

## CHAPTER – 5

### ANNUAL REVENUE REQUIREMENT FOR FY21

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

HESCOM, in its application dated 28<sup>th</sup> November, 2019, has sought approval of the Commission for the revised ARR for the 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	FY21
1	Energy @ Gen Bus (With HRECS & AEQUS) MU	16312.64
2	Energy at Generation Point (Mus) (HESCOM)	15918.35
3	Transmission Losses in %	3.132%
4	Energy @ Interface in MU	15419.78
5	Distribution Losses in %	14.20%
	Sales in MU	
	Sales to other than IP & BJ/KJ	5440.71
	Sales to BJ/KJ	199.94
	Sales to IP	7589.53
	Total Sales	13230.18
6	<b>Revenue at existing tariff</b>	
	Revenue from tariff and Misc. Charges	4203.70
	Tariff Subsidy to BJ/KJ	141.36
	Tariff Subsidy to IP	4925.61
	<b>Total Existing Revenue</b>	<b>9,270.67</b>
	<b>Expenditure:</b>	
7	Power Purchase Cost	6701.03
	Tr. Charges - KPTCL	699.38
	SLDC Charges	4.95
	<b>Power Purchase Cost including cost of transmission</b>	<b>7405.36</b>
8	Employee Cost	949.95
	Repairs & Maintenance	76.55
	Admin & General Expenses	154.32
	<b>Total O&amp;M Expenses</b>	<b>1180.82</b>
9	Depreciation	280.11
10	Interest & Finance charges	
11	Interest on Capital Loans	415.21
12	Interest on Working capital loans	186.72
13	Interest on belated payment on PP Cost	0.00
14	Interest on consumer security deposits	52.74
15	Other Interest & Finance charges	0.00

Sl. No.	Particulars	FY21
16	Less: interest & other expenses capitalised	0.00
	<b>Total Interest &amp; Finance charges</b>	<b>654.67</b>
17	Other Debits	0.00
18	Extraordinary item	0.00
19	Return on Equity	0.00
22	Funds towards Consumer Relations/Consumer Education	0.50
23	Less: Other Income	-326.33
	<b>ARR</b>	<b>9195.13</b>
24	Deficit for FY19 carried forward	759.49
	<b>Net ARR</b>	<b>9954.62</b>
	<b>REVENUE -DEFICIT</b>	<b>-683.95</b>

The HESCOM in its application has requested the Commission to approve the Annual Revenue Requirement of Rs.9954.62 Crores for FY21, which includes the deficit of Rs.759.49 Crores of FY19. Considering the estimated revenue of Rs.9,270.67 Crores from sale of power to the consumers and miscellaneous revenue at the existing retail supply tariff, HESCOM has projected the revenue gap of Rs.683.95 Crores for FY21. In order to bridge the revenue gap of Rs.683.95 Crores for FY21, the HESCOM has proposed the average increase in retail supply tariff by 52 paise per unit in respect of all category 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 the Annual Performance Review for FY19 based on the audited accounts and other relevant records furnished by HESCOM. Accordingly, a deficit of Rs.401.22 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, hence 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:

#### HESCOM Proposal:

The HESCOM, in its Tariff application has proposed capex of Rs.1877.75 Crores and Rs.1205.51 Crores for FY20 and FY21 as below:

**TABLE - 5.2**  
**HESCOM's Capex Proposal for FY21**

Sl. No.	Scheme	Revised Capital Budget Proposal for FY20 (Rs in Crs.)	Revised Capital Budget Proposal for FY21 (Rs in Crs.)
	Mandatory works, Social obligation and other works		
1	Gangakalyan IP sets: Dr. B. R Ambedkar Development Corporation		
2	Gangakalyan IP sets: Karnataka State Tribal Development Corporation		
3	Gangakalyan IP sets: D. Devraju Urs Backward Class Development Corporation	70.00	100.00
4	Gangakalyan IP sets :Karnataka Minority Development Corporation		
5	Gangakalyan IP sets :Karnataka Vishwakarma Samudaya Development Corporation		
	Sub - total	70.00	100.00
	GOK Sponsored Works		
6	Special Development Plan for backward talukas under Nanjundappa scheme(SDP)	15.00	25.00
7	Rural Electrification under SCSP (Not covered under RGGVY)	5.00	7.00
8	Rural Electrification under TSP (Not covered under RGGVY)	3.00	3.00
9	Energisation of IP sets under Sheegra Samparka	22.00	10.00
10	Creating infrastructure to UAIP Sets (Before and after 2014 GOK circular)	120.00	88.00
11	Nirantara Jyoti Yojana.	20.00	17.00
11.a	Bifurcation of IP Sets for completed NJY Feeders	0.00	26.00
	<b>Sub - total</b>	<b>185.00</b>	<b>176.00</b>
	GOI Sponsored Works		
12	RGGVY	0.00	0.00
13	DDUGVY	206.40	23.00
14	R- APDRP.	1.00	1.00

14.a	R-APDRP exclusively for Modem and meters	3.00	0.50
15	IPDS IT imitative Phase II	10.55	10.57
16	IPDS	90.00	65.08
17	Soubhagya Yojane	20.00	20.00
	<b>Sub - total</b>	<b>330.95</b>	<b>120.15</b>
18	Expansion of network and system improvement works.		
a	Additional DTCs	55.00	50.00
b	Enhancement of Distribution Transformers	10.00	5.00
c	Shifting of existing transformer to load centre	5.00	2.00
d	LT line conversion of 1Ph 2 wire or 1Ph 3 wire to 3ph 5 wire	7.00	5.00
e	Providing new link lines for bifurcation of load	15.00	30.00
f	Providing SMC box to distribution transformer	0.50	0.00
19	Construction of new 33 KV stations	35.00	25.00
19.a	Construction of new 33 KV lines.	30.00	15.00
20	Augmentation of 33 KV stations.	30.00	15.00
21	Construction of 11 KV lines for 33 KV / 110 KV sub-stations.	30.00	35.00
22	Replacement of 33 KV lines Rabbit conductor by Coyote conductor.	20.00	25.00
23	11 KV Re-conductoring.	30.00	35.00
24	LT Re-conductoring.	40.00	40.00
25	HVDS	0.00	0.00
26	NEF (REC) for replacing 11 KV OH feeders by UG Cables in Hubli and Belgaum cities.	230.00	3.00
26a	Replacing 11 KV OH feeders by UG Cables in Gokak Town	22.00	5.00
27	Commissioning of 3 Phase 4 wire HT Metering Cubicle with meter, CTs, PTs	29.00	30.86
28	Refurbishing works on HT/LT/DTC in O & M Divisions	155.00	100.00
28a	OTM	0.00	6.50
	<b>Sub-total</b>	<b>743.50</b>	<b>427.36</b>
	Reduction of T & D and ATC loss		
29	Providing meters to un-metered IP sets.	5.00	0.00
30	Providing meters to un-metered BJ/KJ installations.	2.00	1.00
31	Replacement of faulty / MNR energy meters by static meters.	5.00	10.00
32	Replacement of more than 10 year old electromechanical energy meters by static meters.	133.00	61.15
33	DTC's metering ( Other than APDRP)	20.00	3.00
	<b>Sub - total</b>	<b>165.00</b>	<b>75.15</b>
	General (In House)		
34	Rural Electrification (General)(Not covered under RGGVY)	3.50	1.00
35	Electrification of BPL Households (General) (Not covered under RGGVY)	8.00	1.00
36	Water works	30.00	0.00
37	Other E & I Works (DP & GOS)	5.00	5.00
38	Energisation of IP sets under general.	5.00	5.00
39	Service connections other than IP/BJ/KJ/Water works.	20.00	15.00
40	Improvement Works at 5 Nos of Villages in each MLA Constituency & 5 Nos of Villages in each MP	35.00	26.00

	Constituency under MADARI VIDUYAT GRAM .		
41	Providing prepaid meters to temporary installations	8.95	8.95
42	Providing numerical relays to provide power supply to farm houses	4.50	2.00
43	Providing 16KVA Transformers for A/P/S to farm houses in Chikodi Division	5.00	5.00
44	The work of Supply of Hardware, Supervisory Manpower (for Technical Support) and Development of Software (End to End Solution including Google Map Subscription for 2 Years, if applicable) to Support Enumeration of IP Sets in HESCOM Jurisdiction (except Bailhongal O & M Division) through GIS Application and Maintenance for 2 Years	3.35	0.70
45	Replacement of old and failed equipment and other works of existing 33 KV stations and lines.	15.00	15.00
46	T&P materials.	5.00	5.00
	<b>Sub - total</b>	<b>148.30</b>	<b>89.65</b>
	New initiatives works		
47	IT initiatives, automation and call centre	7.00	4.00
48	Providing solar roof tops to HESCOM and other Government office buildings	5.00	2.00
49	Establishing ALDC & SCADA.	5.00	4.00
50	Special pilot project for Strategic Business Centre at Gadag Division	2.00	2.00
51a	Smart Metering	40.00	9.20
51b	Smart Grid Initiative	10.00	0.00
52	DSM Projects	1.00	1.00
	<b>Sub - total</b>	<b>70.00</b>	<b>22.20</b>
	Immediate Execution (Planned/Unplanned)		
53	Replacement of failed distribution transformers.	10.00	10.00
54	Replacement of Power Transformers.	5.00	5.00
55	Preventive measures to reduce the accidents. (Providing intermediate poles, Restranging of sagging lines, providing guy & struds, providing guarding, DTC earthing )	45.00	70.00
56	Replacement of broken poles / Disaster Management Works	15.00	20.00
57	Restoration of Power Supply in Flood Affected Areas	0.00	50.00
	<b>Sub - total</b>	<b>75.00</b>	<b>155.00</b>
58	Civil Engineering works like Construction of new office buildings/ Substation civil works, Modernisation/Repairs to existing buildings, regular maintenance to immovable properties	40.00	40.00
59	Corporate Office Reserve for Emergency	50.00	0.00
	<b>Sub - total</b>	<b>90.00</b>	<b>40.00</b>
	<b>Total</b>	<b>1877.75</b>	<b>1205.51</b>

Apart from the above, HESCOM has sought approval for Rs.200 Crores additional Capital Budget to meet the expenditure towards restoration of power supply and reconstruction of distribution network in flood affected area

in HESCOM, referring to their letter No. dated. 15<sup>th</sup> October, 2019 addressed to the Commission.

