

KERALA STATE ELECTRICITY REGULATORY COMMISSION

THIRUVANANTHAPURAM

Application No : OA 9/2019

Present: **Shri. R. Preman Dinaraj, Chairman**
Shri. S. Venugopal, Member
Shri. K. Vikraman Nair, Member

In the matter of **Determination of ARR & ERC of M/s Thrissur Corporation Electricity Department (TCED) for the Control Period 2018-19 to 2021-22,**

Applicant **: M/s Thrissur Corporation Electricity Department**

Order Dated 08-11-2019

1. M/s. Thrissur Corporation Electricity Department (TCED) under Thrissur Municipal Corporation is a deemed licensee under Electricity Act 2003 which is continuing as the one and only local self government undertaking, performing the function of Distribution Licensee in the State of Kerala. It has an operational history of more than 80 years, starting from August 1937, when the generation & distribution business of Cochin State Power & Light Corporation Ltd was purchased by the then Thrissur Municipality. The current licence area of the TCED corresponds to the administrative limits of the old Thrissur Municipality covering an area of approximately 12.65 sqkm, even though the administrative jurisdiction of the Thrissur Corporation covers an area of approximately 101.42 sqkm.
2. The Commission had notified the KSERC (Terms and Conditions for Determination of Tariff) Regulations (herein after referred to as Tariff Regulations, 2018) on 26-10-2018. As per Regulation 10(1) of the said regulations, every distribution business/licensee shall file, on or before the thirty first day of October 2018, the petition for approval of Aggregate Revenue Requirement and determination of tariff for each year of the Control Period. The licensee has filed the petition on ARR & ERC for the control period, 2018-19 to 2021-22 as per the Tariff Regulation 2018 on 28-12-2018 in the Multi Year Tariff Framework. A summary of the ARR-ERC contained in the Petition are as under:

Table – 1
Comparative Statement of ARR & ERC

Particulars	2016-17 (As per Accounts) (Rs.lakh)	2016-17 (Trued Up) (Rs.lakh)	2017-18 ARR Approved (Rs.lakh)	2018-19 (Projected) (Rs.lakh)	2019-20 (Projected) (Rs.lakh)	2020-21 (Projected) (Rs.lakh)	2021-22 (Projected) (Rs.lakh)
Purchase of power	9334.40	9343.80	11637.86	10579.90	10966.68	11352.72	11649.14
R & M Expenses	83.19	54.61	57.81	100.67	110.73	121.80	133.99
Employee Cost	1112.55	941.40	996.47	1261.15	1435.62	1578.08	1735.17
A & G Expenses	338.64	102.57	272.29	356.82	371.61	387.57	404.82
Depreciation	221.02	198.81	221.02	239.28	269.48	392.78	441.71
Interest & Finance Charges	188.86	147.61	248.32	242.61	264.44	288.25	314.19
Statutory Surplus/ RoE	85.43	85.43	50.63	88.29	97.53	139.31	172.35
Total Expenditure	11364.10	10874.23	13484.66	12868.71	13516.08	14260.51	14851.35
Revenue from sale of power	11122.77	11122.77	12703.90	11918.55	12297.69	12676.83	13055.97
Non tariff Income	891.71	1343.40	720.50	732.68	725.69	719.25	713.38
Total Income	12014.49	12466.17	13424.40	12651.23	13023.38	13396.08	13769.35
Revenue Surplus /(Gap)	650.38	1591.94	(60.26)	(217.48)	(492.70)	(864.44)	(1082.00)

3. As shown above, the licensee proposes revenue gap for each year of the control period. The petition was admitted as OA 9/2019. The Commission vide letter dated 27-02-2019 sought clarifications and decided to conduct the public hearing on 21-03-2019. The licensee submitted the reply on the clarifications on 20-03-2019.

Hearing on the Matter

4. The Commission conducted public hearing on the application for the approval of ARR& ERC for the control period 2018-19 to 2021-22 filed by M/s Thrissur Corporation Electricity Department (TCED), at the Conference Hall, Government Guest House, Ramanilayam, Thrissur on 21-03-2019. The licensee was represented by Sri. M.Sugadhakumar, Asst.Secretary, Sri. Jomon, Sr. Superintendent, Sri. T.S.Jose, Electrical Engineer and other officers. Sri. T.S.Jose presented the details of the application and responded to the queries of the Commission. The main points submitted in the petition are briefed below.
- The licensee for the control period has projected increase in the sale and the number of consumers for each year of the control period. The major revenue is realized from LT–I, LT VII-A, HT II B & HT- IV category and the revenue projections are made considering the prevailing tariff. The licensee has proposed a 2% to 4 % increase in the sales for different categories of consumers for each year of the control period.

- The distribution loss proposed for each year of the control period is 7.60%
- The non-tariff income projected by the licensee includes meter rent, interest from deposits, etc. The licensee has also included charges such as testing fee, recovery consequent to detection of theft of power, meter box charges, pole rental charges etc under non-tariff income.
- The Employee cost of TCED includes salary, DA and other benefits to serving employees and pension payments to the retired employees. The licensee has stated that the increase in Basic Salary for the year 2018-19 and 2019-20 is mainly due to the projection being based on the Salary pay revision of 2013.
- The repair and maintenance cost for each year of the control period is projected considering an increase of 10% in the R&M expenses. The major expenditure is towards the R&M of Lines & Cable Networks.
- The A & G Expenses proposed, includes rent, section 3 duty, Insurance, telephone, postage, audit charge, consultancy charges, vehicle expenses, bank charges, license fee advertisement expenses etc.
- TCED has proposed only interest on security deposit as part of interest and finance charges for the control period.
- The licensee proposed a capital investment plan to the tune of Rs.12979.86 lakh for the control period. The major capital investment proposed is the 110 kV substation at Kottapuram and 10 MW Small Hydel Project
- Depreciation for each year of the control period has been projected including the capital expenditure for each year of the control period under the straight line method as per the Tariff Regulations 2018.
- The licensee has claimed Return on net fixed assets at the rate of 3%.

5. Smt. Mehrunisa, Executive Engineer TRAC, Sri. Manoj.G, AEE, TRAC and Sri. Ajith Kumar.G, DAO, TRAC represented KSEB Ltd. Sri. Manoj.G presented the counter statement/comments of KSEB Ltd. and submitted written remarks on the application. The major points raised by KSEB Ltd are abstracted below.

- The distribution loss claimed by TCED from 2018-19 to 2021- 22 is around 7.6% and there is no indication of reduction of distribution loss during the control period proposed by TCED
- The O&M expenses claimed by licensee in petition for 2018-19 to 2021-22 is more than the norms approved by the Commission. KSEB Ltd submitted that

the O&M expense comes under controllable expense and the same may be limited to the norms approved by the Commission.

- It was also pointed out that the licensee had not considered the remarks by the Commission while proposing the rent for the control period.
- The revision of retail tariff in April 2017 is not seen reflected in the average realization projected by the licensee.
- With regard to the capital investments proposed for the control period, the Commission may consider the same only after submission of the detailed capital expenditure plan with proper justification and reasons for the capital expenditure.
- KSEB Ltd also stated that the BST of TCED may be revised considering the cumulative revenue surplus of Rs 11312.48 Lakh at the end of 2015-16 and the revenue may be passed on to the consumers in Kerala.
- KSEB Ltd also submitted that TCED has not complied with the direction of the Commission on the signing of PPA with KSEBL and mentioned that punitive action for non compliance if deemed fit may be taken.

6. The Commission during the hearing stated that the licensee may carry out the capital investment only after conducting proper study on whether the projects are feasible. Expenditure on unviable capital investments if any made by the licensee shall not be passed on to the consumers. The Commission also stated that the capital investments shall be done only after obtaining prior approval from the Commission. The Commission sought clarifications on the petition and directed the licensee to submit the reply on the counter statement submitted by KSEB Ltd and the details sought on or before 20-04-2019. The licensee vide letter dated 16-04-2019 submitted the addition clarifications and the reply to the comments raised by KSEB Ltd.

7. 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. The Commission has increased the energy charges from Rs.5.85/kWh to Rs. 6.05/kWh and demand charges from Rs.300/kVA per month to Rs.340/kVA per month. Based on the tariff revision, the licensee vide letter dated 02-09-2019 submitted the revised projections for the control period. Based on the revisions made, a comparative statement of the ARR & ERC is tabulated hereunder.

