CHAPTER - 3

ANNUAL REVENUE REQUIREMENT FOR FY18

3.0 Annual Revenue Requirement for FY18:

Hukeri Rural Electric Co-operative Society (HRECS), in its application dated 30th November, 2016, has sought approval of revised ARR and retail supply tariff for FY18. The summary of the proposed revised ARR for FY18 is as follows:

TABLE – 3.1

Revised ARR for FY18-HRECS's Submission

Amount in Rs. lakhs

Particulars	FY18
Energy at IF Point in MU	347.16
Sales in MU	
Sales to other than IP & BJ/KJ	95.40
Sales to BJ/KJ	1.81
Sales to IP Sets	197.31
Total Sales in MU	**294.52**
Distribution Loss (MU)	52.64
Distribution Loss in %	15.16%
Revenue in Rs. Lakhs	
Revenue from Sale of Power	5,355.25
Subsidy from BJ/KJ	87.43
Subsidy from IP Sets	9135.44
Total Revenue	**14578.12**
Expenditure in Rs. Lakhs	
Power Purchase Cost	14863.72
O&M Expenses	1572.72
Depreciation	113.99
Interest on Capital Loan	48.05
Interest on Working Capital Loan	64.36
Interest on Consumers' Security Deposit	95.17
Return on Equity	142.73
Other Income	180.28
ARR	**16720.46**

HRECS has requested the Commission to approve the revised Annual Revenue Requirement of Rs.16720.46 Lakhs for FY18 as stated above. Along with the gap claimed in revenue of Rs.1692.88 lakhs for FY16, the net ARR claimed for FY18 is Rs.18413.34 lakhs. Considering the revenue realization of Rs.14578.12 lakhs at existing tariff, the over all gap in revenue for FY18 is projected at Rs.3835.22 lakhs which translates to Rs.1.30 per unit. However, HRECS has proposed to increase the retail supply tariff by Rs.2.05 per unit across all categories of consumers including IP set consumers in order to bridge the gap in revenue of Rs.2142.34 lakhs for FY18. However by considering the uniform increase in tariff of Rs.2.05 per unit sought by HRECS, the increase in revenue for the proposed sales will be Rs. 6040.06 lakhs for FY18. This is more than the additional revenue required to meet the proposed gap in revenue of Rs.3835.22 lakhs for FY18.

3.1 Revision of Annual Revenue Requirement for FY18:

As discussed in the preceding Chapter of this Order, the Commission has carried out the Annual Performance Review for FY16 based on the audited accounts furnished by HRECS. Pursuant to the same, a deficit of Rs.747.55 lakhs is to be carried forward into the revised ARR of FY18.

3.1.1. Capital expenditure of HRECS for FY18:

HRECS's submission:

The HRECS has proposed a revised capex of Rs.989.86 Lakhs as against the Commission approved capex of Rs.282.79 Lakhs for FY18. The HRECS has indicated some new schemes like:

a) 11kV Line feeder separation, strengthening and re-conductoring
b) Replacement of Single Phase Electromechanical Energy Meters by Electro Static Energy meters and three phase meters

Further, the HRECS has increased the capex from the approved level in the category of service connections to LT industries, Agricultural, Domestic and Commercial installations. The details of the capex program of HRECS is shown below:

Table –3.2

Capital expenditure of HRECS for FY18:

Amount in Rs. Lakhs

Sl No	Particulars	FY18	Revised Capex for FY18
1	**H.T Lines**		
	a) 11 kV Lines	54.7	54.7
2	**L.T Lines**		
	a) 3 Phase 5 wire	_	_
	b) 3 Phase 4 Wire	18.48	18.48
	c) 1 Phase 3 Wire	9.61	9.61
	d) 1 Phase 2 Wire	16.79	16.79

3	**Transformer Centres**		
	a) 500 kVA Transformer Centre	-	-
	b) 250 kVA Transformer Centre	-	-
	c) 200 kVA Transformer	-	-
	d) 150 kVA Transformer Centre	-	-
	e) 100 kVA Transformer Centre	22.55	22.55
	f) 63/50 kVA Transformer Centre	36.76	36.76
	g) 25 kVA Transformer Centre	20.17	20.17
	h) Others (10 & 15 kVA)	_	_
4	**Service connection**		
	a) Agriculture -HT	_	_
	b) Industrial -HT & others	_	_
	c) Agriculture -LT	17.19	19.41
	d) Industrial -LT	2.52	3
	e) Domestic	14.42	17.58
	f) Commercial	1.22	2.46
	g) Street Light Brackets	-	-
5	**Improvement Works**		
	11 kV Line	27.35	27.35
	100 kVA Transformer Centre	22.55	22.55
	LT Line 3 Ph.4 Wire	18.48	18.48
	DDUGJY Scheme		
6	**11kV Line feeder separation**	-	199.99
7	**11kV Line system strengthening**	-	75.48
8	11kV line re-conductoring	-	124.51
9	Replacement of Single Phase Electromechanical Energy Meters by Electro Static Energy meters	-	273.77
10	Replacement of Single Phase Electromechanical Energy Meters by Electro Static Energy meters	-	26.22
	Total	**282.79**	**989.86**