The HESCOM has stated that their Annual Investment Plan for FY21 is as shown below:

- a. Annual Investment Plan includes all the planned and Non Plan works
- b. Provision for capital budget is made for commissioned works, ongoing works and works that have been proposed to be taken up.
- c. Since most of the schemes such as DDUGJY, IPDS, Replacement of OH by UG cable in Hubli & Belagavi city, Soubhagya are on the verge of completion, the entire balance of Capital budget has been allotted in FY21.
- d. GoK scheme called Model Electricity Village (MEV) which mainly focuses on development / strengthening of distribution network in the selected villages is included in the Budget plan for FY21 with full allocation to complete it.
- e. Prioritization is made for Replacement of old meters by Static meters which in turn ends up in reduction in Technical and Commercial losses and also supports in Energy Auditing in more technical way.
- f. Appropriate provision is made for Social obligatory works such as Ganga Kalyan works, SDP, TSP, SCSP.
- g. Budget provision for the projects such as NJY Phase-III, which are under completion and bifurcation of IP Sets from these NJY Feeders are included for FY21.
- h. Capital Budget provision is made for Refurbishing works on HT/LT/DTC and OTM works in O & M Divisions. The objective of this work is to have reliable, quality supply with intention of enabling stable distribution network and accident free network.
- i. Investment provision is made on System strengthening works such as Reconductoring, linklines, Preventive Measure works will be taken in order to improve tail end voltage and reduction of losses and prevents Accidents.
- j. Investment provision is made on E & I works like additional DTCs, feeder bifurcation, line conversion, shifting of transformer to load centre,

- enhancement of transformers etc are considered for energy saving and Quality supply and reduction of over load thus improving voltage
- k. Investment is made on New Stations / Augmentation and also replacement works in Stations are to be taken up in order to improve quality power supply and reduce distribution losses and to cater load growth.

Considering all the above factors Annual Investment plan for FY21 is proposed to a tune of **Rs.1205.51 crores** and prayed before Hon'ble Commission to consider the revised proposal for FY21 and accord approval.

#### **Commission's Analysis and decision:**

As per the Tariff application filed by HESCOM, it has proposed the revised Capex of Rs.1877.75 Crores and Rs.1205.51 Crores for FY20 and FY21 respectively and Rs.200 Crores additional Capex to meet the expenditure towards restoration of power supply and reconstruction of distribution network in the flood affected areas of HESCOM.

In the preliminary observations, the HESCOM was directed to explain the rationale behind submitting the proposal for incurring higher amounts than the amounts already approved for the current control period. The Commission has approved capital expenditure of Rs.1200 Crores and Rs.1025 Crores for FY20 and FY21 respectively in terms of the MYT Regulations and HESCOM has to comply with the approval as per Tariff Order 2019. **Any additional amounts required shall be incurred through re-appropriations within the approved amounts.**

HESCOM has submitted that, the directions of the Commission in respect of capital works will be followed strictly by adoption of the capex guidelines and orders of the Commission. HESCOM, has stated that the work which are absolutely essential are included in the Annual plan. During the course of MYT filing, capital plan of Rs.1877.75 Crores and Rs.1567.00 Crores FY20 and FY21 respectively are proposed. However, there is a deviation in Annual capex due

to launch of some projects by Government like DDUGJY, IDPS, and Madari Vidhyuth Gram etc. While planning, prioritization of works and other essential parameters will also be considered. HESCOM in its filing has brought to the notice of Commission that, there was a devastating flood in Karnataka especially North Karnataka region, which resulted in damage of distribution infrastructure resulting in huge losses to the company's assets. To restore power supply alone, HESCOM has incurred capital expenditure of Rs.200 Crores. Hence for the above reasons there is a deviation in the plan already proposed by HESCOM. Rationale behind higher expenditure booked in some of the works is due to more number of applications registered in respect of Ganga Kalyan and water supply works. Anticipating number of applications to be registered in respect of Ganga Kalyan and water supply works is unpredictable and is slightly higher than the average number of applications while preparation of annual capex plan.

**The Commission note that, HESCOM has filed application for APR of FY19 and ARR for FY21. Hence, in these proceedings, the Annual Performance Review of FY19 and revision of Annual Revenue Requirement of FY21 is being taken by the Commission. Hence the question of approval of revised capex for FY20 will not arise. The review of capex based on the actual expenditure will be taken up while undertaking APR of FY20 and revision of ARR for FY22.**

In respect of additional capex proposed by HESCOM for Rs.200 Crores towards restoration of power supply and reconstruction of distribution network in flood affected area in HESCOM, HESCOM has to adhere to the directions of the Commission communicated vide letter dated 19<sup>th</sup> February, 2020 wherein it was informed that the funds for the flood relief works are to be met from the relief fund to be provided by the Central/ State Governments. **HESCOM is directed to strictly adhere to the said directions of the Commission and any expenditure incurred without the approval of the Commission will not be passed in the Tariff and HESCOM will be held responsible for the same.**



In compliance of the observations on the capital expenditure of Rs.1877.75 Crores proposed in its filing for FY21, HESCOM has submitted the revised Format-17 for Rs.1205.51 Crores for kind consideration of the Commission.

HESCOM was directed to submit the total capex incurred for the last three financial years (FY17, FY18 and FY19) in respect of Ganga Kalyana works, creating infrastructure for Unauthorized IP Sets, replacement of more than 10-year-old electromechanical energy meters by static meters, enhancement of distribution transformers and DTC metering and the reduction in distribution losses, percentage of DTC metering and the energy audit conducted in respect of DTCs which are metered and the results thereof, so as to justify the proposed expenses for FY21.

In reply, HESCOM has submitted the following:

**a) Gangakalyana:**

Total Capex incurred during the last three financial years (FY17, FY18 and FY19) in respect of Ganga Kalyana Works:

SL No	Financial Year	No. of GK IP sets energized	Balance at the end of FY	Expenditure incurred Rs in Crores
1	2016-17	5440	1404	77.21
2	2017-18	6228	372	88.59
3	2018-19	6289	1531	80.10

**b) Creating infrastructure for Unauthorized IP Sets;**

**(Amount Rs.in Crores)**

Creating infrastructure for Unauthorized IP (UNIP) Sets					
Financial year	No. of packages taken up	Capex Incurred during FY	Completed packages	No. of beneficiaries completed	Balance No. of packages
FY-17	8	126.94	8	5050	0
FY-18	14	108.30	9	8000	5
FY-19	12	56.32	11	625	1

**c) Replacement of more than 10-year-old electromechanical energy meters by static meters;**

FY 17		FY 18		FY 19		Balance	
Physical	Financial	Physical	Financial	Physical	Financial	Physical	Financial
0	0	0	0	83635 Nos.	00	553117	152.89 Crores

**d) DTC Metering;**

FY 17		FY 18		FY 19		Balance	
Physical	Financial	Physical	Financial	Physical	Financial	Physical	Financial
-	15.86 Crs*	-	8.91 Crs.*	-	-	-	-

*\*The above said expenditure is towards the retention amount held and monthly maintenance bills.*

HESCOM has taken up Metering of 40793 Nos of DTCs in two Phases (Phase-I & II). Metering of all the 40793 Nos of DTCs is completed. Details Metering, Communication with server and Energy Audit conducted for the month of October-2019 is as below:

No. of DTC Metered	No. of DTC Meters Communicating in M/s. AFL DTCM Web portal	Balance No. of DTC Meters to be Communicated in M/s. AFL DTCM Web portal	No. of DTC for which Energy Audit report is generated				
			Negative Loss%	0-10%	10-20%	above 20%	Total
40793	32624	8169	2778	14184	344	9814	27120

It is noted that HESCOM's replies to the observations are not convincing. The information provided by the HESCOM is incomplete and this shows that HESCOM, without analyzing the benefits derived from each of the capital works, is spending amount towards it. The Commission would also like to emphasize that the works related to DTC metering through installation of modems and sim are not working satisfactorily and the energy auditing is not taking place at the DTC level, as it is observed from the prudence check report for FY17 and FY18. **Hence, HESCOM is directed to furnish the details of performance guaranty of the DTC Metering contract besides getting the modems repaired through the respective contractors who are responsible for maintenance of such DTC metering. After setting right the modems, whether**

energy audit is being carried out in respect of those DTCs, need to be confirmed within three months from the date of this Order. Failing which the cost towards imprudent work under DTC metering would be recovered in the next ARR, to be approved for FY22.