Table – 2
Summary of the Projected ARR&ERC based on Revised Tariff

Particulars	2018-2019 (Projected) (Rs.lakh)	2019-2020 (Projected) (Rs.lakh)	2020-2021 (Projected) (Rs.lakh)	2021-2022 (Projected) (Rs.lakh)
Purchase of power	10579.90	11454.44	11855.94	12164.79
R & M Expenses	100.67	110.73	121.80	133.99
Employee Cost	1261.15	1435.62	1578.08	1735.17
A & G Expenses	356.82	371.61	387.57	404.82
Depreciation	239.28	269.48	392.78	441.71
Interest & Finance Charges	242.61	264.44	288.25	314.19
Statutory Surplus/ RoE	88.29	97.53	139.31	172.35
Total Expenditure	12868.71	14003.85	14763.73	15367.02
Revenue from sale of power	11918.55	12712.65	13230.11	13609.25
Non tariff Income	732.68	725.69	719.25	713.38
Total Income	12651.23	13438.34	13949.36	14322.63
Revenue Surplus /(Gap)	(217.48)	(565.51)	(814.37)	(1044.39)

Analysis and decision of the Commission

8. 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. 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:
9. **No. of Consumers & Sale of power:** - As per Regulation 10 (8) of Tariff Regulations 2014, 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.

10. The number of consumers and the sales proposed for the control period is as shown below.

Table – 3
Projection of number of Consumers & Energy sales for the control period

Particulars	No. of consumers				Sales MU			
	2018-19	2019-20	2020-21	2021-22	2018-19	2019-20	2020-21	2021-22
LT-I Single Phase	11,011	11,341	11,681	12,031	17.07	17.73	18.39	18.88
LT-I-Three Phase	10,139	10,443	10,756	11,079	24.20	25.13	26.06	26.76
LT-VI A	528	544	560	577	3.81	3.96	4.10	4.21
LTV A	197	203	209	215	0.07	0.07	0.08	0.08
LTVI A	252	260	268	276	2.73	2.83	2.94	3.02
LTVI B	449	462	476	490	2.60	2.70	2.80	2.87
LTVI C	488	503	518	534	5.04	5.24	5.43	5.58
LTVI D	25	26	27	28	0.08	0.08	0.08	0.09
LTVI E	34	35	36	37	0.06	0.06	0.07	0.07
LTVI F	604	622	641	660	5.55	5.76	5.97	6.13
LTVI G	34	35	36	37	0.29	0.30	0.31	0.32
LTVII A	13,327	13,727	14,139	14,563	37.51	38.95	40.40	41.48
LTVII B	1,607	1,655	1,705	1,756	0.90	0.94	0.97	1.00
LTVII C	30	31	32	33	0.40	0.42	0.44	0.45
LTVIII B	187	193	199	205	1.94	2.01	2.08	2.14
LT IX	86	89	92	95	0.09	0.10	0.10	0.10
LTII	1	1	1	1	0.00	0.00	0.00	0.00
LT III A	13	13	13	13	0.08	0.08	0.08	0.08
HT-I A	3	3	3	3	0.38	0.40	0.41	0.42
HT-I B	1	1	1	1	0.19	0.20	0.21	0.21
HT-II A	4	4	4	4	1.17	1.22	1.26	1.29
HT-II B	14	42	43	44	15.18	15.77	16.35	16.79
HT-IV	93	96	99	102	30.13	31.29	32.45	33.32
Total	39,127	40,329	41,539	42,784	149.48	155.23	160.98	165.29

11. The licensee for the control period had proposed increase in the sales and the number of consumers in all categories. The major increase proposed in the number of consumers is under LT-I, LT VI F, LT VIIA, LT VII B and HT II B category. The licensee has proposed an increase of 2% to 4% in the sales for each category of consumers. Major number of the consumers of TCED fall under LT-I, LT VII-A and the major sale

is contributed by LT-I, LT VII-A, HT II B & HT- IV category. A comparison of the total sales and the number of consumers is shown below

Table – 4
Comparison of the number of Consumers & Energy sales

Particulars	No.of consumers				Sales MU			
	2018-19	2019-20	2020-21	2021-22	2018-19	2019-20	2020-21	2021-22
LT-I	21,150	21,784	22,437	23,110	41.27	42.86	44.45	45.64
LT VII A	13,327	13,727	14,139	14,563	37.51	38.95	40.40	41.48
Other LT	4535	4672	4813	4957	23.64	24.55	25.45	26.14
Total LT	39,012	40,183	41,389	42,630	102.42	106.36	110.30	113.26
HT-II B	14	42	43	44	15.18	15.77	16.35	16.79
HT-IV	93	96	99	102	30.13	31.29	32.45	33.32
Other HT	8	8	8	8	1.74	1.82	1.88	1.92
Total HT	115	146	150	154	47.05	48.88	50.68	52.03
Total	39,127	40,329	41,539	42,784	149.48	155.23	160.98	165.29

12. The licensee for the control period has projected increase in the sale and the number of consumers for each year of the control period compared to the previous years. The percentage increase in the number of consumers and the sales over the years is as shown below.

Table – 5
Percentage increase in the number of consumers & energy sales over the years

Particulars	2015-16 As per Accounts	2016-17 As per Accounts	2017-18 As per Accounts	2018-19 Projected	2019-20 Projected	2020-21 Projected	2021-22 Projected
Number of consumers	37774	38365	39111	39127	40329	41539	42784
% Increase in the number of consumers over the previous year		1.56%	1.94%	0.04%	3.07%	3.00%	3.00%
Sales in MU	139.19	140.64	143.73	149.48	155.23	160.98	165.29
% Increase in the sale over the previous year		1.04%	2.20%	4.00%	3.85%	3.70%	2.68%

13. Based on the details, it is seen that the increase in the sales projected for the control period is between 2% to 4%. The licensee has proposed a total increase in the number of consumers of 3% for each year of the control period. The projection made for number of consumers for 2018-19 is low. Considering the increase in the sales proposed for the control period the Commission approves the sales as projected for the control period.

14. **Energy requirement & Distribution Loss:** As per Regulation 72, the licensee is to provide voltage level distribution loss and distribution loss trajectory for the control period. Necessary supporting studies have to be furnished along with the application. 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.

15. The licensee has proposed an increase in the energy requirement to cater to the proposed increase in the sale for the control period. The licensee for the control period has not proposed any distribution loss reduction trajectory. The licensee has proposed a distribution loss of 7.60% for each year of the control period as shown below.

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

Year	2018-19	2019-20	2020-21	2021-22
	Projected	Projected	Projected	Projected
Energy Requirement (MU)	161.78	168.01	174.22	178.89
Energy sales (MU)	149.48	155.23	160.98	165.29
Distribution loss (MU)	12.30	12.78	13.24	13.60
Distribution loss (%)	7.60%	7.61%	7.60%	7.60%

16. The details of the actual distribution loss for the previous years are shown below.

Table – 7
Past data of distribution loss and energy input

Year	2016-17	2017-18
	As per Accounts	As per Accounts
Energy Requirement (MU)	152.21	154.94
Energy sales (MU)	140.64	143.73
Distribution loss (MU)	11.57	10.96
Distribution loss (%)	7.60%	7.25%

17. As per Regulation 72, the licensee is to provide distribution loss trajectory for the control period. Distribution loss is a controllable parameter and the licensee is to take efforts to reduce the distribution loss. The licensee has achieved a distribution loss of 7.25% in 2017-18.

18. As per the clarifications submitted vide letter dated 16-04-2019, the licensee has stated that TCED has commissioned two solar power plant with installed capacity of

200 kW & 150 kW. The energy input from the plant has not been seen accounted in the energy input. **In this context, the Commission directs that while showing the total energy input, TCED shall include the generation from the own sources such as Solar energy plant as well as purchases from KSEB Ltd. The licensee shall submit the same accordingly while filing the application for truing up of accounts for the relevant years.**

19. Considering the loss reduction achieved by the licensee in 2017-18, the Commission sets distribution loss reduction targets as shown below.

Table – 8
Approved Distribution loss and energy input for the control period

Year	2018-19	2019-20	2020-21	2021-22
	Projected	Projected	Projected	Projected
Energy Requirement (MU)	160.73	166.47	172.17	176.31
Energy sales (MU)	149.48	155.23	160.98	165.29
Distribution loss (MU)	11.25	11.24	11.19	11.02
Distribution loss (%)	7.00%	6.75%	6.50%	6.25%

20. **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 and the number of consumers. The details of the projection are shown below.

