CHAPTER – 5

ANNUAL REVENUE REQUIREMENT FOR FY21

5.0 Annual Revenue Requirement (ARR) for FY21 - MESCOM's Filing:

MESCOM in its application dated 28th November, 2019, has sought approval of the Commission for its revised ARR for FY21 and the revision of retail supply tariff for FY21. The summary of the proposed ARR for FY21 is as follows:

TABLE – 5.1

Proposed ARR for FY21

Amount in Rs. Crores

Sl. No.	Particulars	As Filed by MESCOM
1	Energy at Generating Bus (With MSEZ) (MU)	6453.45
2	Transmission Losses in %	3.132%
3	Energy @ Interface in MU	6251.33
4	Distribution Losses in %	10.48%
5	Sales in MU	
	Sales to other than IP & BJ/KJ	3487.20
	Sales to BJ/KJ	37.29
	Sales to IP	2071.70
	Total Sales	**5596.19**
6	**Revenue at existing tariff in Rs. Crores.**	
	Revenue from tariff and Misc. Charges	2737.24
	Tariff Subsidy to BJ/KJ	26.59
	Tariff Subsidy to IP	1141.51
	Total Existing Revenue including Miscellaneous Revenue	**3905.34**
	Expenditure in Rs. Crores.	
7	Power Purchase Cost	2939.81
	Transmission charges of KPTCL	271.06
	SLDC Charges	1.90
	Power Purchase Cost including cost of transmission	**3212.77**
8	Employee Cost	512.58
	Repairs & Maintenance	72.31
	Admin & General Expenses	130.62
	Total O&M Expenses	**715.51**
9	Depreciation	162.74
10	Interest & Finance charges	
11	Interest on Capital Loans	138.86
12	Interest on Working capital loans	81.99

Sl. No.	Particulars	As Filed by MESCOM
13	Interest on belated payment on PP Cost	0.00
14	Interest on consumer security deposits	45.63
15	Other Interest & Finance charges	1.84
16	Less: Interest & other expenses capitalised	-2.10
	Total Interest & Finance charges	**266.22**
17	Other Debits	18.42
18	Net Prior Period Debit/Credit	0.00
19	Return on Equity	154.29
20	Funds towards Consumer Relations/Consumer Education	0.50
21	Other Income (Including income from MSEZ)	-57.83
	Total ARR	**4472.62**
22	Surplus of FY19 carried forward (APR)	221.19
23	**Net ARR**	**4251.43**
24	Revenue Deficit for FY21(6-23)	-346.09

MESCOM has requested the Commission to approve the revised Annual Revenue Requirement of Rs.4251.43 Crores for FY21, including the surplus of Rs.221.19 Crores for FY19. Considering the estimated revenue of Rs.3905.34 Crores from sale of power to the consumers at the existing retail supply tariff, MESCOM has projected the net revenue deficit of Rs.346.09 Crores for FY21. The MESCOM has proposed average increase in retail supply tariff by 62 paise per unit in respect of all categories of consumers, including BJ/KJ and IP set consumers for FY21.

5.1 Annual Performance Review for FY19 & FY20:

As discussed in the preceding chapter of this Order, the Commission has carried out Annual Performance Review for FY19 based on the audited accounts and other relevant records furnished by MESCOM. Accordingly, a surplus of Rs.233.55 Crores of FY19 is required to be carried forward to the ARR of FY21.

As regards APR for FY20, it is noted that the audited accounts for FY20 are yet to be finalized, the Commission decides to take up the APR of FY20, while taking up the revision of ARR / Retail Tariff, if any, for FY22.

5.2 Annual Revenue Requirement for FY21:

5.2.1 Capital Investments for FY21:

MESCOM Proposal:

The MESCOM, in its Tariff application, has proposed capex of Rs.1091.44 Crores and Rs.914.75 Crores for FY20 and FY21 respectively as below:

TABLE – 5.2

MESCOM's Revised Capex Proposals

Amount in Rs. Crores

Sl. No.	Particulars	FY20	FY21	
			As already filed	Revised
A.	**Regular works**			
1	Extension & Improvement (E&I) works (Additional Transformers, Link-Lines, HT/LT Re-conductoring, HVDS , UG/AB Cable etc.)	100.00	250.00	250.00
2	DTC metering	52.69	2.70	45.00
3	Replacement of MNR/DC & Electromechanical meters by Static meters and SMART metering	5.00	20.00	5.00
4	Replacement of faulty Distribution Transformers	5.00	5.00	5.00
5	Service Connection	50.00	55.00	55.00
	Sub Total (Sl.No.1 to 5)	**212.69**	**332.70**	**360.00**
6	Rural Electrification (General)			
a.	Electrification of Hamlets	2.00	2.00	2.00
b.	Energization of IP sets under general, Ganga Kalyana schemes etc	45.00	55.00	55.00
c.	Electrification of BPL Households	0.25	0.25	0.25
	Sub- Total	**47.25**	**57.25**	**57.25**
7	Tribal Sub-Plan			
a.	Electrification of Tribal Colonies	1.50	1.50	1.50
b.	Energization of IP sets	0.80	0.85	0.95
c.	other improvement works	0.05	0.05	0.05
	Sub- Total	**2.35**	**2.40**	**2.50**
8	Special Component Plan			
a.	Electrification of S.C Colonies	1.00	1.00	1.00
b.	Energization of IP sets	1.05	1.10	1.40
c.	Other improvement works	0.10	0.10	0.10
	Sub- Total	**2.15**	**2.20**	**2.50**

9	Tools & Plants & Computers	11.50	6.00	10.00
10	Civil Engineering Works	60.00	60.00	60.00
11	33 KV Station and Line Works	82.00	100.00	70.00
12	Solar Roof top on Company Buildings	-	-	1.50
13	Software Acquired/Purchased for internal use – GPS Survey, Validation, Updation & Enumeration of IP Sets etc.,	4.00	4.00	0.00
	Sub- Total (Sl.No.9 to 13)	**157.50**	**170.00**	**141.50**
	Total-A:	**421.94**	**564.55**	**563.75**
B.	**GoI/GoK Scheme works:**			
1	Deen Dayal Upadhyaya Grama Jyoti Yojana (DDUGJY)	290.00	50.00	50.00
2	IPDS: System improvement & Strengthening works in R-APDRP / statutory towns	121.50	15.00	20.00
3	IPDS: Gas insulated substations	75.00	75.00	55.00
4	IPDS (Integrated Power Development Scheme) Phase II-IT	6.00		6.00
5	IPDS - RT-DAS	5.00	5.50	0.00
6	Providing Infrastructure to regularized UIP and general IP sets -Phase-III	82.00	9.50	45.00
7	Improvement works for Model Electricity Village	25.00	25.00	30.00
8	Improvement works for Model Sub-division	50.00	58.00	140.00
9	Soubhagya	15.00	7.00	5.00
	Total-B:	**669.50**	**245.00**	**351.00**
	GRAND TOTAL:	**1091.44**	**809.55**	**914.75**

The MESCOM has submitted that, for the financial year 2020-21 it has prepared a capex plan involving a total amount of Rs.914.75 Crores of which Rs.563.75 Crores is allocated for regular works and Rs.351.00 Crores for GoI & GoK schemes, as detailed above. In the proposed CAPEX the details of Budget requirement are as given below;

a) **System Augmentation & Strengthening:** The System improvement works like providing additional transformers, Link-Lines, Re-conductoring of HT/LT/33kV lines are being carried out regularly for which a Budget provision of Rs.100.00 Crores is made. Further, it is proposed to replace 25-year-old conductor of around 15,000 of DTCs for which additional budget requirement of Rs.150.00 Crores is made. Hence, a total budget provision of Rs.250 Crores is made for FY21.

b) **DTC metering:** As per the guidelines of the Hon'ble Commission, the DTC metering work is already taken up during the financial year 2016-17 including maintenance for a period of 5 years. Hence a Budget provision of Rs.45 Crores is made for FY21.

c) Service Connection works: As per GoK order works pertaining to electrical infrastructure required for energization of drinking water supply installations are to be executed by ESCOMs. As large number of drinking water supply applications are being received in MESCOM the capital budget of Rs.55 Crores is proposed for FY21 under Service connections including water supply works.

d) **Energization of IP sets,** a Budget of Rs.55 Crores is proposed for FY21 under general scheme which includes energization of Ganga Kalyana works also.

e) Energization of IP sets (Providing Infrastructure to regularized UIP sets and general IP sets): As per GoK order dated 14.07.2014, all the new IP sets are being serviced duly collecting Rs.10,000 towards infrastructure cost. Since large number of IP sets serviced are pending for providing infrastructure, for speedy execution it is proposed to award the works on total turnkey basis under Rate Contract at a cost of Rs.110.19 Crores, the tendering for which is under process. Hence a Budget provision of Rs.45 Crores is made for FY21.

f) Station and line works: It is proposed to establish 8 new 33/11KV substations and 6 additional Power transformers in existing 33/11KV substations during 2020-21. Hence budget provision of Rs.70 Crores is made.

g) Other Major allocations:

i. **Improvement works for Model Electricity village: As per the Budget Speech** 2017-18 by the Chief Minister, 6 numbers of villages in each assembly constituency are to be converted as model electricity villages. It is proposed to execute some of the improvement works in the selected villages for which budget provision of Rs.50 Crores was made for the year 2017-18. Since the works were held up due to court cases during 2017-18, budget provision of Rs.50 Crores was carry forwarded for the year 2018-19. After the clearance of court case on 14.06.2018, the division- wise tenders, under rate contract were called and these proposals were placed before the board wherein, it was directed to take up these works by preparing the DPRs. As per the directions of board, the division-wise DPRs are being prepared based on the actual quantity and tendering will be processed shorty. Hence, Budget provision of Rs.30 Crores is made for FY 21.

ii. **Deendayal Upadhyaya Gram Jyoti Yojana (DDUGJY):** GOI has launched DDUGJY for Rural areas. REC is the Nodal Agency. Scope of work includes feeder separation, strengthening of sub-transmission and distribution system, metering, rural electrification etc. 'In-Principle' approval for an amount of Rs.395.65 Crores has been communicated from REC/GoK during January-2017 for all 4 districts of MESCOM.

