BEFORE THE HON'BLE KERALA STATE ELECTRICITY REGULATORY COMMISSION, THIRUVANANTHAPURAM

IN THE MATTER OF:

PETITION FOR APPROVAL OF ARR, ERC, TARIFF PROPOSAL& CAPITAL INVESTMENT PLAN FOR CONTROL PERIOD 2018-22.

OBJECTIONS FILED BY:

THE KERALA HIGH TENSION AND EXTRA HIGH TENSION INDUSTRIAL ELECTRICITY CONSUMERS' ASSOCIATION, PRODUCTIVITY HOUSE, JAWAHARLAL NEHRU ROAD, KALAMASSERY 683104, ERNAKULAM DISTRICT

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OBJECTIONS OF THE KERALA HT & EHT INDUSTRIAL ELECTRICITY CONSUMERS' ASSOCIATION (THE OBJECTOR)TO THE PROPOSAL OF KERALA STATE ELECTRICITY BOARD LIMITED (THE PETITIONER) IN THE MATTER OF PETITION FOR APPROVAL OF ARR, ERC, TARIFF PROPOSAL & CAPITAL INVESTMENT PLAN FOR CONTROL PERIOD 2018-22. BEFORE THE HON'BLE KERALA STATE ELECTRICITY REGULATORY COMMISSION, THIRUVANANTHAPURAM

10th December 2018

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A1: BACKGROUND

OBJECTIONS OF THE KERALA HT & EHT INDUSTRIAL ELECTRICITY CONSUMERS' ASSOCIATION TO THE APPLICATION OF KERALA STATE ELECTRICITY BOARD LIMITED (THE PETITIONER) IN THE MATTER OF PETITION FOR APPROVAL OF ARR, ERC, TARIFF PROPOSAL & CAPITAL INVESTMENT PLAN FOR CONTROL PERIOD 2018-22.

The above-mentioned Objector most humbly begs to prefer the present objection against the application of the Petitioner in the matter of petition for approval of ARR, ERC, tariff proposal & capital investment plan for control period 2018-22 on the following facts and grounds amongst others.

1. The Objector is the Kerala HT & EHT Industrial Electricity Consumers' Association, comprising of 166 member consumers, including more than 29 major industries. Of the member HT & EHT industries, about 31 industrial consumers have contracted for a maximum demand of more than 2000 kVA each with the Petitioner and more than 20 industries draw power at HT and EHT level from the Petitioner.

2. For the proposed control period, HT/EHT consumers are expected to be accounted for about 27% of the total energy sales to consumers by the Kerala State Electricity Board Limited (KSEBL). They expected to contribute around29% to the total revenue from tariffs.[1]

3. Some characteristics of the industrial consumers that benefits KSEBL are:

   (a) They are the subsidizing category of consumers for KSEBL. Hence, they are the revenue earners ensuring better returns for KSEBL.

   (b) The Load curve and consumption pattern enable better capacity utilization and low Cost of Service for KSEBL in comparison to LT consumer categories.

[1] As per the petition submitted by KSEBL for ARR, ERC, tariff proposal & capital investment plan for control period 2018-22.

4. Section 61 (g) of the Electricity Act, requires the Hon'ble Commission to determine tariffs reflecting Cost of Supply of electricity and also to reduce cross-subsidies in a manner specified by the Commission. Section 61 (d) also mandates the Commission to encourage the principles of efficiency, economy, and competition. To safeguard the interests of the consumers and in the light of the provisions of the Electricity Act 2003, the Objector opposes petition for approval of ARR, ERC, tariff proposal & capital investment plan for control period 2018-22 various issues, which are discussed in this document.

5. That the Objector, without prejudice to all other rights available to it, wants to be heard in person and/or through its duly empowered pleader instructed by it on its behalf, by this Hon’ble Commission.

   Without prejudice to what has been stated herein this petition, the Objector craves leave of this Hon'ble Commission to make further submissions, if necessary, before this Hon'ble Commission, which may please be considered as additional submissions.

   Further, the Objector requests the Hon’ble Commission to provide an opportunity for submission and hearing on KSEBL’s tariff proposal, if it is submitted before the Commission at a later date.

A2: KEY OBJECTIONS

Energy Sales forecast

2.1 As per clause 71 "Sales forecast" of the Distribution Tariff Regulations, 2018

> ***"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"*

2.2 The Petitioner submitted that it has estimated the energy sale forecast for the control period based on the past actual data such as Category wise consumption, Compound Annual Growth Rate (CAGR) trends, actual consumption during the year 2018-19 till September-2018 and other relevant factors.