Commission's analysis and decision:

HRECS has proposed Rs.707.07 Lakhs in addition to the MYT approved capex of Rs.282.79 Lakhs, totaling to Rs.989.86 Lakhs. HRECS in its replies to the preliminary observations on this issue has stated that, it has proposed DDUGJY scheme which includes 11kV Line Feeder separation, 11kV line system strengthening and 11kV line re-conductoring at Rs.199.99 Lakhs, Rs.75.48 Lakhs and Rs.124.51 Lakhs respectively. HRECS has also stated that, DDUGJY scheme has been sanctioned by MoP through REC and the DPR has been submitted to REC. The benefits envisaged from the above schemes are stated to be as follows:

a) Power supply failures to agricultural loads can be easily attended after feeder separation.
b) Quality and reliability of power supply will be improved.
c) Accurate readings of the meter can be achieved by replacing the Electro-mechanical meters with Electronic meters.
d) Increased sales to metered categories, reduction in distribution loss and improvement in the tail end voltage.

In respect of Replacement of Single Phase and Three Phase Electromechanical Energy Meters by Electro Static Energy meters, HRECS has proposed a capex of Rs.273.77 Lakhs and Rs.26.22 lakhs respectively. HRECS in its replies to the preliminary observations made on this issue by the Commission has stated that, there are 70281 single phase Electromechanical meters and it is replacing 16650 meters by FY18 at a cost of Rs.273.73 Lakhs, whereas in 3 phase meters, out of 1679 meters, HRECS has proposed to replace 793 Meters with a cost of Rs.26.22 Lakhs.
HRECS has stated in its replies to the preliminary that, it has followed the "**Capital Expenditure Guidelines for ESCOMs"** issued by the Commission. Accordingly, it needs to project its capex commensurate with:

a) The network expansion required,
b) Reliability of power to be improved
c) The target loss reduction trajectory

HRECS should mandatorily follow the **"Capital Expenditure Guidelines for ESCOMs"** in which the capital investment planning process, prioritization and post commissioning analysis to be adopted by the ESCOMs are elaborated. The Commission has been directing the ESCOMs to conduct energy audit by listing out high loss making 11kV feeders and take up strengthening works to reduce losses. HRECS should also move in this direction and list the high loss making feeders based on the input energy to the feeders and sale of energy in that feeder.

In light of the above discussions and considering the justification of HRECS for increased capex at Rs.**989.86**Lakhs, the Commission decides to consider the capex of Rs.989.86 Lakhs, subject to prudence check. **HRECS should meet any additional capex required during FY18, only through re-appropriation of approved amounts within the overall capex.**

3.1.2. Sales Forecast:

1. HRECS in its filing has considered the data of FY17 in estimating CAGR for the number of installations as well as energy sales. Since the data FY17 is an estimated figure, the Commission had suggested that the CAGR should have been calculated considering the period for which actual data was available i.e up to FY16.

2. Regarding the growth rates for the no. of installations, the Commission had noted that the growth rate considered for LT-3 is slightly higher and for LT-5 and HT-1 is lower compared to the normal growth rates.

HRECS in its replies has requested to retain the estimates for LT3 category, though the estimates for LT3 are marginally higher. Similarly, for other categories the HERCS has requested to retain the estimates made by it.

The Commission has noted the replies furnished and the approach of the Commission for estimating the number of installations is discussed in the subsequent paragraphs.

3. Regarding the growth rates for the energy sales, the Commission had noted that the growth rates considered for LT-2a, LT-3, LT-5 and LT-6(WS & SL) and HT-1, are higher when compared to the normal growth rates. Further in the case of HT2b) & HT-3, in spite of number of installations remaining at the same level, the energy sale is decreasing. HRECS was asked to furnish the reasons for the same.

4. HRECS in its replies has stated that in respect of HT2b and HT3, the consumption pattern is decreasing in spite of the number of installations remaining the same.