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

(Amount Rs.in Crores)

Approved and Actual Capex incurred of HESCOM							
Particulars	FY13	FY14	FY15	FY16	FY17	FY18	FY19
Capital investment proposed	1189.22	1178.00	797.50	1818.86	901.05	748.55	1298.16
Capital investment approved by the Commission	1189.22	1178.00	797.50	500.00	806.05	743.55	1298.16
Actual capital investment incurred as per audited accounts *	251.27	343.05	358.09	704.21	707.63	1102.19	977.86
Percentage of actual capital investment to the approved capital investment	21.13%	29.12%	44.90%	140.84%	87.79%	148.23%	75.33%
*without considering capital investment disallowed under prudence check							

**The Commission, based on the previous years' achievements and the break-up of capex furnished by the HESCOM, recognizes the capex proposal of HESCOM at Rs.1205.51 Crores for FY21. However, the Commission decides to reckon Rs.1085 Crores for the purpose of for determination of Tariff for FY21.**

Commission directs HESCOM to maintain the physical progress as well as 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 Commission directs.

The Commission directs HESCOM to take concrete measures to complete and capitalize the works in the prescribed time schedule, so as to ensure that the benefits of capex investment are passed on to the consumers effectively besides capitalizing the works soon after their completion, as far as possible during the same financial year.

The Commission directs the HESCOM to put sincere efforts towards achieving the following objectives of the proposed capex on a priority:

1. Reducing distribution losses,
2. Reducing the HT:LT Ratio
3. Reduce Transformer failures
4. Segregate the loads in the feeders.
5. Segregate technical and commercial losses and reduce Power theft and
6. Bring awareness among the people on the usage, safety, and conservation of electrical energy.
7. Improve sales to metered category so as to improve its revenues.
8. 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 for FY21:**

### **I. Sales-Other than IP sets:**

#### **Category-wise estimation of number of installations and sales by HESCOM for FY21:**

HESCOM, in its filing has estimated revised sales for FY21 as 13230.18 MU.

#### **HESCOM's Approach:**

- a) The HESCOM, in its filing has submitted that the number of installations for FY20 & FY21, is estimated considering the growth in installations for the period from FY15 to FY19, except in the case of BJ/KJ and IP set installations. For BJ/KJ the number of installations has been retained at FY19 level.
- b) Similarly, for energy sales estimates, CAGR for the period FY15 to FY19 has been considered by HESCOM, except for LT-4, HT 2c (ii), HT3a(iii), HT-3b & HT-4 categories, which had negative CAGR.

The preliminary observations on sales forecast for the FY21, the replies furnished by HESCOM and the observations of the Commission are discussed in the following paragraphs:

1. In case of LT-4(b) & 4(c), HESCOM may consider estimating the sales based on specific consumption of FY19, as sales CAGR is negative.

HESCOM Replies:

has requested to retain the projections as made by HESCOM, which is based on 5-year CAGR.

2. The growth rate for installations considered for LT-6-Water Supply installations is lower as compared with the normal growth rates. Therefore, HESCOM may consider revising the data for this category.

HESCOM Replies:

HESCOM has requested to retain the projections as made by HESCOM, which is based on 5-year CAGR, nature of installations and trend.

3. The sales growth rate considered for LT-2b, LT-5, LT-6 SL and HT-3 is lower and for HT-4 it is higher, considering the CAGR. HESCOM may consider revising the data for these categories.

HESCOM Replies:

HESCOM has stated that the projections are based on 5-year CAGR, nature of installations and trend and has requested to retain the projections as made by HESCOM.

4. In respect of HT2(a) category, the sales estimate based on the analysis of open access impact shall be considered. HESCOM should have computed the growth rates considering the total energy sold to this category including OA/wheeling and should have estimated the sales considering the ratio of energy sold by HESCOM in FY19 to the total

sales of FY19 including OA/wheeling sales. HESCOM may compute HT-2a sales on the above method and furnish the data.

HESCOM Replies:

HESCOM has submitted that due to inconsistency in OA/wheeling data, HESCOM is unable to arrive at exact growth in consumption based on ratio as directed by the Commission.

5. To validate the sales, the Commission directed HESCOM to furnish, category wise information in the specified format.

HESCOM Replies:

HESCOM has furnished the data.

6. Sales to HRECS:

For FY19 to FY21, HRECS has considered the following quantum of purchase from HESCOM (including AEQUS sales):

	<b>FY19</b>	<b>FY20</b>	<b>FY21</b>
HRECS Estimate-MU	346.63	361.57	381.94

The Commission had directed HESCOM to confirm, as to whether the above quantum of sales to HRECS is considered, while arriving at the overall power purchase requirement for HESCOM.

HESCOM Replies:

HESCOM has submitted that based on e-mail received from HRECS, it has considered 373.38 MU for FY20 and 394.29 MU for FY21 as sales to HRECS, including Transmission losses.

The Commission has discussed its approach in estimating sales to HRECs in the HRECs' Order.

The Commission has taken note of the replies furnished above. The approach of the Commission in estimating the number of installations and sales are discussed in the following paragraphs:

**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 30<sup>th</sup> 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 HESCOM 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 HESCOM are retained.
- c. Wherever the number of installations estimated by the HESCOM 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 HESCOM 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 HT-4 category, the number of installations as estimated for FY20 is retained, as there is negative growth.
- f. For HT-5 category, the estimates of HESCOM are retained.

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

**Approved Number of installations**

FY21	
As Filed by HESCOM	Approved by the Commission
3753008	3811522

**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 HESCOM has been validated, duly considering the actual sale upto November, 2019 and modified suitably as stated earlier.
  - b. Wherever the sale estimated by the HESCOM, for the for 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 HESCOM are considered.
  - c. Wherever the sales estimated by the HESCOM for the FY 21 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 sale estimated by HESCOM for 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 CAGRs for the period FY14–FY19 and for the period FY16-FY19 are considered.



- e. LT-4b and LT-4c, the sales are estimated based on FY19 specific consumption.
- f. For HT-2a, the sales based on Open access analysis is reasonable and therefore considered.
- g. For HT-4 and HT-5 categories, the estimates of FY20 are retained, as there are no additions to installations during FY21.

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

#### Approved Energy Sales

FY21		in Million Units
As Filed by HESCOM	Approved by the Commission	
5440.71	5434.80*	

\*Note: Excludes sales to HRECs.

#### (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	718179	199.94	23.20
Installations consuming more than 40 units and billed under LT2(a)	42349	43.91	86.40

The Commission notes that, the specific consumption works out to 23.20 units / installation / month for BJ/KJ installations consuming less than or equal to 40 units per month and 86.40 units /installation/month for BJ/KJ installations consuming more than 40 units per month.

Since, the HESCOM 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 at FY19 level, as proposed by HESCOM for FY21. Thus, the sales approved for FY21 is as indicated in the following Table:

Particulars	No. of Installations	Sales-MU
Installations consuming less than or equal to 40 units	718179	199.94
Installations consuming more than 40 units and billed under LT2(a)	42349	43.91

## II. Sales to IP sets – projections for ARR FY21;

### HESCOM Proposal:

HESCOM, in its tariff application, has projected IP sets consumption of 7,589.53 MU against 10,45,411 for FY21. HESCOM, as per D-2 Format, has reported actual consumption of 6,729.14 MU against 9,30,551 number of IP set installations for FY19. HESCOM, in its current tariff filing, has reported that the growth rate as per 5-year CAGR is 11.51%, which is huge. The number of IP installations added from April 2019 to September 2019 is said to be 28,490 and considering the similar addition during the remaining period of FY20, HESCOM has considered addition of 56,980 number of installations for FY20 and the same increase for FY21.

### 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 6,726.87 MU (as detailed in Chapter-4 Sales portion of this Order). Based on the actual sales to IP sets, the Commission has arrived at the specific consumption as 8,268 units per installation per annum for the FY19, by considering the mid-year installations of 8,13,599 numbers.