Table – 9
Projected Power Purchase Cost

Particulars	2018-19	2019-20	2020-21	2021-22
Energy Purchase (MU)	161.78	168.01	174.22	178.89
Maximum demand (kVA)	371923	379363	386950	394690
Demand charge (Rs./kVA)	300.00	300.00	300.00	300.00
Total demand charge (Rs.lakh)	1115.77	1138.09	1160.85	1184.07
Energy charge (Rs./kVA)	5.85	5.85	5.85	5.85
Total energy charge (Rs. Lakh)	9464.13	9828.59	10191.87	10465.07
Power purchase cost (Rs. Lakh)	10579.90	10966.68	11352.72	11649.14
Average Power purchase cost (Rs/unit)	6.54	6.53	6.52	6.51

21. 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 TCED as shown below.

Energy Charge (Rs. per unit)	Pre revised Tariff	5.85
	Revised Tariff w.e.f 08-07-2019	6.05
Demand Charge (Rs. kVA per month)	Pre revised Tariff	300.00
	Revised Tariff w.e.f 08-07-2019	340.00

22. The licensee vide letter dated 02-09-2019 submitted the revised power purchase cost based on the revised tariff. The revised power purchase cost submitted by the licensee for the years of the control period is shown below.

Table – 10
Projected Power Purchase Cost based on revised tariff

Year	Rs.lakh
2018-19	10579.90
2019-20	11454.44
2020-21	11855.94
2021-22	12164.79

23. The actual power purchase cost for the year 2017-18 was Rs.10123.63 lakh for a sale of 154.69 MU. Considering the loss reduction target fixed for each year of the control period, the sale of power has been approved in Table 8 above and the revised tariff applicable for the remaining years of the control period the power purchase cost approved is shown below.

Table – 11
Approved Power Purchase Cost

Particulars	2018-19	2019-20	2020-21	2021-22
Energy Purchase (MU)	160.73	166.47	172.17	176.31
Maximum demand (kVA)	371923	379363	386950	394690
Demand charge (Rs./kVA)	300.00	300.00/ 340.00	340.00	340.00
Total demand charge (Rs.lakh)	1115.77	1249.04	1315.63	1341.65
Energy charge (Rs./kVA)	5.85	5.85/6.05	6.05	6.05
Total energy charge (Rs. Lakh)	9402.71	9982.04	10416.28	10666.76
Power purchase cost (Rs. Lakh)	10518.48	11231.08	11731.91	12008.41

24. **O&M Expenses:** Operation & maintenance includes controllable expenses like Employee cost, Repair & Maintenance Expenses & Administrative & General Expenses. The Commission as per Regulation 79(8) of the KSERC (Terms and conditions for determination of tariff) Regulations, 2018 has approved the Operation & Maintenance expense of TCED for the control period. The licensee has projected the Operation and

Maintenance Expenses higher than the ceiling level specified in the regulation. A comparison of the projections made by the licensee and the normative amount approved by the Commission is shown below.

**Table – 12
Comparison of the O&M Expenses**

Particulars	2018-19		2019-20		2020-21		2021-22	
	Projection (Rs.lakh)	Norms (Rs.lakh)	Projection (Rs.lakh)	Norms (Rs.lakh)	Projection (Rs.lakh)	Norms (Rs.lakh)	Projection (Rs.lakh)	Norms (Rs.lakh)
Employee cost	1261.15	1254.28	1435.62	1314.98	1578.08	1378.63	1735.17	1445.36
R&M Expenses	100.67		110.73		121.80		133.99	
A&G Expenses	356.82		371.61		387.57		404.82	
Total	1718.64	1254.28	1917.96	1314.98	2087.45	1378.63	2273.98	1445.36

25. Employee cost: The licensee has projected the employee cost higher than the actual employee cost booked in their account over the previous years. The Employee cost of TCED includes salary, DA and other benefits to serving employees and terminal benefits etc to the retired employees. The comparison of the split up of the actual employee cost for the previous years and the projected employee cost for the years of the Control period are shown below:

**Table-13
Comparison of employee cost over previous years**

Particulars	2016-17 As per Accounts (Rs.lakh)	2016-17 Trued Up (Rs.lakh)	2017-18 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)
Salaries	801.44	941.40	741.87	807.04	940.71	1033.28	1135.07
Stipend & Wages	93.41		111.53	206.75	227.42	250.17	275.18
Salary Arrear	-		122.75	-	-	-	-
Pension Contribution	112.52		106.35	118.15	124.06	136.46	150.11
Other Allowances	2.10		11.23	2.32	2.55	2.81	3.09
Earned Leave Encashment	92.91		72.69	112.42	123.66	136.03	149.63
Bonus/ Festival Allowance	8.56		11.33	12.46	13.71	15.08	16.59
Medical Expenses	1.61		-	2.00	3.50	4.25	5.50
Total	1112.55	941.40	1177.75	1261.15	1435.62	1578.08	1735.17

26. In the details submitted, the licensee has stated that the increase in Basic Salary for the year 2018-19 and 2019-20 is mainly due to the projection being based on the 2013

Salary Pay scale. Previously the Salary was being paid based on the 2008 pay scale as the 2013 pay scale was awaiting approval. The licensee has stated that they have received the Govt. approval for the 2013 pay scale in 2018-19. Accordingly the projections for the remaining years have been done based on the new pay scale. With regard to the increase in Stipend & Wages proposed for the Control Period the licensee has stated that the Basic wage rate has been revised from Rs 300 to Rs 600 which has led to increase in the amount than that of the year 2016-17. The stipend and the wages of the licensee for the years of the control period is significantly high compared to the actual amount over the previous year. The projection of the stipend and wages is almost double compared to the actual amount over the previous year. While truing up of the accounts of the previous year the Commission has commented on the matter. In view of the heavy employee cost vis-à-vis the scale of operation of the licensee, the Commission hereby directs the licensee to find out means for controlling employee expenses. The licensee may also take note of the fact that employee cost being a controllable item, non-prudent expenditure shall not be passed on to the consumers.

27. R&M Expenses: The licensee, for the control period has projected the repair and maintenance cost considering a 10% increase over the actual repair and maintenance cost incurred by the licensee. A comparison of the actual R&M expense for 2016-17 & 2017-18 and the years of the control period is as shown below.

Table-14
R&M expenses proposed for the control period

Particulars	2016-17 (As per Accounts) (Rs.lakh)	2016-17 (Trued Up) (Rs.lakh)	2017-18 (As per Accounts) (Rs.lakh)	2018-19 Projection (Rs.lakh)	2019-20 Projection (Rs.lakh)	2020-21 Projection (Rs.lakh)	2021-22 Projection (Rs.lakh)
Civil Works	1.23	54.61	0.40	1.49	1.64	1.80	1.98
Lines & Cable Networks	71.98		82.61	87.09	95.80	105.38	115.92
Vehicles	4.65		3.09	5.62	6.18	6.80	7.48
Furniture & Fixtures	0.79		0.12	0.95	1.05	1.15	1.27
Office Equipment	4.55		4.56	5.51	6.06	6.66	7.33
Gross R&M Expenses	83.19	54.61	90.79	100.67	110.73	121.80	133.99
%Increase over previous year			9.13%	10.88%	10.19%	9.99%	10.00%

28. As per the split up submitted in the petition, major expenditure is towards the R&M of Lines & Cable Networks. The licensee has not submitted the split up of the said repair

and maintenance. The Commission directed the licensee to submit the split up of the projection under R&M for Lines & Cable Networks. The licensee vide letter dated 20.03.2019 has mentioned that the expense is towards the repairs of transformers & other distribution assets, consumption of stores & spares, labour and contract expenses relating to works carried out in connection with supply disruptions due to damages and faults. The licensee has also stated that they are planning to carry out for the first time extensive Power Equipment Testing at the substations. The licensee has not submitted proper split up details of the proposed amounts as sought by the Commission.

