

**KERALA STATE ELECTRICITY REGULATORY COMMISSION
THIRUVANANTHAPURAM**

Petition No :OA 6/2019

Present: **Shri. R. PremanDinaraj,Chairman**
Shri.K.Vikraman Nair, Member

In the matter of **Determination of ARR & ERC of M/s KananDevan Hills Plantations Company Private Limited (KDHPCL), Munnar for the Control Period 2018-19 to 2021-22**

Applicant: **M/s KananDevan Hills Plantations Company Private Limited (KDHPCL), Munnar**

Order Dated 11-11-2019

1. KananDevan Hill Plantations Company Private Limited(hereinafter referred to as KDHPCL or the licensee) is the distribution licensee supplying electricity in and aroundMunnar. KDHPCL avails electricity from KSEB Ltd for the supply to its consumers and for its own consumption.
2. The Commission had notified the KSERC (Terms and Conditions for Determination of Tariff) Regulations, 2018(hereinafter referred to as Tariff Regulations, 2018)on 26-10-2018. Regulation 10(1) of the said regulations mandates the filing of the petition for approval of Aggregate Revenue Requirement and determination of tariff for each year of the Control Period from 2018-19 to 2021-22 and the petitions for truing up of accounts. The licensee has filed the petition on ARR & ERC for the control period, as per the Tariff Regulation 2018 in the Multi Year Tariff Framework. A summary of the projections given in the Petition is as shown below:

**Table – 1
Comparative Statement of ARR & ERC of KDHPCL**

Particulars	2016-17		2017-18	Control Period Estimates			
	As per Accounts (Rs. lakh)	Trued Up (Rs. lakh)	As per Accounts (Rs. lakh)	2018-19 Projected (Rs. lakh)	2019-20 Projected (Rs. lakh)	2020-21 Projected (Rs. lakh)	2021-22 Projected (Rs. lakh)
Income							
Revenue from Sale of Power	2397.02	2397.02	2984.32	3,059.29	3,120.74	3,183.42	3,247.27
Other Income	17.18	81.44	17.74	70.27	69.41	67.06	63.35
Total Income	2414.20	2478.46	3002.06	3,129.56	3,190.15	3,250.48	3,310.62

Particulars	2016-17		2017-18	Control Period Estimates			
	As per Accounts (Rs. lakh)	Trued Up (Rs. lakh)	As per Accounts (Rs. lakh)	2018-19 Projected (Rs. lakh)	2019-20 Projected (Rs. lakh)	2020-21 Projected (Rs. lakh)	2021-22 Projected (Rs. lakh)
Expenditure							
Purchase of Power	2123.88	2134.08	2811.98	2,905.91	2,967.34	3,029.90	3,093.76
Repairs and Maintenance	30.83	17.62	33.11	36.50	38.27	40.12	42.06
Employee Cost	155.85	84.78	180.14	126.40	132.52	138.93	145.66
A&G Expenses	35.14	9.18	11.27	13.75	14.41	15.11	15.84
Depreciation	17.55	16.55	20.26	27.24	30.85	33.51	36.12
Interest & Finance Charges	14.21	26.89*	27.87	66.00	72.80	75.81	77.90
Other Debits	13.09	1.74	15.94	15.07	15.41	15.75	16.10
Return on Equity	-	5.82	-	10.54	11.69	12.27	12.73
Total Expenditure.	2390.55	2296.66	3100.57	3,201.42	3,283.29	3,361.40	3,440.17
Net Surplus/(Deficit)	23.65	181.80	(98.51)	(71.86)	(93.14)	(110.92)	(129.55)

*Approved interest and finance charge for 2016-17 of Rs.26.89 lakh includes interest on security deposit of Rs.13.30 lakh, bank charges of Rs.9.47 lakh and interest on working capital of Rs.4.12 lakh.

3. The licensee has proposed an increasing trend in the revenue gap for each year of the control period. The Commission vide letter dated 13-02-2019 had sought clarifications on the petition. The licensee vide letter dated 27-02-2019 submitted the details. The licensee made revisions on the initial submission. Accordingly the corrected summary is tabulated hereunder.

Table – 2
Summary of the Projected ARR&ERC for the Control period

Particulars	Control Period Estimates			
	2018-19 Projected (Rs. lakh)	2019-20 Projected (Rs. lakh)	2020-21 Projected (Rs. lakh)	2021-22 Projected (Rs. lakh)
Revenue from Sale of Power	3,059.29	3,120.74	3,183.42	3,247.27
Other Income	70.27	69.68	67.50	63.94
Total Income	3129.56	3190.42	3250.92	3311.21
Purchase of Power	2,905.91	2,967.34	3,029.90	3,093.76
Repairs and Maintenance	36.50	38.27	40.12	42.06
Employee Cost	126.40	132.52	138.93	145.66
A&G Expenses	13.75	14.41	15.11	15.84
Depreciation	27.24	30.85	33.51	36.12
Interest & Finance Charges	66.00	72.80	75.81	77.90
Other Debits	15.07	15.41	15.75	16.10
Return on Equity	6.59	9.73	10.76	11.26
Total Expenditure.	3197.46	3281.33	3359.89	3438.70
Net Surplus/(Deficit)	(67.90)	(90.91)	(108.97)	(127.49)

4. The petition was admitted as OA 6/2019. After admitting the petition, the Commission has placed the copy of the petition in the website and directed the licensee to give publicity to invite comments/objections from consumers in the area as per sub section (2) of section 64 of the Electricity Act, 2003 and Regulation 27(6) of the Conduct of business Regulations, 2003. The licensee published the summary of the petition in the following dailies.
- The New Indian Express dated 11-03-2019
 - Mangalam daily dated 11-03-2019
 - Deshabimani daily dated 11-03-2019

Hearing on the Matter

5. The public hearing on the application was held at the KDH Club Hall, Munnar 05-04-2019. The petitioner was represented by Sri. P.M. Srikrishnan, Executive Director, KDHPCL and other officers of the licensee. Sri. P.M. Srikrishnan, briefed the details of the application and responded to the queries of the Commission. The main points submitted in the petition are as below.
- The licensee has proposed revenue gaps for each year of the control period based on the prevailing tariff.
 - The licensee has not projected any increase in the number of consumers during the control period which is projected to remain same at 15884 nos as in 2017-18. The licensee has stated that the annual increase in the sale of electricity during the past three financial year from 2014-15 to 2016-17 is less than 1 %. KDHPCL has submitted that the petition has been prepared by applying a CAGR of 2% over the units sold in the year 2017-18 at the current retail tariff.
 - For the year 2018-19, the proposed sale is 47.13 MU. The sales projected for the subsequent years of the control period is 48.07 MU for 2019-20, 49.03 MU for 2020-21 & 50.02 MU for the year 2021-22. The major sale of the licensee is to the HT IA Industrial and LT I Domestic category.
 - The licensee has estimated a distribution loss of 12.00% for the control period.
 - Power purchase cost has been estimated for the control period with an average cost of Rs.5.31 per unit
 - KDHPCL has proposed the O&M expenses as per the ceiling norms fixed by the Commission.

- The licensee has proposed capital investment for the control period. The licensee in the clarifications submitted that the capital proposals are for miscellaneous capital items like re-conductoring of HT-Lines, replacement of mechanical meters with electronic meters, installation of transformers, voltage improvement, spot billing units etc. As the items are of low value, no DPR was prepared.
 - The licensee in the petition has claimed depreciation on straight line method as per the Tariff Regulations 2018. The licensee has proposed depreciation of Rs.27.24 lakh, Rs.30.85 lakh, Rs.33.51 lakh and Rs.36.12 lakh for the years of the Control period after considering the asset addition in each year.
 - The interest and finance charged projected by the licensee for the Control period includes interest on working capital, interest on security deposit, interest on normative loan and bank charges.
 - The licensee has included Section III duty and periodical charges under other debits.
 - The licensee, for the control period has proposed a return at 3% on the net fixed assets at the beginning of each year of the control period.
 - The non-tariff income accounted by the licensee in the application includes interest receivable on KDHPCL deposit with KSEB Ltd and miscellaneous recoveries and interest on accumulated surplus. The licensee stated that Interest on accumulated surplus has been computed each year adopting an interest rate of 6.70%, the rate received by the KDHPCL on the term deposit placed with State Bank of India.
6. Sri.Bipin Shankar, Deputy Chief Engineer TRAC and Sri. AjithKumar.G, DAO, TRAC represented KSEB Ltd. Sri.Bipin Shankar presented the counter statement/comments of KSEB Ltd. The major points presented by KSEB Ltd are abstracted below.
- a. The licensee has not proposed a distribution loss reduction targets for the control period. The Commission may approve distribution loss considering a decreasing trajectory.
 - b. With regard to the accumulated surplus, the interest has to be calculated at the rate applicable to loans