- b. From the data of previous four years till FY18 as furnished by HESCOM, the Commission has found an average addition of 31,918 number of IP installations every year. As per the submissions made by HESCOM, it is observed that, HESCOM has considered the addition of 56,980 number of installations for FY20 as well as for FY21. HESCOM has projected huge additions in the number of installations. The Commission has considered the increase in number of IP set installations every year, based on the actual increase in number of IP set installations, in the past four years, excluding FY19 and has projected the number of installations for FY21. Considering 30,000 as the additional during previous two years, the number of installations for FY20 is 9,60,551 (9,30,551 + 30,000) and for FY21 is 9,90,551 (9,60,551 + 30,000).
- c. The actual sales to IP sets for FY20, till November 2019, as reported by HESCOM, in its replies to preliminary observations for tariff filing is 3,901.62 MU against 9,51,981 number of installations. The actual specific consumption per IP set per month for FY19 on the basis of revised worked out sales works out to 689 units per IP set per month. By considering this approved specific consumption for FY19 and actual sales till November 2019, sales for the remaining four months i.e., December 2019 to March 2020 has been 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's decision to consider the data of actual sales to IP sets for FY20, till November 2019 is only provisional, for making the estimates for FY21 subject to review during the APR for FY21.
- d. 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;

**Approved IP set Sales for FY21**

Particulars	FY21		
	As approved by the Commission in T.O. 2019	As submitted by HESCOM in its Tariff Application	As approved by the Commission (Revised)
<b>No. of Installations</b>	8,05,775	10,45,411	9,90,551
<b>Mid-year number of Installations</b>	7,87,587	10,16,471	9,75,551
<b>Specific consumption in units per installation per annum</b>	8,752	7,467	6,882
<b>Sales in MU</b>	<b>6,892.58</b>	<b>7,589.53</b>	<b>6,714.03</b>

Accordingly, the Commission approves 6,714.03 MU as energy sales to IP-sets as against the projected sales of HESCOM for 7,589.53 MU, for FY21. The number of installations approved for FY21 is 9,90,551. 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 by restricting the hours of supply based on the subsidy allocation from the Government. The Commission will not consider any quantum of energy supplied (for computation of subsidy), over and above the numbers of hours for which the Government of Karnataka has extended free power to the IP sets. The Government may also issue necessary directions to the ESCOMs in this regard.

- e. The Commission notes that, the sales to all the other categories of consumers except BJ/KJ and IP Set categories is indicating a reducing trend, whereas the sales to IP set installations is showing an increasing trend. The Commission took note of the sales figure of HESCOM and the methodology followed in arriving the figure therein. Even after segregation of the IP feeders with huge investment, the Commission has 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 has further observed that the month-wise IP set

sales figures submitted earlier during FY19 differs from the figures submitted by the HESCOM in the present application. The Commission, by considering all these aspects, decides that, if any discrepancy is found in the sales figures submitted by the ESCOMs, it will reserve the right to conduct third party verification through random or detailed check of meter readings and the computation of IP Set sales figures.

- f. The Commission notes that in view of the increase in the IP set sales, the sales and the subsidy amount to IP Set installations payable by the Government is increasing year on year and the amount of subsidy receivable from the GoK towards the outstanding subsidy is also increasing, which is affecting the finances of ESCOMs. **Thus, the Commission directs the HESCOM to restrict its sales to IP Set installations to the level of sales approved by the Commission. 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, HESCOM 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.**
- g. **The Government of Karnataka is requested to issue necessary directions to the ESCOMs in this regard, so to ensure that the IP set consumption is regulated as per the subsidy made available to the ESCOMs.**
- h. The Commission notes that HESCOM has taken up GPS survey of IP-sets to identify the defunct / 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. HESCOM has not submitted the data of GPS survey with clarity giving details of working and defunct / not in use / dried up installations. From the data of GPS survey furnished by HESCOM, it is observed that there is a difference in number of installations as compared to the number of IP installations in the DCB and accounts. Thus, the Commission

observed inconsistency in the GPS survey data furnished by HESCOM and hence the Commission is unable to accept the same.

- i. As the quality of data relating to GPS survey of IP-sets, as furnished by HESCOM 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, HESCOM 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 tried up during the Annual Performance Review for the FY20/21.
- j. While assessing the sales to IP sets for FY19, the Commission had observed abnormal average consumption per IP set installation per month, in few of the segregated agricultural feeders. Hence, the feeder-wise, month wise-data of assessment of IP sets for the period from April 2019 to November 2019, 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, HESCOM 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.**

By considering all these aspects, 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.

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

TABLE – 5.3

## Category wise Approved number of installations for FY21

No. of installations

Tariff Category	Description	HESCOM Filing	Approved by the Commission
LT-1 (a)	Bhagya Jyoti < =40 units	718179	718179
LT-1 (a)	Bhagya Jyoti >40	42349	42349
LT-2a	Domestic	2940685	2993077
LT-2b	Pvt. Institutions	8150	8150
LT-3	Commercial - Applicable to areas coming under VPs	411929	412443
LT-4 (a)	IP sets - Less than 10 HP	1045411	9,90,551
LT-4 (b)	Irrigation Pump sets - More than 10 HP	857	849
LT-4 (c)	Private Horticulture Nurseries, Coffee & Tea Plantations	514	493
LT-5	Lt Industries	130632	128775
LT-6	Water Supply	55725	55994
LT-6	Street Lights	26234	26618
LT-7	Temporary Power Supply	131755	138598
	LT Total	5512420	5516076
HT-1	HT Water Supply	464	452
HT-2 (a)	HT Industries	2143	2150
HT-2 (b)	HT Commercial	732	732
HT-2(c)	Hospitals run by Govt., charitable Insttns. Etc.	402	402
HT-3(a) & (b)	HT Irrigation & LI Societies	341	341
HT-4	Res. Apartments	30	33
HT-5	Temporary	66	66
	HT Total	4178	4176
<b>**Grand Total</b>		<b>5516598</b>	<b>5520252</b>
*Categories other than IP sets and BJ/KJ consuming less than or equal to 40 units/month. /installations.		<b>3753008</b>	<b>3811522</b>
IP sets and BJ/KJ consuming less than or equal to 40 units/month. /installations.		<b>1763590</b>	<b>1708730</b>

\* Includes BJ/KJ consuming more than 40 units/installation/month

\*\* Excludes HRECS

The category wise approved energy sales for the FY21 vis-à-vis the estimates made by HESCOM are indicated below:

**TABLE – 5.4**  
**Category wise Approved Energy sales**

Tariff Category	Category	Million Units	
		HESCOM Filing	Approved by the Commission
		FY21	FY21
LT-1 (a)	Bhagya Jyoti <=40 units	199.94	199.94
LT-1 (a)	Bhagya Jyoti>40	43.91	43.91
LT-2a	Domestic	1556.28	1556.28
LT-2b	Pvt. Institutions	22.98	23.06
LT-3	Commercial - Applicable to areas coming under VPs	520.78	520.78
LT-4 (a)	IP sets - Less than 10 HP	7589.53	6714.03
LT-4 (b)	Irrigation Pump sets - More than 10 HP	16.63	16.40
LT-4 (c)	Private Horticulture Nurseries, Coffee & Tea Plantations	0.86	0.90
LT-5	Lt Industries	335.11	337.09
LT-6	Water Supply	385.95	385.95
LT-6	Street Lights	158.89	158.89
LT-7	Temporary Power Supply	39.39	39.40
	LT Total	10870.25	9996.63
HT-1	HT Water Supply	318.62	315.10
HT-2 (a)	HT Industries	1298.35	1307.45
HT-2 (b)	HT Commercial	138.29	138.29
HT-2(c)	Hospitals run by Govt., charitable Insttns. Etc.	110.63	100.18
HT-3(a) & (b)	HT Irrigation & LI Societies	443.76	443.76
HT-4	Res. Apartments	15.04	14.90
HT-5	Temporary	35.24	32.46
	HT Total	2359.93	2352.14
	<b>**Grand Total</b>	<b>13230.18</b>	<b>12348.77</b>
	*Categories other than IP sets and BJ/KJ consuming less than or equal to 40 nits/month./instn.	5440.71	5434.80
	IP sets and BJ/KJ consuming less than or equal to 40 units/month./instns.	7789.47	6913.97

\* Includes BJ/KJ consuming more than 40 units/installation/month

\*\* Excludes HRECS



### 5.2.3 Distribution Losses for FY21:

#### HESCOM's Submission:

HESCOM in its filing has proposed to achieve distribution loss of 14.20% as approved by the Commission in its Tariff Order dated 30.05.2019 for FY21 considering a total energy sale of 13230.18 MUs and a total energy purchase at the Interface point (excluding HRECS) of 15419.78 MU.

#### Commission's Analysis and Decisions:

The performance of HESCOM in achieving the loss targets set by the Commission in the past six years is as follows:

**TABLE – 5.5**  
**Approved & Actual Distribution Loss-FY13 to FY19**

Particulars	Figure in Percentage						
	FY13	FY14	FY15	FY16	FY17	FY18	FY19
Approved Distribution loss	18.00	19.00	19.00	17.50	16.00	15.50	14.90
Actual distribution loss	19.88	18.05	16.74	16.89	16.02	14.76	14.64*

\*As revised by the Commission consequent to revision of IP-set sales, as discussed in APR chapter

The Commission notes that, during the preceding years i.e., from FY13 to FY19, HESCOM has been able to achieve distribution loss reduction of 5.24 percentage point.

The Commission notes that HESCOM has retained the Commission's approved distribution losses at 14.20% for FY21, a meagre reduction of 0.42% over the actual distribution loss of 14.62% of FY19 for 2 years. HESCOM has proposed a huge capex with the main objective to improve quality power supply to its consumers and to reduce the distribution losses. Hence, the distribution losses proposed by the HESCOM for FY21 is not justifiable. The Commission had directed HESCOM to have a relook on the issue and to re-assess and submit the revised projected distribution losses for FY21.