Table 1: Historical Energy sales (in MU) of KSEBL

Category	**FY 2011-12**	**FY 2012-13**	**FY 2013-14**	**FY 2014-15**	**FY 2015-16**	**FY 2016-17**	**FY 2017-18**
Domestic	7705.86	8313.36	8739.52	9367.26	9943.48	10280.74	10574.84
Commercial	2141.22	2224.06	2229.34	2418.28	2735.36	2957.95	3063.48
Industrial	1097.04	1101.96	1096.56	1096.93	1103.23	1131.91	1112.33
Agricultural	286.18	306.08	310.24	291.41	279.48	321.98	346.03
Streetlight	294.26	313.2	319.06	346.43	366.62	375.77	373.48
Sub Total (LT)	**11524.56**	**12258.66**	**12694.72**	**13520.31**	**14428.16**	**15068.35**	**15470.15**
HT category	2586.27	2687.56	2791.64	2988.14	3130.94	3301.83	3494.04

Category	FY 2011-12	FY 2012-13	FY 2013-14	FY 2014-15	FY 2015-16	FY 2016-17	FY 2017-18
EHT Category	1243.12	1217.59	1243.85	1158.45	975.06	826.38	1041.94
Railways	154.49	173.67	200.69	205.31	212.83	229.59	265.8
Bulk Supply	472.09	500.76	523.15	554.06	578.08	612.1	608.77
Total Sales	**15980.53**	**16838.24**	**17454.05**	**18426.27**	**19325.07**	**20038.25**	**20880.7**
Open Access				**4.43**	**135.25**	**441.55**	**378.02**
Total Energy sales (in MU)	15980.53	16838.24	17454.05	**18430.7**	**19460.32**	**20479.8**	**21258.71**

2.3 Based on the past data on the sales made available by the Petitioner, the Objector has estimated the sales forecast for the control period considering the CAGR and past year growth trends. Also, it is pertinent to mention that although there has been an increase of Sales every year, **the y-o-y increase has shown a decreasing trend.** The decrease in LT categories is mainly caused by LED bulb and solar penetration as well as the saturation caused by 100 % electrification.

2.4 The Objector is of the view that considering 6 year/ 5 year CAGR doesn't depict a true picture of the estimated sales figures and such estimations may lead to inflated projections, resulting in unnecessary burdening of costs on the consumers. In view of the same, the Objector has re-estimated the sales considering the average y-o-y increase, as the same would represent the fairer picture of the state's consumption.

2.5 The trend in HT and EHT sales category does not show a specific trend. Hence, the growth rate has been considered as per the y-o-y average growth rate in sales over the past years. Also, wherever the growth factors show a negative trend (for e.g. LT – Industrial category), the growth factors have been slightly modified to arrive at the Sales projections.

Table 2: Historical growth trends in Sales of KSEBL (MU)

Category	6 year CAGR	5year CAGR	4year CAGR	3 year CAGR	2 year CAGR	y-o-y increase (FY 18 over FY 17)
Domestic	5.44	4.96	4.90	4.13	3.14	2.87
Commercial	6.14	6.60	8.28	8.22	5.83	3.56
Industrial	0.23	0.19	0.36	0.47	0.41	-1.73
Agricultural	3.22	2.48	2.77	5.89	11.27	7.47
Street Lights	4.05	3.58	3.85	2.54	0.93	-0.61
HT Category						
HT I	4.57	4.39	4.18	4.23	5.95	5.59
HT II	37.03	43.62	55.27	11.57	6.32	6.13
HTIII	2.87	2.85	6.18	11.84	18.74	4.21
HT IV	-4.81	-5.83	-7.52	3.67	5.04	6.72
HT V	0.00	0.00	0.00	22.37	25.15	9.54
EHT Category						
EHT-1	-0.18	1.13	1.39	1.77	11.19	-1.25
EHT-II	-2.68	-2.15	-0.56	1.89	2.49	3.23
EHT-III		15.51	3.85	22.01	65.26	39.69
EHT Non industrial			3.74	2.54	1.28	8.36
Railway Traction	9.47	8.88	7.28	8.99	11.76	15.77
Bulk	4.33	3.98	3.86	3.19	2.62	-0.54
HT&EHT Total	**4.13**	**4.40**	**4.52**	**4.98**	**6.25**	**5.49**
Total	**4.78**	**4.67**	**4.92**	**4.70**	**4.25**	**3.41**