- c. The methodology considered by KDHPCL for the calculation of interest on working capital is to be looked into as the calculation is not as per the regulation. It was submitted that the claim on interest on normative loan was not justifiable as the Commission had not allowed any loan outstanding on 31-03-2017. Therefore normative loan for the approved capital investment may only be allowed.
 - d. With regard to the O&M expenses, KSEB Ltd stated that the licensee has blindly proposed the components of O&M expenses as approved in the regulations rather than projecting the same which is not a prudent practice. It was also submitted that the O&M approved in the regulations may be on the higher side and may allow the same subject to prudence check.
 - e. Detailed project report with regard to the capital investment has not been submitted, which is to be furnished to the Commission.
 - f. The depreciation for assets may be allowed only for the assets created from own funds or actual loan, after due consideration of the vintage of the assets and depreciation not to be allowed for the assets created out of consumer contribution.
 - g. The claim of the licensee on Section 3(1) duty may be disallowed.
7. The Commission during the hearing stated that the licensee may approach the banks to negotiate a higher interest on the deposits of the licensee. The Commission during the hearing also sought clarifications on the petition and directed the licensee to submit:
- The detailed capital investment proposal along with detailed project report.
 - The distribution loss reduction trajectory for the control period.
8. The Commission directed KDHPCL to submit the details,if any before the Commission to substantiate the claims made in the petition and the reply on the counter statement submitted by KSEB Ltd. The licensee vide letter dated 30-04-2019 submitted the same.
9. The Commission in its order dated 08-07-2019 in OA 15/2018 had revised the Retail supply Tariff (RST) applicable to the consumers across the state and the Bulk Supply Tariff (BST) applicable to the licensees. Based on the tariff revision, the licensee vide letter dated 25-07-2019 submitted the revised projections for the control

period. Based on the revisions made, a comparative statement of the ARR & ERC is tabulated hereunder.

Table – 3
Summary of the Projected ARR&ERC based on Revised Tariff

Particulars	Control Period Estimates			
	2018-19 Projected (Rs. lakh)	2019-20 Projected (Rs. lakh)	2020-21 Projected (Rs. lakh)	2021-22 Projected (Rs. lakh)
Revenue from Sale of Power	3,059.29	3282.44	3347.00	3412.93
Other Income	70.27	70.24	67.79	63.81
Total Income	3129.56	3352.68	3414.79	3476.74
Purchase of Power	2,905.91	3131.93	3198.22	3265.87
Repairs and Maintenance	36.50	38.27	40.12	42.06
Employee Cost	126.40	132.52	138.93	145.66
A&G Expenses	13.75	14.41	15.11	15.84
Depreciation	27.24	30.85	33.51	36.12
Interest & Finance Charges	66.00	74.63	77.65	79.77
Other Debits	15.07	15.39	15.72	16.05
Return on Equity	6.59	9.73	10.76	11.26
Total Expenditure.	3197.46	3447.73	3530.02	3612.63
Net Surplus/(Deficit)	(67.90)	(95.05)	(115.23)	(135.89)

Analysis and decision of the Commission

10. The Commission considered the petition for approval of ARR & ERC for the Control Period 2018-19 to 2021-22, the additional clarifications and submissions furnished by the licensee along with the comments of KSEB Ltd. The analysis and decisions of the Commission on the application for approval of ARR & ERC for the Control Period 2018-19 to 2021-22 are detailed below:
11. **No. of Consumers and Sale of Power:-**As per Regulation 10 (8) of Tariff Regulations 2018, the applicant/distribution licensee shall develop the forecast of expected revenue from existing charges based on the estimates of contract demand and quantum of electricity to be supplied to the consumers and to be wheeled on behalf of the users of the distribution system for each financial year of the control period. Further Regulation 71 provides as follows:

71.Sales forecast. –(1) *The distribution business/licensee shall submit, along with the petition for approval of Aggregate Revenue Requirement and determination of tariff, a forecast of expected demand and sale of electricity to different categories of consumers and to each consumption slab within each tariff category, in its area of supply for the Control Period.*

(2) Sale of electricity, if any, to electricity traders or other distribution licensees shall be separately indicated.

(3) The Commission shall examine the forecasts for its reasonableness based on the growth in number of consumers and consumption per consumer, the demand of electricity in the preceding financial years, anticipated growth in the succeeding financial years and any other factor, which the Commission may consider relevant and approve forecast of sale of electricity to the consumers with such modifications as deemed appropriate.

12. The number of consumers and the sale of power proposed by the licensee for the control period is as shown below.

Table – 4
Number of consumers & Energy sales

Year	No. of Consumers	Sales in MU	% Increase in sales
2015-16 (Actual)	15638	37.17	
2016-17 (Actual)	15727	37.87	1.88%
2017-18 (Actual)	15884	46.21	22.02%
2018-19 (Projected)	15884	47.13	2.00%
2019-20 (Projected)	15884	48.07	2.00%
2020-21 (Projected)	15884	49.03	2.00%
2021-22 (Projected)	15884	50.02	2.00%

13. The comparison of the category wise number of consumers and the sales and the projection for the control period is shown below.

Table – 5
Category wise number of consumers & Energy sales

Particulars	2016-17 (Actual)		2017-18 (Actual)		2018-19 (Projected)	
	No. of Consumers	Sales MU	No. of Consumers	Sales MU	No. of Consumers	Sales MU
HT IA Industrial	25	22.76	25	30.29	22	30.48
HT II (Non Ind/Comm)	-	-	-	-	3	0.41
HT III Agriculture	2	0.29	2	0.32	2	0.33
HT IV Commercial	8	2.27	8	2.44	8	2.49
LT I Domestic	13262	7.02	13369	7.39	13369	7.54
LT II Colonies	1	0.00	-	-	-	-
LT IV Industries	96	0.59	91	0.60	91	0.62
LT V Agriculture	5	0.02	5	0.01	5	0.01
LT VI Non-Domestic	715	0.85	714	0.93	906	1.61
LT VII Commercial	1361	3.64	1360	3.83	1168	3.24
Street Lighting	252	0.43	310	0.38	-	-
LT VIII Public Lighting	-	-	-	-	307	0.38
LT TOD Tariff	-	-	-	-	3	0.02
Total	15727	37.87	15884	46.21	15884	47.13

Particulars	2019-20 (Projected)		2020-21 (Projected)		2021-22(Projected)	
	No. of Consumers	Sales MU	No. of Consumers	Sales MU	No. of Consumers	Sales MU
HT IA Industrial	22	31.09	22	31.71	22	32.35
HT II (Non Ind/Comm)	3	0.42	3	0.43	3	0.44
HT III Agriculture	2	0.33	2	0.34	2	0.35
HT IV Commercial	8	2.54	8	2.60	8	2.65
LT I Domestic	13369	7.69	13369	7.84	13369	8.00
LT IV Industries	91	0.63	91	0.64	91	0.65
LT V Agriculture	5	0.01	5	0.02	5	0.02
LT VI Non-Domestic	906	1.65	906	1.68	906	1.71
LT VII Commercial	1168	3.31	1168	3.37	1168	3.44
LT VIII Public Lighting	307	0.38	307	0.39	307	0.40
LT TOD Tariff	3	0.02	3	0.02	3	0.02
Total	15884	48.07	15884	49.03	15884	50.02

14. The number of consumers proposed for the control period is 15884 which is the actual number for 2017-18. The licensee has not projected any increase in the number of consumers during the control period. From the details provided in the petition major numbers of consumers are in the LT I Domestic category. The licensee has stated that the annual increase in the sale of electricity during the past three financial years from 2014-15 to 2016-17 is less than 1 %. The very recent year 2017-18 has been ignored for determination of the trend as for the year the substantial increase in the consumption had arisen from incremental load of 2 MVA. The licensee has stated that the additional load has been allowed by KSEB Ltd since April 2017. KDHPCL has submitted that the petition has been prepared by applying a CAGR of 2% over the units sold in the year 2017-18.
15. The major number of consumers falls in the LT I Domestic category whereas the major sale of power is towards HT IA Industrial category. The licensee proposes increase in the sales of power during the control period for all categories of consumers. The licensee proposes a 2% increase in the sale during the control period. The licensee has also stated that marginal increase in the number of consumer may happen only in the low consuming domestic category which will have only a very negligible impact. Considering the past growth in the sales of the licensee and the proposed increase for the future, the Commission approves the sale as proposed for the control period.

16. **Distribution Loss & Energy requirement:** As per Regulation 72, the licensee is to provide voltage level distribution loss and distribution loss trajectory for the control period with necessary supporting studies. The distribution licensee shall also propose the loss reduction targets for each financial year of the control period along with the distribution loss levels. The Commission has to approve the target level of losses based on the opening level of losses, the figures filed by licensee and other relevant factors.
17. M/s KDHPCL has estimated the Distribution Loss at 12% for the Control Period. The licensee has given the estimates of the Feedback energy for computation of distribution. It may be seen that for the calculation of Distribution loss of KDHPCL, feed back energy is also considered since feed back is the energy wheeled through the lines of KDHPCL for the consumers of KSEB Ltd. The details of the energy requirement and the distribution loss for the control period given in the petition is as shown below.