The Commission notes that HRECS has not furnished replies on the Commission's observation regarding the growth rates considered for LT-2a, LT-3, LT-5 and LT-6(WS & SL) and HT-1. The Commission has noted the general reply furnished regarding sales to HT2b and HT3 categories.

The approach of the Commission for estimating the energy sales is discussed in the subsequent paragraphs.

5. To validate the sales, the Commission had requested category-wise information in the specified format regarding the number of installations as well as energy sales. HRECS has furnished the above data.

6. The Commission's approach for estimating the number of installations and sales for the FY18 for categories excluding BJ/KJ and IP sets is discussed below:

i) No. of Installations:

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

a. The base year number of installations for FY17 is modified duly validating the revised estimate furnished by HRECS in the current filing and considering the data as on November,2016.

b. Wherever the number of installations estimated by HRECS for the FY18 is within the range of the estimates based on the CAGR for the period FY11 – FY16 and for the period FY13 - FY16, the estimates of HRECS are retained.

c. Wherever the number of installations estimated by HRECS for the FY18 is lower than the estimates based on the CAGRs for the period FY11 – FY16 and for the period FY13 - FY16, the estimates based on the lower of the CAGRs are considered.

d. Wherever the number of installations estimated by HRECS for the FY18 is higher than the estimates based on the CAGRs for the period FY11 – FY16 and for the period FY13 - FY16, the estimates based on the higher of the CAGRs are considered.

e. For LT4 (b), LT4 (c), LT-7 and HT2c and HT3 categories, the estimates of HRECS are retained.

Based on the above approach, the total number of installations (excluding BJ/KJ and IP) estimated by the Commission for the for FY18 is 81834 as against HRECS estimate of 83309.

ii) Energy Sales:

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

a. The base year sales for FY17 as estimated by HRECS are validated duly considering the actual sales up to November, 2016 and modified suitably. Further, the CAGR for HT2a category is worked out deducting the sales to AEQUS SEZ during FY16.

b. Wherever the sales estimated by HRECS for the FY18 is within the range of the estimates based on the CAGR for the period FY11 – FY16 and for the period FY13 - FY16, the estimates of HRECS are retained.

c. Wherever the sales estimated by HRECS for the FY18 is lower than the estimates based on the CAGRs for the period FY11 – FY16 and for the period FY13 - FY16, the estimates based on the lower of the CAGRs are considered.

d. Wherever sales estimated by HRECS for the FY18 is higher than the estimates based on the CAGRs for the period FY11 – FY16 and for the period FY13 - FY16, the estimates based on the higher of the CAGRs are considered.

e. For LT4 (b) and (c), LT-7, HT-2(c) and HT-3, the sales estimates of HRECS is retained.

Based on the above approach, the sales (excluding BJ/KJ and IP) estimated by the Commission for the FY18 is 72.96 MU as against HRECS estimate of 74.61 MU.

7. Sales to BJ/KJ and IP sets:

i) Sales to BJ/KJ:

The electricity consumption to this category upto 18 units per installation per month hitherto was being subsidized by the Government of Karnataka and any installation under this category consuming more than 18 units per month was billed under relevant LT 2(a) category. However, the Government of Karnataka in its Budget for 2017-18 has announced that it would extend the subsidy to BJ/KJ installations consuming upto 40 units per installation per month. Therefore, the Commission has reckoned the above and has worked out the subsidy accordingly.

Considering the specific consumption and the number of installations, for FY16, for installations consuming up to 18 units and above 18 units as per the actual data furnished by HRECS, the total sales estimated for this category for FY18 works out to 2.58 MU. Considering the total number of BJ/KJ installations of 13460 for FY18 as proposed by HRECS, the specific consumption works out to 15.99 units per installation per month which is less than 40 units per installation per month announced by the Government for the purpose of subsidy. Thus, the entire consumption of 2.58 MU is considered for the purpose of estimating the subsidy for this category. However, the HRECS while claiming the subsidy shall consider only such installations which consume upto 40 units per installation per month and any installation under this category consuming more than 40 units shall be billed under the relevant LT 2(a) category.

ii) Sales to IP sets for FY 18:

In its Tariff Order dated 30th March, 2016, the commission had fixed a specific consumption of 7,341 units / installation/annum for the control period FY17 to FY19. But, Hukeri RECS has projected a consumption of 197.309 MU by considering a specific consumption of 7,748 units/installation/annum, for FY18. The specific consumption considered by the Hukeri RECS is on a higher side looking at the specific consumption of 7,341 units / installation /annum arrived at for FY15 which was based on the meter readings of 249 sample IP-sets. Therefore, it would be proper to continue the specific consumption at 7,341 units/installation/annum, instead of 7,748 units/installation/ annum, for FY18. Accordingly, the Commission decides to approve a specific consumption of 7,341units/installation/annum for FY18 also. Hence, by considering the number of installations proposed by the Hukeri RECS for FY17 and FY18, the sales to IP-set category for FY18 is worked out as follows:

TABLE-3.3

Approved specific consumption of IP-sets for FY18

Particulars	As filed by the HRECS		As approved by the Commission
	FY17	FY18	FY18
Nos. of installations	**25,141**	**25,788**	**25,788**
Mid-Year no. of installations		**25,465**	**25,465**
Specific consumption in units/installation/annum		**7,748**	**7,341**
Sales in MU		**197.309**	**186.84**

Based on the above discussions, the Commission approves 186.84 MU as sales to IP-set installations as against 197.309 MU reported by the Hukeri RECS for FY18. The number of installations approved for FY18 is 25,788. This approved IP-set consumption for FY18 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.

During the course of Public hearing held by the Commission, the representatives of certain Farmers' Association have suggested that the Government may consider paying the subsidy directly to the farmers against their IP Set consumption. They have also expressed that meters could be installed to their IP Sets, by the distribution licensee to whom energy charges would be paid by the farmers.

The Commission is of the view that implementing the suggestion of direct remittance of subsidy to the farmers would encourage metering of the IP Sets enabling proper accounting of energy and

also facilitate accurate computation of losses in the distribution system. The Commission notes that the Government of Karnataka would have to formulate suitable policy in the matter.

Further, the Hukeri RECS was directed to take up GPS survey of IP-sets in order to identify the defunct/dried up/not-in-use installations in the field and to take necessary action to arrive at correct number of IP-sets by deducting such IP-sets from its account, on the basis of GPS survey report. The Hukeri RECS has reported that, it should take up GPS survey considering the GPS Survey undertaken by HESCOM. Therefore, Hukeri RECS is directed to complete the GPS survey of IP-sets at the earliest and submit compliance thereon to the Commission. Thus, in view of pendency of the GPS survey of IP-sets, the number of installations estimated for FY17 as well as for FY18 are subject to modification based on the GPS survey report. The Commission, for now, in the absence of survey reports, has considered the estimated number of installations for FY17 and FY18 as reported by the Hukeri RECS. However, on completion of the GPS survey, the Hukeri RECS shall arrive at correct number of IP-sets in the field duly deducting the number of dried up/defunct/not-in-use wells based on the GPS survey results, from its account. Any variation in sales due to change in number of installations on account of GPS Survey would be trued up during the Annual Performance Review, for the FY18.

Further, it is noted that the Hukeri RECS has already segregated 16 feeders and one more feeder is nearing completion under NJY. After its completion, the energy consumed by the IP-sets could be more accurately measured at the 11 KV feeder level at the sub-stations after allowing for distribution system losses in 11 KV lines, distribution transformers and LT lines.

Hence, the Commission directs the Hukeri RECS to report the overall IP-set consumption on the basis of the specific consumption arrived at from the consumption recorded in the energy meters in respect of segregated agriculture feeders under NJY, to the Commission, every month, regularly, as per the following format:

Month	Name of Sub-division	No. of Segregated Agricultural Feeders in the subdivision	Monthly Consumption in MU as recorded in all the agricultural feeders at the substations pertaining to the sub-division	Distribution loss(11kV line, DTCs,& LT line) Plus sales to other consumers if any, in MU (losses in all the agricultural feeders only to be considered)	Net consumption duly deducting the Distribution loss (11kV line, DTCs &LT line) & any other loads if any	No. of IP sets (total-dried up) connected to the agricultural feeders in the subdivision			Average consumption of IP sets/ month (specific cons in units /IP/month)	Total no of IP sets(total-dried up) in the subdivision (as per DCB)			Total sales of IP sets in MU
						Beginning of the Month	Serviced during Month	Mid-Month		Beginning of the Month	Serviced during Month	Mid-Month	
1	2	3	4	5	6=(4-5)	7 a	7 b	7c = (7a+7 b)/2	8=6/7c	9 a	9 b	9c = (9a+9 b)/2	10= 8*9 c
April to March	Subdivision-1 Subdivision-2 Subdivision....												