Table 3: Category wise sales (MU) as estimated by the Petitioner

Category	FY 2018-19	FY 2019-20	FY 2020-21	FY 2021-22
Domestic	10856.52	11439.87	11901.30	12381.33
Commercial	3168.22	3448.97	3660.73	3885.49
Industrial	1100.98	1134.68	1146.03	1157.49
Agricultural	350.02	368.65	377.80	387.19
Street Lights	380.84	404.36	420.75	437.81
LT II	4.90	5.05	5.10	5.15
LT IX	2.01	2.12	2.18	2.25
LT Total	**15863.49**	**16803.70**	**17513.89**	**18256.71**
HT I	2137.66	2280.91	2385.08	2494.01
HT II	797.91	864.87	918.70	975.88
HTIII	9.69	10.17	10.46	10.76
HT IV	671.26	727.59	772.88	820.98
HT V	15.41	16.51	17.33	18.20
HT Total	**3631.93**	**3900.05**	**4104.45**	**4319.83**
EHT I	355.56	369.22	375.75	382.38
EHT II	748.67	778.40	793.12	808.12
EHT III	94.83	101.61	106.69	112.02
EHT non industrial	70.48	73.75	75.62	77.54
Railway Traction	273.51	293.05	307.70	323.09

Category	FY 2018-19	FY 2019-20	FY 2020-21	FY 2021-22
KMRL	15.79	16.92	17.77	18.66
EHT Total	**1558.84**	**1632.95**	**1676.65**	**1721.81**
Bulk	**593.03**	**632.99**	**662.29**	**693.10**
HT & EHT Total	**5783.80**	**6165.99**	**6443.39**	**6734.74**
Total sales for the year – (1)	**21647.29**	**22969.69**	**23957.28**	**24991.45**
Growth over previous year (%)	1.83%	6.11%	4.30%	4.32%

Table 4: Category wise sales (MU) as projected by the Objector

Category	FY 2018-19	FY 2019-20	FY 2020-21	FY 2021-22
Domestic	10856.52	11195.92	11545.93	11906.88
Commercial	3168.22	3377.76	3585.15	3805.27
Industrial	1100.98	1111.99	1123.11	1134.34
Agricultural	350.02	361.28	370.24	379.44
Street Lights	380.84	396.28	412.34	429.05
LT II	4.90	4.95	5.10	5.15
LT IX	2.01	2.07	2.18	2.25
LT Total	**15863.49**	**16450.25**	**17044.05**	**17662.39**
HT I	2137.66	2256.07	2359.10	2466.84
HT II	797.91	845.68	896.31	949.97
HTIII	9.69	10.17	10.46	10.76
HT IV	671.26	705.20	740.86	778.32
HT V	15.41	16.51	17.33	18.20
HT Total	**3631.93**	**3833.63**	**4024.06**	**4224.10**
EHT I	355.56	369.22	375.75	382.38
EHT II	748.67	762.37	776.32	790.53
EHT III	94.83	101.61	106.69	112.02
EHT non industrial	70.48	71.89	73.33	74.79
Railway Traction	273.51	287.19	301.55	316.63
KMRL	15.79	16.92	17.77	18.66
EHT Total	**1558.84**	**1609.20**	**1651.41**	**1695.02**
Bulk	**593.03**	**618.70**	**645.48**	**673.43**
HT & EHT Total	**5783.80**	**6061.53**	**6320.95**	**6592.54**
Total sales for the year – (2)	**21647.29**	**22511.78**	**23365.01**	**24254.93**
Growth over previous year (%)	1.83%	3.99%	3.79%	3.81%
Difference in sales as projected by the Objector and Petitioner (1-2)	**0.00**	**457.89**	**592.25**	**736.51**

2.6 The Objector humbly requests the Hon'ble Commission to consider the above submissions and approve the Sales as per the projections made by the Objector.

Transmission and Distribution (T&D) Losses

2.7 The Objector would like to invite the Hon'ble Commission's attention to the Suo-moto order for determination of tariff for 2017-18 dated 17th April'2017. The Commission in the order has fixed a reasonable combined T&D loss incremental reduction target of 0.30% for the years 2015-16 & 2016-17and 0.25% for the year2017-18, from the loss levels approved for the previous years. The combined loss targets approved for the year FY 2017-18 is 13.65%.

2.8 The Objector would like to highlight that in the past, the Hon'ble Commission had mostly set 0.50% as the loss reduction target in a year. Despite setting lower loss reduction target of 0.30% for FY 2016-17, **the KSEBL had not made efforts to achieve it** (loss levels of 13.93% reported during the true up of FY 17)

2.9 The Petitioner in its Petition for the approval of ARR for the control period submitted that the actual T&D loss levels for the FY 2017-18 stood at 13.07%, less than what has been approved by the Hon'ble Commission in it Suo-moto Order dated 17th April, 2017.

2.10 As per Clause 72 (2) & (3) of the KSERC Distribution Tariff Regulations, 2018

"72. Distribution losses.