Table – 6
Distribution loss and energy input projected for the control period

Sl.No	Particulars	2018-19	2019-20	2020-21	2021-22
1	Energy Input (MU)	54.80	55.90	57.02	58.16
2	Total Energy Sales (MU)	47.13	48.07	49.03	50.02
3	Distribution loss (MU) (1-2)	7.67	7.83	7.98	8.14
4	Feed back (MU)	9.15	9.33	9.51	9.71
5	Gross energy (MU) (1+4)	63.95	65.23	66.53	67.87
6	Distribution loss % (3/5)	12.00%	12.00%	12.00%	12.00%

18. The Commission has examined the details of the distribution loss given in the petition. The actual distribution loss for 2016-17 was 11.40% which was approved in the tried up of accounts of the year. A comparison of the actual distribution loss of the licensee over the years is shown below.

Table – 7
Past data of actual distribution loss and energy input

Sl. No	Particulars	2013-14	2014-15	2015-16	2016-17	2017-18
1	Energy Input (MU)	44.34	46.03	42.90	43.82	53.17
2	Total Energy Sales (MU)	37.04	38.67	37.20	37.87	46.25
3	Distribution loss (MU) (1-2)	7.30	7.36	5.70	5.95	6.92
4	Feed back (MU)	7.80	8.17	8.20	8.40	8.98
5	Gross energy (MU)	52.56	54.20	51.10	52.22	62.15
6	Distribution loss % (3/5)	13.89%	13.57%	11.12%	11.40%	11.13%

19. While approving the ARR & ERC for the years 2013-14 & 2014-15, the Commission had approved 12% as the distribution loss target. The actual distribution loss for 2017-18 is 11.13%. As shown in the Table above, there is reduction in the distribution loss of the licensee in the recent years. However the licensee has projected the loss target for the control period at a higher level than 2017-18 actuals.
20. The Commission notes that the licensee has proposed improvement in performance as per Form D.6.1. However there is a mismatch between the distribution loss proposed by the licensee for the control period at 12% when compared to the licensee's figure in Form D.6.1. The licensee has shown distribution loss reduction target as shown below.

Table – 8
Distribution loss reduction projected for the control period

Distribution loss (%)	2018-19	2019-20	2020-21	2021-22
	Projected	Projected	Projected	Projected
	11.50%	11.00%	11.00%	10.00%

21. Considering the loss reduction achieved by the licensee in 2017-18, the Commission approves 11.13% as the loss reduction target for 2018-19 as achieved by the licensee in 2017-18. For the subsequent years of the control period, the licensee shall reduce the distribution loss as approved hereunder.

Table – 9
Distribution loss and energy input approved for the control period

SI.No	Particulars	2018-19	2019-20	2020-21	2021-22
1	Energy Input (MU)	54.19	54.98	55.82	56.66
2	Total Energy Sales (MU)	47.13	48.07	49.03	50.02
3	Distribution loss (MU) (1-2)	7.06	6.91	6.79	6.64
4	Feed back (MU)	9.15	9.33	9.51	9.71
5	Gross energy (MU) (1+4)	63.34	64.31	65.33	66.37
6	Distribution loss % (3/5)	11.13%	10.75%	10.40%	10.00%

22. **Power Purchase Cost:** -The licensee has proposed an increase in the power purchase cost for each year of the control period considering the increase in the sale of power. The licensee has stated that the projections are made as per the prevailing tariff. The details of the power purchase cost are tabulated hereunder.

Table – 10
Projected power purchase cost for the control period

Particulars	Purchase in MU	Demand charge (Rs.lakh)	Variable Charge (Rs.lakh)	Total cost (Rs.lakh)	Average cost (Rs/kWh)
Actual 2016-17	43.82	239.47	1884.41	2123.88	4.85
Actual 2017-18	53.17	374.24	2437.74	2811.98	5.29
Projection 2018-19	54.80	384.97	2520.94	2905.91	5.30
Projection 2019-20	55.90	395.91	2571.44	2967.34	5.31
Projection 2020-21	57.02	407.06	2622.84	3029.90	5.31
Projection 2021-22	58.16	418.45	2675.31	3093.76	5.32

23. The detailed split up of the power purchase cost projected for the control period is shown below.

Table – 11
Split Up of Projected power purchase cost for the control period

Particulars	2018-19	2019-20	2020-21	2021-22
Gross energy (MU)	63.95	65.23	66.53	67.87
Less - Feed Back	9.15	9.33	9.51	9.71
Total Energy Purchase (MU)	54.80	55.90	57.02	58.16
Maximum Demand (kVA)	121548	123979	126459	128988
Contract Demand (kVA)	108000	108000	108000	108000
Excess Demand (kVA)	13548	15979	18459	20988
Demand Charges (Rs.kVA)	300.00	300.00	300.00	300.00
Total Demand Charges (Rs.lakh)	384.97	395.91	407.06	418.45
Energy Charges (Rs.kWh)	4.60	4.60	4.60	4.60
Total Energy Charges (Rs.lakh)	2520.94	2571.44	2622.84	2675.31
Power purchase cost (Rs.lakh)	2905.91	2967.34	3029.90	3093.76

24. The Commission vide order dated 08-07-2019 in OA No.15/2018 has issued the schedule of tariff and terms and conditions for retail supply of electricity by Kerala State Electricity Board Limited and other licensees applicable till 31-03-2020. Accordingly the Commission has revised the BST applicable to KDHPCL as shown below.

Energy Charge (Rs. per unit)	Pre revised Tariff	4.60
	Revised Tariffw.e.f 08-07-2019	4.80
Demand Charge (Rs. kVA per month)	Pre revised Tariff	300.00
	Revised Tariffw.e.f 08-07-2019	340.00

25. As per the details submitted, the licensee has proposed excess demand charges for demand above the committed contract demand. The licensee has considered 1.5 times the demand charges for the years of the control period considering the demand above the committed contract demand. Projecting excess demand charge is not a prudent practice as the licensee is required to take efforts to revise the

contract demand. Accordingly the licensee is directed to take appropriate steps and approach the KSEB Ltd. to revise the contract demand as per requirement so as to avoid the excess demand charges.

26. Considering the distribution loss reduction targets approved for the control period, the revised tariff applicable for the remaining years of the control period and the contract demand at the applicable tariff, the power purchase cost approved is shown below.

Table – 12
Power purchase cost approved for the control period

Particulars	2018-19	2019-20	2020-21	2021-22
Gross energy (MU)	63.34	64.31	65.33	66.37
Less - Feed Back	9.15	9.33	9.51	9.71
Total Energy Purchase (MU)	54.19	54.98	55.82	56.66
Maximum Demand (kVA)	121548	123979	126459	128988
Demand Charges (Rs.kVA)	300.00	300.00/ 340.00	340.00	340.00
Total Demand Charges (Rs.lakh)	364.64	408.21	429.96	438.56
Energy Charges (Rs.kWh)	4.60	4.60/4.80	4.80	4.80
Total Energy Charges (Rs.lakh)	2492.74	2609.52	2679.36	2719.68
Power purchase cost (Rs.lakh)	2857.38	3017.73	3109.32	3158.24

27. For approval of the power purchase cost for the year 2018-19, the pre-revised tariff applicable for the year is considered. The power purchase cost for the year 2019-20 is approved considering the pre-revised tariff applicable till 07-07-2019 and the revised tariff from 08-07-2019 for the remaining days of the control period. For the years 2020-21 & 2021-22, the revised tariff is considered for the approval of power purchase cost

28. **Operation & Maintenance Expenses:** Operation & maintenance expenses include controllable expenses like Employee cost, R&M Expenses and A&G Expenses. The Commission as per Regulation 79(6) of the Tariff Regulations, 2018 has approved the operation & maintenance expenses of KDHPCL for the control period as shown below.

Table – 13
Normative O&M for the control period

Particulars	Control Period Estimates			
	2018-19 (Rs.lakh)	2019-20 (Rs.lakh)	2020-21 (Rs.lakh)	2021-22 (Rs.lakh)
Total O&M Expenses	176.65	185.20	194.16	203.56

29. For the control period, the licensee has claimed the O&M expenses as per the norms approved by the Commission. This is a healthy trend and the Commission accordingly approves the normative O&M expense as at Table 13. The licensee is also directed to limit the O&M expenses to the amount approved by the Commission.
30. **Capital Investment proposed for the Control period:** The licensee has proposed yearwise capital investment for the control period as summarized below.

