores which is determined as the deficit as per APR for FY17 as discussed in Chapter-4. Based on the existing retail supply tariff, the total realization of revenue will be Rs.3934.90 Crores which is Rs.194.42 Crores less than the projected revenue requirement for FY19.

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

TABLE – 5.28

Revenue gap for FY19

Particulars	Amount
Net ARR including carry forward gap of FY17 (in Rs. Crores)	4129.32
Approved sales (in MU)	6480.63
Average cost of supply (in Rs./unit)	6.37
Revenue at existing tariff (in Rs. Crores)	3934.90
Gap in revenue (in Rs. Crores)	**(194.42)**

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