Note:

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

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

Based on the above discussions, the Commission approves 2623.80 lakh units as the sales for FY18, excluding sales to AEQUS SEZ The category-wise sales is indicated in Annexure-1

3.1.3 Distribution Losses:

In its application, Hukeri RECS has projected distribution losses of 15.16% for FY18. The Commission in its Tariff Order dated 30th March, 2016 had fixed distribution loss of 14.00% for FY18. The Society has reported the actual loss of 15.12% as against the targeted losses of 14.50% for FY16. The Commission therefore, has imposed a penalty of Rs.51.86 lakhs for non-achievement of targeted losses in FY16. Having recorded 15.12% losses in FY16, HRECS has proposed a loss level of 15.19% for FY17 and 15.16% for FY18, a reduction of only 0.04% percentage points for two years. The Commission in its preliminary observations had requested HRECS to reassess the distribution loss levels for

FY18. However, HRECS in its replies has retained the distribution loss for FY18 at 15.16%.

The Commission notes that, the Society is operating in a considerably smaller geographical area and it should be possible for it to contain losses to the lowest possible levels. Further, having invested substantially in improvement works of its distribution network and the NJY works, the Society should institutionalise the process of energy accounting and energy auditing at transformer and feeder levels to curb losses and reduce the current level of losses.

Hence, considering the actual loss levels in FY16 and the investments in major works like feeder segregation under NJY Scheme, Extension and Improvement works, the Commission decides to revise the distribution loss levels for FY18 as follows:

TABLE – 3.4

Approved range of Distribution loss

(% loss)

Range	FY18
Upper limit	15.00
Average	**14.50**
Lower Limit	14.00

Further, based on the principles laid down in the MYT Regulations, the Commission would consider the incentive/penalty on actual basis during the Annual Performance Review for the relevant years.

3.1.4 Power Purchase:

HRECS has proposed to purchase 347.16 MU for FY18 at its interface points from HESCOM at a cost of Rs.14863.72 lakhs.

As per the data furnished in Format D-19, the HRECS has indicated the energy at interface points at 110/11KV and 33/11KV for FY18. Since the supply at 33/11KV is met by distribution system of HESCOM, the HRECS is required to bear the losses of handling the energy received at 33KV. HESCOM in its application has projected the distribution losses at 33 KV level as 2.71% for FY18. Considering the same percentage on the estimated energy to be handled at 33KV to meet the requirement of HRECS, the allowable energy at IF points and power purchase for FY18 are as follows:

TABLE-3.5

Allowable Energy at IF points and Power Purchase for FY18

Particulars	FY18
Total Energy at IF of HESCOM in MU	306.88
Energy received at 110/11kV Levels in MU	276.19
Energy received at 33kV Levels in MU	30.69
% Energy Loss at 33kV of HESCOM	2.71%
Energy Loss at 33kV of HESCOM in MU	0.85
Net Energy at IF Points inclusive of losses of HESCOM at 33Kv in MU	307.73
Approved Transmission Losses of KPTCL in %	3.37%
Approved power purchase for HRECS in MU	318.46
Approved power purchase for AEQUS in MU	20.84
Total Power Purchase in MU	339.30

The actual losses at 33KV level are already accounted along with the distribution loss computation of HESCOM. However, the energy loss estimated at 33KV level of HESCOM is considered to cater to the requirement of HRECS only for the purpose of payment of power purchase charges.

Based on the weighted average cost of power supply inclusive of transmission charges as approved for HESCOM for FY18, the Commission decides to allow power purchase cost of HRECS for FY18 as follows:

TABLE-3.6

Approved Power Purchase for FY18

Particulars	FY18
Approved power purchase Quantum in MU including AEQUS SEZ	339.30
Approved rate of power purchase of HESCOM in Rs/Unit	4.1462
Trading margin in Rs. per unit	0.05
Approved rate of power purchase from HESCOM in Rs/Unit including trading margin	4.1962
Approved Power Purchase Cost in Rs. Lakhs	**14237.84**

Since the cost of power purchase indicated above is inclusive of transmission charges, the Commission has not allowed transmission charges payable to KPTCL separately. Since the energy supplied to Hukeri RECS by HESCOM is measured and billed at interface points of Hukeri RECS, the HRECS shall pay the power purchase cost at Rs.4.3539 Paise per unit for the energy purchased at interface points.