Table-14
Proposed Capital Investment for the control period

	Qty	2018-19 Rs.lakh	2019-20 Rs.lakh	2020-21 Rs.lakh	2021-22 Rs.lakh
Box Spanner Kit-Tools Kit		0.03			
Energy Meters	2700 nos	27.00			
Switch Meters	50 nos	16.50			
Old Transformer Procured from TGBPL for Replacing at Pullivasal Factory division upgradation	160 kVA	1.15			
Transformer for Letchmi Estate	100 kVA	9.00			
Reconductoring of HT OH Line from Kundaly Dam to Chundavurrai Factory (Re-rooting and Reconductoring)	4 km	18.12			
Reconductoring of HT OH Line from Kundaly Dam to Chittavurrai Factory	4.5 km	16.88			
Energy Meter Replacement	3000 nos	30.00			
Voltage improvement at Chundavurrai	100 kVA	5.00			
Spot Billing		8.00			
Reconductoring of HT OH Line from Nettigudi to Guderale	2 km		7.50		
Reconductoring of HT OH Line from Nettigudi to Devikulam	5 km		18.75		
Energy Meter Replacement	3000 nos		30.00		
Voltage improvement Letchmi estate Factory Division (Transformer)	100 kVA		9.00		
Reconductoring of HT OH Line from Earlston Bungalow to Devikulam	5 km			18.75	
Reconductoring of HT OH Line from Indo swiss to Arivikad	2 km			7.50	
Voltage improvement (transformer) at Kanniamallay factory division	100 kVA			4.00	
Energy Meter Replacement	2000 nos			20.00	
Reconductoring of HT OH Line from ITD to Kalaar	5 km				18.75
Reconductoring of HT OH Line from Madupatty to Thenmally	7 km				26.25
Voltage improvement (Transformer) at Periavurrai Factory division	100 kVA				4.00
Total		131.68	65.25	50.25	49.00

31. The main items in the capital expenditure programme for the control period include purchase of energy meters, reconductoring works, installation of transformers, and other miscellaneous purchases such as tool kit, voltage improvement equipments,

spot billing terminals etc., However, the licensee could not provide convincing justifications for proposing the capital investment plan. Instead in their clarifications, dated 27-02-2019, the licensee stated that the capital investment proposals are of low value, hence no DPR was prepared.

32. The Commission has examined the capital expenditure proposal of the licensee for the control period with the available information furnished by the licensee. As per Regulation 54 of the Tariff Regulations, 2018, capital investments proposals for the control period shall be in accordance with the 'Guidelines for In-principle Clearance of Capital Investment' specified at Annexure-IV of the Regulations. As per the guidelines, the licensee has to submit DPR for investments above 5 lakh. Hence the statement of the licensee that *as the items are of low value, no DPR was prepared*, cannot be accepted.
33. The licensee is proposing to purchase 10700 energy meters during the control period. The consumer strength proposed at the end of the control period is only 15884. The licensee did not furnish the details on the percentage of faulty meters in the system and the need for replacement of such large number of meters. Similarly for other proposals such as re-conductoring, transformer installation, the licensee did not furnish the rationale for such investments. Considering the items such as re-conductoring of existing lines, which are essential for maintaining supply and reducing losses, the Commission proceeded to analyse the proposal with the existing details for the purpose of approving ARR&ERC.
34. As per the details furnished by the licensee, re-conductoring works proposed by the licensee as shown below:

Table-15
Details of the Re-conductoring works proposed

Particulars	Unit cost	2018-19	2019-20	2020-21	2021-22
		Quantity in km Proposed			
Kundaly Dam to Chundavurrai Factory (Re-rooting and Reconductoring)	Rs.4.53 lakh/km	4.00			
Kundaly Dam to Chittavurrai Factory	Rs.3.75 lakh/km	4.50			
Nettigudi to Guderale	Rs.3.75 lakh/km		2.00		
Nettigudi to Devikulam	Rs.3.75 lakh/km		5.00		
Earlston Bungalow to Devikulam	Rs.3.75 lakh/km			5.00	
Indo swiss to Arivikad	Rs.3.75 lakh/km			2.00	
ITD to Kalaar	Rs.3.75 lakh/km				5.00
Madupatty to Thenmallay	Rs.3.75 lakh/km				7.00
Total Amount proposed		35.00	26.25	26.25	45.00
Average cost (Rs.lakh/km)		4.12	3.75	3.75	3.75

35. The licensee has proposed about 7 to 12 km of reconductoring of HT lines per year during the control period. Considering the level of operations of the licensee, the proposed quantum of works can be completed as proposed. The licensee has worked out the estimate cost for reconductoring as shown below:

Table-16
Estimated cost of reconductoring work as proposed by KDHPCL

HT-Line reconductoring /KM with Recon Conductor - As per KDHP Workings				
Sl.No.	Description	Nos./ Kg	Quantity	Total amount
1	No. of post required "A "post	7	12358	86506
2	100x50 = HT cross arm	7	1200	8400
3	Disc Insulator	12	650	7800
4	Pin Insulator	21	125	2625
5	ACSR conductor (1x3=3) km	1025	210	215250
7	Stay set	7	2500	17500
8	Transport		LS	10000
9	Labour / km			30000
	Total			378081
	Cost per KM 375,000/-			

36. For installation of transformers the proposed cost is Rs.5.075 lakh. In the case of meters, the licensee has proposed the average cost of meter at Rs.1000/-, which is also not substantiated properly. Since the details of the programme was not furnished by the licensee, a meaningful analysis is not possible.
37. In this context it is to be noted that the latest cost data approved for KDHPCL is for the year 2016. The Commission vide order dated 27-04-2018 in OA 17 of 2017 has approved the cost data of the rates of materials and labour for the distribution works of KSEB Ltd for the year 2018-19. A comparison of the cost data for the licensee and KSEB Ltd for reconductoring and that of installation of transformers are as shown below:

Table-17
Cost of Re-conductoring as per the approved cost data

Re-conductoring	Cost data for KDHPCL	Cost data for KSEBLtd
HT line with ACSR Raccoon	Rs.3.0 lakh per km	Rs.2.40 lakh per km
HT line with ACSR Rabbit	Rs.2.15 lakh per km	Rs.1.70 lakh per km

38. Similarly, the installation of transformers, as against the proposed cost of Rs.5.075 lakh, the approved cost data is as shown below:

Table-18
Cost of Transformer Installation as per the approved cost data

Cost of Transformer Installation	Cost data for KDHPCL(Rs.)	Cost data for KSEB Ltd (Rs.)
Installation of 11 kV/ 433 V , 25 kVA Transformer	224850 /Transformer	282000 /Transformer
Installation of 11 kV/ 433 V ,100 kVA Transformer	330450/ Transformer	390000 /Transformer
Installation of 11 kV/ 433 V ,160 kVA Transformer	470900 /Transformer	547000 /Transformer
Installation of 11 kV/ 433 V , 250 kVA Transformer	501550 /Transformer	561000 /Transformer
Installation of 11 kV/ 433 V ,500 kVA Transformer	853550 /Transformer	874000 /Transformer

39. The Commission notes that the cost data approved for KDHPCL is in the year 2016-17. Since the licensee has not approached the Commission for revision of rates, no new rates have been approved. The latest cost data approved is for KSEB Ltd for 2018-19. Though the rates for KSEB Ltd is slightly lower than that of the small licensees, the Commission is of the view that latest approved rates for KSEB Ltd with sufficient adjustments may be used for approving the capital expenditure for the licensees. Accordingly the Commission for the purpose of estimating the amount of capital investment, used the latest cost data of KSEB Ltd with 10% markup as shown below:

Table-19
Approved rate for distribution works for KDHPCL for the control period

Particulars	Rs.lakh
HT line with ACSR Raccoon	Rs.2.64 lakh /km
Installation of 11 kV/ 433 V ,100 kVA Transformer	Rs.4.29 lakh/transformer

40. Based on the above, the Commission after considering the capital investment proposal of KDHPCL, decided to grant in principle approval for the same. In principle approval is granted on the condition that the works proposed shall be executed as per the proposed time frame with due prudence. Notwithstanding the rates approved above, the licensee shall ensure transparent and cost effective means including tendering process for both procurement of equipment and stores and for execution of works. The licensee shall furnish the details, including the source of funds, details of execution of works while filing the petitions for truing up of accounts. The final approval shall only be given after due prudence check. Accordingly, the approved capital investment for the control period is shown below:

Table-20
Approved capital expenditure for the control period

SI.No.	Particulars	Qty	Unit	Rate (Rs.)	18-19	19-20	20-21	21-22
					Rs. Lakhs	Rs. Lakhs	Rs. Lakhs	Rs. Lakhs
1	Box Spanner Kit-Tools Kit				0.03			
2	Energy Meters	2,700	Nos	1,000	27.00			
3	Switch Meters	50	Nos	33,000	16.50			
4	Old Transformer Procured from TGBPL for Replacing at Pullivasal Factory division upgradation	160	kVA		1.15			
5	Transformer for Letchmi Estate	100	kVA	4,29,000	4.29			
6	Reconductoring of HT OH Line from Kundaly Dam to Chundavurrai Factory (Re-rooting and Reconductoring)	4	km	2,64,000	10.56			
7	Reconductoring of HT OH Line from Kundaly Dam to Chittavurrai Factory	5	km	2,64,000	11.88			
8	Energy Meter Replacement	3,000	nos	1,000	30.00			
9	Voltage improvement at Chundavurrai	100	kVA	4,29,000	4.29			
10	Spot Billing				8.00			
11	Reconductoring of HT OH Line from Nettigudi to Guderale	2	km	2,64,000		5.28		
12	Reconductoring of HT OH Line from Nettigudi to Devikulam	5	km	2,64,000		13.20		
13	Energy Meter Replacement	3,000	Nos	1,000		30.00		
14	Voltage improvement Letchmi estate Factory Division (Transformer)	100	kVA	4,29,000		4.29		
15	Reconductoring of HT OH Line from Earlston Bungalow to Devikulam	5	km	2,64,000			13.20	
16	Reconductoring of HT OH Line from Indo swiss to Arivikad	2	km	2,64,000			5.28	
17	Voltage improvement (tansformer) at Kanniamallay factory division	100	kVA	4,29,000			4.29	
18	Energy Meter Replacement	2,000	Nos	1,000			20.00	
19	Reconductoring of HT OH Line from ITD to Kalaar	5	km	2,64,000				13.20
20	Reconductoring of HT OH Line from Madupatty to Thenmallay	7	km	2,64,000				18.48
21	Voltage improvement (Transformer) at Perivavurrai Factory division	100	kVA	4,29,000				4.29
	Total				113.67	52.77	42.77	35.97

41. **Depreciation:** -The licensee has claimed depreciation in the straight line method as per the Tariff Regulations 2018. In the petition, the licensee has proposed depreciation of Rs.27.24 lakh, Rs.30.85 lakh, Rs.33.51 lakh and Rs.36.12 lakh for the years of the control period. The licensee has considered the asset additions proposed to be made during the years of the Control Period for claiming

depreciation. The split up of the depreciation claimed for each year of the control period is tabulated hereunder.