At present, except Feeder segregation, Rural Electrification and metering works are under completion stage. Hence, a budget provision of Rs.50 Crores is made for FY21 anticipating the liabilities.

h) **Integrated Power Development Scheme(IPDS):** The GoI has launched IPDS for Urban/ Semi-urban areas. PFC is the Nodal agency. Scope of work includes strengthening of sub-transmission and distribution network, metering, provision for solar panels, IT enablement works etc. Sanction has been communicated by PFC for an amount of Rs.157.80 Crores on 16.03.2016 covering 30 statutory towns in 4 circles of MESCOM and additional cost of Rs.9.80 Crores on 01.02.2018 covering 7 statutory towns in 3 Circles of MESCOM namely Mangalore, Udupi & Shivamogga. At present, the works have been completed and finalization of executed quantities with cost, material reconciliation is under process. Hence, a budget provision of Rs.20 Crores is made for FY 21 anticipating the liabilities.

i) **IPDS: Gas insulated substations:** Under IPDS it is proposed to establish 4 numbers of 33/11KV Gas insulated substations for which M/s PFC has communicated the sanction for Rs.39.48 Crores. Accordingly, tenders have been finalized and LOI has been issued on 06.09.2019 and DWA to be issued for Rs.57.38 Crores. Hence a Budget provision of Rs.55 Crores is made for FY21.

j) **IPDS (Integrated Power Development Scheme) Part -II:** The scope of work involves IT applications in IPDS towns i.e. establishing IT infrastructure etc. The DPR amounting Rs.5.84 Crores has been submitted to MoP and approval has been accorded for Rs.4.76 Crores. On behalf of all ESCOMs, BESCOM has floated the tender on 05.06.2018 for implementation of IT enablement Projects (Phase-II-IT) in MESCOM under IPDS scheme at a cost of Rs.5.84 Crores. Hence the budget provision of Rs.6 Crore was made for FY19.

Since tendering was under process by BESCOM the budget provision of Rs.6 Crore was carry forwarded to FY20. Since no bidder participated for the tender invited by BESCOM, it was proposed to invite tenders for IPDS phase II in following different packages as approved by SLDRC meeting held on 24.11.2018.

Package	Scope of Work
1.	DC Hardware and Software refreshed with version up-gradation of applications and migration of R-APDRP Part-A and IPDS Phase II towns data along with FMS
2.	Hosting DRC on Cloud
3.	IPDS towns IT infrastructure (switches, router, SBMs, workstations PCs, printers etc.,) along with FMS
4.	IPDS towns GIS survey
5.	FMS for IPDS Phase II towns
6.	Fixing of Modems to IPDS towns for ESCOMs (excluding BESCOM)

BESCOM on behalf of all ESCOMs invited tender for one of such package and has issued LOI for GIS based Asset Mapping Survey, Digitization and Integration of Consumer Indexing data under IPDS IT Phase –II and work is yet to be awarded.

Since the tenders for remaining packages are yet to be invited by BESCOM, the budget provision of Rs.6 Crores is carried forwarded to FY21.

k) **Model Sub-division:** Mangaluru & Shivamogga are selected as Smart Cities under flagship programme of the Central Government. MESCOM has selected prominent area of Mangaluru & Shivamogga i.e. Attavara Sub-division in Mangalore and City Sub Division-1 in Shivamogga. DPRs amounting Rs.267 Crores have been prepared and approved by Hon'ble KERC to take up the following works.

- Laying of 11kV/LT UG Cable.
- Establishing & Commissioning of RMU.
- Establishing of LT Feeder Pillar Boxes.

The works have been awarded on Total Turnkey (rate contract) basis at a cost of Rs.212.79 Crores. Accordingly, a Budget provision of Rs.140 Crores is made for FY21 duly considering the additional amount required for balance works if any.

l) **Soubhagya:** "Pradhan Mantri Sahaj Bijli Har Ghar Yojana- Soubhagya" is a flagship program launched by Govt. of India to achieve universal household electrification in Urban & Rural areas though Grid and Off grid (solar standalone system) modes.

In MESCOM, for implementation of scheme REC has sanctioned a cost of Rs.3.51 Crores for electrification of households and Rs.12.10 Crores additional sanction for creation of infrastructure for electrification of households.

At present, the works have been completed and finalization of executed quantities with cost, material reconciliation is under process. Hence, a budget provision of Rs.5 Crores is made for FY21 anticipating the liabilities.

Commission's Analysis and decision:

As per the MESCOM's tariff application, it has proposed capex of Rs.1091.44 Crores and Rs.914.75 Crores for FY20 and FY21 respectively. In the preliminary observations the MESCOM was directed to explain the rationale behind submitting the proposal for incurring higher amounts than the approved estimated capital expenditure of Rs.818.58 Crores and Rs.607.16 Crores respectively for FY20 and FY21 in terms of the MYT Regulations in the Tariff Order 2019.

It is to be stated here that MESCOM has filed application for APR of FY19 and ARR for FY21. Hence the question of revised capex for FY20 will not arise in these proceedings.

The MESCOM in its compliance has stated that, the Capital Investment Programme of MESCOM for the fiscal year 2019-20, 2020-21 and 2021-22 is prepared for a total amount of Rs.818.58 Crores, Rs.607.16 Crores and Rs.521.89 Crores respectively. Since some of the scheme works were not taken up on time the Budget allocated for these works during previous years has been carry forwarded to next years. Hence the CAPEX for FY-20 and FY-21 works out for Rs.1091.44 Crores and Rs.914.75 Crores respectively.

In the preliminary observations, MESCOM was directed to submit the total capex incurred for the last three financial years (FY17, FY18 and FY19) in respect of E&I works, DTC metering and 33 kV station and line works and corresponding reduction in distribution losses, percentage of DTC metering and the energy audit done in respect of DTCs which are metered and the results thereof, so as to justify the corresponding proposed expenses for FY21. In the compliance, MESCOM has submitted the following information with regard to progress from FY17 to FY19:

TABLE - 5.3

Capex Progress Achieved in the last 3 Years

Sl. No	Particulars	FY17	FY18	FY19
1	DTC Added (Nos.)	1225	1391	1380
2	HT Reconductoring (RKMs)	171.00	160.02	193.40
3	HT line including 11KV Express Link Lines in (RKMs)	542.49	555.29	786.6
4	LT line reconductoring in (RKMs)	537.44	602.07	703.10
5	LT lines in (RKMs)	82.26	135.09	126.78
6	a) New 33 KV stations (Nos/MVA)	1/5	1/10	2/15
	b) New 33 KV Lines (RKMs)	7.00	17.65	57.25
	c) Augmentation of 33 KV stations (Nos/MVA)	4/27.5	4/42.5	2/10
7	Distribution Loss (in%)	11.4	11.32	10.52
8	Units saved under E&I works (MU)	26.08	17.99	41.46
9	Units saved under Station works (MU)	2.69	5.07	3.04
10	CAPEX incurred for E&I works (Rs. In Lakhs)	6520.62	9029.03	10980.34
11	CAPEX incurred for station works (Rs. In Lakhs)	1814.60	2274.22	2005.14
12	CAPEX incurred for DTC Metering (Rs. In Lakhs)	1941.93	5260.77	1843.81
13	Total Number of DTCs Metred as at the end of year	37083	39418	43673
14	% of DTC Metering	62.67	58.97	58.17
15	Number of DTCs Audited	5950	9107	11716

The MESCOM's previous years' achievement of capex vis-à-vis the approved capex is shown in the following table below:

TABLE - 5.4

MESCOM's Capex Achievements

(Amount in Rs.Crores)

Approved and Actual Capex incurred -MESCOM							
Particulars	**FY13**	**FY14**	**FY15**	**FY16**	**FY17**	**FY18**	**FY19**
Capital investment Proposed	249.85	281.40	262.33	827.33	320.40	595.40	803.50
Capital investment approved by the Commission	249.85	281.40	262.33	353.89	288.90	289.40	763.50
Actual capital investment incurred as per	130.92	193.17	252.07	230.10	288.38	419.39	839.17

Approved and Actual Capex incurred -MESCOM							
Particulars	**FY13**	**FY14**	**FY15**	**FY16**	**FY17**	**FY18**	**FY19**
audited accounts							
Percentage of actual capital investment to the approved capital investment	52.40%	68.65%	96.09%	65.02%	99.82%	144.92%	109.91%

Based on the last three years' achievements and the projected works to be undertaken considering the GoI / GoK schemes, works to be partly met by the capital grants, consumers' contribution and the available internal resources, the Commission recognizes the expected capital expenditure proposal of MESCOM at Rs.914.75 Crores for FY21. However, the Commission decides to reckon Rs.667.77 Crores for the purpose of determination of revised ARR and retail supply tariff for FY21.

The Commission also directs MESCOM to carry out the capital works without seeking any additional capex during the middle of the year by making suitable re-appropriation within the capex amount approved by the Commission. It shall be noted that for any capex incurred without approval of the Commission, the corresponding interest on loans and depreciation will not be considered for the ARR of the respective years.

The Commission directs MESCOM to maintain the physical progress and financial progress in respect of the works carried out under Capex, indicating timelines of completion, cost to benefit ratio, etc. These details shall be furnished to the Commission, as and when the Commission directs.

The Commission directs MESCOM to take concrete measures to complete and capitalize the works as per the time schedule, so as to ensure the envisaged benefits are passed on to the consumers effectively and capitalize the works proposed, as far as possible, during each financial year.

The Commission directs the MESCOM to put sincere efforts towards achieving the following objectives of the proposed schemes under capex on due priority:

1. Reducing distribution losses,
2. Reducing the HT:LT Ratio
3. Reduce Transformer failures
4. Segregate the loads in the feeders.
5. Increase the penetration of HVDS
6. Reduce Power theft and
7. Bring programs for the awareness among the people on usage and conservation of energy.
8. Improve the sales to metered category.
9. Improve the Power factor of the IP set loads by installing switched capacitors of suitable capacity to the secondary of the transformers.

5.2.2 Sales Forecast for FY21:

MESCOM, in its filing, has estimated sales for FY21 as 5554.25 MU including 2.88 MU sales to KPCL and excluding 41.94 MU sales to MSEZ.

A. Sales- Other than IP Sets:

I. MESCOM's Approach:

MESCOM has adopted the following methodology for making estimates of Number of installations and Energy Sales:

1. Considering the actuals of FY19, MESCOM has revised the estimates for FY20.
2. For all the categories except BJ/KJ, LT-4a, LT-7 and HT-5, generally MESCOM has considered the 5-year CAGR for the period FY15 to FY19 or 3-year CAGR for the period FY17 to FY19. MESCOM has also compared the previous year growth rates. Wherever, the growth is negative or inconsistent, MESCOM has suitably modified the estimates.
3. For LT-7 and HT-5 the number of installations and energy sales have been retained at FY19 level, stating that the growth rate for these categories is inconsistent.

The observations of the Commission on the sales forecast for the FY21, the replies furnished by the MESCOM and the Commissions decisions thereon, are discussed in the following paragraphs:

i) Energy Sales- Other than IP sets:

a) **LT (1) – BJ/KJ category**: MESCOM had not considered any additions to the number of installations and had retained the FY19 data for both FY20 & FY21. The Commission observed that in FY19, the installations had reduced by 3158 numbers in comparison to FY18 and upto September 2019, there was a further reduction by 835 numbers. Hence, the Commission suggested MESCOM to consider revising the number of installations and sales for this category.

MESCOM Replies:

MESCOM has requested the Commission to retain the number of installations and energy sales of FY19 for FY21 also.

b) **LT2(b) & LT4(c) categories**: MESCOM had retained the number of installations as on September, 2019 for both the years FY20 & FY21, and the sales were worked out on pro-rata basis of half-year consumption of FY20, stating that energy sales are reducing in these categories.