3.1.5 O & M Expenses:

HRECS in its application has proposed O & M expenses for FY18 as follows:-

TABLE – 3.7
O&M Expenses for FY18 –HRECS's Proposal

Amount in Rs. lakhs

Sl. No.	Particulars	FY18
1	R&M Expenses	343.61
2	Employee cost	1098.28
3	Administrative & General Expenses	130.83
O&M Cost in Rs. lakhs		**1572.72**

HRECS has stated that the above claims include an amount of Rs.185 Lakhs on account of proposed recruitment during FY18.

Commission's Observations:

The Commission computes the O & M expenses for FY18 duly considering the actual O & M expenses of FY16 of Rs.1118.08 Lakhs as the O & M expenses for base year. Considering the Wholesale Price Index (WPI) as per the data available from the Ministry of Commerce & Industry, Government of India and Consumer Price Index (CPI) as per the data available from the Labour Bureau, Government of India and adopting the methodology followed by CERC with CPI and WPI in a ratio of 80: 20, the allowable weighted inflation rate for FY18 is 7.71%.

For the purpose of determining the normative O & M expenses for FY18, the Commission has considered the following:

a) The actual O & M expenses incurred for FY16 as per audited accounts as the base year O&M expenses.
b) The three year compounded annual growth rate (CAGR) of 2.81% of the number of installations considering the actual number of installations as per

audited accounts upto FY16 and as projected by the Commission for FY17 and FY18.

c) The weighted inflation index (WII) at 7.71% as computed above.

d) Efficiency factor at 0.50% as considered in the earlier two control periods.

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

Accordingly, the normative O & M expenses for FY18 are as follows:

TABLE – 3.8
Approved O & M expenses for FY18

Amount in Rs. lakhs

Particulars	FY16	FY17	FY18
No. of Installations	116958	119442	122541
CGI based on 3 Year CAGR		3.08%	2.81%
Weighted Inflation index		7.71%	7.71%
Base Year O&M Cost (as per actuals of FY16)	1118.08		
Approved O&M Expenses		**1233.14**	**1356.71**

The Commission is of the view that additional employee cost due to recruitment for FY18 could be factored only after being incurred by the distribution licensee.

Thus, the Commission decides to approve the O&M expenses of Rs.1356.71 lakhs for FY18.

3.1.6 Depreciation:

HRECS has claimed depreciation of Rs.113.99 Lakhs as allowed by the Commission in its Tariff Order dated 30th March, 2016 for FY18 as follows:

TABLE- 3.9
Depreciation for FY18 – HRECs Proposal

Amount in Rs.lakhs

Particulars	FY18
Buildings	0.94
Civil	1.38
Other Civil	0.01
Plant & Machinery	64.54
Line, Cable Network etc.,	75.23

Vehicles	1.91
Furniture	0.69
Office Equipments	4.29
Total	**148.99**
Less Depreciation on assets created out of Contribution / Grants	35.00
Approved Depreciation	**113.99**

In accordance with the provisions of the MYT Regulations, the Commission has determined the depreciation for FY18 considering the following:

a) The actual rate of depreciation of category-wise assets has been determined considering the depreciation and gross-block of opening and closing balance of fixed assets, as per the audited accounts for FY16.

b) The actual rate of depreciation, so arrived at, is considered to allow the depreciation on the gross block of opening and closing balances of fixed assets projected by HRECS, duly factoring the retirement of assets value in its application for FY18.

c) The depreciation on account of assets created out of consumers contribution/grants are deducted, based on the opening and closing balance of such assets duly considering the addition of assets as proposed by the HRECS, at the weighted average rate of depreciation as per actuals in FY16.

d) Accordingly, the depreciation for FY18 are as follows:

TABLE – 3.10

Approved Depreciation for FY18

Amount in Rs. lakhs

Particulars	FY18
Buildings	0.94
Civil	1.33
Other Civil	0.01
Plant & Machinery	72.86
Line, Cable Network etc.,	111.91
Vehicles	2.36
Furniture	0.54

Office Equipment	4.77
Total	**194.72**
Less Depreciation on assets created out of Contribution / Grants	81.00
Approved Depreciation	**113.72**

Thus, the Commission decides to approve depreciation of Rs.113.72 lakhs for FY18.

3.1.7 Interest & Finance Charges:

a) HRECS has claimed an amount of Rs.48.05 lakhs towards interest on loan capital at an average rate of interest of 11.55% on the opening balance of capital loan of Rs.317.13 lakhs and the new loan of Rs.197.95 lakhs for FY18.

The Commission has considered the capex of Rs.282.79 Lakhs as discussed in the earlier paragraphs of this Chapter. For the purpose of claiming interest on capital loan, the Commission has considered normative capital loan of Rs.197.95 lakhs for FY18.