1) (a) The distribution business/licensee shall carry out proper studies for the estimation of distribution losses, in order to set a realistic base line of the estimates of losses at different voltage levels and to segregate commercial and technical losses in the system:

(b) The distribution business/licensee shall submit separate details of loss at different voltages, while computing its total energy requirement.

(2) (a) The distribution business/licensee shall submit, along with the petition for approval of Aggregate Revenue Requirement for the Control Period, the information on actual total distribution losses and voltage-wise distribution losses in the preceding four financial years and estimates for each year of the Control Period and the basis on which such losses have been worked out.

(b) The distribution business/licensee shall also propose the loss reduction targets for each financial year of the Control Period, along with absolute loss levels:

(c) The distribution business/licensee shall substantiate the proposed loss levels with necessary studies and their results.

(3) The Commission shall approve the target of distribution loss for each financial year of the Control Period considering the opening loss levels, filings of the distribution business/licensee, submissions and objections raised by stakeholders and findings of the Commission. "

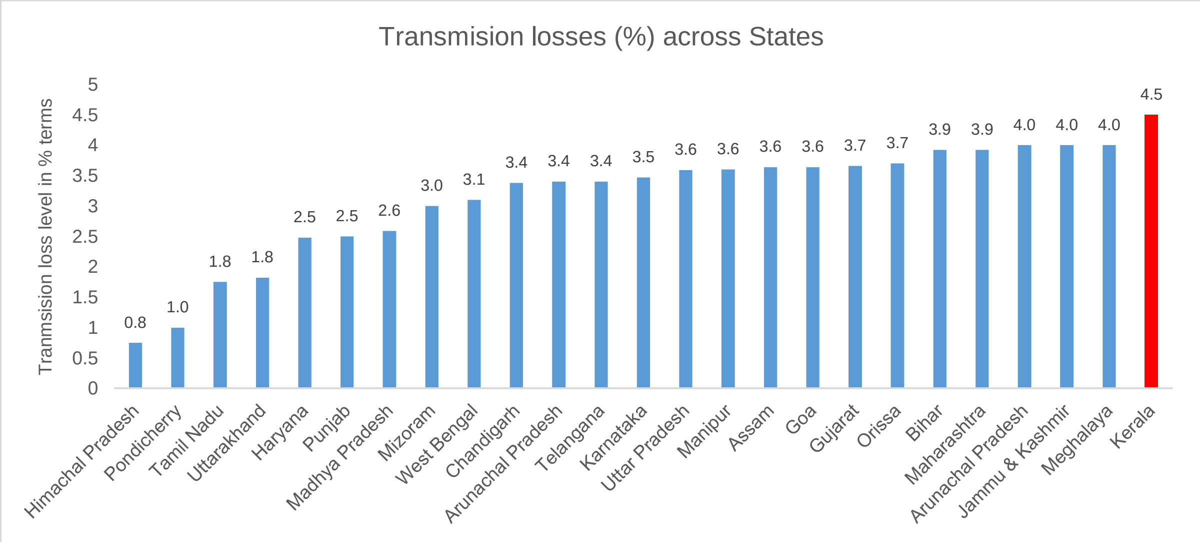
2.11 As per the above clause, ***the Petitioner is required to carry out proper studies for the estimation of voltage wise distribution loss of the system and segregate Technical and commercial losses of the system. However, the Petitioner has not undertaken any initiatives in this direction.***

2.12 The Objector wants to highlight that The National Electricity Policy issued under Section 3 of the Act stipulates that the ***technical loss and commercial loss should be assessed separately***. The Hon'ble Commission has been given directives to KSEBL Ltd to submit proposal for the approval of separate technical and commercial losses. Recently the Parliamentary Committee on Power and Government of India have also given direction to separate technical and commercial loss. However, the KSEBL Ltd has not so far submitted application in this regard with supporting data and documents.

2.13 The Petitioner submitted that the massive flood, which recently hit the state has severely damaged distribution infrastructure and replacement has to be done for restarting Energy Audit and AT&C loss calculation activities. However, the Objector humbly requests the Hon'ble Commission to direct the Petitioner to submit detailed report on the actual voltage wise loss levels of the network within 3 months from the date of issuance of the Order.

2.14 The Petitioner has estimated a target T&D loss reduction of 0.25% in 2018-19 and 0.4% annually thereafter owing to the significant capital expenditure proposed. The Objector submits that the Petitioner was able to achieve a loss reduction percentage to the extent of 0.83% in the past year (13.9% in FY 17 to 13.07% in FY 18). The Objector is of the view that the Petitioner has replaced/refurbished majority of the Distribution equipment during the recent floods that has left a devastating impact on Kerala. The new Distribution infrastructure is more efficient and it is easier to contain the losses to a greater extent. Keeping in view the recent floods, the Objector proposes a loss reduction target of 0.50% in the FY 2018-19, the target for the subsequent years may be set as proposed by the Petitioner.