29. The Commission had considered the past trends of the actual R&M expenditure. The actual R&M expenses booked by the licensee for the year 2015-16 were Rs. 69.00 lakh. The Commission had approved only an amount of Rs.51.59 lakh as per the norms approved by the Commission in the Tariff Regulations, 2014. When compared to the actual expenses of 2015-16, the percentage increase in 2016-17 is more than 20%, whereas it is 10% for the subsequent years. As per the Tariff Regulations, 2018 all components of O&M expenses are controllable expenses and as per Regulation 14 (2), the aggregate loss on account of controllable factors shall be borne by the distribution licensee and shall not be passed on to the consumer in any manner. The licensee is directed to take efficient measures to reduce the repair and maintenance expenses and keep it at prudent levels.

30. **Administrative & General Expenses:** The A & G Expenses proposed, includes various items such as rent, rates and taxes, insurance, telephone charges, internet and related charges, legal charges, audit fees, consultancy charges, printing and stationary, advertisement charges, DSM expenses, statutory fee including payments to SERC etc. A comparison of the actual expenses and the projection made by the licensee for the control period is shown below.

Table 15
Details of A&G Expenses

Particulars	2016-17 (As per Accounts) (Rs.lakh)	2016-17 (Trued Up) (Rs.lakh)	2017-18 (As per Accounts) (Rs.lakh)	2018-19 (Projection) (Rs.lakh)	2019-20 (Projection) (Rs.lakh)	2020-21 (Projection) (Rs.lakh)	2021-22 (Projection) (Rs.lakh)
Rent rates Taxes	172.03	19.28	172.03	172.03	172.03	172.03	172.03
Insurances	2.63	2.63	2.62	3.06	3.31	3.57	3.86
Telephone & Internet Charges	4.33	4.33	4.75	5.05	5.45	5.89	6.36

Legal Charge	2.06	2.06	2.50	2.40	2.59	2.80	3.02
Consultancy Charges	14.51	14.51	1.86	16.92	18.27	19.73	21.31
Conveyance Charge	4.38	4.38	4.61	5.11	5.52	5.96	6.44
Other Professional Charge	6.47	6.47	5.38	7.55	8.15	8.81	9.51
Training to staff	5.68	5.68	2.03	6.63	7.16	7.73	8.35
License fee And other related charges	5.01	5.01	4.55	5.84	6.31	6.81	7.36
Other Expenses	18.08	18.08	23.07	11.54	12.47	13.46	14.54
Printing & Stationery	5.06	5.06	8.62	5.90	6.37	6.88	7.43
Advertisement	8.31	8.31	2.80	9.69	10.47	11.31	12.21
Miscellaneous Expenses	6.73	6.73	2.82	7.84	8.47	9.15	9.88
Bank Charges	0.06	0.06	0.80	0.07	0.08	0.08	0.09
Sec 3 Duty	83.32	-	84.48	97.18	104.96	113.35	122.42
TOTAL	338.64	102.57	394.69	356.82	371.61	387.57	404.82

31. The major claim booked under A&G expense are towards Rents & taxes and section 3(1) duty. Regarding rent, the Commission in the ARR&ERC order dated 15-5-2013 for the year 2013-14 had clearly indicated the guidelines on which the rent is to be estimated and also directed to furnish the certificate from PWD on fixation of rent. However, no attempt is seen to have been made to consult PWD for fixation of fair rent. The Commission had discussed the matter in detail vide the order dated 19-05-2014 on ARR&ERC of the licensee for the year 2014-15. Since the licensee had not taken a decision on the matter, the Commission had issued specific directions while approving the rent in the truing up of accounts for 2015-16. The decision was based truing up the accounts of the year 2013-14 & 2014-15 approving a rent of Rs 17.20 lakh to approve 10% of the claim. In the truing up for the year 2015-16, the Commission approved an amount of Rs.18.21 lakh considering an escalation rate of 5.85% (CERC escalation rate for the period) from Rs.17.20 lakh which was approved for the year 2014-15. The Commission had sought clarification on the high rent component and TCED submitted that the issue is under the discussion of the Corporation Council. The Commission notes that this matter has been pending for the last five years and hereby directs the licensee to take a final decision immediately.

32. With regard to section 3(1) duty as per the Kerala Duty Act 1963, Commission has not been admitting the same as revenue expenditure. The Section 3(1) duty is a statutory levy. Section 3 of the said Act is quoted hereunder,-

“3. Levy of electricity duty on sales of energy by licensees.- (1) Save as otherwise provided in sub-section (2); every licensee in the State of Kerala shall pay every month to the Government in the prescribed manner, a duty calculated at 6 naye paise per unit of energy sold or a price more than 12 naye paise per unit;

Provided that no duty under this sub-section shall be payable by the Kerala State Electricity Board on the energy sold by it to another licensee.

(2) Where a licensee holds more than one licence, duty shall be calculated and levied under this section separately in respect of each licence.

(3) The duty under this Section on the sales of energy should be borne by the licensee and shall not be passed on to the consumer.”

33. As per the provisions of the Act, the same should be borne by the Licensee and shall not be passed on to the consumers.

34. The licensee has stated that the amount shown under Consultancy charges mainly constitutes of two items namely the fees paid to Kerala State Productivity Council (KSPC) engaged by TCED for Energy Auditing of its Feeders. The other expense is towards the charges paid to Chartered Accountancy firm engaged for Auditing and providing Consultancy Services. The Other Professional Charges includes Inspection Fees, Testing Fees for Vehicles and Technical Fees for Research and Survey. Miscellaneous Expenses includes Discount Allowed, Sitting fee For CGRF Meetings and other General expenses. Commission shall consider these expenses while trying up the accounts for the relevant years based on merits and documents submitted to validate the actual expenditure.

35. **O&M Expenses Approved:** The Commission has fixed the normative O&M expense in the Tariff Regulations, 2018. As per the Regulation 79(8) of the Tariff Regulations, 2018 all components of O&M expenses are controllable expenses and as per regulation 14 (2), the aggregate loss on account of controllable factors shall be borne by the distribution licensee and shall not be passed on to the consumer in any manner. Accordingly Commission is of the considered view that the O&M expense is to be approved only in line with Regulation 79(8). The approved O&M expense for the control period is shown below.

Table-16
O&M Approved for the control period

Year	Rs.lakh
2018-19	1254.28
2019-20	1314.98
2020-21	1378.63
2021-22	1445.36

36.The licensee is directed to limit the operation and maintenance expenses at the normative amount approved by the Commission.

37.**Interest and Finance Charges:** - The licensee had projected interest on security deposit as interest and finance charges for the control period. The licensee has stated that they have projected the interest on security deposit as 6.75%. The increase in the Amount on Security Deposit has been projected at a rate of 9.00%. The projection made for each year is tabulated hereunder.

Table 17
Details of Interest and finance charges projected

Particulars	2018-19 (Projections) (Rs.lakh)	2019-20 (Projections) (Rs.lakh)	2020-21 (Projections) (Rs.lakh)	2021-22 (Projections) (Rs.lakh)
Security Deposit	3594.29	3917.77	4270.37	4654.70
Interest at 6.75%	242.61	264.45	288.25	314.19

38.The licensee has projected an increase in the security deposit of 9.00% whereas the average growth rate on the projected revenue for the sale of power for the control period is only is 4.34%.The projection made by the licensee is on the higher side as the growth in revenue is only 4.34%. Accordingly the increase in security deposit for the years of the control period is worked out based on the growth rate of 4.34%.

39.As per the Regulation 29 (8) of the Tariff Regulations, 2018, interest shall be allowed on the amount held as security deposit in cash from users of the transmission system or distribution system and consumers at the bank rate as on first day of April of the financial year in which the application is filed. The bank rate as on April 1st 2018 is 6.25%. Accordingly the increase in security deposit at a growth rate of 4.34% and interest on security deposit as per the bank rate as on April 1st 2018 is shown below.

Table 18
Approved interest and finance charges for the control period

Particulars	2018-19 (Rs.lakh)	2019-20 (Rs.lakh)	2020-21 (Rs.lakh)	2021-22 (Rs.lakh)
Security Deposit	3594.29	3750.28	3913.04	4082.87
Interest at 6.25%	224.64	234.39	244.57	255.18

40. **Capital Investment proposed for the Control period:** The licensee has proposed capital investment plan for the control period. The year wise details of the proposed capital expenditure for the control period is shown below.