The Commission notes that, the present interest rates by commercial banks and financial institutions are charged mainly on the basis of Marginal Cost of fund based Lending Rates (MCLR). These rates are comparatively lower than the base rates considered earlier. Further, in view of the changing economic situation, it is observed that there is a considerable reduction in the MCLR and also downward trend is evident in the interest rates. Hence, in such a situation, the Commission is of the view that, the HRECS can avail Capital loans at competitive interest rates. The Commission notes that, the present SBI MCLR rate for capital loans with a tenure of 3 years is 8.15%. Considering the present MCLR, the Commission decides to allow an interest rate of 11.00% for FY18 for new Capital loans. However, the interest liability on existing loan balances are computed at the weighted average interest rates derived from the audited accounts of FY16 duly considering the new loans proposed for FY17.

It shall be noted that, the amount of interest and the rate of interest now considered by the Commission on the capital loans for FY18 are subject to review during APR.

Accordingly, the interest on capital loan for FY18 is as follows:

TABLE – 3.11
Approved Interest on Capital Loans for FY18

Amount in Rs. Lakhs

Particulars	FY18
Opening Balance long term loans	317.13
Add: New Loans	197.95
Less: Repayments	0.00
Total loan at the end of the year	515.08
Average Loan	416.10
Approved Interest on capital loans	**46.86**

Thus, the Commission decides to approve the interest on capital loans of Rs 46.86 Lakhs for FY18.

c) Interest on working Capital:

HRECS has claimed an amount of Rs.64.36 lakhs at 11.75% p.a for FY18 towards interest on working capital based on the norms under MYT Regulations.

The Commission has been computing the interest on working capital as per the norms specified under the MYT Regulations, which consists of one month's O & M expenses, 1% of opening GFA and two months' revenue. The Banks / Financial institutions have switched over from PLR to base rate and now from base rate to MCLR. As discussed earlier, the MCLR for loans with tenure of one year is 8.00%. As such, the Commission decides to considered interest on working capital at 11% p.a. for FY18.

Accordingly, the approved interest on working capital loans for FY18 is as follows:

TABLE – 3.12

Approved Interest on Working Capital loans for FY18

Amount in Rs. Lakhs

Particulars	FY 18
One-twelfth of the amount of O&M Exp.	113.06
Opening GFA as per Audited Accts	7014.97
Stores, materials and supplies 1% of Opening balance of GFA	70.15
One-sixth of the Revenue	2171.15
Total Working Capital	**2354.36**
Rate of Interest (% p.a.)	11.00%
Interest on Working Capital	**258.98**

Thus, the Commission approves the interest on working capital loans of Rs.258.98 lakhs for FY18.

d) Interest on Consumer Security Deposit:

HRECS has claimed an amount of Rs.95.17 lakhs for FY18 towards interest on consumers' deposits at the bank rate of 8.75%.

In accordance with the KERC (Interest on Security Deposit) Regulations 2005, the interest rate to be allowed is the bank rate prevailing on the 1st of April of the financial year for which the interest is due. As per the Reserve Bank of India's notification dated 4th October, 2016, the bank rate is 6.75%. The Commission has considered the same, for computation of interest on consumer security deposits for FY18.

The Commission has considered the consumer security deposits as per audited accounts of FY16 for onward projection for FY18. Also, the Commission is considering the average of the opening and closing balances of consumer deposits of the relevant year. The interest on consumer deposits for FY18 is as follows:

TABLE – 3.13

Approved Interest on Consumer Security Deposits for FY18

Amount in Rs. Lakhs

Particulars	FY18
Opening balance of consumer security deposits	1358.99
Addition of consumer security deposits during FY18	113.00
Closing balance of consumer security deposits	1471.99
Average balance of consumer security deposits	1415.49
Bank rate to be allowed as per regulations	6.75%
Approved Interest on Consumer Security Deposits	**95.55**

Thus, the Commission decides to approve the interest on consumer security deposits of Rs.95.55 lakhs for FY18.

The abstract of the approved Interest and Finance charges is indicated below:-

TABLE – 3.14

Approved Interest & Finance Charges for FY18

Amount in Rs. Lakhs

Particulars	FY18
Interest on Loan	46.86
Interest on Working Capital	258.98
Interest on Consumer Deposit	95.55
Total	**401.38**

3.1.8 Return on Equity:

HRECS has claimed an amount of Rs.142.73 lakhs for FY18 towards Return on Equity by considering the closing balance of share capital and share deposit without factoring accumulated deficit. The RoE has been computed inclusive of corporate tax of 30% and cess of 3%.