2.15 The T&D losses is a controllable item. The Hon'ble Commission has approved the transmission loss as 4.50% for the year 2016-17 and 2017-18, in Suo-moto order for 2017-18 in the absence of reliable data source provided by KSEBL. The Transmission Losses for a small State such as Kerala would be significantly lower. The comparison of the Transmission Losses in different States given in the Table below shows that the Transmission Losses being allowed in Kerala at 4.5% are the highest in the country, and much bigger States are having Transmission Losses lower than 4%(for e.g. Transmission loss at Tamil Nadu is 1.8%), hence, it appears illogical that the Transmission Losses in KSEBL Ltd.'s system are 4.50%.



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2.16 Further, it is pertinent to mention that the losses at EHT level are not a mammoth task can be estimated by the KSEBL as there is 100% metering at EHT level. However, even after the repeated directives the Hon'ble Commission, the Petitioner is unable to conduct any such study. The Objector is of the view that such non-compliance of the directives is against the spirit of Indian Electricity Act, 2003 and should be seriously dealt with as the same would have a severe impact on the open access charges to be levied on open access consumers.

2.17 Thus, we request the Hon'ble Commission to approve the loss levels as estimated by the Objector and direct the Petitioner to strictly adhere to the loss levels as tabulated below:

Table 5: Loss levels as projected by the Objector

S No	Particulars	FY 2017-18	FY 2018-19	FY 2019-20	FY 2020-21	FY 2021-22
As per KSEBL						
1i	T&D loss reduction estimated		0.25%	0.4%	0.4%	0.4%
2i	T & D loss	13.07%	12.82%	12.42%	12.02%	11.62%
3i	Transmission Losses	4.50%	4.05%	3.95%	3.85%	3.75%
As per the Objector						
1ii	T&D loss reduction estimated		0.50%	0.4%	0.4%	0.4%
2ii	**T & D loss**	**13.07%**	**12.57%**	**12.17%**	**11.77%**	**11.37%**
3ii	Transmission Losses	4.50%	4.05%	3.95%	3.85%	3.75%
	Difference – (Obj – Pet)	**-**	**(0.25%)**	**(0.25%)**	**(0.25%)**	**(0.25%)**

Energy Requirement

2.18 The allowed total energy input into the KSEBL system has been arrived at by grossing up the sales with the estimated T&D losses by the Objector.

2.19 We request the Hon'ble Commission to approve the energy requirement as tabulated below. Since the Petitioner is not in a position to submit voltage wise losses of the distribution network, the Objector humbly requests the Hon'ble Commission to true-up the actual distribution loss levels and pass on the benefits to consumers as per applicable regulations.

Table 6: Energy requirement (MU) as per the T&D loss levels estimated by the Objector

S No	Particulars	FY 2018-19	FY 2019-20	FY 2020-21	FY 2021-22
As per KSEBL					
1	Total energy sales projected	21647.29	22969.69	23957.28	24991.45
2	T&D Loss In %	12.82%	12.42%	12.02%	11.62%
3	Energy at IF Points in MU	24830.57	26227.10	27230.37	28277.27
4	Substation auxiliary Consumption	15.58	16.36	17.18	18.04
5i	Energy at Gen. Points in MU	24846.15	26243.46	27247.55	28295.31
As per Objector					
1	Total energy sales projected	21647.29	22511.78	23365.01	24254.93
2	T&D Loss In %	12.57%	12.17%	11.77%	11.37%
3	Energy at IF Points in MU	24758.62	25630.11	26480.93	27365.47
4	Substation auxiliary Consumption	15.58	16.36	17.18	18.04
5ii	Energy at Gen. Points in MU	24774.21	25646.47	26498.11	27383.51
	Difference – (Obj-Pet)	**(71.95)**	**(596.97)**	**(749.42)**	**(911.79)**

Estimation of energy generation for the control period

2.20 KSEBL has 88 numbers of hydel power plant with cumulative capacity of 2055 MW. The projection of energy generation from hydel sources are arrived based upon the historical data of water inflow.

2.21 The KSEBL has projected 7886.45 MU of hydel energy for FY 2018-19. However, the actual generation till the month of October 2018 is around 5,381 MU i.e. 68% of the projected generation.