The Commission had noted that, there is a positive growth rate in the number of installations and hence, MESCOM should have considered the same for estimating the number of installations. Further, sales could be projected based on the specific consumption of FY19.

MESCOM Replies:

MESCOM has adopted a conservative growth rate and has requested to consider the estimates made by MESCOM.

c) In case of LT-5 category, MESCOM had retained the energy sales at FY19 level, even though there was positive growth in number of installations, stating that the energy sales have a negative growth. MESCOM was directed to analyze the reasons for such decrease in sales in spite of growth in installations.

MESCOM Replies:

MESCOM will analyze the reasons in detail.

d) **HT-2c category:**

The Commission had noted that, even though there is a positive growth rate in the number of installations, the energy sales is retained at FY19 level, stating that the energy sales have a negative growth. MESCOM was directed to analyze the reasons for such decrease in sales in spite of growth in installations.

MESCOM Replies:

MESCOM will analyze the reasons in detail.

e) The growth rate considered for the number of installations for LT-2b, LT-3, LT-6 SL, HT-1, HT-2a & HT-4 is lower, as compared to the CAGR. MESCOM may consider revising the same.

MESCOM Replies:

MESCOM has submitted that it has furnished in detail the methodology adopted for estimating the number of installations and has requested to consider the same.

f) The growth rate considered for energy sales to LT-6 WS, LT-6 SL & HT-4 appears to be lower, considering the CAGR and, the growth rate considered for HT-1 & HT-2a appears to be higher, considering the CAGR. MESCOM may consider revising the same.

MESCOM Replies:

MESCOM has submitted that it has furnished in detail the methodology adopted for estimating the number of installations and has requested to consider the same.

g) To validate the sales, the Commission directed MESCOM to furnish the category wise information in the specified format.

MESCOM Replies:

MESCOM has furnished the details in its replies.

h) **Sales to MSEZ:**

MESCOM has considered sales to MSEZ as 41.94 MU for both the years FY20 and FY21, whereas MSEZ in their filing have indicated the same as follows:

FY20	FY21
53.44 MU	57.89 MU

MESCOM shall reconcile the above data.

MESCOM Replies:

MSEZ had consumed only 41.94 MU in FY19, against the approved sales of 45.32 MU and in FY18 the sales were only 39.60 MU. Hence, MESCOM has considered energy sales of FY19 for both FY20 & FY21.

The Commission has noted the replies furnished by MESCOM. The approach of the Commission in estimating number of installations and energy sales are discussed in the following paragraphs. As far as MSEZ sales are concerned, the same is discussed in the MSEZ order.

II. The Commission's approach for estimating the number of installations and sales for FY21:

1) No. of Installations:

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

a. The Commission has validated both the number of installations and energy sales to various categories considering the actuals as on 30th November, 2019 and has estimated the number of installations and sales for the remaining period reasonably. Accordingly, the base year estimation has been revised which has an impact on the estimates on the number of installations and sales for the FY21.

b. Wherever the number of installations estimated by the MESCOM for the FY 21 is within the range of the estimates based on the CAGR for the period FY14–FY19 and for the period FY16 - FY19, the estimates of the MESCOM are retained.

c. Wherever the number of installations estimated by the MESCOM for the FY21 is lower than the estimates based on the CAGRs for the period FY14–FY19 and for the period FY16-FY19, the estimates based on the lower of the CAGRs for the period FY14–FY19 and for the period FY16-FY19 are considered.

d. Wherever the number of installations estimated by MESCOM for the FY21 is higher than the estimates based on the CAGRs for the period FY14 – FY19 and for the period FY16 - FY19, the estimates based on the higher of the CAGRs for the period FY14 – FY19 and for the period FY16 - FY19 are considered.

e. For LT-4b and HT-5 categories, the number of installations as estimated for FY20 is retained, as there is negative growth.

f. For LT-7 category, the estimates of MESCOM are retained.

Based on the above approach, the total number of installations (excluding BJ/KJ consuming ≤ 40units/month and IP installations) estimated by the Commission for the FY21 is indicated in the table below:

Approved Number of installations

FY21	
Filed	**Approved**
1991518	**1984838**

2) Energy Sales:

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

a. The base year sale for FY20 as estimated by the MESCOM has been validated, duly considering the actual sale upto November, 2019 and modified suitably as stated earlier.

b. Wherever the sale estimated by the MESCOM, for the for FY 21, is within the range of the estimates based on the CAGR for the period FY14 to FY19 and for the period FY16 to FY19, the estimates of the MESCOM, are considered.

c. Wherever the sales estimated by the MESCOM for the FY21 is lower than the estimates based on the CAGRs for the period FY14 to FY19 and for the period FY16 to FY19, the estimates based on the lower of the CAGRs for the period FY14 to FY19 and for the period FY16 to FY19, are considered.

d. Wherever sale estimated by MESCOM for FY21 is higher than the estimates based on the CAGRs for the period FY14 to FY19 and for the period FY16 to FY19, the estimates based on the higher CAGRs for the period FY14 to FY19 and for the period FY16 to FY19, are considered.

e. In respect of LT-4b and LT-4c, the sales are estimated based on FY19 specific consumption.

f. For LT-7 category, the estimates of MESCOM are retained.

g. In respect of HT-2(a), estimates of MESCOM is retained as it is reasonable as estimates based on CAGR is lower and based on OA analysis is higher.

h. For HT-2(b), the sales are worked out considering Open Access impact.

i. For HT-2c, sales are estimated based on FY19 consumption.

j. For HT-5, quantum of sale for FY20 is retained, since there are no additions to the number of installations during FY21.

Based on the above approach, the sales (excluding BJ/KJ consuming ≤ 40units/month and IP sales) estimated by the Commission, for the FY21, is indicated in the following table:

Approved Energy Sales*

in Million Units

FY21	
Filed	**Approved**
3445.26	**3540.83**

***Includes KPCL sales and excludes MSEZ sales**

(ii) Sales to BJ/KJ:

The break-up of sales to BJ/KJ installations considered for FY19 is as indicated below:

Particulars	No. of Installations	Consumption in MU	Specific consumption per installation per month (kWh)
Installations consuming less than or equal to 40 units	175524	37.29	17.70
Installations consuming more than 40 units and billed under LT2(a)	12480	12.08	80.66

The Commission notes that, the specific consumption works out to 17.70 units /installation/month for BJ/KJ installations consuming less than or equal to 40 units per month and 80.66 units /installation/month for BJ/KJ installations consuming more than 40 units per month.

Since, the MESCOM has not proposed any additional installations during FY21, as there is no GoK policy to extend the benefit of free power to any new BJ/KJ installations, the number of BJ/KJ installations consuming less than or equal to 40 units per month and more than 40 units per month is retained as proposed by MESCOM for FY21 at FY19 level. Thus, the sales approved for FY21 is as indicated in the following Table:

Million Units

Particulars	No. of Installations	Sales-MU
Installations consuming less than or equal to 40 units	175524	37.29
Installations consuming more than 40 units and billed under LT2(a)	12480	12.08

B. Sales projections of IP set for FY21:

MESCOM Proposal:

MESCOM, in its tariff application, has projected IP sets consumption of 2071.70 MU against 4,57,874 installations for FY21. MESCOM, as per D-2 Format, has reported actual consumption of 1,630.90 MU against 3,26,187 number of IP set installations for FY19. MESCOM, in its current tariff filing, has reported a 3-year CAGR of 5.85% in the number of IP installations and as a result has considered addition of 19,082 installations for FY20 and 20,198 for FY21. Also, MESCOM has informed that, during the GPS survey, it has identified 92,407 no. of unauthorized, working IP installations (Total UA 1,17,255 minus 22,249 (Not in use / Dried up installations), minus 2,599 (Disconnected installations) in its jurisdiction, and has addressed a letter to the Government seeking approval to assign RR Nos. In anticipation of the approval of the Government, MESCOM has reported to have added normal growth addition of 20,182 + the unauthorized working IP of 92,407 for FY21 making the projection of number of IP installations as 4,57,874.

Commission's Analysis and Decision:

a) While verifying the computations of IP set, it is found that, the actual sales to IP set installations for FY19 works out to 1,477.50 MU (as detailed in Chapter-4 Sales portion). Based on the actual sales to IP sets, the Commission has arrived at the specific consumption as 4,674 units per installation per annum for the FY19, by considering the mid-year installations of 3,16,120 numbers.

b) The Commission is unable to accept the proposal of MESCOM in adding the unauthorized IP installations while making projections of sales to IP sets for FY21, in anticipation of the approval of the Government for assigning the RR Nos. Instead, in order to consider such unauthorized IP installations, MESCOM has to regularize the unauthorized IP installations by collecting the fees / penalty as prescribed by the Government and provide suitable infrastructure. In other words, MESCOM shall take action to disconnect the unauthorized IP installations if the consumers fail to comply with the rules.

c) Considering the data of FY18 and FY19, the Commission has found an average addition of 17,529 number of IP installations and considers the same number of additions during FY20 and FY21. With this realistic number, the projections of number of IP installations are 3,43,716 (3,26,187 + 17,529) for FY20 and 3,61,245 (3,43,716 + 17,529) for FY21.

d) The actual sales to IP sets for FY20, till November 2019, as reported by MESCOM, in its replies to preliminary observations for tariff filing is 1,078.89 MU against 3,38,712 number of installations. The actual specific consumption per IP per month for FY19 on the basis of revised sales worked out to 389.50 units / IP / month. By considering this approved specific consumption for FY19 and actual sales till November 2019, sales to remaining four months i.e., December 2019 to March 2020 is estimated. The specific consumption for the revised sales for FY20 is worked out and the same is applied for projecting the sales to IP sets for FY21. The Commission has decided to consider the data of actual sales to IP sets for FY20, till November 2019 as furnished by MESCOM in its replies to preliminary observations, only provisionally for making the estimates for FY21.

e) Based on the estimated number of installations and consumption for FY20 and by considering the revised specific consumption for FY19, the details of energy sales projections to IP set consumers for FY21, are as indicated below:

TABLE – 5.5
Approved Energy Sales to IP Sets for FY21

Particulars	FY21		
	As approved by the Commission in TO 2019	As submitted by MESCOM in its Tariff Application	As approved by the Commission (Revised)
No. of Installations	3,50,825	4,57,874	3,61,245
Mid-year number of Installations	3,43,463	4,01,572	3,52,481
Specific consumption in units/installation/annum	5,082	5,159	4,796
Sales in MU	**1,745.01**	**2,071.70**	**1,690.41**

Accordingly, the Commission hereby approves 1,690.41 MU as energy sales to IP-sets as against MESCOM's projection of 2,071.70 MU, for the FY21. The number of installations approved for FY21 is 3,61,245. This approved IP set consumption for FY21 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. The MESCOM shall regulate the number of hours of power supply to exclusive agricultural feeders, accordingly.