HESCOM has submitted that, in order to bring down the distribution loss to the lowest level, HESCOM is carrying out system improvement works in most efficient way. HESCOM added that many IP sets without proper infrastructure have been added during FY19 and HESCOM will have to create infrastructure for the IP sets to maintain the losses at the approved level, which is a time-

consuming process. Also, infrastructure works needs to be carried out for other category of consumers as well. Hence, HESCOM has requested the Commission to retain the distribution loss target at 14.20% for FY21.

It is worthwhile here to note that the Commission has been allowing capital expenditure incurred by the HESCOM subject to prudence check and it has also allowed reasonable capex for FY21. The bulk of the capex like Gangakalyan Works, E&I work, NJY, IPDS, Refurbishing works on HT/LT/DTC in O&M division, RAPDRP etc., should enable HESCOM not only to strengthen its infrastructure but should also enable reduction of distribution losses.

Considering the losses achieved by HESCOM during the previous years and the present loss levels and the capital investments made in the past, besides the likely investments in FY21, the Commission decides to fix the following distribution loss targets for FY21:

**TABLE – 5.6**  
**Approved Distribution Losses for FY21**

Particulars	Figures in % Losses	
	FY21	
Upper limit	14.50	
<b>Average</b>	<b>14.00</b>	
Lower limit	13.50	

#### 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 – 5.7**  
**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
<b>Total</b>	<b>75365.83</b>

**HESCOM's submission:**

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

**TABLE – 5.8  
Energy Requirement as filed by HESCOM**

Particulars	FY21
Sales (MU)	13230.18
Distribution losses (%)	14.20
Energy at IF point (MU)	15419.78
Transmission Losses (%)	3.132
<b>Energy Required to meet the sales of HESCOM (MU)</b>	<b>16312.64</b>

**5.2.5 Sources of Power:****HESCOM's submission;**

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

HESCOM has submitted the basis for considering the availability of power from different sources, 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, Renewable Energy(RE) and other sources such as UPCL 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, the fixed charges and

variable charges are indicated in the tariff application of HESCOM. The same are shown in the following Tables.

**TABLE - 5.9****Power purchase requirement of HESCOM for FY21**

SOURCES	FINANCIAL YEAR 20-21		
	Energy in MU	Cost in Rs Crs.	Avg. cost Per unit Rs./unit
KPCL Hydel Energy	4439.06	385.26	0.87
KPCL Thermal Energy	2178.77	1485.22	6.82
CGS Energy	3561.74	1737.20	4.88
UPCL	187.56	130.61	6.96
Renewable Energy/Bundled power	5264.63	2232.08	4.24
Other State Hydel	32.66	10.98	3.36
Medium Term	257.92	134.40	5.21
PGCIL & POSOCO Charges		364.17	-
KPTCL Transmission & SLDC		704.33	-
Allocation to other ESCOMs	390.30	221.11	5.67
<b>TOTAL</b>	<b>16312.64</b>	<b>7405.36</b>	<b>4.54</b>

**Commission's analysis and decisions**

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

- a) Karnataka Power Corporation Limited (KPCL) Generating stations;
- b) Central Generating Stations (CGS);
- c) Major Independent Power producers (IPPs) and
- d) 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 KPCL in respect of KPCL Generating Stations and availability as furnished by the SRPC in respect of Central Generating Stations. The availability of CGS stations is based on the share of Karnataka, as notified from time to time.

The Commission has considered the availability of energy from the Renewable Energy sources and Medium Term Power Purchases based on the actual generation capacity contracted through PPAs by the ESCOMs, as indicated in

D-1 Format. 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 – 5.10**

**ABSTRACT OF POWER PURCHASE REQUIREMENT OF THE STATE**

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	
<b>TOTAL</b>	<b>73104.34</b>	<b>37227.47</b>	<b>5.092</b>

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

### HESCOM's Submission

HESCOM has submitted the Power Purchase requirement along with the cost including the transmission charges and SLDC charges, in D-1 Format. HESCOM has sought approval of the Commission for purchase of power to an extent of 16312.64 MU at a cost of Rs.7405.36 Crores, which includes transmission and SLDC charges, for the year FY 21

As regards the cost of power, the HESCOM 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 HESCOM, 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 distribution losses, the requirement of Power for the HESCOM, for the year FY21, is worked out as detailed below:

#### Power Purchase requirement approved for the HESCOM for the year FY 21

Particulars	FY21
Sales (MU)	12348.77
Distribution losses (%)	14.00%
Energy at IF point (MU)	14359.03
Transmission Losses (%)	3.039%
<b>Energy at generation bus required to meet the sales target of HESCOM (MU) (Including sales to Hukeri of 327.265 MU and sales to AEQUS SEZ of 30.118 MU at IF points).</b>	<b>15166.467</b>

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 HESCOM 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 Dispatch. **It is expected that any surplus energy available from 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
<b>Total</b>	<b>4292.869</b>	<b>25.430</b>

8. In reply to the Commission's observation that the ESCOMs are paying the PGCIL transmission charges at exorbitant rates, HESCOM has stated that due to addition of capacity and addition of transmission lines, PGCIL charges have been increased. In this regard the Commission notes that the draft CERC (Sharing of Inter State Transmission Charges and Losses) Regulations 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 HESCOM shall intimate the Commission the 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 given by the Government of Karnataka, the Power Purchase quantum and its costs are approved in the ARR of HESCOM for the year FY21, as shown in Annexure- 1 & 2.
10. The consolidated power purchase cost for the year FY21, as approved by the Commission, is shown in the following Table:

**TABLE - 5.11****ABSTRACT OF POWER PURCHASE APPROVED FOR HESCOM FOR THE YEAR FY21**

SOURCES	FINANCIAL YEAR 20-21		
	Energy in MU	Cost in Rs. Crores	Cost Per unit in Rs.
KPCL Hydel Energy	2629.28	255.50	0.97
KPCL Thermal Energy	2966.36	1793.50	6.05
CGS Energy	3581.10	1732.03	4.84



SOURCES	FINANCIAL YEAR 20-21		
	Energy in MU	Cost in Rs. Crores	Cost Per unit in Rs.
UPCL	432.00	293.76	6.80
Renewable Energy:	4560.79	1752.87	3.84
Other State Hydel	35.92	12.07	3.36
Total Bundled Power	703.09	277.48	3.94
Medium Term (Co Gen)	257.92	134.38	5.21
PGCIL & POSOCO Charges		219.95	
KPTCL Transmission & SLDC		811.932	
<b>TOTAL</b>	<b>15166.47</b>	<b>7283.46</b>	<b>4.802</b>

**Thus, the Commission hereby approves power purchase quantum of 15166.47 MU at a cost of Rs.7283.46 Crores, for FY21. The breakup of source-wise Power and the cost thereon, is shown in Annexure- 1 and 2 of this Order.**

The HESCOM 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:**

The Commission directed HESCOM to furnish the estimates for complying with the solar and non-solar RPO for FY21.

HESCOM in its reply to preliminary observation, has submitted that it will be able to achieve non-solar RPO target of 27.22% and solar target of 16.22%, as against target of 11% and 8.50% as specified by the Commission vide its (Procurement of Energy from Renewable Sources) (Sixth Amendment) Regulations, 2015, respectively, for FY21.

The Commission notes the reply furnished by HESCOM. Further, the Commission directs HESCOM to 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:

#### HESCOM's Proposal:

HESCOM in its application has claimed an amount of Rs.1180.82 Crores towards O&M expense for FY21. HESCOM, in its application, has submitted that it has considered following assumptions for computing the O&M expenses for FY21:

- a) Actual O&M expenses for FY19 inclusive of contribution to pension and gratuity trust of Rs.969.88 Crores;
- b) CGI of 4.52% for FY21 based on Three Year CAGR;
- c) Weighted inflation index at 8.2760% based on Tariff Order dated 30.05.2019.
- d) Efficiency factor at 2%;

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

**TABLE – 5.12**  
**O&M Expenses for FY21-HESCOM's Proposal**

Particulars	Amount in Rs. Crores		
	FY19	FY20	FY21
No of installations as per audited accounts	5029700	5266172	5516598
Weighted Inflation Index as per Tariff Order dtd.30.05.2019 (in %)		8.276%	8.276%
CGI based on 3-year CAGR as per Tariff Order 30.05.2019 (in %)-		4.51%	4.52%
O &M expenses for FY-19 as per Audited Accounts Rs. Crs	969.88		
Less: Pay Revision Arrears	37.13		
Actual O &M expenses for FY-19 Rs. Crs.	932.75		
O & M Expenses: O & M (t-1) * (1+Wii+CGI-X) in Crs.		1033.37	1144.82

Based on the above projected total normative O & M Expenses, HESCOM has claimed the segregated O & M Expenses as shown in the following Table:

**TABLE – 5.13**  
**O & M Expenses- HESCOM's Submission for FY21**

Particulars	Amount in Rs. Crores
	FY21
R&M cost	76.55
Employee cost	913.95
A&G expenses	154.32
<b>O&amp;M cost</b>	<b>1144.82</b>
P&G Contribution difference (Provisional) payable for FY-21 (revised from 42.53% to 57.30%) as per P&G Trust Order No: KEPGT/KCO123/P72019-20/CYS-13 dated 30.10.2019	36.00
<b>Total O&amp;M cost</b>	<b>1180.82</b>

**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 incur these expenses within the approved limits. Therefore, HESCOM was directed to re-examine and reconsider the projections for FY21. However, HESCOM has requested the Commission to retain the O & M expenses at the level proposed in its tariff petition.