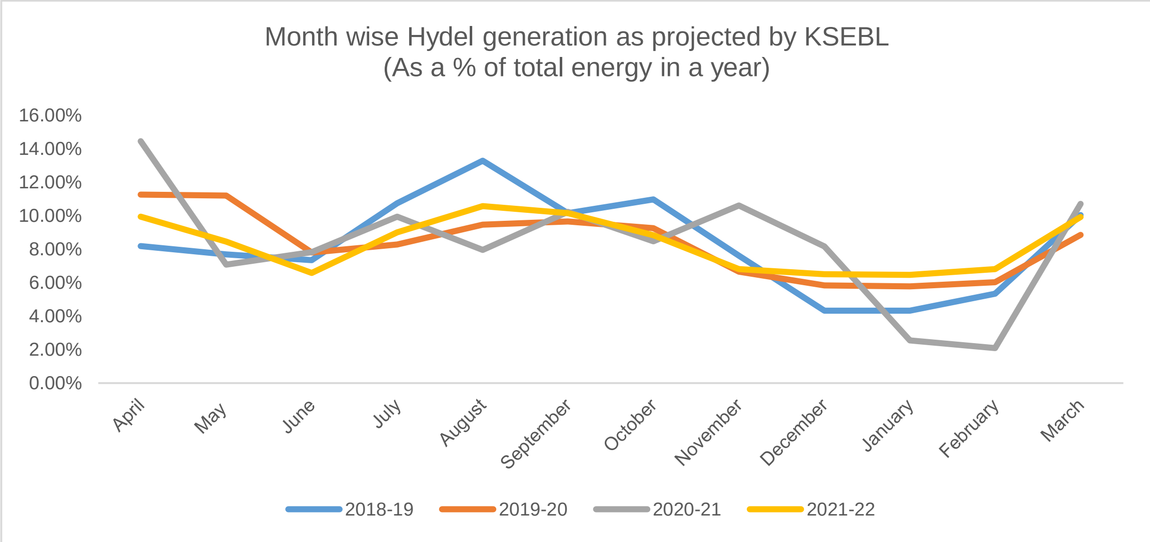
2.22 The Objector has re-assessed the storage level for the year and estimated the Hydel generation for the year as 8,409.53 MU as elaborated below:-

Table 7: Hydel generation for FY18 as estimated by the Objector

Particulars	Code	Value
Storage as on 31st Oct-18 (in MU terms)	A	3279 MU
Average inflow Nov to May (in MU terms)	B	1403 MU
Buffer Requirement (in MU terms)	C	500 MU
Hydel Generation 2018-19 as per petitioner		7886.45 MU
Hydel generation as of Oct-18	D	5381 MU
Hydel Generation Projection April-19	E	772.56 MU
Hydel generation Projection May-19	F	767.53 MU
Hydel Generation 2018-19 as per Objector	G=A+B+D-C-E-F	8022.91 MU
KSEBL Projection for 2020 & 2021 as per petition		
April 2020	H	597.52
May 2020	I	548.57
Total April- May 2020	J	1146.09
April 2021	K	625.69
May 2021	L	535.17
Total April- May 2021	M	1160.86
Average- 2020-2021	N	1153.48
	O=E+F-N	386.61
Total Hydel generation as per Objector	**P=G+O**	**8,409.53**
Difference		**523.08 MU**

2.23 Thus, additional availability of 523.08 MU will be available for the generation during 2017-18. The Objector has carefully taken in to the consideration of additional energy into the financial analysis as detailed in the subsequent section.

2.24 The Objector would also request the Hon'ble Commission to observe the erratic pattern of hydel generation as proposed by KSEBL.



The Objector is of the view that the Hydel generation is not estimated correctly. Needless to say, the hydel sources of the energy is the cheapest and lower estimation of hydro generation will result into higher power purchase requirement from external sources. This will have a significant implication on the ARR estimation.

Renewable Purchase Obligation - RPO

2.25 The Kerala State Electricity Regulatory Commission (Renewable Energy) Amendment Regulations, 2017 define the RPO targets to be met by the distribution licensee have been defined from FY 2016-17 to FY 2017-18.

2.26 The Objector has estimated the RPO trajectory till FY 2021-22 in line with the targets set by the Hon'ble Commission during FY 2016-17 to FY 2018-19 as tabulated below.