The Commission notes that, the sales to all other category of consumers except BJ/KJ and IP Set categories are on the reducing trend, whereas the sales to IP set is on the increasing trend. The Commission took note of the sales figure of MESCOM and the methodology followed in arriving the figure therein. The Commission observed that the power supply to the IP Set category is not being arranged as per the hours of supply stipulated in the Government Orders and thus the sales under IP sets category is increasing year on year.

The Commission notes that the sales and subsidy amount to IP Sets is showing an increasing trend year on year as compared to the approved figures. This is also resulting in increase in the subsidy burden on GoK. **Thus, the Commission directs the MESCOM to restrict its IP sets sales to the Commission approved sales only. MESCOM is hereby cautioned that the power supply made to IP Set installations beyond the approved level, without proper justification, will not be considered. For any increase in consumption without establishing the increase in the number of installations or specific approval from the Government for giving enhanced hours of supply, MESCOM itself would be responsible and that the consequent additional financial burden would not be considered for the purpose of any additional subsidy payable by GoK. In such cases the Commission would, besides disallowing the excess consumption will also consider levy of penalty for the increased distribution losses.**

The Commission decides that, if discrepancies are continued in computation of IP set sales figures submitted by the ESCOMs, the Commission may take up third party verification of the DTC meter readings and the meter reading of the IP set feeders for establishing the correctness of computation of IP Set sales figures.

The Government of Karnataka is also requested to issue necessary directions to the ESCOMs in this regard, so as to ensure that the IP set consumption is regulated as per the subsidy made available to the ESCOMs.

f) The Commission notes that MESCOM has taken up GPS survey of IP-sets to identify the defunct / not in use / dried up installations in the field and to arrive at the correct number of IP-sets by deducting such defunct / not in use / dried up IP-set installations from its account, on the basis of GPS survey results. MESCOM has not submitted the data of GPS survey with clarity giving details of working and defunct / not in use / dried up installations. While assessing sales to IP installations for FY19, it has considered all the IP installations by considering the installations which are not in use / dried up, for the reason that 'not in use installations' are the seasonal installations, dried-up due to non-availability of water and these two categories become active at certain point of time when the water is available. While, making projection of sales to IP installations, MESCOM is deducting the no. of unauthorized not in use / dried up installations. Thus there is inconsistency in the GPS survey data furnished by MESCOM and hence the Commission is unable to accept the same.

g) In view of fact that the GPS survey of IP-sets as furnished by MESCOM is not satisfactory, the number of installations reckoned for FY19 and estimates for FY21 are subject to change based on the GPS survey results. Accordingly, after furnishing the GPS survey data and finalization of the report, MESCOM shall furnish the correct number of IP set installations, duly deducting the number of installations not in use / dried up / defunct IP sets from the total number. Thereafter, any variation in the sales due to change in the number of installations would be trued up during the Annual Performance Review for the FY20 and FY21.

h) While assessing the sales to IP sets for FY19, the Commission had observed that the total number of pilot DTCs where only 53% to 86% of meters are working. Hence, the DTC-wise data of assessment of IP sets for the period from April 2019 to November 2019 furnished by MESCOM, in its replies to preliminary observations, has been considered provisionally for the purpose of projecting the sales for FY20 and FY21. The Commission would consider revision of the same, based on the GPS survey data. **Hence, MESCOM is directed to submit the final survey Report within 3 (three) months from the date of this Order. The survey data should be reconciled with the DCB Statement data and thereafter report the total IP-set consumption to the Commission, month-on month regularly, as per the format prescribed in the previous tariff orders of the Commission.**

Based on the above discussions, the category-wise approved number of installations for the FY21 vis-à-vis the estimates made by the MESCOM is indicated below:

TABLE – 5.6

Category wise approved number of installations for FY21

No. of Installations

Tariff Category	Consumer Category	As filed by MESCOM	As approved by the Commission
LT-1 (a)	Bhagya Jyoti < =40 units	175524	175524
LT-1 (a)	Bhagya Jyoti >40	12480	12480
LT-2a	Domestic AEH	1648228	1638888
LT-2b	Pvt. Institutions	3580	3707
LT-3	Commercial - Applicable to areas coming under VPs	228145	228419
LT-4 (a)	IP sets - Less than 10 HP - General	457874	361245
LT-4 (b)	Irrigation Pump sets - More than 10 HP	165	165
LT-4 (c)	Private Horticulture Nurseries, Coffee & Tea Plantations	4567	5050
LT-5	Lt Industries	33750	33750
LT-6	Water Supply	17316	17106
LT-6	Street Lights	23760	25743
LT-7	Temporary Power Supply	17096	17096
	LT Total	**2622485**	**2519173**
HT-1	HT Water Supply	123	124
HT-2 (a)	HT Industries	1012	1022
HT-2 (b)	HT Commercial	866	851
HT-2(c)	Pvt. Hospitals & Ednl. Insttns.	323	323
HT-3(a) & (b)	HT Irrigation & LI Societies	30	33
HT-4	Res. Apartments	60	62
HT-5	Temporary	17	19
HT Total		**2431**	**2434**
*Grand Total		2624916	2521607
Categories other than IP sets and BJ/KJ consuming less than or equal to 40 units/month/installations		1991518	1984838
IP sets and BJ/KJ consuming less than or equal to 40 units/month/ installations		633398	536769

Total excludes SEZ

Accordingly, the category-wise approved sales for the FY21 vis-à-vis the estimates made by MESCOM is indicated in the following Table:

TABLE – 5.7
Category wise approved Energy sales

Million Units

Tariff Category	Consumer Category	As filed by MESCOM	As approved by the Commission
LT-1 (a)	Bhagya Jyoti < =40 units	37.29	37.29
LT-1 (a)	Bhagya Jyoti>40	12.08	12.08
LT-2a	Domestic AEH incl. KPCL.	1435.40	1486.51
LT-2b	Pvt. Institutions	14.24	14.24
LT-3	Commercial – Applicable to areas coming under VPs	400.52	408.52
LT-4 (a)	IP sets – Less than 10 HP – General	2071.70	1690.41
LT-4 (b)	Irrigation Pump sets – More than 10 HP	0.85	0.87
LT-4 ©	Private Horticulture Nurseries, Coffee & Tea Plantations	6.91	8.11
LT-5	Lt Industries	133.95	133.95
LT-6	Water Supply	125.57	131.10
LT-6	Street Lights	70.26	72.11
LT-7	Temporary Power Supply	20.41	20.41
	LT Total	**4329.18**	**4015.60**
HT-1	HT Water Supply	110.71	109.04
HT-2 (a)	HT Industries	685.91	685.91
HT-2 (b)	HT Commercial	215.91	220.55
HT-2©		144.58	159.93
HT-3(a) & (b)	HT Irrigation & LI Societies	41.20	48.86
HT-4	Res. Apartments	22.15	23.60
HT-5	Temporary	1.73	2.16
HT Total		**1222.19**	**1250.05**
Sales to KPCL		2.88	**2.88**
***Grand Total**		**5554.25**	**5268.53**
Categories other than IP sets and BJ/KJ consuming less than or equal to 40 units/month/installations		3445.26	**3540.83**
IP sets and BJ/KJ consuming less than or equal to 40 units/month/installations		2108.99	**1727.70**

*** Excludes sales to SEZ**

In addition to the above, the energy sold to MSEZ is considered, as approved in the MSEZ Order.

5.2.3 Distribution Losses for FY21:

MESCOM's Submission:

As per the Tariff application, the MESCOM has estimated the distribution losses of 10.48% as against the target loss level of 10.90% approved by the Commission, in its Tariff Order dated 30th May, 2019, as indicated below:

Projected Distribution Losses for FY21
MESCOM's Submission

Loss Figures in %

Particulars	FY21
Energy Sales (MU)	5596.19
Dist. Loss (%)	**10.48%**
Energy at IF point (MU)	6251.33

Commission's Analysis and Decisions:

The performance of MESCOM in achieving the loss targets fixed by the Commission in the past five years, is as follows:

TABLE – 5.8

Approved & Actual Distribution Losses-FY13 to FY19

Loss Figures in %

Particulars	FY13	FY14	FY15	FY16	FY17	FY18	FY19
Approved Distribution losses	12.00	11.75	11.50	11.25	11.15	11.05	10.95
Actual distribution losses	11.88	11.93	11.56	11.50	11.40	11.32	13.29*

***Actual distribution loss reported by MESCOM is 10.52%, whereas the Commission has considered 13.29% for the reasons stated in APR Chapter.**

The Commission notes with displeasure that, the distribution loss level for FY19 has increased by 2.34% percentage as compared to 10.95% percent approved by the Commission as per APR for FY19.

The Commission in its preliminary observation had observed that MESCOM had projected the revised distribution losses at 10.50% and 10.48% for FY20 and FY21 respectively, a meagre reduction of 0.02% over the actual distribution loss of 10.52% for FY19 as reported by MESCOM as per the audited accounts and further 0.02% reduction over the projected distribution losses of FY20. The

Commission had also observed that, since MESCOM has proposed huge capex with the main objective of reducing the distribution losses and to improve the quality of power, the revised distribution loss level proposed by the MESCOM for FY20 and FY21 is not justifiable. MESCOM was directed to re-asses and submit the revised projected distribution losses for FY20 and FY21.

MESCOM, in its reply to the preliminary observations, has submitted that out of the total capex proposed for FY20 and FY21, the budget earmarked for improvement works is only Rs.100 Crores and Rs.250 Crores, respectively. Other capex works proposed may not have any effect in reduction of technical losses.

The Commission is not satisfied with the reply submitted by MESCOM and also notes that MESCOM has not quantified the loss reduction that could be achieved due to the proposed system improvement works.

In the light of the above discussion and based on the achievement made by the MESCOM in the reduction of losses during the previous years and the capex incurred so far along with the proposed capex for FY21, the Commission decides to fix the following distribution loss targets for FY21:

TABLE – 5.9
Approved Distribution Losses for FY21

Percentages

Particulars	FY21
Upper limit	10.25%
Average	**10.00%**
Lower limit	9.75%

The Commission directs MESCOM to chalk out an action plan to achieve the above target losses and submit the same to the Commission, within two months of the issue of this Order.

5.2.4 Power Purchase for FY21

The ESCOMs, in their tariff applications have submitted the D-1 Format, wherein the requirement of power purchase for the FY21 has been furnished. The consolidated statement showing the energy requirement for FY21, is shown hereunder:

TABLE – 5.10
Requirement of Energy as filed by ESCOMs

ESCOMs	Energy requirement for FY21 (in MU)
BESCOM	35120.40
MESCOM	6453.45
CESC	8151
HESCOM	16312.64
GESCOM	9328.34
Total	75365.83

MESCOM's submission:

The MESCOM has submitted its power purchase requirement for FY21 based on the projected sales, as follows:

TABLE – 5.11

Energy Requirement as filed by MESCOM

Particulars	FY21
Sales (MU)	5596.19
Distribution losses (%)	10.48
Energy at IF point (MU)	6251.33
Transmission Losses (%)	3.132%
Energy Required at Generation bus to meet the projected sales (MU)	**6453.45**

5.2.5 Sources of Power:

MESCOM's submission:

The MESCOM, in its tariff application, has furnished the sources of power, from which it plans to meet the requirement of Power, for FY21.