Table-21
Depreciation proposed for the control period

Particulars	Rate of depreciation (%)	2018-19			2019-20		
		GFA beginning of the year (Rs.Lakh)	Additions during the year (Rs.Lakh)	Depreciation (Rs.Lakh)	GFA beginning of the year (Rs.Lakh)	Additions during the year (Rs.Lakh)	Depreciation (Rs.Lakh)
Transformers	5.28	253.37	45.15	15.74	298.52	26.25	17.13
Distribution lines	5.28	40.16	-	2.12	40.16		2.12
Others	6.33	24.67	5.03	1.77	29.70	9.00	2.45
Meters	5.28	61.34	81.50	7.54	142.84	30.00	9.12
IT Equipments	15.00	0.48	-	0.07	0.48		0.03
Gross Asset		380.02	131.68	27.24	511.70	65.25	30.85
Less: Consumer contribution		7.89			7.89		
Net Asset considered for depreciation		372.13	131.68	27.24	503.81	65.25	30.85

Particulars	Rate of depreciation (%)	2020-21			2021-22		
		GFA beginning of the year (Rs.Lakh)	Additions during the year (Rs.Lakh)	Depreciation (Rs.Lakh)	GFA beginning of the year (Rs.Lakh)	Additions during the year (Rs.Lakh)	Depreciation (Rs.Lakh)
Transformers	5.28	324.77	26.25	18.52	351.02	45.00	20.90
Distribution lines	5.28	40.16		2.12	40.16		2.12
Others	6.33	38.70	4.00	2.65	42.70	4.00	2.89
Meters	5.28	172.84	20.00	10.19	192.84		10.18
IT Equipments	15.00	0.48		0.03	0.48		0.03
Gross Asset		576.95	50.25	33.51	627.20	49.00	36.12
Less: Consumer contribution		7.89			7.89		
Net Asset considered for depreciation		569.06	50.25	33.51	619.31	49.00	36.12

42. The Commission while truing up of accounts for the year 2016-17 had approved the depreciation of Rs.16.55 lakh for the assets till 2016-17, whereas had not considered the asset addition of Rs.54.28 lakh created during the year, since the licensee had not submitted the details of the date of commissioning of the assets. The Commission had also not allowed depreciation for the assets of Rs.14.96 lakh

created out of consumer contribution. The licensee subsequently has submitted the details of the asset additions for the years 2016-17 & 2017-18. The major investment for the year 2016-17 was the drawing of the 11kV line from Chitrapuram and connectivity of new 11kV line which were commissioned on 02-03-2017. The licensee has also made an asset addition of Rs.2.14 lakh in 2017-18. The details of the asset additions for the year 2016-17 & 2017-18 is shown below.

Table-22
Asset Additions for 2016-17 & 2017-18

Particulars	Rs.Lakh
2016-17	
Drawing of 11kV line from Chitrapuram	26.24
Connectivity of new 11kV line	25.63
Cable Crimping tool hydraulic	0.20
Puller 5 ton capacity	0.27
Rotary Hammer	0.12
11 Nos. of fire extinguishers	0.36
CT/PT unit for switching station	1.46
Total	54.28
2017-18	
Computer	0.49
VCB Truck 400 AMPS	1.59
2 Nos Hand Crimping tool	0.06
Total	2.14

43. Based on the details furnished by the licensee, the Commission has approved the addition to the assets for the year 2016-17 and 2017-18 as shown in table 22 above. Further, the actual capital additions for the year 2017-18 as per the truing up of accounts is also taken into account for the purpose of approving depreciation for the control period.
44. In this context it is to be noted that, the licensee in the letter dated 1-12-2010 had furnished the value of the assets transferred/taken over from the erstwhile licensee M/s Tata Tea Limited as at 01-08-2007. Since these assets have already completed 12 years, depreciation is allowable at a lower rate for the remaining life period. Similarly, the assets added from 2007 to 2018 is eligible for depreciation as per the approved rates.
45. As per the Tariff Regulations, 2018, depreciation on assets created out of consumer contribution is not allowable. The assets created out of consumer contribution is Rs.14.96 lakh. Accordingly, the depreciation for existing assets as on 1-4-2018,

excluding depreciation for assets created out of grants and contributions for each year of the control period is as shown above.

Table-23
Depreciation for the existing Assets as on 1-4-2018

Assets Prior to Transfer	GFA as on 1-4-2018 (Rs. Lakhs)	Depreciation Rate (%)	Depreciation for existing assets for the control period			
			2018-19 (Rs. Lakh)	2019-20 (Rs. Lakh)	2020-21 (Rs. Lakh)	2021-22 (Rs. Laks)
Transformers	80.38	1.14%	0.92	0.92	0.92	0.92
Distribution lines	40.16	1.14%	0.46	0.46	0.46	0.46
Meters	7.22	8.74%	0.63	0.63	0.63	-
Others	-		-	-	-	-
IT equipments			-	-	-	-
Sub Total	127.76		2.01	2.01	2.01	1.37
Assets added from 2007-08 to 2017-18						
Transformers	172.99	5.28%	9.13	9.13	9.13	9.13
Distribution lines	-	5.28%	-	-	-	-
Meters	54.12	5.28%	2.86	2.86	2.86	2.86
Others	24.67	6.33%	1.56	1.56	1.56	1.56
IT equipment	0.48	15.00%	0.07	0.07	0.07	0.07
Sub Total	252.26		13.63	13.63	13.63	13.63
Total as on 1-4-2018	380.02		15.63	15.63	15.63	15.00
Less Consumer contribution	14.96	5.28%	0.79	0.79	0.79	0.79
GFA Less Consumer contribution	478.73		14.84	14.84	14.84	14.21

46. As mentioned in Para 40, the Commission has granted in principle approval of the capital expenditure addition for the control period. As per the provisions of the Tariff Regulations, 2018, proportionate depreciation is allowable for the addition of assets during the year. Thus, the total depreciation approved for the control period is as shown below:

Table-24
Depreciation approved for the control period

Particulars		2018-19	2019-20	2020-21	2021-22
GFA at the beginning of the year	Rs.lakh	380.02	493.69	546.46	589.23
Approved Asset Addition during the control period	Rs.lakh	113.67	52.77	42.77	35.97
Total GFA at the end of the year	Rs.lakh	493.69	546.46	589.23	625.20
Applicable depreciation rate	%	5.28%	5.28%	5.28%	5.28%
Depreciation for the Asset Addition	Rs.lakh	3.00	7.39	9.92	12.00
Depreciation for the existing assets	Rs.lakh	14.84	14.84	14.84	14.21
Total Depreciation	Rs.lakh	17.84	22.24	24.76	26.21

47. The licensee shall furnish full details of the asset added during the year along with the date of commissioning of the asset while submitting the petition for the truing up of accounts for each year of the control period.

Table-25
Summary of the Depreciation allowed for the Control period

Particulars	2018-19 Rs.lakh	2019-20 Rs.lakh	2020-21 Rs.lakh	2021-22 Rs.lakh
Depreciation proposed	27.24	30.85	33.51	36.12
Depreciation approved	17.84	22.24	24.76	26.21

48. The difference between the depreciation proposed vis-s-vis the approved is due to the fact that the licensee has proposed the higher rate of depreciation continuously for all the assets irrespective of its age.
49. **Interest and Finance Charges:** -The interest and finance charged projected by the licensee for the Control period includes interest on working capital, interest on security deposit, interest on normative loan and bank charges. A comparison of the interest and finance charges is shown below.

Table-26
Interest and finance charges for the control period

Interest & Finance Charges	Rs.Lakh
2016-17 Trued Up	26.89
2017-18 ARR Approved	12.83
2017-18 Actual	27.87
2018-19 Projected	66.00
2019-20 Projected	74.63
2020-21 Projected	77.65
2021-22 Projected	79.77

50. A comparison of the split up of the interest and finance charges approved in the ARR&ERC for the years 2016-17 & 2017-18 and the projections of the licensee for the current control period is tabulated hereunder.