The Commission has noted the actual O&M expenses of Rs.969.89 Crores as per the audited accounts of HESCOM for FY19. This amount 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. As per the filing and as per the replies to the preliminary observations, the O&M expenses claimed by HESCOM also includes Rs. 37.13 Crores towards the arrears of pay revision of physically challenged Revenue Assistants /Junior Assistant, payable from 29.12.2010 to FY19, whose services were regularized w.e.f 29.12.2010, as per KPTCL order No. KPTCL/B16/4682 (III) /2006-07 dated 14.01.2019, which has been deducted to arrive at the actual O & M expenses for FY19 as the base year O & M expenses.

The pay of these employees for FY20 will be considered while carrying out the APR of FY20, since Rs.37.13 Crores of arrears pertaining from 29.12.2010 to FY19

is a provision created in the books of accounts of FY19. Hence, the Commission decides to consider the actual O&M expenses of Rs.932.76 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 for the base year in FY20.

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) based on 3-year CAGR and inflation rate index based on the methodology followed by the CERC.

The Commission has computed the O & M expenses, duly considering the actual O & M expenses of FY19 as per the audited accounts (being the latest data available as per the audited accounts) for Rs.932.76 Crores which is inclusive of contribution to P&G Trust as the base year O&M expenses to arrive at the O & M expenses for FY20 and FY21. Considering the Wholesale Price Index (WPI) as per the data available from the Ministry of Commerce & Industry, Government of India and Consumer Price Index (CPI) as per the data available from the Labour Bureau, Government of India and adopting the methodology followed by CERC with CPI and WPI in a ratio of 80:20 in line with the methodology followed by the Commission in its Tariff Order issued earlier, the allowable annual escalation inflation rate for FY21 is computed as follows:

**TABLE – 5.14**  
**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

Year	WPI	CPI	Composite Series	Yt/Y1=Rt	Ln Rt	Year (t-1)	Product [(t-1)* (LnRt)]
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:

- The actual O & M expenses incurred as per the audited accounts for FY19 inclusive of pay revision arrears and contribution to the Pension and Gratuity Trust to arrive at the O & M expenses for the base year FY20.
- 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 of 6.224% for FY21.
- The weighted inflation index (WII) at 8.2604% as computed above.
- Efficiency factor at 2% is considered.

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

The Commission note that the inflation index of 8.276% considered by HESCOM in computation of O&M expenses is application for FY18. The Commission has considered the inflation index of 8.2604% as per the methodology adopted by CERC vide its Notification dated 02.04.2019 with weightage of 80% on CPI and 20% on WPI. As per the decisions of the Commission in the earlier Tariff Orders, the distribution licensees are required to justify any increase in pay scale with commensurate increase in real employee productivity.

Hence, the Commission 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 FY21 are as follows:

**TABLE – 5.15**  
**Approved O & M expenses for FY21**

Particulars	Amount in Rs. Crores	
	FY21	
No. of Installations	5520252	
CGI based on 3 Year CAGR in %	6.224%	
Inflation index in %	8.2604%	
Base year O&M expenses ( as per actuals of FY19)	932.76	
Allowable O&M expenses = O&M Index= O&M (t-1) *(1+WII+CGI-X)	1180.93	
<b>Allowable O&amp;M Cost</b>	<b>1180.93</b>	

Since, the base year O&M expenses also includes the contribution to the P & G Trust and pay revision amount, the Commission has not considered allowing contribution to the P & G Trust and pay revision arrears separately for FY21.

**Thus, the Commission decides to approve the O&M expenses of Rs.1180.93 Crores for FY21.**

### 5.2.9 Depreciation:

#### HESCOM's Proposal:

The HESCOM in its filing has claimed amount of Rs.280.11 Crores towards depreciation for FY21 based on the following assumptions:

- 1) Depreciation has been computed as per the CERC Regulations with effect from 1<sup>st</sup> April, 2009.
- 2) Projected growth in the fixed assets is worked out on the basis of creation of assets out of the capex proposed for FY20 and FY21.
- 3) 70% of the proposed capex is considered as the assets created for FY21.
- 4) Average of 5.28% of value of assets created out of grants is deducted in total depreciation in FY21.

Depreciation claimed by HESCOM for FY21 is as detailed below:

**TABLE – 5.16**

**Depreciation-FY21- HESCOM's Submission**

Amount in Rs. Crores	
Particulars	FY21
Land and rights	
Buildings	5.25
Hydraulics Works	0.30
Other Civil Works	0.21
Plant & Machinery	71.67
Lines Cable Networks	301.82
Vehicles	0.98
Furniture & Fixtures	0.55
Office Equipment	0.38
Intangible assets	2.14
<b>Total</b>	<b>383.29</b>
<b>Less:</b> Depreciation on assets created out of consumer contribution / grants	103.18
<b>Net Depreciation</b>	<b>280.11</b>

HESCOM has submitted that the amount of Capital Grants received from Government's towards cost of capital assets, has been reduced from the Gross Block. The capital asset created out of Consumer Contribution and Government grants towards cost of capital assets cannot be identified to relevant fixed assets, the same is treated as related to the Lines, Cables and Networks Assets group and deducted directly from the total Gross Fixed Assets. Further, the depreciation on these assets provided at respective Accounting Units has been reduced from depreciation for the FY-21 @5.28% and the net depreciation is Rs.280.11 Crores for FY21.

**Commission's analysis and decision:**

The Commission notes that, HESCOM in its filing as shown in table 5.18 above, has claimed the gross depreciation on the fixed assets for Rs.383.29 Crores for FY21. The HESCOM has claimed the net depreciation of Rs.280.11 Crores for FY21, after deducting Rs.103.18 Crores towards depreciation on assets created out of consumers' contribution/grant. The Commission also notes the amount of depreciation claimed on each category of assets as per D-6 Format for having claimed an amount of Rs.280.11 Crores as net depreciation for FY21.

The Commission, as made out in the pre-para of this chapter, has considered the amount of capex and the categorization of assets thereon in computation of the net depreciation for FY21.

In accordance with the provisions of the MYT Regulations and amendments thereon, the Commission 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) This actual rate of depreciation of FY19 is considered on the of average of opening and closing balance of gross block of fixed assets projections made on the approved capex and the categorization of assets thereon by the Commission for computing depreciation for FY20 and FY21.
- c) The depreciation on account of assets created out of consumers' contribution / grants are considered (deducted) based on the opening and closing balance of such assets duly considering the addition of assets as considered and projected by the Commission for FY 21, at 5.28% for FY21.

Accordingly, the computation of depreciation for FY21, is shown as follows:

**TABLE – 5.17**  
**Approved Depreciation for FY21**

Particulars	Amount in Rs. Crores	
	Depreciation	
Buildings	5.01	
Civil Works	0.35	
Other Civil Works	0.22	
Plant & Machinery	77.76	
Line, Cable Network	285.12	
Vehicles	0.42	
Furniture	0.44	
Office Equipment	0.25	
Land/Lease hold	0.05	
<b>Total Depreciation</b>	<b>369.63</b>	
<b>Less:</b> Depreciation as the assets created on Consumer contribution/grants	-109.58	
<b>Allowable Net Depreciation</b>	<b>260.05</b>	



Thus, the Commission decides to approve an amount of Rs.260.05 Crores after considering the depreciation on assets created out of consumer contribution / grants towards the net depreciation for FY21.

#### 5.2.10 Interest on Capital Loans:

##### HESCOM's proposal:

HESCOM, in its filing, has proposed to raise a capital loan of Rs.640.73 Crores and has claimed Rs.415.21 Crores towards interest on capital cost for FY21. HESCOM in its application has submitted that it has worked out and claimed the interest on individual source-wise loan basis for FY21.

HESCOM has requested the Commission to approve interest on capital loans for FY21 as follows:

**TABLE – 5.18**  
**Interest on Capital Loans for FY21– HESCOM's Proposal**

Amount in Rs. Crores	
Particulars	FY21
Opening balance	3256.82
Add: New loans	640.73
Less: Repayment	335.53
Closing balance loans	3562.01
Average loans	3409.42
<b>Interest on capital Loans</b>	<b>415.21</b>

##### Commission's analysis and decision:

The Commission has noted the capital loan portfolio of HESCOM for FY19 and as at 30<sup>th</sup> September 2019, besides the capex and capital loans proposed for FY21, as discussed in the preceding paragraphs of this Chapter.

As per the audited accounts and as per the APR of FY19, the HESCOM had incurred interest on capital loan at a weighted average rate of interest of 11.53% per annum, with majority of capital loans availed from REC and PFC at a higher rate of interest. The Commission by considering the financial position of HESCOM and the existing loans along with the interest rate thereon, decides to consider the weighted average rate of interest of FY19 at 11.53% for the

existing loan balances for which interest has to be factored during FY20. Further, for FY21, the weighted average rate of interest of the preceding years, on the existing loan balances, has been considered. The Commission has considered the requirement of the new capital loan by considering the amount of capital grants available for the works proposed under various schemes from GOI / GoK, the internal resources and consumers' contributions, as estimated by the HESCOM, in the proposed capex, for FY21.