2.27 Accordingly, the RPO targets to be met by the Petitioner has been estimated by the Objector has been tabulated below:

Table 8: RPO as estimated by the Objector

Particulars	FY 2018-19	FY 2019-20	FY 2020-21	FY 2021-22
As per KSEBL				
Energy sales excl bulk licensees(1) in MU	21054.26	22336.70	23294.99	24298.35
Hydro (2) in MU	7886.44	6998.42	6564.44	6471.77
Small hydro(3) in MU	665.36	725.61	824.80	863.28
Net Energy sales(1)-(2+(3) in MU	13833.18	16063.89	17555.35	18689.86
Non solar RPO - %	7.00%	8.00%	9.00%	10.00%
Solar RPO - %	2.75%	4.00%	5.25%	6.50%

Particulars	FY 2018-19	FY 2019-20	FY 2020-21	FY 2021-22
Non Solar RPO Targets in MU	968.32	1285.11	1579.98	1868.99
Solar RPO Targets in MU	380.41	642.56	921.66	1214.84
As Per the Objector				
Energy sales excl bulk licensees(1) in MU	21054.26	21893.07	22719.52	23581.50
Hydro (2) in MU	8336.76	6998.42	6564.44	6471.77
Small hydro(3) in MU	665.36	725.61	824.80	863.28
Net Energy sales(1)-(2+(3) in MU	13382.86	15620.26	16979.88	17973.01
Non solar RPO - %	7.00%	8.00%	9.00%	10.00%
Solar RPO - %	2.75%	4.00%	5.25%	6.50%
Non Solar RPO Targets in MU	936.80	1249.62	1528.19	1797.30
Solar RPO Targets in MU	368.03	624.81	891.44	1168.25

Power purchase

a. Power purchase from Central Generating Stations (CGS):

2.28 The energy availability estimated from CGS for the Control period after making judicious assumptions for PLF and auxiliary consumption considering the operational Norms specified in CERC (Terms and Conditions of Tariff) Regulations, 2014.

2.29 The Objector has estimated the fixed charge and variable charge for the control period considering 2% escalation in variable charges duly accounting for, the escalation in coal price and 2% reduction in fixed charges from FY 2019-20 considering the ageing of stations. The Objector has taken due cognizance of the commissioning of new power stations and accordingly included the same in the estimation of power purchase cost. Further, the objector requests the Hon'ble Commission to consider incentive due to excess generation at the time of true up. The Petitioner has made a comparison of variable charges of CGS with per unit cost considered by other southern region states (Tamil Nadu and Karnataka) for FY 2018-19 as approved by the Commission.

Table 9: Energy Charges (Rs/kWh) as approved by the Hon'ble Commission in other Indian states for the FY 2018-19

Particulars	Tamil Nadu	Karnataka	KSEBL Proposed
RSTPS – I & II	2.26	2.4	2.36
RSTPS – III	2.16	2.4	2.31
TALCHER – II	1.65	1.52	1.56
SIMHADRI TPS- II	2.68	2.82	2.84
NLC II STAGE 1	2.6	2.9	2.96
NLC I EXPANSION	2.49	2.7	2.73
NLC II -EXPN	2.42	2.7	2.73
NTPL	2.56	3.26	3.10
VALLUR STPS	2.4	3	2.89

2.30 It can be seen that the Variable charges as projected by the Petitioner for the FY 2018-19 are comparatively higher as compared to the charges in other states (as approved by the Commission). Hence, we request the Hon'ble Commission to kindly approve the charges after due prudence check after verification of actual power purchase cost during H-1 of FY 2018-19.

2.31 The Objector has arrived at the Transmission charges based on the average of actual point-of-connection (PoC) charges as approved by CERC for the state of Kerala for the months of April to June and July to September 2018 vide its Orders dated 05.06.2018 & 03.08.2018. The Objector humbly requests the Hon'ble Commission to consider the same for the Control period. Any variation in the charges may be adjusted by the Commission during the True up. Accordingly, the PoC charges as considered by the Objector has been tabulated below:

Table 10: PoC Charges (in Rs/MW/month) as considered by the Objector

Particulars	PoC charges (Rs/MW/Month)	Reliability support charges (Rs/MW/Month)	HVDC charges (Rs/MW/Month)
CERC Order (Jul-sep) dated 30/08/2018	147224	29171	19093
CERC Order (Apr-Jun) dated 05/06/2018	176876	26946	14857
Charges as computed by the Objector	**162050**	**28058.5**	**16975**
Charges as considered by the Petitioner	**176395**	**28506**	**18355**

2.32 Considering the Power allocation to the Petitioner from various central power generating stations, the Transmission charges as estimated by the Objector vis-à-vis as submitted by the Petitioner and the difference thereon has been tabulated below:

Table 11: Transmission charges (in Rs Cr) as estimated by the Objector

Name of CGS	Installed capacity (in MW)	Allocation (%)	Allocation (MW)	Annual Transmission charges for FY 19 (in Rs Cr)	Annual Transmission charges for FY 20 to FY 22 (in Rs Cr)
RSPTS Stage I & II	2100	11.67%	245.07	60.90	60.90
RSTPS Stage III	500	12.20%	61	15.16	15.16
TALCHER - Stage II	2000	21.35%	427	106.11	106.11
Simhadri Exp	1000	8.29%	82.9	20.60	20.60
NLC-II- Stage-1	630	10.00%	63	15.66	15.66
NLC-II- Stage-2	840	10.71%	89.964	22.36	22.36