Table-27
Comparison of Interest and finance charges

Particulars	2016-17 Trued Up (Rs. Lakh)	2017-18 ARR Approved (Rs. Lakh)	2017-18 For Truing up (Rs. Lakh)	2018-19 (Rs. Lakh)	2019-20 (Rs. Lakh)	2020-21 (Rs. Lakh)	2021-22 (Rs. Lakh)
Interest on Normative Loan				24.35	30.39	32.61	33.90
Interest on Working Capital	4.12			1.58	1.65	1.73	1.82
Security deposits	13.30	12.83	12.65	31.80	34.12	34.79	35.47

Bank Charges on Bank Guarantee/L.C to KSEB	9.47		15.22	2.42	2.61	2.67	2.72
Bank Charges on Rs 7.18 Crs Bank Guarantee to KSEB				5.86	5.86	5.86	5.86
Total	26.89	12.83	27.87	66.00	74.63	77.65	79.77

51. **Interest on Normative Loan:** The licensee has claimed interest on normative loan for each year of the control period. The licensee has stated that Interest on Normative Loan has been provided at the base rate of 8.70 %. The details of the claim made by the licensee are tabulated hereunder.

Table-28
Interest on Normative Loan projected for the control period

Particulars	2018-19 (Rs. Lakh)	2019-20 (Rs. Lakh)	2020-21 (Rs. Lakh)	2021-22 (Rs. Lakh)
Gross Normative loan - Opening	380.02	511.63	576.88	627.13
Cumulative repayment of Normative Loan upto previous year	152.32	179.56	210.41	243.92
Net Normative loan - Opening	227.70	332.07	366.47	383.21
Increase/Decrease due to ACE/ de-capitalization during the Year	131.61	65.25	50.25	49.00
Repayments of Normative Loan during the year	27.24	30.85	33.51	36.12
Net Normative loan - Closing	332.07	366.47	383.21	396.09
Average Normative Loan	279.89	349.27	374.84	389.65
Weighted average Rate of Interest of actual Loans	8.70	8.70	8.70	8.70
Interest on Normative loan	24.35	30.39	32.61	33.90

52. The Commission has examined the proposal of the licensee and the provisions of the Regulations. As per Regulation 22(1), in the case of existing distribution system, the capital cost approved by the Commission prior to the First day of April 2018, including additional capitalisation if any and the expenditure projected for the respective financial years of the Control Period, shall form the basis for determination of tariff. As per Regulation 27(2) in the case of existing assets, the balance depreciable value as on the First day of April, 2018, shall be worked out by deducting the cumulative depreciation approved by the Commission upto the Thirty First day of March, 2018, from the gross depreciable value of the assets. Regulation 26(4) says that if any fixed asset is capitalised on account of capital expenditure incurred prior to the First day of April, 2018, the debt-equity ratio allowed by the Commission for determination of tariff for the period ending the Thirty First day of March, 2018 shall be considered. Further, Regulation 29(2) provides that the normative loan outstanding as on the First day of April, 2018, shall be worked out

by deducting the amount of cumulative repayment as approved by the Commission up to the Thirty First day of March, 2018, from the normative loan. However, the licensee has neither sought nor has the Commission approved any normative loan as outstanding on the First day of April, 2018.

53. Based on the provisions of the Regulations, the normative loan for the Control Period is worked out. The GFA as on 1-4-2018 is Rs.380.01 lakh. The Commission in their truing up order for the years 2005-06 to 2009-10 had not approved interest charges for the loan amount of the Rs.127.76 lakh taken at the time of transfer of licence for the value of the GFA from the erstwhile licensee M/s Tata Tea. This was not approved considering the lack of proper supporting details. The consumer contribution/grants as on the date is Rs.14.96 lakh. The accumulated depreciation as per accounts as on 1-4-2018, including the provisional depreciation for the year 2017-18 is Rs.152.32 lakh. Based on the above, the GFA eligible for interest and return as on 1-4-2018 is as shown below:

Table-29
Value of Fixed assets as on 1-4-2018

Particulars	Rs. Lakh
GFA as on 1-4-2018	380.02
Less GFA at the time of transfer/GFA for which no return was allowed	127.76
Less Consumer contribution and grants	14.96
Balance GFA to be considered	237.29
Accumulated depreciation till 1-4-2018	152.32
GFA eligible for Interest and Return as on 1-4-2018	84.98

54. As shown above, the normative loan as on 1-4-2018 is Rs.84.98 lakh. As mentioned in the earlier sections, the Commission has given in principal approval for the assets additions for the control period as proposed by the licensee on a provisional basis. Based on the above, the normative loan is worked out as shown below:

Table-30
Normative loan approved for the control period

	2018-19	2019-20	2020-21	2021-22
	Rs.lakh	Rs.lakh	Rs.lakh	Rs.lakh
GFA eligible for Return as on 1-4-2018	84.98			
(Normative loan at the beginning of the year)	84.98	180.80	211.34	229.35
Asset Addition during the year	113.67	52.77	42.77	35.97
Less Depreciation for the year	17.84	22.24	24.76	26.21

Closing Normative loan for the year	180.80	211.34	229.35	239.12
Average Loan for the year	132.89	196.07	220.34	234.23
Rate of Interest (Base rate)	8.15%	8.15%	8.15%	8.15%
Interest charges for the year	10.83	15.98	17.96	19.09

55.2nd proviso to Regulation 29(4) provides that if there is no actual loan and the normative loan is outstanding the interest charges shall be at the base rate. The base rate /SBI MCLR for one year tenor is 8.15%. Accordingly, the interest charges are approved as shown above.

56. **Interest on working capital:** The licensee has submitted the formats showing the computation of interest on working capital. The licensee in the write up, has stated that interest on normative working capital as per regulations 32(1)(e) comprising of one-twelfth of annual operation and maintenance expenses, one-sixth of annual income from sale of power less one-sixth of annual income from sale of power towards security deposit from the consumers. The claim made by the licensee is shown below.

Table 31
Working capital proposed for the control period

Particulars	2018-19	2019-20	2020-21	2021-22
	(Projected) (Rs.lakh)	(Projected) (Rs.lakh)	(Projected) (Rs.lakh)	(Projected) (Rs.lakh)
O&M expenses (1 month)	14.72	15.43	16.18	16.96
Maintenance Spares	0.00	0.00	0.00	0.00
Receivables 2 months (Revenue from sale of power)	508.76	545.90	556.60	567.52
Less: Security Deposit from Consumers.	508.76	545.90	556.60	567.52
Total Working Capital	14.72	15.43	16.18	16.96
Interest Rate %	10.70%	10.70%	10.70%	10.70%
Interest on Working Capital	1.58	1.65	1.73	1.82

57. Regulation 32 (e) of the Tariff Regulation 2018, specifies the methodology for the computation of interest on working capital for a distribution licensee. As per the said regulations, working capital shall comprise as follows:

“(e) In the case of distribution business/licensee the working capital shall comprise of,-

(i) operation and maintenance expenses for one month; plus

(ii) cost of maintenance spares equivalent to one-twelfth of the average of the book value of stores, materials and supplies at the beginning and end of the financial year; plus

(iii) receivables equivalent to the expected revenue from sale of electricity for two months at the prevailing tariff:

Provided that the amount, if any, held as security deposits except the security deposits held in the form of Bank Guarantee from users of the distribution system and consumers shall be reduced while computing the working capital requirement;

Provided further that for distribution business/licensees who supply electricity to their consumers on prepaid metering system, no interest on working capital shall be allowed.”

58. As per the Regulations interest on working capital is to be allowed at a rate equal to 2% higher than the base rate as on the first day of April of the financial year in respect of which the petition for approval of aggregate revenue requirement and determination of tariff is filed. The interest rate adopted by the licensee is 10.70% which is the base rate of SBI as at 1st April 2018 plus 2%. As per the regulation base rate means the Marginal Cost of funds based Lending Rate (MCLR) declared by the State Bank of India as applicable on first day of April of respective financial year for a tenor of one year.

59. The licensee in the petition has made an error while estimating the working capital requirement as the amount considered as security deposit from consumers and the interest rate considered were not correct. The MCLR rate prevailing as on 1st April 2018 is 8.15%. Accordingly the interest rate to be considered is 10.15%. As per the provisions of Tariff Regulations, 2018, the working capital for the M/s KDHPCL is estimated as shown below:

Table 32

Working capital and interest on working capital approved for the control period

Particulars	2018-19	2019-20	2020-21	2021-22
	(Rs.lakh)	(Rs.lakh)	(Rs.lakh)	(Rs.lakh)
O&M expenses (1 month)	14.72	15.43	16.18	16.96
Maintenance Spares	0.00	0.00	0.00	0.00
Receivables 2 months (Revenue from sale of power)	508.76	545.90	556.60	567.52
Less: Security Deposit from Consumers.	254.38	272.95	278.30	283.76
Total Working Capital	254.38	272.95	278.30	283.76
Interest Rate %	10.15%	10.15%	10.15%	10.15%
Interest on Working Capital	25.82	27.70	28.25	28.80

60. Accordingly considering the rate of interest of 10.15% and the provisions of the Tariff Regulations, 2018, the Commission allows the interest on working capital for the control period as shown above.