The Commission takes note of the various capital works proposed under capex and the source of fund for FY21. The Commission further notes that various works proposed by HESCOM are covered under grants from GoI / GoK under various schemes and also notes the availability of internal resources and the works to be executed through consumers' contribution during FY21.

The Commission notes that the HESCOMs has proposed capex amount of Rs.1205.51 Crores for FY21. As against this, after deducting cost of the works covered under capital grants from GOI / GoK, and the availability of internal resources and the consumer's contributions towards capital works, the expenditure likely to be met by the HESCOM by raising new capital loan is proposed at Rs.640.73 Crores for FY21.

The Commission by considering the achievement of the Capital works by HESCOM in the earlier years and also in FY19 and FY20, notes that in all the previous years, HESCOM has not achieved much progress against its own targeted capex. Thus, the Commission after considering all the above aspects and to avoid front loading of the interest on loan component in the retail supply tariff, has decides to reckon Rs.1085 Crores as capex and considered new loans of Rs.600 Crores for FY21. The Commission has considered new loans, in accordance with the debt equity ratio of 70:30 as in MYT Regulations.

The Commission notes that the interest rate of interest on capital loan claimed by HESCOM at 12.178% is on the higher side. HESCOM needs to initiate financial prudence measures, so as to avail loans at comparatively lower interest rates

and 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 are on the basis marginal cost of fund-based Lending Rates (MCLR). These rates are comparatively lower than the bank rates considered earlier. Further in the current favorable economic conditions for investment, it is observed that there is a downward trend in the MCLR and interest rates. Hence, in such a situation, the Commission is of the view that, the HESCOMs can avail capital loan at competitive rates, which would be lesser than the interest rate proposed by the HESCOM.

The Commission notes that, the present SBI MCLR rate for capital loan with tenure of 3 years is 8.15% per annum. The Commission by reckoning the capital loans availed by HESCOM from REC and PFC and the interest rates charged by these financial institutions and also by considering the present MCLR based interest rates, decides to consider admissible basis points on the current MCLR and allow the interest rate of 11% per annum for FY21, on the new capital loan borrowings. It shall be noted that, the rate of interest now considered by the Commission on the new capital loans for FY21, is subject to review during APR and revision of ARR of FY21.

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

**TABLE – 5.19**  
**Approved Interest on Capital Loans for FY21**

Particulars	Amount in Rs. Crores	
	FY21	
Secured Loans & Unsecured loans	2551.27	
Add: New Loans Borrowed	600.00	
Less: Repayments of loan	-206.03	
Total loan at the end of the year	2945.24	
Average Loan	2748.26	
Interest to be paid on long term loans as per schedule 26	313.59	
Weighted average interest rate considered on existing loan balance	11.46%	
Interest rate per annum Allowed on new loans in %	11.00%	
<b>Allowable Interest on Capital Loan</b>	<b>313.59</b>	

Thus, the Commission decides to approve interest on capital loans of Rs.313.59 Crores for FY21.

#### 5.2.11 Interest on Working Capital:

##### HESCOM's proposal:

HESCOM, in its filing, has claimed interest on working capital based on the norms prescribed in the MYT Regulations as follows:

**TABLE – 5.20**

**Interest on Working Capital for FY21  
HESCOM's Submission**

Amount in Rs. Crores	
Particulars	FY21
One -twelfth of the amount of O & M Expenses	99.12
Opening GFA	7286.92
Stores, materials and supplies - 1% of opening balance of GFA	72.87
One-Sixth of the Revenue	1525.50
Total Working Capital	1697.49
Rate of Interest per annum	11.00%
<b>Interest on Working Capital</b>	<b>186.72</b>

##### 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 months' O & M expenses, 1% of Opening Balance of GFA and two months' revenue.

The Commission notes that HESCOM has claimed the working capital interest at 11 % per annum on the basis of Bank Prime Lending Rates which is at present not applicable for the new loans.

The present interest rates by commercial banks and financial institutions are charged mainly on the basis of MCLR rates declared from time to time. Hence, the Commission would consider MCLR, depending upon the tenure of the loan. The Commission notes that, HESCOM needs to initiate financial prudence

measures in availing working capital, so that the interest burden on its consumers is reduced.

As per the replies to the observation of the Commission and as per the audited accounts for FY19, HESCOM has availed the working capital interest at the rate of 8.55% to 11.75% per annum from PFC, REC and Commercial banks. As discussed earlier, the present SBI MCLR for loan with tenure of one year is 7.60% to 7.85% per annum. Therefore, the Commission by taking the downward trend in the internal rates as per the provisions of the MYT Regulations, and by reckoning the present MCLR with a reasonable spread on basis points, decides to consider interest on working capital at 11.00% per annum for FY21.

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

**TABLE – 5.21**  
**Approved Interest on Working Capital loans for FY21**

Amount in Rs. Crores	
Particulars	FY 21
One-twelfth of the amount of O&M Exp.	98.41
Opening GFA	7145.09
Stores, materials and supplies - 1% of Opening balance of GFA	71.45
One-sixth of the Revenue	1481.49
Total Working Capital	1651.35
Rate of Interest (% p.a.)	11.00%
<b>Interest on Working Capital</b>	<b>181.65</b>

**Thus, the Commission decides to approves interest on working capital loans of Rs.181.65 Crores for FY21.**

#### **5.2.12 Interest on Consumer Security Deposit:**

##### **HESCOM's proposal:**

HESCOM in its filing has claimed an amount of Rs.52.74 Crores towards interest on Consumer Security Deposits for FY21.

HESCOM has submitted that it has considered an additional consumer security deposit of Rs.50 Crores every year on the closing balance of consumer security deposit for FY19 while projecting consumer security deposits for FY20 and FY21 and has computed the interest on consumer security deposit, at the Bank rate of 6.50% per annum for FY21. The abstract of interest on consumer security deposit for FY21 is as follows:

**TABLE – 5.22**  
**Interest on Consumer Security Deposits for FY21**  
**HESCOM's Submission**

Amount in Rs. Crores	
Particulars	FY21
Opening balance of consumer security deposits	799.97
Closing balance of consumer security deposits	849.97
Average balance of consumer security deposit	824.97
Rate of Interest % per annum	6.50%
Interest payable to Consumers	53.62

HESCOM in format A1 has claimed an amount of Rs.52.74 Crores towards interest on Consumer Security Deposits to project the revised ARR for FY21.

**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 1<sup>st</sup> of April of the financial year for which the interest is due. As per Reserve Bank of India Notification dated 4<sup>th</sup> October, 2019, the bank rate is 5.40% per annum. 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.50 Crores each for FY20 and FY21 as the additional security deposit likely to be collected for projected the interest on consumer security deposit. Thus, the allowable interest on consumer deposits for FY21 are as follows:

**TABLE – 5.23**  
**Approved Interest on Consumer Security Deposits for FY21**  
Amount in Rs. Crores

Particulars	FY21
Opening balance of consumer security deposits	847.60
Closing Balance of Consumer Security deposit	897.60
Average balance of consumer security deposit.	872.60
Allowable interest rate per annum	5.40%
<b>Allowable Interest on Consumer Security Deposit</b>	<b>47.12</b>

Thus, the Commission decides to approve interest on consumer security deposits at Rs.47.12 Crores for FY21.

#### 5.2.13 Other Interest and Finance Charges:

HESCOM in its filing has not claimed other interest & Finance Charges for FY21.

#### Commission's analysis and decision:

As HESCOM has not claimed any amount towards other interest & finance charges, the Commission has not considered any amount on this account for FY21. The abstract of approved interest and finance charges for FY21 are as follows:

**TABLE – 5.24**  
**Approved Interest and finance charges for FY21**  
Amount in Rs. Crores

Particulars	FY21
Interest on Loan Capital	313.59
Interest on Working Capital	181.65
Interest on Consumer Security Deposit	47.12
<b>Approved Interest &amp; Finance Charges</b>	<b>542.36</b>

#### 5.2.14 Other Debits:

HESCOM has not claimed any amount towards other debits for FY21. As per the provision of MYT Regulations, the Commission has not allowed any amount under other debits for FY21.

#### 5.2.15 Return on Equity:

##### HESCOM's proposal:

HESCOM has not claimed any amount towards Return on Equity, in view of the negative net-worth estimated for FY21.

**Commission's analysis and decision:**

The Commission notes the status of debt-equity ratio with reference to the projected gross fixed assets 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 received from the GoK during FY20 for arriving at the allowable equity base for FY21.

Further, in compliance of the Orders of the Hon'ble ATE in Appeal No.46/2014, wherein it was 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 indicated as follows:

**TABLE – 5.25  
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	7145.09	2551.27	-241.85	5001.56	2143.83	35.70%	-
	Closing Balance	8161.89	2945.24	-241.85	5713.32	2448.57	36.08	-

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

The Return on Equity FY21, that could be allowed, based on the above data, is worked out as follows:



**TABLE – 5.26**  
**Approved Return on Equity for FY21**

Amount in Rs. Crores	
Particulars	FY21
Opening balance of Paid Up Share Capital	1554.24
Opening balance of Share Deposit	0.00
Opening balance of Accumulated deficit	-1762.09
<b>Less: Recapitalized Security Deposit</b>	<b>-34.00</b>
Net Equity at the beginning of the year	-241.85
<b>Allowable Normative RoE grossed with MAT</b>	<b>0.00</b>

The net-worth of HESCOM is showing a negative balance of Rs.241.85, for FY21. Thus, the Commission decides not to allow any amount towards return on equity, for FY21.