The basis for considering the availability of power from different sources as submitted by MESCOM is as follows:

(i) The availability/ power procurement from KPCL Thermal and Hydel stations is on the basis of Power Purchase Agreement dated 22.05.2010, based on norms approved by the State Commission, vide its order dated 03.08.2009.

(ii) Availability of power from Central Generating Stations (CGS) is as per the Ex-Bus generation details furnished by the CGS to the CEA, for preparation of LGBR.

(iii) In respect of Major IPPS, RE and other sources such as UPCL, RE generators and others sources such as Jurala Power & TB Dam Power etc., the availability is reckoned based on the contracted capacity.

(iv) The Capacity of the existing sources and the envisaged additional sources vis-à-vis the energy requirement for the entire State and the energy charges are indicated in the tariff application of MESCOM. The same are shown in the following Tables.

TABLE - 5.12

Power purchase requirement of MESCOM for FY21

SOURCES	FINANCIAL YEAR 20-21		
	Energy in MU	Cost in Rs Crs.	Avg. cost Per unit Rs./unit
KPCL Hydel Energy	1521.68	136.90	0.90
KPCL Thermal Energy	1278.75	887.88	6.94
CGS Energy	1788.58	849.17	4.75
UPCL	283.63	197.61	6.97
Renewable Energy/Bundled power	1396.19	573.67	4.11
Other State Hydel	14.05	4.72	3.36
Medium Term			
PGCIL & POSOCO Charges		193.15	
KPTCL Transmission & SLDC		272.96	
Allocation to other ESCOMs	170.57	96.71	5.67
TOTAL	**6453.45**	**3212.27**	**4.98**

Commission's Analysis and decisions:

The energy requirement of the ESCOMs, including MESCOM, is being met by the following sources, through long-term Power Purchase Agreement (PPAs) entered by the ESCOMs with:

a) Karnataka Power Corporation Limited (KPCL) Generating stations;
b) Central Generating Stations (CGS);
c) Major Independent Power producers (IPPs) and
d) Renewable Energy (RE) sources.

To arrive at the available quantum of energy and power for the year FY 21, the Commission has considered the availability as furnished by the KPCL in respect of KPCL Generating Stations and availability as furnished by the SRPC in respect of the Central Generating Stations. The availability of CGS stations is based on the share of Karnataka, as notified from time to time.

In the case of availability from the Renewable Energy sources and Medium Term Power Purchases, the actual generation capacity contracted by the ESCOMs, as indicated in D-1 Format and as per the contracted PPAs, has been considered. The availability from the other sources such as Jurala Hydel Station and TB dam Power Stations of Telangana State has been considered based on Karnataka's share in the installed capacity and as per the contracts executed with these generators.

The availability as furnished by the KPCL in respect of Yelahanka Combined Cycle Power Plant (YCCPP), having a capacity of 350 MW respectively has not been considered, as the said generating station is yet to be synchronized with the grid and the Commercial Operation Date (COD) is yet to be declared.

The availability of New NLC Plant Thermal Power Project has been considered based on Karnataka's share, as furnished by the PCKL, duly limiting the quantum of energy as per the requirement of ESCOMs, to meet the sales targets. The plant has since been synchronized and supplying power to the grid.

Based on the above availability criteria, the energy requirement for the State, with reference to the sales target approved for FY21, is given in the following Table.

TABLE – 5.13

ABSTRACT OF POWER PURCHASE REQUIREMENT OF THE STATE FOR THE YEAR FY21

SOURCES	FINANCIAL YEAR 20-21		
	Energy in MU	Total Cost in Rs Crs.	Avg. cost per unit Rs./unit
KPCL Hydel Energy	11567.04	992.71	0.86
KPCL Thermal Energy	15193.60	9462.99	6.23
CGS Energy	19948.10	9339.82	4.68
UPCL	3600.00	2448.00	6.80
Renewable Energy:	17628.37	6700.75	3.80
Other State Hydel	183.60	61.70	3.36
Bundled Power	3698.57	1459.31	3.95
Medium Term (Co Gen)	1285.06	669.52	5.21
PGCIL & POSOCO Charges		1774.37	
KPTCL Transmission & SLDC		4318.30	
TOTAL	**73104.34**	**37227.47**	**5.092**

5.2.6 MESCOM's Power Purchase Cost & Transmission charges for FY21:

MESCOM's Submission

MESCOM has submitted the Power Purchase requirement along with the cost, including the transmission charges and SLDC charges, in D-1 Format. MESCOM has sought approval of the Commission for purchase of power to an extent of 6453.45 MU at a cost of Rs. 3212.77 Crores, which includes transmission and SLDC charges, for the year FY 21

As regards the computation of cost of power, the MESCOM has submitted that, same is considered as per the norms defined in contracts (PPAs)/ Regulations and based on the tariff indicated by KPCL for its Stations and the tariff determined by the CERC in respect of Central Generating Stations, DVC Stations and UPCL stations.

Commission's analysis and decisions

After a detailed analysis of the power purchase costs claimed by the MESCOM, the Commission has arrived at the power purchase quantum and cost, to be allowed in the ARR for FY21. The basis for computation of power purchase quantum and cost for the year FY21 is as indicated below:

1. Quantum of Power: Based on the approved sales and the allowable transmission and distribution losses, the requirement of Power for the MESCOM, for the year FY 21, is worked out as detailed below:

Power Purchase requirement for the MESCOM for the year FY 21

Particulars	FY21
Sales (MU)	5268.53
Distribution losses (%)	10.00
Energy at IF point (MU)	5853.92
Transmission Losses (%)	3.039
Energy at generation bus Required to meet the sales target of MESCOM (MU) Includes sales of 59.70 MU (at IF point) to MSEZ	**6097.10**

2. 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 dispatch based on the ranking of all approved sources of supply.

3. The rates considered in respect of the KPCL stations are based on the Commission's order dated 03.08.2009 for hydel stations, except for Shivasamudram, Shimsha, Munirabad & MGHE for which separate rates, as per Order dated 25th February 2015, are applicable.

4. The variable costs of State thermal stations and UPCL, are considered based on the recent power purchase bills passed by the MESCOM and also based on the recent landed cost of fuel and other variable components.

5. The fixed charges and the variable charges in respect of 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. However, the energy has been considered from these units by limiting the quantum of energy as per the requirement of ESCOMs, to meet the sales target on the basis of Merit Order Despatch. **It is expected that any surplus energy available from the tied up sources of energy would be traded by the ESCOMs through PCKL on commercial principles. Similarly, any requirement over and above the quantum approved in this Tariff Order, shall be procured from the contracted/ tied up sources only.**
6. The variations, if any, in the costs allowed now will be considered during the FAC exercise / Annual Performance Review of FY21.
7. The Commission has allowed the KPTCL transmission charges and SLDC charges to be paid by the ESCOMs in the Power Purchase Cost and is as detailed below:

Transmission Charges & SLDC Charges payable by ESCOMs

Name of ESCOM	KPTCL Transmission Charges in Rs. Crores	SLDC Charges in Rs. Crores
BESCOM	2179.288	11.923
MESCOM	319.224	1.996
CESC	466.272	2.815
HESCOM	806.902	5.032
GESCOM	521.183	3.665
Total	**4292.869**	**25.430**

8. In reply to the Commission's observation that the ESCOMs are paying the PGCIL transmission charges at exorbitant rates, MESCOM has stated that the comments for the new CERC (Sharing of Inter State Transmission Charges and Losses) Regulations has been submitted. In this regard the Commission notes that the draft Regulation does not specify the POC charges applicable for Karnataka State. Further the Commission note that the final notification of the Regulation has been issued by the CERC. The MESCOM

shall intimate the Commission, any changes in the existing POC charges and the applicability of period, along with the POC charges.

9. Based on the requirement of energy allowed and the power allocation made by the Government of Karnataka, the Power Purchase quantum and its costs are approved in the ARR of MESCOM for the year FY21, as shown in Annexure- 1 & 2.

10. The power purchase cost for the year FY21 of MESCOM, as approved by the Commission, is shown in the following Table:

TABLE -5.14

ABSTRACT OF POWER PURCHASE APPROVED FOR MESCOM FOR THE YEAR FY21

SOURCES	FINANCIAL YEAR 20-21		
	Energy in MU	Cost in Rs Cr	Per unit Cost
KPCL Hydel Energy	1081.57	91.82	0.85
KPCL Thermal Energy	1199.46	758.55	6.32
CGS Energy	1675.64	784.55	3.55
UPCL	468.00	318.24	6.80
Renewable Energy:	1258.82	457.45	3.63
Other State Hydel	15.42	5.18	3.36
Total Bundled Power	291.92	115.20	3.95
Medium Term (Co Gen)	106.27	55.37	5.21
PGCIL & POSOCO Charges		219.58	
KPTCL Transmission & SLDC		321.216	
TOTAL	**6097.10**	**3127.157**	**5.129**

Thus, the Commission hereby approves power purchase quantum of 6097.10 MU at a cost of Rs.3127.157 Crores, for FY21. The breakup of source-wise Power and the cost thereon, is shown in Annexure- 1 and 2 of this Order.

The MESCOM shall regulate the quantum and cost of power as per the above approval of the Commission. However, since the power purchase costs are uncontrollable, any excess quantum or cost will be trued up in Annual Performance Review for FY21.

5.2.7 Renewable Purchase Obligation (RPO) target for FY21:

MESCOM has submitted that it will be able to achieve non-solar RPO of 15.29%, as against 13% and solar RPO of 15.30% as against target of 8.50% as specified by the Commission in KERC (Procurement of Energy from Renewable Sources) (Sixth Amendment) Regulations, 2018 for FY21.

MESCOM shall take necessary action to meet the above RPO targets. In case, there is any need to buy RECs to fully meet the RPO, the cost thereon would be factored in the APR of FY21.

5.2.8 O & M Expenses for FY21:

MESCOM's Proposal:

The MESCOM in its application has requested the Commission to consider the projected O&M expenses of Rs.715.51 Crores for FY21, based on the employee cost, R&M Expenses and A&G Expenses made on the assumptions detailed below:

- Actual O&M expenses in the year FY19 as the base.
- Consumer growth index of 3.31% (3 years CAGR).
- Weighted average inflation index of 8.26%.
- Efficiency factor of 1%.

The MESCOM has computed Weighted average inflation index of 8.26% based on the WPI and CPI figures from 2007 to 2018 as per the formula adopted by CERC.