61. **Interest on security deposit:** As per the Tariff Regulations 2018, interest shall be allowed on the amount held as security deposit in cash from users of the distribution system and consumers at the bank rate as on the First day of April of the financial year in which the application is filed. The licensee in the petition has claimed interest on security deposit as shown below.

Table – 33
Interest on security deposit projected for the control period

Particulars	2018-19 (Rs. Lakh)	2019-20 (Rs. Lakh)	2020-21 (Rs. Lakh)	2021-22 (Rs. Lakh)
Security Deposit from consumers	508.76	545.90	556.60	567.52
Interest on security deposit @ 6.25%	31.80	34.12	34.79	35.47

62. As per the Balance sheet submitted by the licensee (Form DBS) the amount shown as security deposit from consumers is lower than the claim. Since the figures as per the balance sheet is actual, same is considered for estimating interest on security deposit. Considering the bank rate of 6.25% prevailing as on 1-4-2018, the amount of interest on security deposit approved for the control period is shown below.

Table – 34
Approved Interest on security deposit

Particulars	2018-19 (Rs. Lakh)	2019-20 (Rs. Lakh)	2020-21 (Rs. Lakh)	2021-22 (Rs. Lakh)
Security Deposit from consumers	254.38	272.95	278.30	283.76
Interest on security deposit @ 6.25%	15.90	17.06	17.39	17.73

63. **Bank Charges:** The licensee has claimed bank charges on Bank Guarantee/L.C to KSEB and on Rs 7.18 Crores which is the bank Guarantee to KSEB as per the orders of Hon. Supreme Court of India in Civil Appeal No. 2144/2011. The split up of the claim is shown below.

Table – 35
Bank Charges Claimed

Particulars	2018-19 (Rs. Lakh)	2019-20 (Rs. Lakh)	2020-21 (Rs. Lakh)	2021-22 (Rs. Lakh)
Bank Charges on Bank Guarantee/ L.C to KSEB	2.42	2.61	2.67	2.72
Bank Charges on Rs 7.18 Crores for Bank Guarantee to KSEB	5.86	5.86	5.86	5.86

64. The licensee has stated that Bank Charges at 1 % per annum has been provided on the amount of the Letter of Credit provided to KSEBL for securing payment of monthly bills for power purchase costs. The licensee has also state that the Bank Guarantee Charges at 0.82 % has been provided on the Rs.7.18 Crores provided to KSEBL as per the directions of the Supreme Court of India in the petition 2144/2011. The Commission notes that the licensee has considered two different rate of interest for the calculation of bank charges on bank guarantee. The licensee is hereby directed to clarify this difference in the interest rate.
65. The Commission approves the charges proposed as Bank Guarantee charges and for obtaining letter of credit to KSEB Ltd. With regard to the bank guarantee provided to KSEBL as per the orders of Hon. Supreme Court, the Commission in the previous orders have specifically directed the licensee that charges shall not be included in the allowable expenses. Accordingly, the Commission approves only the Bank Charges on Bank Guarantee/ L.C to KSEB Ltd.
66. Accordingly, the interest and finance charges approved for the control period is shown below.

Table-36
Approved Interest and Finance charges for the control period

Particulars	2018-19	2019-20	2020-21	2021-22
	(Rs. Lakh)	(Rs. Lakh)	(Rs. Lakh)	(Rs. Lakh)
Interest on Normative Loan	10.83	15.98	17.96	19.09
Interest on Working Capital	25.82	27.70	28.25	28.80
Interest on Security deposits	15.90	17.06	17.39	17.73
Bank Charges on Bank Guarantee/L.C to KSEB	2.42	2.61	2.67	2.72
Total	54.97	63.35	66.27	68.34

67. **Others debits:** - The details of the amount projected under the head Other debits is as follows.

Table-37
Other Debits projected for the control period

Particulars	2016-17 Actual (Rs.lakh)	2016-17 Trued Up(Rs.lakh)	2017-18 Actual (Rs.lakh)	2018-19 (Rs.lakh)	2019-20 (Rs.lakh)	2020-21 (Rs.lakh)	2021-22 (Rs.lakh)
Duty III	12.56	-	14.15	14.53	14.84	15.15	15.47
Inspection Charges	0.54	0.54	0.51	0.54	0.57	0.60	0.63
Provision for doubtful Debt	1.20	1.20	1.28	-	-	-	-
Total	13.10	1.74	15.94	15.07	15.41	15.75	16.10

68. The licensee has included Section III duty and periodical charges under the debits under other debits. The Commission has stated that Section III duty shall not be passed on to the consumers as per the Electricity Duty Act 1963. The Commission has already taken a considered stand and in previous orders and had stated the legal position with regard to Section 3 duty and had mentioned that it cannot be passed on to the consumers in view of the statutory provisions laid down in the Kerala Electricity Duty Act, 1963. Hence the Commission approves only the inspection charges under 'other debits' for the control period.

69. **Return on NFA :-** As per Regulation 28(2) of the Tariff Regulations 2018, if there is no equity invested in the business or equity invested in the regulated business of the distribution licensee is not clearly identifiable, return at the rate of three percent shall be allowed on the net fixed assets at the beginning of the financial year for such regulated business. The licensee for the control period has proposed a return at the 3% on the net fixed assets at the beginning of the year. The projection of the licensee is tabulated hereunder.

Table-38
Return on Net Fixed Assets projected

Particulars	Control period estimates			
	2018-19 (Rs. Lakh)	2019-20 (Rs. Lakh)	2020-21 (Rs. Lakh)	2021-22 (Rs. Lakh)
GFA at the beginning of the year	372.13	503.81	569.06	619.31
Accumulated depreciation	152.32	179.56	210.41	243.92
NFA at the beginning of the year	219.81	324.25	358.65	375.39
Return on NFA @3%	6.59	9.73	10.76	11.26

70. The Commission has examined the claims of the licensee. The Commission in the previous years had approved a RoNFA at a rate of 3% as per the provisions of the Regulations for the entire NFA considering the fact that the licensee has not claimed any interest on loan for the creation of fixed assets. However, in the control period for 2018-19 to 2021-22, the Commission has allowed the interest charges on a normative basis for the assets added (after deducting depreciation) since the transfer of licence, treating the same as fully funded through loans as per the provisions of the Regulations. Hence it is not fair to allow additional return in the form on Return on NFA for the entire assets. However, the licensee is reasonably eligible for the return on the amount of investment of Rs.127.76 lakh (which is the value of assets at the time of transfer) for which no return is allowed. Accordingly the return on NFA is allowed as shown below:

Table - 39
Approved return of NFA for the control period

Particulars	2018-19	2019-20	2020-21	2021-22
	(Rs. Lakh)	(Rs. Lakh)	(Rs. Lakh)	(Rs. Lakh)
GFA as on 1-4-2018	380.02			
Less Accumulated depreciation	152.32			
Less consumer contribution	14.96			
Less GFA for which interest charges are allowed	84.98			
Balance value of Net Fixed Assets at the beginning of the year	127.76	127.76	127.76	127.76
Rate of Return	3%	3%	3%	3%
Eligible Return	3.83	3.83	3.83	3.83

71. **Aggregate Revenue Requirement:** The Aggregate Revenue Requirement approved for the control period is summarised as given below:

Table – 40
Aggregate Revenue Requirement approved for the control period

Particulars	2018-19 Projected (Rs.Lakh)	2018-19 Approved (Rs.Lakh)	2019-20 Projected (Rs.Lakh)	2019-20 Approved (Rs.Lakh)	2020-21 Projected (Rs.Lakh)	2020-21 Approved (Rs.Lakh)	2021-22 Projected (Rs.Lakh)	2021-22 Approved (Rs.Lakh)
Purchase of Power	2905.91	2857.38	2967.34	3017.73	3029.90	3109.32	3093.76	3158.24
O&M expenses	176.65	176.65	185.20	185.20	194.16	194.16	203.56	203.56
Depreciation	27.24	17.84	30.85	22.24	33.51	24.76	36.12	26.21
Interest & Finance Charges	66.00	54.97	72.80	63.35	75.81	66.27	77.90	68.34
Other Debits	15.07	0.54	15.41	0.57	15.75	0.60	16.10	0.63
Return on Equity	6.59	3.83	9.73	3.83	10.76	3.83	11.26	3.83
Total Expenditure	3197.46	3111.21	3281.33	3292.92	3359.89	3398.94	3438.70	3460.31

72. **Total Revenue:** - The total revenue includes revenue from the sale and non tariff income claimed by the licensee.

73. **Revenue from Sale of Power:** The Commission vide order dated 08-07-2019 in OA No.15/2018 has issued the schedule of tariff and terms and conditions for retail supply of electricity applicable till 31-03-2020. The category wise revenue from sale of power claimed by the licensee for each year of the control period considering the

revised relevant tariff applicable for the years of the control period is tabulated hereunder.