Table 19
Proposed Capital Expenditure Plan for the control period

Particulars	2018-19 Rs.lakh	2019-20 Rs.lakh	2020-21 Rs.lakh	2021-22 Rs.lakh	Year Not Specified Rs.lakh	Total Rs.lakh
New 110 kV substation at Kottapuram		3000.00				3000.00
Small Hydel Project of 10 MW at Averkutty or Kannakuzhy			3000.00	3000.00		6000.00
Online Payment System, Office Automation System and Management Information System		400.00				400.00
Solar Projects of 2MW		200.00	200.00	200.00		600.00
Smart Metering		200.00	300.00			500.00
Transformer Earthing and Yard Metalling		50.00				50.00
DTR Metering		15.00				15.00
Outage Management System		20.00				20.00
Inner Ring Outer Ring			250.00	250.00		500.00
Vehicles	25.00	20.00	10.00	10.00		65.00
Line Voltage Detector		1.00				1.00
Safety & Detection Equipments		10.30				10.30
Substation Automation					150.00	150.00
Laying of ACSR And ABC Conductor					586.10	586.10
Installation of New Transformers and RMU'S at various locations					557.54	557.54
Feeder related works					340.77	340.77
Other Works					184.15	184.15
Total	25.00	3916.30	3760.00	3460.00	1818.56	12979.86

41. The licensee in the petition has submitted a write up on the proposed capital expenditure which is briefed below.

- **Small Hydel Project (SHP)** : The licensee has proposed a New Small Hydel project of 10 MW and has stated that the hydel project is for meeting the Renewable Power Obligation (RPO). The licensee has inspected 4 sites Averkutty – Chittor, Ittyani, Kanjirakolly and Kannakuzhy and has narrowed it down to Averkutty and Kannakuzhy. The licensee had stated that the revenue earned can be used to reduce the Power Purchase cost of TCED. TCED has remitted the License Fee/premium for allotment of the project of Rs 191.25 Lakhs and an equivalent amount as Bank Guarantee to Energy Management Centre. The licensee has entrusted KSEB as the Consultant for preparation of Detailed Project Reports for the projects. It is stated that they have pegged the Project Investment Cost at Rs 10000 lakh for the Hydel Project and proposes a Funding Pattern of 70:30 with Debt and Equity. TCED proposes to avail Loans from either KIIFB or other Scheduled Commercial Banks for financing the project. For the control period TCED has projected a Loan fund of Rs 4200.00 lakh for the project.
- **New 110 KV Substation:** TCED has proposed to construct a new 110 KV Substation at Kottapuram. The licensee has proposed the funding pattern of 70:30. The licensee has stated that they have the option of availing loans from Scheduled Banks on the fixed deposits made in the banks which is the Security Deposit. The licensee has stated that they are also looking into the possibility of availing loan from KIIFB.
- **Solar projects:** TCED as part of its Renewable Power Purchase Obligation has set up and commenced Solar projects at various locations. TCED proposes to Install Roof Top Solar Plants at various locations having a total capacity of 2MW in the Control Period. The licensee has proposed the investment of Rs.200.00 lakh each for the years 2019-20, 2020-21 and 2021-22 The Total Projected Outlay comes to Rs 600.00 lakh. The licensee has also stated that an MOU has been signed with 'ANERT' for implementation of various projects of Central and State Power Departments. As part of its Solar Programme, TCED and ANERT are looking into the possibility of setting up a "Solar City" project which aims at providing Electric Car Charging Points at various locations, Solar Plants at Corporation owned Car Parking Locations

- **Online Payment System, Office Automation System and Management Information System:** TCED intends to get the Online Bill Payment system for its Consumers, an Office Automation System for streamlining the existing processes and operations of TCED. TCED has stated that the same shall lead to considerable savings in costs, efforts and time. Digitization of Existing Files and Electronic file maintenance and processing is also to be achieved. The licensee also intends to install a Management Information System to help in providing timely and high quality information. The total outlay expected for this comes to Rs 400.00 lakh. TCED has proposed the mentioned investments for the year 2019-20.
- **Transformer Earthing and Yard Metalling:** Rs.50.00 lakh is proposed for Transformer earthing and Yard Metalling in the Control Period in FY 2019-20.
- **DTR Metering:** As part of the DTR Metering Programme being done by TCED Rs 45.00 lakh has been spent towards installing DTR Meters. TCED is expecting to complete the DTR Programme in FY 2019-20 by incurring a further cost of Rs 15.00 lakh.
- **Smart Metering:** TCED as part of Central Government directions plans to implement Prepaid/Smart Metering in its Distribution Area. The Metering Programme is expected to be carried out using Energy Savings Performance Contract (ESPC) Model by which an Energy Savings Company (ESCO) is to be appointed for carrying out the same. Through this model only 30% of the Total Investment Cost shall be borne by TCED. The remaining 70% shall be borne by the Organization carrying out the work. In return for their efforts a certain portion of Savings achieved the Revenue/savings generated out of the project shall be shared with the Organization carrying out the work. The Programme is expected to be carried out with the help of the Central Government Owned EESL. TCED anticipates that the Project will be completed in 2 Phases in FY 2019-20 and FY 2020-21. The share of Investment of TCED in the project comes to Rs.500 Lakh. TCED expects the Expenditure to be Rs.200.00 lakh in FY 2019-20 and Rs.300.00 lakh in FY 2020-21.
- **Inner Ring Outer Ring:** As part of ensuring uninterrupted Energy availability to its Consumers TCED has proposed an Inner Ring Outer Ring distribution system in its Distribution area. TCED anticipates that the same shall be carried out in 2 Phases during the years 2020-21 & 2021-22 at a total cost of Rs.500 lakh

- **Outage Management System, Safety & Detection Equipments:** To identify areas and instances of Outages occurring in the Distribution system and to manage these Outages in the best cost effective manner with minimum downtime, TCED aims to establish an Outage Management System at a Cost of Rs 20.00 Lakhs. To identify voltage levels in the distribution system at various locations TCED aims to acquire Line Voltage Detector equipments at a Cost of Rs 1 Lakh and to ensure Safety to Employees of TCED when operating in the field Safety Kits and Safety equipments such as Safety Ladders are proposed to be acquired at a Cost of Rs. 10.30 Lakhs. The licensee has stated that the proposed expenditure is for the year 2019-20
- **Substation Automation:** TCED has proposed Rs. 150.00 lakh for automating the operations in its Substation
- **Other Development Works:** The licensee has proposed development works of Rs. 1668.55 Lakh which includes Rs.586.10 lakh for Laying of ACSR & ABC Conductor, Rs. 557.54 lakh for Installation of new transformers and RMU'S at various locations, Rs.340.77 lakh for feeder related works, and Rs.184.15 lakh for other miscellaneous works
- **Vehicles:** The licensee for the control period proposes Rs.65.00 lakh for the purchase of vehicles for the control period.

42. Other than the write up, TCED has not submitted any details with regard to the proposed Capital expenditure. The Commission had directed the licensee to submit the detailed project proposal along with the funding pattern and its source with proper investment plan and other details. The licensee vide letter dated 16-04-2019 stated that detailed capital investment plan for all the proposed projects will be submitted for approval of the Commission. This is yet to be submitted.

43. Regulations 22 to 27 of the Tariff Regulations, 2018 provide for the procedure to be followed for addition of assets and the claiming of depreciation. As per Regulation 22 (3), the capital cost approved by the Commission after prudence check shall form the basis for determination of tariff. Unless the approval is obtained, it is not eligible to be part of GFA. Though the Commission had directed the licensee to submit proper details of the proposed capital expenditure, the licensee has not provided any proper details or the cost benefit analysis for the proposed projects. The licensee is directed

to submit, as per the provisions of the Tariff Regulations, 2018, the detailed project estimate with cost benefit analysis, funding details and the likely impact on the quality of supply to the Commission for formal approval.

44. With regard to the proposal for construction of a 110 kV substation at Kottappuram, the Commission had already taken a considered view and had decided on the matter vide order dated 01-02-2018. The relevant portion of the said order is quoted hereunder,

“20. The Commission, based on the deliberations of the subject matter and also duly considering the materials and other documents placed before it, has decided and ordered as follows.