To arrive at the base figure of Rs.408.47 Crores for FY19, for projecting the employee cost for the years FY20 and FY21, MESCOM has considered the actual employee expenses of Rs.392.40 Crores, incurred during FY19 and has added Rs.16.07 Crores towards difference of P&G Trust contribution at 14.77% (57.30% - 42.53%).

Considering the weighted inflation index of 8.26% and Consumer Growth Index of 3.31%, MESCOM has projected the normative O&M expenses of Rs.512.58 Crores for FY19. While projecting the employee cost of Rs.512.58 Crores for FY21, MESCOM has considered Rs.13.19 Crores as additional cost expected to be incurred during FY21 due to recruitment of 700 employees.

MESCOM has projected an expense of Rs.72.31 Crores and Rs.130.62 Crores towards R&M Expenses and A&G expenses for FY21 based on the actual R&M expenses and A&G expenses of Rs.59.14 Crores and Rs.106.84 Crores, respectively, incurred during FY19 and adopting the norms by considering the inflation index and consumer growth rate for FY21.

Based on the above assumptions, the MESCOM has sought the O & M expenses for FY21 as detailed below:

TABLE - 5.15

O&M Expenses for FY21: MESCOM's Proposal

Amount in Rs. Crores

Particulars	FY21
Employee Costs	512.58
R&M Expenses	72.31
A&G Expenses	130.62
Total O&M Expenses	**715.51**

Commission's analysis & decision:

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

The Commission, in its preliminary observation, had directed MESCOM to furnish the computation towards claiming Rs.99.80 Crores and Rs.92.57 Crores for FY20 and FY21, respectively with clear bifurcation of the amounts between the employees recruited prior to 31.03.2006 and those employed after 31.03.2006.

MESCOM, in its reply to the preliminary observation, has submitted the above information.

Further, the Commission had also directed MESCOM to furnish the present status of recruitment of the proposed employees. MESCOM has submitted that the new employees are expected to join the company by March, 2020. The Commission notes that MESCOM has included Rs.13.19 Crores as the additional employee cost anticipating addition of 700 employees in FY21. Since, it is a provision made anticipating the addition of employees, the Commission has not considered the same and would take up any additional cost incurred due to new recruitments, while truing up the costs for FY21.

Regarding the claim of Rs.16.07 Crores towards additional contribution to P&G Trust for FY19, MESCOM in its reply to the preliminary observation has submitted that the increased percentage of 14.77% on P&G contribution (from 42.53% to 57.30%) has been applied to the basic pay, DP & DA pertaining to the employees recruited before 31.03.2006 to arrive at the difference in the contribution amount of Rs.16.07 Crores. The Commission in computation O&M expenses has reckoned and included the additional contribution of Rs.16.07 Crores for to P&G Trust and has arrived at the base year O&M expenses of Rs.574.82 Crores (Actual 558.75 + additional contribution to P&G Trust Rs.16.07 Crores) for FY19.

The Commission notes that the actual O&M expenses of Rs.558.38 Crores for FY19 also includes the contribution towards P&G Trust and the amount on account of revision of pay along with the other employee cost, Repair & Maintenance expenses and A&G expenses. Hence, the Commission decides to consider the actual O&M expenses of Rs.558.38 Crores, as per the audited accounts (all inclusive) for FY19 as the base year data (being the latest data available as per the audited accounts) to arrive at the O&M expenses FY20 and FY21.

The Commission as per the norms specified under the provisions of MYT Regulations, for computation of O&M expenses, has considered the consumer growth rate (CPI) 3-year CAGR and inflation rate index based on the methodology followed by the CERC.

The Commission has computed the O & M expenses for FY21, duly considering the base year actual O&M expenses of Rs.558.38 Crores for FY19 which is inclusive of contribution to P&G Trust and pay revision amount as per the audited accounts to arrive at the base year O&M expenses for FY19. Considering the Wholesale Price Index (WPI) as per the data available from the Ministry of Commerce & Industry, Government of India and Consumer Price Index (CPI) as per the data available from the Labour Bureau, Government of India and adopting the methodology followed by the CERC, with CPI and WPI in a ratio of 80:20, in line with the methodology followed by the Commission, in its earlier Tariff Orders, the allowable annual escalation rate for FY21 is computed as follows:

TABLE - 5.16
Computation of Inflation Index for FY21

Year	WPI	CPI	Composite Series	Yt/Y1=Rt	Ln Rt	Year (t-1)	Product [(t-1)* (LnRt)]
2007	73.6	130.8	119.36				
2008	80.0	141.7	129.36	1.08	0.08	1	0.08
2009	81.9	157.1	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	220.48	1.85	0.61	7	4.30
2015	110.3	261.4	231.196	1.94	0.66	8	5.29
2016	110.3	274.3	241.5	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

For the purpose of determining the normative O & M expenses for FY21, the Commission has considered the following:

a) The actual O & M expenses incurred as per the audited accounts for FY19 inclusive of contribution to the Pension and Gratuity Trust and pay revision amount to determine the O & M expenses for the base year FY20 and FY21.

b) The three year Compounded Annual Growth Rate (CAGR) of the number of installations considering the actual number of installations as per the audited accounts upto FY19 and as projected by the Commission for FY21 at 3.36%.

c) The weighted inflation index (WII) at 8.2604% as computed above.

d) Efficiency factor at 1% as considered in the earlier Tariff Orders.

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

As per the decision of the Commission, in the earlier tariff order, the distribution licenses are required to justify any increase in employees cost to commensurate the increase in real employee's productivity. **Hence, the Commission reiterates and expects that with the increase in the emoluments, the improved productivity of the employees would be reflected in terms of increased sales, reduction of losses and improved revenue collections**.

Accordingly, the normative O & M expenses for FY21are as follows:

TABLE - 5.17
Approved O & M expenses for FY21

Particulars	FY21
No. Of Installations	2521607
CGI based on 3-year CAGR in %	3.36%
Inflation index in %	8.2604%
Base year O&M expenses (Actuals for FY19 including the P&G contribution and the additional contribution of Rs.16.07 Crores to P&G trust)	574.82
Allowable O&M expense = O&M Index= 0&M (t-1) *(1+WII+CGI-X) in (Rs. Crores)	**702.32**

Since the base year data of O&M expenses for FY19 also includes the contribution and additional contributions to P&G Trust and pay revision amounts, the Commission has not considered allowing the above items separately for FY21.

Thus, the Commission decides to approve total O&M expenses of Rs.702.32 Crores for FY21.

5.2.9 Depreciation:

MESCOM's Proposal:

The MESCOM, in its filing has claimed amount of Rs.162.74 Crores towards depreciation for FY21, as per the norms specified under the MYT Regulations.

The MESCOM, in its application in computation of depreciation has considered CAPEX of Rs.914.75 Crores for FY21. MESCOM has considered 75% of the CAPEX as addition of assets during FY20 and FY21. MESCOM has submitted that, it has considered a weighted average rate of depreciation at 4.80%, arrived at by considering the average of the opening & closing balances of value of gross fixed assets for FY19, as the rate of depreciation for the years FY21.

Accordingly, MESCOM has claimed the depreciation for FY21 of Rs.162.74 Crores net depreciation after considering the depreciation on the assets created out of Government grants and consumer contributions.

Commission's analysis and decision:

The Commission, in accordance with the provisions of the MYT Regulations and amendments issued thereon, has determined the depreciation for FY21 considering the following:

a) The actual rate of depreciation of category-wise assets is determined considering the depreciation and gross block of opening and closing balances of fixed assets as per the audited accounts for FY19.

b) The actual rate of depreciation, so arrived at, is considered for allowing the depreciation on projected value of gross block of average of opening and closing balance of fixed assets, made on the basis of Commission approved capex and likely categorization of asset thereon for FY20 and FY21.

c) The depreciation on account of assets created out of consumer's contribution / grants are considered (deducted) based on the average balance of fixed assets for FY21. Accordingly, an amount of Rs.21.34 Crores of depreciation on the assets created out of consumer contributions / grants has been factored in approval of the net depreciation for FY21.

Accordingly, the depreciation for FY21 are as follows:

TABLE - 5.18

Approved Net Depreciation for FY21

Amount in Rs. Crores

Particulars	Depreciation
Buildings	3.68
Civil	0.17
Other Civil	0.03
Plant & Machinery and Line& Cable Network	169.35
Vehicles	0.59
Furniture	0.45
Office Equipment	0.61
Released assets reused	0.00
Land	0.00
Intangible Assets	0.00
Gross Depreciation	**174.87**
Less: Depreciation on assets created out of Consumers' contribution / grant	-21.34
Net Depreciation for FY21	**153.53**

Thus, the Commission decides to approve an amount of Rs.153.53 Crores towards net depreciation for FY21.

5.2.10 Interest on Capital Loans:

MESCOM's proposal:

MESCOM in its Petition has estimated the capital loan amount for FY21 based on the following assumptions;

a. Out of the total Capex incurred for Rs.839.17 Crores, during FY19, an amount of Rs.226.78 Crores is related to the works for which work orders were sanctioned in the previous years. Thus, about 27% of the total capex will remain as spill over works for the next years.

b. The expected consumers' contribution and Government grants for each of the years is estimated at Rs.166.95 Crores for FY20 and FY21.

The estimated capital loan amount for FY21 is as follows:

TABLE – 5.19
Estimated Loan capital: MESCOM's submissions

Amount in Rs.Crores

Particulars	FY-21
Proposed CAPEX-(a)	914.75
73% of the proposed CAPEX (*)--(b)	667.77
Less: consumers' contribution & Government grants --(c)	166.95
Net CAPEX for the year [(b)-(c)]—(d)	500.82
70% of (d)	350.57
Capital Loan recruitment	**350.00**

Hence, MESCOM has requested the Commission to consider new capital loan amount of Rs.350 Crores and the total interest on capital loan of Rs.138.86 Crores for FY21. MESCOM has computed the interest on capital loan for FY21, as shown below:

TABLE – 5.20
Interest on Capital Loan - MESCOM's submission for FY21

Amount in Crores

Particulars	FY21
Opening Balance of loans	1172.12
Add: New Loans	350.00
Less: Repayments	169.57
Closing Balance of loans	1352.55
Average Loan	**1262.34**
Rate of interest	11.00%
Interest on Capital Loan	**138.86**

Commission's analysis and decision:

The Commission has taken note of the capex requirement and the capital loan proposals of the MESCOM for FY21.

The Commission, in its preliminary observation, had observed that MESCOM, in its filing had not carried forward the outstanding balance of short-term loans/overdraft as on 31.03.2019 to FY20 and FY21, as both the opening and closing balances were shown as nil. Hence, MESCOM was directed to re-examine the issue and furnish the correct details. To this observation MESCOM did not submit any reply.