Table-41
Revenue Projections for the control period

Particulars	2018-19 (Projected)				2019-20 (Projected)			
	No. of Consumers	Sales MU	Total revenue Rs.lakh	Average Realisation Rs./kWh	No. of Consumers	Sales MU	Total revenue Rs.lakh	Average Realisation Rs./kWh
HT IA Industrial	22	30.48	1942.99	6.37	22	31.09	2099.26	6.75
HT II (Non Ind/Comm)	3	0.41	34.19	8.30	3	0.42	35.77	8.50
HT III Agriculture	2	0.33	13.36	4.09	2	0.33	15.12	4.53
HT IV Commercial	8	2.49	211.62	8.49	8	2.54	219.63	8.62
LT I Domestic	13369	7.54	324.92	4.31	13369	7.69	353.01	4.59
LT III Temp Connection			0.02				0.02	
LT IV Industries	91	0.62	39.16	6.37	91	0.63	41.98	6.70
LT V Agriculture	5	0.01	0.33	2.36	5	0.01	0.38	2.71
LT VI Non-Domestic	906	1.61	140.04	8.68	906	1.65	146.76	8.92
LT VII Commercial	1168	3.24	319.12	9.84	1168	3.31	333.53	10.08
LT VIII Public Lighting	307	0.38	25.64	6.82	307	0.38	29.00	7.55
LT TOD Tariff	3	0.02	1.17	5.85	3	0.02	1.19	7.44
Total	15884	47.13	3052.56	6.48	15884	48.07	3275.37	6.81
Fuse off calls/New Application Fee			0.02				0.02	
Reconnection fee			0.23				0.25	
Public lighting			2.47				2.59	
Maintenance charges			0.06				0.06	
Delayed payment charges			3.54				3.72	
Other receipts- Power Theft. Etc.			0.40				0.42	
Total			3059.29				3282.44	

Particulars	2020-21 (Projected)				2021-22 (Projected)			
	No. of Consumers	Sales MU	Total revenue Rs.lakh	Average Realisation Rs./kWh	No. of Consumers	Sales MU	Total revenue Rs.lakh	Average Realisation Rs./kWh
HT IA Industrial	22	31.71	2141.23	6.75	22	32.35	2184.05	6.75
HT II (Non Ind/Comm)	3	0.43	36.49	8.53	3	0.44	37.22	8.52
HT III Agriculture	2	0.34	15.42	4.52	2	0.35	15.74	4.54
HT IV Commercial	8	2.60	223.73	8.62	8	2.65	228.20	8.62
LT I Domestic	13369	7.84	358.80	4.57	13369	8.00	364.70	4.56
LT III Temp Connection			0.02				0.02	
LT IV Industries	91	0.64	42.82	6.69	91	0.65	43.68	6.69

LT V Agriculture	5	0.02	0.40	2.67	5	0.02	0.40	2.67
LT VI Non-Domestic	906	1.68	149.66	8.92	906	1.71	152.72	8.92
LT VII Commercial	1168	3.37	340.21	10.08	1168	3.44	347.00	10.08
LT VIII Public Lighting	307	0.39	29.58	7.55	307	0.40	30.17	7.56
LT TOD Tariff	3	0.02	1.22	7.63	3	0.02	1.24	7.75
Total	15884	49.03	3339.58	6.81	15884	50.02	3405.14	6.81
Fuse off calls/New Application Fee			0.02				0.02	
Reconnection fee			0.26				0.27	
Public lighting			2.72				2.86	
Maintenance charges			0.07				0.07	
Delayed payment charges			3.91				4.10	
Other receipts- Power Theft. Etc.			0.44				0.46	
Total			3347.00				3412.93	

74. The licensee has not projected any change in the number of consumers for the control period, whereas has proposed an increase in the revenue from the sale of power considering the increase in the sale. The licensee has stated that the annual increase in the sale of electricity units during the three financial years 2014-15 to 2016-17 is almost negligible which is less than 1 %. As per the details submitted in the petition, the major revenue is realized from HT I A Industrial category, LT I Domestic & LT VII Commercial categories. Since there is no tariff revision applicable for the year 2018-19, the projection made by the licensee is considered.

75. After examining the details of the revenue from sale of power furnished by the licensee, the Commission approves the same as proposed for the control period.

Table-42
Approved revenue from sale of power as per revised tariff

Particulars	Sale (MU)	Revenue from Sale (Rs.Lakh)
2018-19	47.13	3059.29
2019-20	48.07	3282.44
2020-21	49.03	3347.00
2021-22	50.02	3412.93

76. **Non-Tariff Income:** The non-tariff income accounted by the licensee in the application includes interest receivable on KDHPCL deposit with KSEB Ltd and miscellaneous recoveries and interest on accumulated surplus. A split up of the non tariff income is tabulated hereunder.

Table-43
Non Tariff Income projected for the control period

Items	2016-17		2017-18	2018-19	2019-20	2020-21	2021-22
	As per accounts (Rs.Lakh)	Trued Up (Rs.Lakh)	As per accounts (Rs.Lakh)	Projected (Rs.Lakh)			
Interest receivable on KDHPCL deposit with KSEB	14.82	14.82	15.40	12.60	13.42	13.68	13.96
Miscellaneous recoveries	2.36	2.36	2.34	2.35	2.35	2.35	2.35
Interest on accumulated Surplus	-	64.26	-	55.31	54.47	51.76	47.50
Total	17.18	81.44	17.74	70.27	70.24	67.79	63.81

77. The licensee in the write up has stated that the interest on deposit to KSEB has been computed at 6% on one-twelfth of the annual power purchase cost. This amount is however not being paid/acknowledged by KSEB. As per the order on the truing up of accounts of KDHPCL for the year 2016-17 dated 05-09-2018, the accumulated surplus of the licensee is Rs. 872.80 lakh. The licensee has stated that the interest on accumulated surplus has been computed each year on the opening balance of the surplus adopting an interest rate of 6.70%, which is the rate availed by the KDHPCL on the term loan placed with State Bank of India. Other miscellaneous income included under the head is Rs.2.35 lakh per annum. The Commission approves the non-tariff income as projected for the control period.

78. **Revenue Surplus/Gap:** Based on the above, the revenue surplus/gap for the control period estimated by the licensee and that approved by the Commission are as follows.

Table -44
Approved ARR&ERC for the control period

Particulars	2018-19 Projected (Rs.Lakh)	2018-19 Approved (Rs.Lakh)	2019-20 Projected (Rs.Lakh)	2019-20 Approved (Rs.Lakh)	2020-21 Projected (Rs.Lakh)	2020-21 Approved (Rs.Lakh)	2021-22 Projected (Rs.Lakh)	2021-22 Approved (Rs.Lakh)
Revenue from Sale of Power	3,059.29	3059.29	3282.44	3282.44	3347.00	3347.00	3412.93	3412.93
Other Income	70.27	70.27	70.24	70.24	67.79	67.79	63.81	63.81
Total Income	3129.56	3129.56	3352.68	3352.68	3414.79	3414.79	3476.74	3476.74
Purchase of Power	2,905.91	2857.38	3131.93	3017.73	3198.22	3109.32	3265.87	3158.24
O&M expenses	176.65	176.65	185.20	185.20	194.16	194.16	203.56	203.56
Depreciation	27.24	17.84	30.85	22.24	33.51	24.76	36.12	26.21
Interest & Finance Charges	66.00	54.97	74.63	63.35	77.65	66.27	79.77	68.34
Other Debits	15.07	0.54	15.39	0.57	15.72	0.60	16.05	0.63
Return on Equity	6.59	3.83	9.73	3.83	10.76	3.83	11.26	3.83
Total Expenditure	3197.46	3111.21	3281.33	3292.92	3359.89	3398.94	3438.70	3460.81
Revenue Surplus (+)/ Gap (-)	(-)67.90	(+)18.35	(-)95.05	(+)59.76	(-)115.23	(+)15.85	(-)135.89	(+)15.93

Order of the Commission

79. The Commission considered the application for approval of ARR & ERC for the Control Period 2018-19 to 2021-22, the additional clarifications and submissions furnished by the licensee along with the comments of KSEB Ltd. Accordingly the approved ARR & ERC for the Control Period 2018-19 to 2021-22 are as shown below.

Particulars	2018-19 Approved (Rs. Lakh)	2019-20 Approved (Rs. Lakh)	2020-21 Approved (Rs. Lakh)	2021-22 Approved (Rs. Lakh)
Total Income	3129.56	3352.68	3414.79	3476.74
Total Expenditure	3111.21	3292.92	3398.94	3460.81
Revenue Surplus (+)/ Gap (-)	(+)18.35	(+)59.76	(+)15.85	(+)15.93

Directives of the Commission

80. In view of the facts and reasons explained in earlier paragraphs, the Commission gives the following directives. The licensee shall,

- (i) Promote demand side management and energy efficiency measures within its area of license and report compliance while filing the truing up of accounts for each year of the control period.
- (ii) Implement steps to promote renewable energy and report compliance while filing the truing up of accounts for each year of the control period.
- (iii) Bring down the distribution loss to the level approved in this order.
- (iv) Limit the controllable expenditure to the amounts approved in this order.
- (v) Submit detailed capital investment plan before the Commission and obtain the formal approval of the Commission.

Sd/-
K.Vikraman Nair
Member

Sd/-
Preman Dinaraj
Chairman

Approved for issue

G.Jyothichudan
Secretary