The Commission notes that, considering the amount of closing balance of share capital and share deposit and accumulated deficit as per the audited accounts of HRECS for FY16, there will be negative networth of Rs. 3203.05 lakhs. Since no Return on equity is allowable for FY17 and also no additional equity is proposed, the networth of HRECS even in FY18 remains negative as follows:

TABLE – 3.15

Approved Return on Equity for FY18

Amount in Rs. Lakhs

Particulars	FY18
Paid Up Share Capital	590.99
Share Deposit	3.66
Reserves and Surplus	(3797.69)
Total Equity	(3203.05)
Approved Return on Equity	0.00

Since the networth of HRECS is negative for FY18, the Commission decides not to factor any amount of return on equity.

3.1.9 Other Income

HRECS has claimed an amount of Rs.180.28 lakhs for FY18 as other income.

The other income received by HRECS mainly includes income from rebate for collection of electricity duty, interest on bank deposits, rent from staff quarters and miscellaneous recoveries. The Commission notes that HRECS also receives power purchase cost for sale of power to AEQUS SEZ which needs to be factored under other income.

Based on the average other income earned by HRECS in the previous years and considering expected revenue from sale of power to AEQUS SEZ the Commission decides to approve the other income of Rs. 1318.46 Lakhs for FY18.

3.2 Abstract of Approved ARR for FY18

An Abstract of the approved consolidated Revised Annual Revenue Requirement of Hukeri RECS for FY18 is as follows:

[

TABLE – 3.16

Approved Revised ARR for F18

Amount in Rs. Lakhs

Sl. No	Particulars	As Approved
1	Power Purchase (MU) (Including AEQUS SEZ)	339.30
2	Energy at IF Point	327.02
3	Sales to other than IP & BJ/KJ	72.96
4	Sales to BJ/KJ	2.58
5	Sales to IP	186.84

6	**Total Sales**	**262.38**
7	Distribution Loss (MU)	64.64
8	Distribution Loss in %	14.50%
	Revenue	
9	Revenue from Sale to other than IP & BJ/KJ	4,251.54
10	Revenue from Sale to BJ/KJ	124.45
11	Revenue from Sale to IP	8,650.90
12	**Total Revenue**	**13026.89**
	Expenditure	
13	Power Purchase Cost	14,237.84
14	O&M Expenses	1356.71
15	Depreciation	113.72
16	Interest on Loan Capital	46.86
17	Interest on Working Capital	258.98
18	Interest on Consumers' Deposit	95.55
19	Return on Equity	0.00
20	Other Income	1318.46
21	**ARR**	**14791.19**
22	Deficit of FY16 carried forward	-747.55
23	**Net ARR**	**15538.74**

The Commission decides to approve a revised ARR of Rs.15538.74 Lakhs for FY18 .

3.3 Average Cost of Supply for FY18:

Based on the approved ARR, the average cost of supply of Hukeri RECS for FY18 is as follows:

TABLE – 3.17

Average Cost of Supply for FY18

Sl. No	Particulars	FY18
1	ARR in Rs. lakhs	15538.74
2	Approved Sales in MU	262.38
3	**Average Cost of Supply (Rs. per unit)**	**5.92**

3.4 Gap in Revenue for FY18:

As discussed above, the Commission decides to approve the Revised Annual Revenue Requirement (ARR) of HRECS for its operations in FY18 at Rs.15538.74 lakhs as against HRECS's application proposing an Revised ARR of Rs.18413.34 lakhs. This includes an amount of Rs.747.55 lakhs which is determined as deficit for FY16 as discussed in Chapter-2 of this Order. Considering the estimated revenue for FY18 at the existing retail supply tariff, the total realisation of revenue will be Rs.13026.89 lakhs which is Rs.2511.85 lakhs less than the projected aggregate revenue requirement for the year FY18.

The Commission decides to bridge this gap in revenue for FY18 by revision of retail supply tariff to consumers of HRECS as discussed in the subsequent Chapter of this Order.

3.5 Subsidy payable by GoK:

On the basis of the revised average cost and the revised CDT, the total subsidy payable by GoK, to HRECS for FY18 is as follows:

TABLE – 3.18

Subsidy Payable by GoK – FY18

Sl. No.	Particulars	Amount in Rs. Lakhs
1	Subsidy at average cost of supply on estimated sales to BJ/KJ during FY18	152.85
2	Subsidy at Commission determined tariff on estimated sales to IP sets during FY18	10821.85
	TOTAL	**10974.70**