The Commission notes the portfolio of capital loans of MESCOM for FY19 and also as on 30th September, 2019 for FY20. As per the audited accounts and as per the APR of FY19, MESCOM had incurred interest on capital loan at a weighted average rate of interest of 8.41% per annum. Further, for FY21, the weighted average rate of interest of the preceding year has been considered on the existing loan balances. The Commission has considered the new capital loan duly factoring the availability of capital grants from GoI / GoK and the consumer contributions, without considering the internal resources available on the proposed works for FY21. MESCOM, in its filing, has proposed the capex achievement to an extent of Rs.667.77 Crores for FY21. The expenditure likely to be met by the MESCOM by raising capital loan, after deducting cost of proposed works to be met out of capital grants from GoI/GoK, and consumer's contribution towards capital works, is Rs.350 Crores for FY21.

Considering the approved capex, and the availability of capital grant, consumer's contribution and internal resources, the requirement of new capital loan works out to Rs.350 Crores and repayment of loan at Rs.186.19 Crores for FY21. Hence, the Commission has considered the borrowing of new capital loans of Rs.350 Crores for FY21, in accordance with the debt equity ratio of 70:30 as per the MYT Regulations.

As per the data furnished by the MESCOM, it has claimed the interest on the average loans of both existing and on the new loan at interest rate of 11% per annum.

The Commission notes that, the interest rates proposed by MESCOM by considering the uniform rate of interest at 11.00% is not in line with the rate of interest reckoned by the Commission in its earlier orders. The interest rate claimed by MESCOM on the existing loans amount is comparatively on a higher side, when the actual weighted average rate of 8.41% for FY19 and 8.93% (estimated) for FY20. MESCOM needs to take up financial prudence measures, so as to avail loans at comparatively lower interest rates and thereby reduce the interest burden on the consumers. The Commission further notes that, the present interest rate being charged by the commercial banks and financial institutions is on the basis marginal cost of fund-based Lending Rates (MCLR). These rates are comparatively lower than the rates considered earlier. Further in the current economic conditions favorable for investments, there is a downward trend in the MCLR based interest rates. Hence, in such a situation, the Commission is of the view that, the MESCOM can avail capital loan at a competitive interest rates which would be lesser than the interest rate proposed by it.

The Commission notes that, the present SBI MCLR rate for capital loan with tenure of 3 years is 8.15%. The Commission notes that MESCOM in recent year is availing capital loans from REC / PFC and the interest rates charged by these financial institutions. Considering the present MCLR plus admissible basis points, the Commission decides to allow an interest rate of 11.00% for FY21 for the new capital loan borrowings. It shall be noted that, the rate of interest now considered by the Commission, on the new capital loans, is subjected to review during APR of FY21.

Accordingly, the approved interests on capital loan for FY21 are as follows:

TABLE – 5.21
Approved Interest on capital loan for FY21

Amount in Rs. Crores

Particulars	FY21
Opening Balances of Capital Loans	1107.16
Add: New Loans borrowed	350.00
Less: Repayments of loan	186.19
Total loan at the end of the year	1270.97
Average Loan	**1189.06**
Interest paid on long term loans	109.84

Weighted average rate of interest per annum allowed on existing loans	8.93%
Interest Rate allowed on new loans in %	11.00%
Allowable Interest on Capital Loan	**109.84**

Thus, the Commission decides to approve interest on capital loans of Rs.109.84 Crores for FY21.

5.2.11 Interest on Working Capital Loan:

MESCOM's proposal:

MESCOM has claimed the interest on working capital based on the norms specified in the MYT Regulations as follows:

TABLE – 5.22

Interest on Working Capital Loan for FY21
MESCOM's Submission

Amount in Rs. Crores

Particulars	FY21
1/12th of O&M Expenses	59.63
Opening GFA	3479.84
1% on opening GFA	34.80
1/6th of Revenue	650.89
Total Working Capital	**745.32**
Rate of Interest (%)	11.00%
Working Capital Interest	**81.99**

Commission's analysis and decision:

As per the norms specified under the MYT Regulations, the Commission has computed the interest on working capital which consists of one month's O & M expenses, 1% of Opening GFA and two month's revenue as receivable.

The Commission notes that MESCOM has claimed the working capital interest at 11% per annum.

The present interest rates charged by commercial banks and financial institutions are mainly on the basis of MCLR declared from time to time. Hence, the Commission has considered MCLR, depending upon the tenure of the loan. The Commission notes that, MESCOM needs to initiate financial prudence measures while availing working capital, so that the interest burden on its consumers is reduced. As per the audited accounts for FY19, MESCOM has availed the working capital loan at the interest rate of 8.55% to 8.70% per annum from Commercial banks.

As discussed earlier, the MCLR for loan with a tenure upto one year is 7.60% to 7.85%. Therefore, the Commission, considering the downward trend in the interest rates, and also considering the present MCLR with an addition of appropriate basis points, as per the provisions of the MYT Regulations, decides to consider interest on working capital at 11.00% per annum for FY21.

Accordingly, the approved interest on working capital for FY21 is as follows:

TABLE – 5.23

Approved Interest on Working Capital Loan for FY21

Amount in Rs. Crores

Particulars	FY21
One-twelfth of the amount of O&M Exp.	58.53
Opening GFA	3346.32
Stores, materials and supplies- 1% of Opening balance of GFA	33.46
One-sixth of the Revenue	633.43
Total Working Capital	725.42
Rate of Interest (% p.a.)	11.00%
Interest on Working Capital	**79.80**

Thus, the Commission decides to approve interest on working capital loan of Rs.79.80 Crores for FY21.

5.2.12 Interest on Consumer Security Deposit:

MESCOM's proposal:

MESCOM, in its application has claimed Rs.45.63 Crores towards interest on consumer's security deposit by considering the increase in consumer deposit in FY19 over FY18 for projecting consumer's security for FY21.

Further, MESCOM has considered an interest rate of 6.50% per annum, for estimating the interest on consumer deposits for FY21.

MESCOM has claimed interest on consumer security deposit as shown below:

TABLE – 5.24
Interest on Consumer Security Deposits for FY21
MESCOM's Proposal

Amount in Rs. Crores

Particulars	FY21
Opening balance of Consumer Security Deposit	676.33
Proposed addition during the year	51.25
Closing Balance of the Consumer security deposits	727.58
Average of deposit	701.96
Rate of Interest per annum.	6.50%
Interest on Consumer Security Deposit	**45.63**

Commission's analysis and decision:

In accordance with the KERC (Interest on Security Deposit) Regulations 2005, the interest rate 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 4th October, 2019, the bank rate is 5.40%. This being the latest available bank rate, the Commission has considered the same, for computation of interest on consumer deposits for FY21.

The Commission has considered the consumer security deposits as per the audited accounts of FY19 and half yearly accounts of FY20 and noted the additional amount of deposit collected from the consumers during the previous years. Based on the additional security deposits collected during FY19, the Commission has decided to factor Rs.55 Crores for FY20 and Rs.60 Crores for FY21 as the additional security deposit likely to be collected for the projection of the security deposit during FY21. Thus, the allowable interest on consumer deposits for FY21 is computed in the following Table:

TABLE – 5.25
Approved Interest on Consumer Security Deposits for FY21

Amount in Rs. Crores

Particulars	FY21
Opening balance of consumer deposits	680.08
Closing balance of consumer deposits	740.08
Average consumer deposits	710.08
Rate of Interest allowed per annum	5.40%
Allowable Interest on Consumer Security Deposit.	**38.34**

Thus, the Commission decides to approve interest on consumer security deposits at Rs.38.34 Crores for FY21.

5.2.13 Other Interest and Finance Charges:

MESCOM in its filing has claimed the other interest and finance charges of Rs.1.84 Crores for FY21.

Commission's analysis and decision:

The Commission as per the audited accounts notes the actual other interest and finance charges incurred by MESCOM during the previous years in raising the loans. Considering this, the Commission decides to allow an amount of Rs.1.84 Crores as proposed by MESCOM towards interest and finance charges for FY21.

5.2.14 Interest and other expenses capitalized:

MESCOM has claimed an amount of Rs.2.10 Crores towards capitalization of interest on loans and other expenses for FY21.

Commission's analysis and decision:

Considering, the capital expenditure incurred and capitalized in the previous years, the Commission decides to allow capitalization of interest on loans and other expenses of Rs. 2.10 Crores for FY21.

5.2.15 Interest and finance charges:

The abstract of approved interest and finance charges for FY21 are as follows:

TABLE – 5.26
Approved Interest and finance charges for FY21

Amount in Rs. Crores

Particulars	FY21
Interest on Capital Loan	109.84
Interest on Working Capital Loan	79.80
Interest on Consumers Security Deposit	38.34
Other Interest & Finance Charges	1.84
Less: Interest & other expenses capitalized	-2.10
Total Interest & Finance Charges	**227.72**

5.2.16 Return on Equity:

MESCOM's proposal:

MESCOM, in its application, has claimed the RoE (grossed up with MAT) at 19.706% by considering 15.50% of RoE duly grossed up with the applicable MAT of 21.342% which works out to 19.706%, as approved in Tariff Order, 2018, based on the opening balances of share capital, share deposit, reserves and surplus, and recapitalized security deposit for FY21, as indicated in the following Table:

TABLE – 5.27

Return on Equity – MESCOM's Proposal

Amount in Rs. Crores

Particulars	FY21
Opening balance of Paid up Share capital	481.82
Opening balance of Share deposit	46.88
Opening Balance of Reserves and surplus*	280.27
Less: Recapitalized Security Deposit	26.00
Opening balance of Net Equity	**782.97**
RoE grossed up with MAT	19.706%
Return on Equity	**154.29**

Commission's analysis and decision:

The Commission notes that status of debt equity ratio with reference to the projected gross fixed asset for FY21.

The Commission has considered the actual amount of share capital, share deposits and the accumulated surplus / deficit under reserves & surplus as per the audited accounts for FY19 and the additional equity report received from the Gok during FY20 for arriving at the allowable equity base for FY21.

The Commission, in accordance with the provisions of the MYT Regulations, has considered 15.50% of Return on Equity duly grossed up with the applicable Minimum Alternate Tax (MAT) of 17.94%. This works out to 18.8886% per annum. Further, as per the decision of the Commission in the Review Petition No.6/2013 and Review Petition 5/2014, and the amended provisions of the MYT Regulations, the Return on Equity is to be computed based on the opening balances of share capital, share deposits and the accumulated balances of surplus / deficit under reserves and surplus account. Further an amount of Rs.26.00 Crores of recapitalized consumer deposit as net worth is also considered as per the Orders of the Hon'ble ATE in Appeal No.46/2014. The Commission by considering the actual profit / loss earned by MESCOM during the previous years as per the audited account, in order to avoid front-loading of the allowable RoE in the retail supply tariff, has not carried forward the allowable RoE for FY21 as the additional equity infused during the year for computation of RoE for the subsequent year. Further, the Commission has considered Rs.86.77 Crores of additional equity infused by the GoK during the financial year 2020 to arrive at the opening balance of net equity for FY21.