- (i) There is no immediate requirement for the construction of a second 110 kV s/s within the distribution area of TCED at Kottappuram, extending 110kV supply from the existing substation.*
- (ii) KSEB Ltd as the State Transmission Utility (STU) of the State has the responsibility to provide alternate feeding arrangements to M/s TCED in line with the increase in electricity demand of the distribution area of TCED.*
- (iii) KSEB Ltd and TCED may discuss and finalise the alternate cost effective proposals submitted by KSEB Ltd to cater the additional load requirement up to 18 MVA at the western side of the distribution area of TCED.*

The proposal to construct a 110 kV s/s at Kottapuram by M/s TCED, within their distribution area, is disposed as above.”

45. Though more than 17 months have elapsed since the Commission's Order, TCED is yet to submit any alternate proposal. Under such circumstances, the Commission reiterates the same direction on the capital investment proposal to construct a 110 kV substation at Kottapuram and does not approve the proposal in its current form.

46. TCED has proposed the Small Hydel Project of 10 MW at Averkutty or Kannakuzhy. The licensee has proposed the project for the years 2020-21 & 2021-22 of the control period. It is seen that the licensee has not yet finalized the project site and no detailed project report has been prepared. The Commission directs the licensee to conduct a detailed viability study and a comparative study on the per unit cost for generating electricity with the proposed SHP with other available sources and submit detailed project report before the Commission. The Commission directs the licensee to submit the reports of the detailed study conducted to the Commission and no investment on

the Small Hydel Project shall be made without obtaining the formal approval from the Commission.

47. The other capital additions proposed for the control period are online payment system, office automation system and management information system, solar projects, transformer earthing and yard metalling, DTR metering, smart metering, inner ring outer ring, outage management system, safety & detection equipments, substation automation, laying of ACSR and ABC conductor, installation of new transformers and RMU's at various locations, feeder related works and purchase of vehicles.
48. With regard to the rooftop solar project for the Control Period, the per mega watt cost proposed is Rs.300 lakh. The licensee has not submitted any cost estimates or other details of the project other than the write up. It is also seen that no details with regard to the generation capacity, area proposed etc are submitted before the Commission. The Commission directs the licensee to submit the detailed report of the cost and generation capacity of the proposed project, proposed area for the implementation of the project, efficiency of the panels etc. for obtaining approval from the Commission and only thereafter shall any investment on these projects be made.
49. With regard to the purchase of the vehicle proposed, the licensee has not submitted any details .The licensee shall submit before the Commission, the details of the type of vehicles proposed, the necessity of vehicles proposed prior to purchase of the same.
50. The licensee for the year 2019-20 has proposed a capital investment of Rs. 351.33 lakh for the Erection of one 8 MVA transformer and Installation of Transformer. The Commission vide letter dated 09-08-2019 had directed the licensee to include the proposal as part of the petition for the approval of capital expenditure for the control period . The same is still awaited.
51. Commission also considered the proposed investment for the online payment system, office automation system & management information system, transformer earthing & yard metalling, DTR metering, smart metering, inner ring outer ring, outage management system, safety & detection equipments, substation automation, laying of ACSR and ABC conductor, installation of new transformers and RMU's at various locations and feeder related works. Though some of the projects are essential, no detailed cost estimates and other details substantiating the projects has been submitted. Accordingly, the Commission is not in a position to accord in-principle

sanction for the proposed capital investment without proper documents to substantiate the investment. **The licensee is directed to submit the detailed proposal before the Commission at the earliest. The capital investment plan proposed shall be heard separately and based on the decision of the Commission, the investment proposals can be considered as part of ARR&ERC. Till such time the licensee shall not make any investment on these projects.**

52. **Depreciation:** - The licensee in the petition has claimed depreciation in the straight line method as per the schedule prescribed in the Tariff Regulations 2018. The licensee has projected depreciation for each year of the control period including the capital expenditure for each year of the control period. The claim made by the licensee is shown below.

Table 20
Gross fixed assets, asset additions and depreciation for the control period (Rs. lakh)

Particulars	Depreciation rate (%)	2018-19			2019-20		
		GFA at the beginning of the year (Rs.lakh)	Asset Addition (Rs.lakh)	Depreciation for the year (Rs.lakh)	GFA at the beginning of the year (Rs.lakh)	Asset Addition (Rs.lakh)	Depreciation for the year (Rs.lakh)
Land & land rights	0.00%	23.39	-	-	23.39	-	-
Civil Works (Solar)	5.28%	175.05	91.00	9.24	266.05	200.00	14.04
Distribution Lines	5.28%	2226.09	203.35	68.92	2429.44	491.50	79.04
Sub Station equipment	5.28%	2640.12	264.22	107.97	2904.34	351.33	119.40
Other items	3.34%	100.48	-	3.36	100.48	-	3.36
Meters	5.28%	525.03	21.60	27.72	546.63	238.76	28.86
Vehicles	9.50%	53.68	25.00	3.77	78.68	20.00	6.14
Furniture & Fixtures	6.33%	16.65	5.00	0.69	21.65	5.00	1.01
Office Equipments	6.33%	101.09	10.00	1.43	111.09	10.00	1.98
IT Equipment	15.00%	101.35	10.00	15.20	111.35	36.30	16.70
Other items	15.00%	23.62	3.00	3.19	26.62	400.00	3.42
Total GFA		5986.56	633.17	241.48	6619.73	1752.89	273.95
Less Consumer Contribution	5.28%	41.69	42.94	2.20	84.62	44.22	4.47
Total		5944.87	590.23	239.28	6535.10	1708.66	269.48

Particulars	Depreciation rate (%)	2020-21			2021-22		
		GFA at the beginning of the year (Rs.lakh)	Asset Addition (Rs.lakh)	Depreciation for the year (Rs.lakh)	GFA at the beginning of the year (Rs.lakh)	Asset Addition (Rs.lakh)	Depreciation for the year (Rs.lakh)
Land & land rights	0.00%	23.39	-	-	23.39	-	-
Civil Works (Solar)	5.28%	466.05	200.00	24.60	666.05	200.00	35.16
Distribution Lines	5.28%	2920.94	449.10	100.23	3370.04	362.30	121.21
Sub Station equipment	5.28%	3255.66	330.00	136.27	3585.66	182.77	112.83
Other items	3.34%	100.48	-	3.36	100.48	-	2.85
Meters	5.28%	785.39	326.14	41.47	1111.53	28.75	58.69
Vehicles	9.50%	98.68	10.00	4.33	108.68	10.00	5.87
Furniture & Fixtures	6.33%	26.65	15.00	1.32	41.65	15.00	2.27
Office Equipments	6.33%	121.09	5.00	2.60	126.09	5.00	2.92
IT Equipment	15.00%	147.65	250.00	21.99	397.65	100.00	48.37
Other items	15.00%	426.62	-	63.42	426.62	-	60.45
Total GFA		8372.61	1585.24	399.58	9957.85	903.82	450.92
Less Consumer Contribution	5.28%	128.85	45.55	6.80	174.40	46.92	9.21
Total		8243.77	1539.69	392.78	9783.46	856.90	441.71

53. It is seen that there is difference in the capital expenditure proposed for the control period and the asset additions given in Form D.3.5 of the petition for the control period. The asset addition considered by the licensee for the control period as per the form D 3.5 of the petition is tabulated hereunder.

Table 21
Asset additions proposed by the Licensee

Particulars	2018-19 Rs.lakh	2019-20 Rs.lakh	2020-21 Rs.lakh	2021-22 Rs.lakh	Total Rs.lakh
Civil Works (Solar)	91.00	200.00	200.00	200.00	691.00
Distribution Lines	203.35	491.50	449.10	362.30	1506.25
Sub Station equipment	264.22	351.33	330.00	182.77	1128.32
Meters	21.60	238.76	326.14	28.75	615.25
Vehicles	25.00	20.00	10.00	10.00	65.00
Furniture & Fixtures	5.00	5.00	15.00	15.00	40.00
Office Equipments	10.00	10.00	5.00	5.00	30.00
IT Equipment	10.00	36.30	250.00	100.00	396.30
Other items	3.00	400.00	-	-	403.00
Total GFA	633.17	1752.89	1585.24	903.82	4875.12
Less Consumer Contribution	42.94	44.22	45.55	46.92	179.63
Total	590.23	1708.66	1539.69	856.90	4695.48

54.As mentioned in para 50 the Commission has not approved the proposed asset additions due to want of details. Hence the proposed asset additions is not considered for allowing depreciation for the control period.

55.For the year 2017-18, the licensee has made an asset addition of Rs.449.79 lakh for which no formal approval of the Commission has been taken. The asset addition made by the licensee during 2017-18 is shown below.