#### 5.2.16 Other Income:

##### HESCOM's proposal:

HESCOM, in its filing under format A1, has claimed other income of Rs.326.33 Crores for FY21 as detailed below:

**TABLE – 5.27**  
**Other Income for FY21 – HESCOM's Proposal**

Amount in Rs. Crores	
Particulars	FY21
Other income from other items	142.59
Sale of Power to HRECS & AEQUS	183.74
<b>Total other income</b>	<b>326.33</b>

HESCOM while computing the other income for FY21, has considered other income of Rs.183.74 Crores on the sale of energy of 394.29 MU to HRECS including AEQUS by considering power purchase cost at Rs. 4.66 per unit.

##### Commission's analysis and decision:

The Commission notes that HESCOM while projecting the other income for FY21 has considered Rs. 326.33 Crores, which mainly includes income from miscellaneous recoveries, receipts from trading, interest on bank deposits, rent

from staff quarters / others and sale of scrap, profit on sale of stores, commission for collection of electricity duty, besides income from sale of power to Hukeri RECS. The actual 'other income' earned by HESCOM as per the audited accounts for FY19 was Rs.95.04 Crores.

Thus, considering the other income of Rs.95.04 Crores for FY19 plus 10% increase in each year of FY20 & FY21, and the income of Rs.173.41 Crores from sale of 346.52 MU power at IF points to Hukeri RECS including AEQUS SEZ (at generating bus 357.3838 MU\* Rs.5.00443 per unit=173.41 Crores), the total other income expected to be earned by HESCOM is Rs.285.66 Crores for FY21.

**Thus, Commission decides to approve other income of Rs.285.66 Crores for FY21.**

#### **5.2.17 Fund towards Consumer Relations / Consumer Education:**

HESCOM in its filing, under O&M expenses, has claimed an amount of Rs.0.50 Crores towards consumer relation/education for FY21.

The Commission has been allowing an amount of Rs.0.50 Crore per year towards consumer relations/education. This amount is earmarked to conduct consumer awareness and grievance redressal meetings periodically and to 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 to provide an amount of Rs.0.50 Crore for FY21 towards meeting the expenditure on consumer relations / consumer education.

**The Commission reiterates that HESCOM shall 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 – 5.28**  
**Approved ARR for FY21**

Amount in Rs. Crores		
Sl. No	Particulars	Approved ARR for FY21
1	Energy @ Gen Bus (With HRECS & AEQUS) in MU	15166.47
2	Transmission Losses in %	<b>3.039%</b>
3	Energy @ Interface in MU (Without HRECS & AEQUS)	14359.03
4	Distribution Losses in %	14.00%
5	<b>Sales in MU</b>	
	Sales to other than IP & BJ/KJ	5434.80
	Sales to BJ/KJ	199.94
	Sales to IP	6714.03
	<b>Total Sales</b>	<b>12348.77</b>
6	<b>Revenue at existing tariff in Rs. Crores.</b>	
	Revenue from tariff and Misc. Charges	4390.14
	Tariff Subsidy to BJ/KJ	141.36
	Tariff Subsidy to IP	4357.41
	<b>Total Existing Revenue</b>	<b>8888.91</b>
	<b>Expenditure in Rs. Crores.</b>	
7	Power Purchase Cost	6471.53
	Transmission charges of KPTCL	806.902
	SLDC Charges	5.03
	<b>Total Power Purchase Cost including cost of transmission &amp; SLDC Charges</b>	<b>7283.46</b>
8	O&M Expenses	1180.93
9	Depreciation	260.05
10	<b>Interest &amp; Finance charges</b>	
11	Interest on Capital Loans	313.59
12	Interest on Working capital loans	181.65
13	Interest on belated payment on PP Cost	0.00
14	Interest on consumer security deposits	47.12
15	Other Interest & Finance charges	0.00
16	Less interest & other expenses capitalised	0.00

Sl. No	Particulars	Approved ARR for FY21
	<b>Total Interest &amp; Finance charges</b>	<b>542.36</b>
17	Other Debits	0.00
18	Extraordinary item (Adjustment of excess subsidy amount as per KERC Order)	0.00
19	Return on Equity	0.00
20	Funds towards Consumer Relations/Consumer Education	0.50
21	Less: Other Income	-285.66
	<b>ARR</b>	<b>8981.64</b>
22	Add: Deficit for FY19 carried forward (APR)	-401.22
	<b>Net ARR</b>	<b>9382.86</b>

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

HESCOM 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:

The Commission notes that HESCOM did not propose any new ARR for Retail Supply Business. Hence, the Commission decides to continue with the existing ratio of segregation of ARR, as detailed below:

**TABLE – 5.29**

#### Approved Segregation of ARR – FY21

Particulars	Distribution Business	Retail Supply Business
O&M	63%	37%
Depreciation	84%	16%
Interest on Loans	100%	0%
Interest on Consumer Deposits	0%	100%
RoE	82%	18%
GFA	84%	16%
Non-Tariff Income	0%	100%

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

**TABLE – 5.30**  
**APPROVED REVISED ARR FOR DISTRIBUTION BUSINESS – FY21**

Amount in Rs. Crores		
Sl. No	Particulars	FY21
1	R&M Expenses	743.99
2	Employee Expenses	
3	A&G Expenses	
4	Depreciation	218.44
5	Interest & Finance Charges	
6	Interest on Capital Loans	313.59
7	Interest on Working capital loans	43.94
8	Interest on consumer security deposits	0.00
9	Other Interest & Finance charges	0.00
10	Less: interest & other expenses capitalised	0.00
	<b>Total</b>	<b>1319.96</b>
11	ROE	0.00
12	Less: Other Income	0.00
	<b>NET ARR</b>	<b>1319.96</b>

**TABLE – 5.31**  
**APPROVED ARR FOR RETAIL SUPPLY BUSINESS – FY21**

Amount in Rs. Crores		
Sl. No	Particulars	FY21
1	Power Purchase & SLDC Charges	6476.562
2	Transmission Charges	806.902
3	R&M Expenses	436.94
4	Employee Expenses	
5	A&G Expenses	
6	Depreciation	41.61
7	Interest on Capital Loans	0.00
8	Interest on Working capital loans	137.71
9	Interest on consumer security deposits	47.12
10	Other Interest & Finance charges	0.00
11	Less interest & other expenses capitalised	0.00
	<b>Total</b>	<b>7946.84</b>
12	ROE	0.00
13	Other Income	-285.66
14	Fund towards Consumer Relations / Consumer Education	0.50
	<b>NET ARR</b>	<b>7661.68</b>

### 5.5 Gap in Revenue for FY21:

As discussed above, the Commission decides to approve the Annual Revenue Requirement (ARR) of HESCOM, for its operations in FY21, at Rs. 9382.86 Crores as against HESCOM's proposal of Rs.9954.62 Crores. The approved ARR includes an amount of Rs.401.22 Crores which is determined as the deficit as per APR of FY19, as discussed in Chapter-4.

Based on the existing retail supply tariff, the total revenue from sale of power, for FY21 will be Rs.8888.91 Crores, which would fall short of the approved ARR by Rs.493.95 Crores, which needs to be recovered through revision of retail supply tariff.

The net ARR and the gap in revenue for FY21 are shown in the following table:

**TABLE – 5.32**  
**Revenue gap for FY21**

Particulars	Amount in Rs. Crores	
	FY21	
Net ARR including carry forward deficit of FY19 (Rs. Crores)	9382.86	
Approved sales (MU)	12348.77	
Average cost of supply for FY21 (Rs. / unit)	7.60	
Revenue at existing tariff (Rs. Crores)	8888.91	
<b>Gap in revenue for FY21 (Rs. Crores)</b>	<b>493.95</b>	

The determination of revised retail supply tariff on the basis of the above approved ARR is dealt with in 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 Gol/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 1<sup>st</sup> 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 1<sup>st</sup> November 2020 onwards.

Due to the postponement of the recovery of the revised tariff, out of the projected additional revenue of Rs.493.95 Crores from revision of tariff, the Commission decides to create the unrecovered portion of the revenue gap of seven months amounting to Rs.288.14 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.205.81 Crores in gap in

revenue for FY21 is proposed to be realized as additional revenue through the revision of tariff for the different category of consumers during FY21 from 01.11.2020.

The net ARR and the gap in revenue for FY21 is shown in the following table:

**TABLE – 5.33**  
**Revenue gap for FY21**

<b>Particulars</b>	<b>FY21</b>
Net ARR including carry forward deficit of FY19 (Rs. Crores)	9382.86
Approved sales (MU)	12348.77
Revenue at existing tariff (Rs. Crores)	8888.91
<b>Gap in revenue for FY21 (Rs. Crores)</b>	<b>493.95</b>
<b>Regulatory Asset to be recovered over next two years (in Rs.Crores) in FY22 &amp; FY23</b>	<b>288.14</b>
<b>Balance revenue gap to be collected over a period of five months during FY21 by revision of tariff (Rs.in Crores)</b>	<b>205.81</b>

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.