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 FY21 are as follows:

TABLE – 5.28
Status of Debt Equity Ratio for FY21

Amount in 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
FY21	Opening Balance	3323.93	1107.16	884.32	2326.75	997.18	33.31	26.60
	Closing Balance	3933.10	1270.97	884.32	2753.17	1179.93	32.31	22.48

From the above table, it is evident that the debt equity amount lies within the normative debt equity ratio of 70:30 on the opening and the closing balances of projected GFA for FY21. Further, the Commission will review the same during the Annual Performance Review for each year based on the actual data, as per the audited accounts.

The allowable Return on Equity for FY21 is computed as follows:

TABLE – 5.29
Approved Return on Equity for FY21

Amount in Rs. Crores

Particulars	FY21
OB: Paid Up Share Capital	481.82
OB: Share Deposit	133.65
OB; Reserves & Surplus	294.85
Less: Recapitalized Security Deposit	26.00
Opening Balance of Equity for the year	884.32
RoE Grossed up with MAT @ 17.94 (At 18.8886%)	**167.04**

Thus, the Commission decides to approve Return on Equity grossed up with MAT at 18.8886% at Rs.167.04 Crores for FY21. The RoE and the MAT allowed will be subjected to truing up as per the actual equity and tax paid by the MESCOM during APR of FY21.

5.2.17 Other Income:

MESCOM's proposal:

MESCOM in its filing as per the D4 Format has claimed other income for FY21 as detailed below:

TABLE – 5.30
Other Income - MESCOM's Proposal

Amount in Rs. Crores

Particulars	FY21
Interest on Bank Deposits & Investment	0.02
Interest on Staff loans and advances	0.02
Rental from Staff quarters	1.94
Rental from others	0.13
Profit on sale of stores	0.29
Other miscellaneous receipts from trading	0.01
Sale of Scrap	2.13
Value of materials found excess during physical verification	0.03
Rebate for collection of Electricity duty	0.75
Incentives received	41.27
Miscellaneous recoveries	11.24
Total	**57.83**

Commission's analysis and decision:

The Commission notes that the other income received by the MESCOM mainly includes income from miscellaneous recoveries, interest on bank deposits, rent from staff quarters and sale of scrap, profit on sale of stores rebate on collection of electricity duty besides incentives for timely payment of power purchase bills etc.

The Commission has considered 6% increase over the actual other income earned by MESCOM as per the audited accounts for FY19 in computation of other income for FY21. Based on the above and considering an amount of Rs.38.04 Crores revenue earned on sale of 57.89 MU energy at IF point at the rate of Rs.6.5713 per unit to MSEZ, the Commission decides to consider Rs.133.38 Crores as the other income for the FY21.

Thus the, Commission decides to approve other income of Rs.133.38 Crores for FY21.

5.2.18 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 FY21 towards meeting the expenditure on consumer relations / consumer education.

The Commission directs MESCOM to furnish a detailed plan of action for utilization of this amount and also maintain a separate account of these funds and furnish the same at the time of APR.

5.3 Abstract of ARR for FY21:

In the light of the above analysis and decisions of the Commission, the following is the approved ARR for FY21:

TABLE – 5.31
Approved ARR for FY21

Amount in Rs. Crores

Sl. No.	Particulars	FY21
1	Energy at Gen Bus (With MSEZ) in MU	6097.10
2	Energy at Interface in MU	5853.92
3	Distribution Losses in %	10.00%
4	Sales in MU	
5	Sales to other than IP & BJ/KJ	3540.83
6	Sales to BJ/KJ	37.29
7	Sales to IP	1690.41
	Total Sales	5268.53
	Revenue at existing tariff in Rs. Crores.	
8	Revenue from tariff and Misc. Charges	2842.58
9	Tariff Subsidy to BJ/KJ	26.59
10	Tariff Subsidy to IP	931.42
	Total Existing Revenue	**3800.59**
	Expenditure in Rs. Crores.	
11	Power Purchase Cost	2805.94
12	Transmission charges of KPTCL	319.224
13	SLDC Charges	1.996
	Power Purchase Cost including cost of transmission	**3127.16**
14	O&M Expenses	702.32
15	Depreciation	153.53
	Interest & Finance charges	
16	Interest on Capital Loans	109.84
17	Interest on Working capital loans	79.80
18	Interest on belated payment on PP Cost	0.00
19	Interest on consumer security deposits	38.34
20	Other Interest & Finance charges	1.84
21	Less: interest & other expenses capitalised	-2.10
22	Total Interest & Finance charges	227.72
23	Other Debits	0.00
24	Net Prior Period Debit/Credit	0.00
25	Return on Equity	167.04
26	Funds towards Consumer Relations/Consumer Education	0.50
27	Other Income (Including income from MSEZ)	-133.38
28	ARR	4244.88
29	Less: surplus for FY19 carried forward (As per APR)	-233.55
30	**Net ARR**	**4011.33**

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

MESCOM in its application has not proposed any new ratio for segregation of consolidated ARR into ARR for Distribution Business and ARR for Retail Supply Business.

Commission's Analysis and Decisions:

Since no new proposal has been furnished by MESCOM, the Commission decides to continue with the existing ratio of segregation of ARR as detailed below:

TABLE – 5.32
Approved Segregation of ARR – FY21

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

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

TABLE – 5.33
APPROVED REVISED ARR FOR DISTRIBUTION BUSINESS – FY21

Amount in Rs. Crores

Sl. No	Particulars	FY21
1	R&M Expenses	273.91
2	Employee Expenses	
3	A&G Expenses	
4	Depreciation	128.96
	Interest & Finance Charges	
5	Interest on Capital Loans	109.84
6	Interest on Working capital loans	11.72
7	Interest on consumer security deposits	0.00
8	Other Interest & Finance charges	1.84

Sl. No	Particulars	FY21
9	Less: interest & other expenses capitalised	-2.10
	Total	**524.17**
10	RoE	130.29
11	Less: Other Income	-9.34
12	Provision for taxes	0.00
	NET ARR	**645.12**

TABLE – 5.34

APPROVED ARR FOR RETAIL SUPPLY BUSINESS – FY21

Amount in Rs. Crores

APPROVED ARR FOR RETAIL SUPPLY BUSINESS- FY 21- MESCOM		
Sl. No	**Particulars**	**FY21**
1	Power Purchase & SLDC Charges	2807.93
2	Transmission Charges	319.22
3	O&M Expenses	428.42
4	Depreciation	24.56
	Interest & Finance Charges	
5	Interest on Working capital loans	68.07
6	Interest on consumer security deposits	38.34
7	Other Interest & Finance charges	0.00
8	Less interest & other expenses capitalized	0.00
	Total	3686.56
9	ROE	36.75
10	Less: Other Income	-124.04
11	Provision for taxes	0.00
12	Fund towards Consumer Relations / Consumer Education	0.50
	NET ARR	**3599.76**

5.5 Gap in Revenue for FY21:

As discussed above, the Commission approves the Net Annual Revenue Requirement (ARR) of MESCOM for its operations in FY21 at Rs.4011.33 Crores as against Rs.4251.43 Crores as proposed by MESCOM in its application for ARR of FY21. The approved ARR includes an amount of Rs.233.55 Crores which is determined as the surplus as per APR for FY19 as discussed in Chapter-4. Based on the existing retail supply tariff, the total realization of revenue will be Rs.3800.59 Crores which is Rs.210.74 Crores less than the projected revenue requirement of Rs.4011.33 Crores for FY21.

The net ARR, the gap in revenue for FY21 and the average cost of supply is indicated in the following table:

TABLE – 5.35
Revenue gap for FY21

Particulars	FY21
Net ARR including carry forward deficit of FY19 (in Rs. Crores)	4011.33
Approved sales (in MU)	5268.53
Average cost of supply for FY21 (in Rs. /unit)	7.61
Revenue at existing tariff (in Rs. Crores)	3800.59
Gap in revenue for FY21 (in Rs. Crores)	**210.74**

For the recovery of the gap of Rs.210.74 Crores, the determination of revised retail supply tariff for FY21, on the basis of the above approved ARR is discussed in detail in the Chapter-6 of this Order.

However, the Commission was unable to issue the Tariff Orders for FY21 till October 2020 for the following reasons:

a) Due to total lock down declared by the Government of India / Government of Karnataka on account of Covid-19 pandemic and pendency
b) Pendency of Appeal No.97/2020 filed by the KPTCL before the Hon'ble Tribunal against the Commission's Order dated 16.01.2020 and disposal of the said Appeal by the Hon'ble Tribunal vide Order dated 05.10.2020.
c) Applicability of the Code of Conduct on account of announcement of bye-Election to Assembly Constituency No.136-Sira and 154-Rajajageswari Nagar scheduled on 03.11.2020, by the Election Commission of India, vide Gazette Notification dated 09.10.2020.

The Commission has taken note of the various restriction and measures initiated and enforced by the GoI/Gok during lock down period, to prevent the spread of Corona Virus which has been declared as a Pandemic (COVID-19). This has resulted in setback to all the economic activities, hugely affecting all the sections of the Society, socially and economically. Hence, the consumers could not be burdened with tariff increase from 01.04.2020. However, the tariff increase is imminent due to substantial increase in power purchase cost and other costs to be incurred by the ESCOMs.

In order to tide over the present adverse financial situation, the Commission has decided to give effect to the Order to increase the Tariff from 1st November, 2020. This, in effect, would give relief on account of increased tariff for seven months to the consumers and the Commission hopes that due to gradual relaxation of lockdown conditions, the economic activities would resume and the consumers have to bear the revised tariff from 1st November 2020 onwards.

Due to the postponement of the recovery of the revised tariff, out of the projected additional revenue of Rs.210.74 Crores from revision of tariff, the Commission decides to create the unrecovered portion of the revenue gap of seven months amounting to Rs.122.93 Crores of FY21 as Regulatory Asset to be recovered in the tariff over the next two years (FY22 and FY23). The Commission also decides to allow carrying cost at 10% per annum (based on the current MCLR plus reasonable Basis points) on the amount of Regulatory Asset which will be assessed at the time of the Annual Performance Review (APR) of FY22 and FY23. The balance amount of Rs.87.81 Crores in gap in revenue for FY21 is proposed to be realized as additional revenue through revision of tariff for the different category of consumers during FY21.

The net ARR, the gap in revenue for FY21 and the amount of Regulatory Asset is shown in the following table:

TABLE – 5.36

Revenue gap for FY21

Particulars	FY21
Net ARR including carry forward gap of FY19 (in Rs. Crores)	4011.33
Approved sales (in MU)	5268.53
Revenue at existing tariff (in Rs. Crores)	3800.59
Gap in revenue for FY21 (in Rs. Crores)	**210.74**
Regulatory Asset to be recovered over next two years (in Rs.Crores) in FY22 & FY23	**122.93**
Balance revenue gap to be collected over a period of five months during FY21 by revision of tariff (Rs.in Crores)	**87.81**

The details of revised retail supply tariff, on the basis of the above approved ARR, is discussed and approved in Chapter-6 of this Order.