Table-22
Asset addition submitted by the TCED for 2017-18

Particulars	Amount (in Lakh)
Distribution Lines	197.13
Substation Equipments	74.98
Meters	142.49
Furniture and fixture	1.08
Office Equipments	20.96
IT Equipments	5.90
Building	7.26
Total Gross Value of Additions	449.79

56.Commission is of the considered view that the actual asset additions can be considered for allowing deprecation only after obtaining approval from the Commission. The Commission while truing up the accounts for 2016-17 in order dated 01-08-2019 has approved depreciation of Rs.198.81 lakh as shown below.

Table 23
Depreciation approved for the control period

Particulars	Assets Rs. lakh	Depreciation Rs. lakh
Gross Fixed Assets as on 01-04-2016	5,319.77	221.02
Assets created out of Consumer Contribution and grants	420.60	
Less depreciation @ 5.28% for assets created out of consumer contribution		22.21
Net Depreciation to be allowed for the year		198.81

57.Since the asset additions proposed for the control period is not considered for allowing depreciation & no approval has been granted for the asset additions made in 2017-18, Commission decides to provisionally allow as depreciation of Rs.198.81 lakh for each year of the control period as approved while truing up the accounts for the year 2016-17.

Table 24
Depreciation approved for the control period

Particulars	2018-19 Rs.lakh	2019-20 Rs.lakh	2020-21 Rs.lakh	2021-22 Rs.lakh
Deprecation	198.81	198.81	198.81	198.81

58. **Return on Equity:-** 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 has calculated ROE at 3% on the net fixed assets at the beginning of the period. Accordingly the claim made by licensee at the rate of three percent on the net fixed assets at the beginning of the financial year as shown below.

Table-25
Return on Net Fixed Assets projected

Particulars	2016-17 (As per Accounts) (Rs.lakh)	2016-17 (Trued Up) (Rs.lakh)	2017-18 (As per Accounts) (Rs.lakh)	2018-19 Projection (Rs.lakh)	2019-20 Projection (Rs.lakh)	2020-21 Projection (Rs.lakh)	2021-22 Projection (Rs.lakh)
NFA at the beginning of the year	3268.22	3268.22	3410.14	3445.63	3796.58	5233.56	6380.47
Less Consumer Contribution	420.60	420.60	490.35	502.76	545.70	589.92	635.47
Amount eligible for ROE	2847.62	2847.62	2919.79	2942.87	3250.88	4643.64	5745.00
3 % of NFA eligible for ROE	85.42	85.42	87.59	88.29	97.53	139.31	172.35

59. Since the licensee has not furnished proper details on the asset addition proposed for the control period, the same has not been considered as part of the Gross Fixed Assets. Accordingly, based on the provisional approval on depreciation of Rs.198.81, the RoNFA approved for the control period is as shown below.

Table - 26
Return on NFA approved for the control period (Rs. Lakh)

Particulars	2018-19	2019-20	2020-21	2021-22
Net fixed assets at the beginning of the year	2870.60	2671.79	2472.98	2274.17
<u>Less</u> Fixed Assets financed by Consumer contribution	420.60	420.60	420.60	420.60
Balance Net Fixed assets on which Returns can be allowed	2450.00	2251.19	2052.38	1853.57
3% on Net fixed assets	73.50	67.54	61.57	55.61

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

Table 27
Aggregate Revenue Requirement approved for the control period (Rs. lakh)

Particulars	2018-19		2019-20		2020-21		2021-22	
	Projection (Rs.lakh)	Approved (Rs.lakh)	Projection (Rs.lakh)	Approved (Rs.lakh)	Projection (Rs.lakh)	Approved (Rs.lakh)	Projection (Rs.lakh)	Approved (Rs.lakh)
Power Purchase Cost	10579.90	10518.48	10966.68	11231.08	11352.72	11731.91	11649.14	12008.41
R&M Expenses	100.67	1254.28	110.73	1314.98	121.80	1378.63	133.99	1445.36
Employee cost	1261.15		1435.62		1578.08		1735.17	
A&G Expenses	356.82		371.61		387.57		404.82	
Depreciation	239.28	198.81	269.48	198.81	392.78	198.81	441.71	198.81
Interest and finance charges	242.61	224.64	264.44	234.39	288.25	244.57	314.19	255.18
Return on NFA	88.29	73.50	97.53	67.54	139.31	61.57	172.35	55.61
Total Expenditure	12868.71	12269.71	13516.08	13046.80	14260.51	13615.49	14851.35	13963.37

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

62. Revenue from Sale of Power: The licensee has projected increase the revenue from sale of power for each year of the control period. The category wise revenue from sale of power proposed by the licensee for each year of the control period is as shown below.

Table-28
Revenue Projections for the control period

Category	2018-19		2019-20		2020-21		2021-22	
	Sale	Revenue	Sale	Revenue	Sale	Revenue	Sale	Revenue
	(MU)	(Rs.Lakh)	(MU)	(Rs.Lakh)	(MU)	(Rs.Lakh)	(MU)	(Rs.Lakh)
Domestic	41.27	2126.94	42.86	2191.47	44.45	2256.00	45.64	2320.53
Non-Domestic	102.40	9468.18	106.33	9772.62	110.27	10077.06	113.22	10381.49
Agricultural	0.07	1.89	0.07	1.96	0.08	2.02	0.08	2.08
Industry	3.81	246.44	3.96	254.34	4.10	262.23	4.21	270.13
Streetlight	1.94	75.11	2.01	77.31	2.08	79.52	2.14	81.73
TOTAL	149.48	11,918.55	155.23	12,297.69	160.98	12,676.83	165.29	13,055.97

63. 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. Based on the revised tariff issued by the Commission, the licensee vide letter dated 02-09-2019 submitted the revised revenue from sale of power. 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-29
Revenue Projections for the control period

Particulars	2018-19				2019-20			
	Number of Consumers	Sales MU	Revenue from sale Rs.lakh	Average Tariff (Rs./unit)	Number of Consumers	Sales MU	Revenue from sale Rs.lakh	Average Tariff (Rs./unit)
LT-I Single Phase	11,011	17.07	738.22	4.32	11,341	17.73	843.22	4.76
LT-I-Three Phase	10,139	24.20	1,388.72	5.74	10,443	25.13	1,474.45	5.87
LTII	1	0.00	0.37	26.07	1	0.00	0.38	26.18
LT III A	13	0.08	11.19	14.71	13	0.08	11.76	14.89
LT-IV A	528	3.81	246.44	6.47	544	3.96	264.31	6.68
LTV A	197	0.07	1.89	2.65	203	0.07	2.19	2.96
LTVI A	252	2.73	182.60	6.69	260	2.83	191.66	6.76
LTVI B	449	2.60	191.40	7.37	462	2.70	198.77	7.37
LTVI C	488	5.04	537.24	10.65	503	5.24	555.11	10.60
LTVI D	25	0.08	1.38	1.79	26	0.08	1.70	2.13
LTVI E	34	0.06	3.67	6.02	35	0.06	3.93	6.21
LTVI F	604	5.55	534.98	9.64	622	5.76	556.59	9.66
LTVI G	34	0.29	28.40	9.71	35	0.30	38.44	12.66
LTVII A	13,327	37.51	3,724.26	9.93	13,727	38.95	3,912.23	10.04
LTVII B	1,607	0.90	56.16	6.21	1,655	0.94	60.33	6.43
LTVII C	30	0.40	32.37	8.00	31	0.42	33.96	8.08
LTVIII B	187	1.94	75.11	3.88	193	2.01	86.18	4.29
LT IX	86	0.09	16.75	18.05	89	0.10	18.39	19.08
HT-I A	3	0.38	28.65	7.53	3	0.40	30.88	7.81
HT-I B	1	0.19	13.91	7.29	1	0.20	15.22	7.68
HT-II A	4	1.17	80.78	6.90	4	1.22	85.88	7.07
HT-II B	14	15.18	1,239.83	8.17	42	15.77	1,283.58	8.14
HT-IV	93	30.13	2,784.23	9.24	96	31.29	3,043.47	9.73
Total	39,127	149.48	11918.55	7.97	40,329	155.23	12712.65	8.19

Particulars	2020-21				2021-22			
	Number of Consumers	Sales MU	Revenue from sale Rs.lakh	Average Tariff (Rs./unit)	Number of Consumers	Sales MU	Revenue from sale Rs.lakh	Average Tariff (Rs./unit)
LT-I Single Phase	11,681	18.39	893.07	4.86	12,031	18.88	915.35	4.85
LT-I-Three Phase	10,756	26.06	1531.91	5.88	11,079	26.76	1573.45	5.88
LT-IV A	560	4.10	275.53	6.72	577	4.21	283.43	6.73
LTV A	209	0.08	2.34	3.04	215	0.08	2.40	3.04
LTVI A	268	2.94	198.43	6.75	276	3.02	204.03	6.76
LTVI B	476	2.80	205.26	7.34	490	2.87	211.33	7.36
LTVI C	518	5.43	573.00	10.55	534	5.58	590.88	10.59
LTVI D	27	0.08	1.84	2.21	28	0.09	1.88	2.20
LTVI E	36	0.07	4.09	6.24	37	0.07	4.20	6.24
LTVI F	641	5.97	574.82	9.62	660	6.13	591.35	9.64
LTVI G	36	0.31	42.39	13.46	37	0.32	43.29	13.39
LTVII A	14,139	40.40	4054.02	10.04	14,563	41.48	4172.72	10.06
LTVII B	1,705	0.97	62.91	6.46	1,756	1.00	64.70	6.47
LTVII C	32	0.44	35.15	8.06	33	0.45	36.16	8.08
LTVIII B	199	2.08	91.34	4.39	205	2.14	93.54	4.37
LT IX	92	0.10	19.33	19.34	95	0.10	19.92	19.41
LTII	1	0.00	0.40	26.29	1	0.00	0.42	26.61
LT III A	13	0.08	12.17	14.86	13	0.08	12.50	14.86
HT-I A	3	0.41	32.28	7.87	3	0.42	33.26	7.90
HT-I B	1	0.21	15.96	7.76	1	0.21	16.41	7.78
HT-II A	4	1.26	89.36	7.09	4	1.29	92.03	7.11
HT-II B	43	16.35	1324.12	8.10	44	16.79	1363.03	8.12
HT-IV	99	32.45	3191.11	9.83	102	33.32	3282.97	9.85
Total	41,539	160.98	13230.11	8.22	42,784	165.29	13609.25	8.23

64. The major revenue is realized from LT-I, LT VII-A, HT II B & HT- IV category and the revenue from sale of power is increasing year on year considering the proposed increase in the sale of power. 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.

65. **Non-Tariff Income:** The non-tariff income projected by the licensee includes meter rent, interest from deposits, etc under this head. The licensee has also included charges such as testing fee, recovery consequent to detection of theft of power, meter box charges, pole rental charges etc under non-tariff income. The split-up details of Non-Tariff income claimed are shown below.

Table.30
Projected Non-tariff income for the control period

Particulars	2016-17 (As per Accounts) (Rs.lakh)	2017-18 (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)
Meter Rent/Service Line Rental	70.53	72.94	76.28	79.34	82.51	85.81
Miscellaneous Charges. Reasonable cost for providing supply, Testing fee, Reconnection fee, Penal charges etc	87.18	92.22	95.82	99.65	103.63	107.78
Interest from SD and FD	575.56	547.38	388.11	367.33	346.56	325.78
Commission for collection electricity duty	9.56	9.88	10.34	10.75	11.18	11.63
Income from sale of scrap etc.	1.41	64.11	2.62	2.72	2.83	2.94
Interest on adv. To Suppliers	58.45	52.01	63.22	65.75	68.38	71.11
Recovery of theft and pilferage of energy	13.01	14.19	14.08	14.64	15.22	15.83
Interest on delayed or deferred payment of bills	76.02	68.57	82.22	85.51	88.93	92.49
UJALA LED Income	-	73.28	-	-	-	-
Grand Total	891.71	994.58	732.68	725.69	719.25	713.38

66. The licensee has projected a lower non-tariff income during the control period when compared to the previous years and the same is reducing year after year. The Commission had sought clarification of the reason for the reduction in the non-tariff income. The licensee vide letter dated 16-04-2019 submitted that the decrease in the projection is due to the plan of TCED to utilize the surplus fund for the capital investments proposed for the control period. The licensee has not submitted the proper funding pattern of the proposed capital expenditure. The Commission had directed the licensee to submit the details, whereas the licensee in the letter stated that the detailed capital investment plan for all the proposed projects will be submitted for approval of the Commission. In the absence of proper details, the Commission is not in a position to quantify, to what extent the surplus amount is proposed to be utilized for the control period.

67. The Commission in the order on the truing up of accounts for the year 2016-17 dated 01-08-2019 has approved an accumulated surplus of Rs.12904.42 lakh till 2016-17. Considering the bank rate of 6.25% prevailing as on 01-04-2018 the

interest on accumulated surplus that is to be accounted as part of interest is Rs. 806.53 lakh. The licensee has accounted only a lower amount for each year of the control period. Considering the balance interest amount as part of the non tariff income, the total non tariff income approved for each year of the control period is shown below.

Table.31
Non-tariff income approved for the control period

Particulars	2018-19 Projected (Rs.lakh)	2019-20 Projected (Rs.lakh)	2020-21 Projected (Rs.lakh)	2021-22 Projected (Rs.lakh)
Total non tariff income proposed	732.68	725.69	719.25	713.38
Additional interest on accumulated surplus considered	418.42	439.20	459.97	480.75
Total Non Tariff Income	1151.10	1164.89	1179.22	1194.13

68. Revenue Surplus/ Gap: Based on the decisions above, the revenue surplus/gap approved for the control period is tabulated hereunder.

Table -32
Revenue Surplus/Gap projected by the licensee and approved by the Commission for the control period

Particulars	2018-19		2019-20	
	Projection (Rs. Lakh)	Approved (Rs. Lakh)	Projection (Rs. Lakh)	Approved (Rs. Lakh)
Revenue from sale of power	11918.55	11918.55	12297.69	12712.65
Other income	732.68	1151.10	725.69	1164.89
Total income	12651.23	13069.65	13023.38	13877.54
Power Purchase Cost	10579.90	10518.48	10966.68	11231.08
R&M Expenses	100.67	1254.28	110.73	1314.98
Employee cost	1261.15		1435.62	
A&G Expenses	356.82		371.61	
Depreciation	239.28	198.81	269.48	198.81
Interest and Finance Charges	242.61	224.64	264.44	234.39
Return on equity	88.29	73.50	97.53	67.54
Total Expenditure	12868.71	12269.71	13516.08	13046.80
Revenue Surplus (+)/ Gap (-)	(-)217.48	(+)799.94	(-)492.70	(+)830.74

Particulars	2020-21		2021-22	
	Projection (Rs. Lakh)	Approved (Rs. Lakh)	Projection (Rs. Lakh)	Approved (Rs. Lakh)
Revenue from sale of power	12676.83	13230.11	13055.97	13609.25
Other income	719.25	1179.22	713.38	1194.13
Total income	13396.08	14409.33	13769.35	14803.38
Power Purchase Cost	11352.72	11731.91	11649.14	12008.41
R&M Expenses	121.80	1378.63	133.99	1445.36
Employee cost	1578.08		1735.17	
A&G Expenses	387.57		404.82	
Depreciation	392.78	198.81	441.71	198.81
Interest and Finance Charges	288.25	244.57	314.19	255.18
Return on equity	139.31	61.57	172.35	55.61
Total Expenditure	14260.51	13615.49	14851.35	13963.37
Revenue Surplus (+)/ Gap (-)	(-)864.44	(+)793.84	(-)1082.00	(+)840.01

Order of the Commission

69. 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	13069.65	13877.54	14409.33	14803.38
Total Expenditure	12269.71	13064.80	13615.49	13693.37
Revenue Surplus (+)/ Gap (-)	(+)799.94	(+)830.74	(+)793.84	(+)840.01

Directives of the Commission

70. 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.
- (ii) Bring down the distribution loss to the level stipulated in this order.
- (iii) Limit the expenditure to the amounts approved in this order.

- (iv) Submit detailed capital investment plan before the Commission and obtain the formal approval of the Commission at the earliest.

Sd/-
K.Vikraman Nair
Member

Sd/-
S.Venugopal
Member

Sd/-
Preman Dinaraj
Chairman

Approved for issue

Sd/-
G.Jyothichudan
Secretary