Name of CGS	Installed capacity (in MW)	Allocation (%)	Allocation (MW)	Annual Transmission charges for FY 19 (in Rs Cr)	Annual Transmission charges for FY 20 to FY 22 (in Rs Cr)
NLC- Exp- Stage-1	420	15.93%	66.906	16.63	16.63
NLC - II Exp	500	15.93%	79.65	19.79	19.79
MAPS	440	5.23%	23.012	5.72	5.72
KAIGA Stg I	440	8.64%	38.016	9.45	9.45
KAIGA Stg II	440	7.96%	35.024	8.70	8.70
Kudamkulam I	1000	13.91%	139.1	34.57	34.57
Kudamkulam II	1000	13.30%	133	33.05	33.05
Vallur JV with	1500	3.33%	49.95	12.41	12.41
NTPL (Tuticorin JV)	1000	7.25%	72.5	18.02	18.02
Kudgi Unit I	800	4.49%	35.92	8.93	8.93
Kudgi Unit II	800	4.49%	35.92	8.93	8.93
Kudgi Unit III	800	4.49%	35.92	8.93	8.93
Bhavini*	800	8.60%	43	0.00	10.69
Total			**1756.85**	**425.89**	**436.58**

** Commissioned from FY 19*

Table 12: PoC Charges for CGS (in Rs Cr) as estimated by the Objector

FY	Transmission charges (in Rs Cr)		Difference (in Rs Cr)
	KSEBL –(1)	**Objector –(2)**	**(Obj-Pet)**
FY 19	451.93	425.89	**(26.04)**
FY 20	468.75	436.58	**(32.17)**
FY 21	470.67	436.58	**(34.09)**
FY 22	470.67	436.58	**(34.09)**

2.33 The Objector requests the Hon'ble Commission ***to carefully examine the actual power purchase bills, blending ratio of domestic and imported coal before allowing the variable cost***. For the fixed cost, it is requested to verify the fixed cost approved in the CERC tariff order for the respective plants and allow fixed cost only to the extent of approved in such orders.

2.34 The KSEBL has projected incentive of Rs. 15.08 crore every year to be paid to CGS to better performance in terms of availability and generation. The Objector is of the view that this number is an estimated number without any strong basis. Thus, the incentive part may not be loaded on the ARR upfront and can be taken up at the time of truing up process.

2.35 The Power purchase cost and quantum as projected by the Petitioner and as projected by the Objector is as below:-

Table 13: Power purchase cost (in Rs Cr) and Quantum (MU) as estimated by the Objector for CGS

FY	Ex bus Energy (MU)		Fixed Cost (Rs Cr)		Variable Cost (Rs Cr)		Incentive to the paid by KSEBL to CSGS generator(Rs Cr)		Total Cost (Rs Cr)		Difference
	KSEBL	**Objector**	**KSEBL**	**Objector**	**KSEBL**	**Objector**	**KSEBL**	**Objector**	**KSEBL –(1)**	**Objector –(2)**	**(Obj-Pet)**
FY 19	10675.96	10675.96	880.86	880.86	2775.64	2775.63	**-**	**-**	3656.50	3656.49	**-**
FY 20	11672.88	11672.88	891.99	891.99	3125.75	3125.74	**15.08**	**-**	4032.82	4017.73	**(15.08)**
FY 21	11706.78	11706.78	874.15	874.15	3202.39	3202.39	**15.08**	**-**	4091.62	4076.54	**(15.08)**
FY 22	11706.77	11706.77	865.55	865.55	3266.44	3266.44	**15.08**	**-**	4147.07	4131.99	**(15.08)**

b. Renewable Energy Power Purchase from IPPs within the State

2.36 The Petitioner submitted that it intends to meet it RPO obligation by purchasing Energy from existing IPPs (SHP, solar and wind) and any shortfall is to be met through additional purchases.

2.37 The Hon'ble Commission in its Suo-moto Order for the determination of Tariff for the FY 2017-18 has directed the Petitioner to comply with the RPO in accordance with the provisions in KSERC (Renewable Energy) Regulations. However, the Objector is of the view that the Petitioner has not taken due-cognizance of the directives of the Hon'ble Commission, as the submissions of the Petitioner do not ensure RPO compliance. Further, it can be found that there are many computations errors made by the Petitioner with respect to estimation of RPO compliance as table 4.29 which depicts the RPO targets for the next control period as estimated by the Petitioner does not match with the targets and compliance as estimated by the Petitioner vide annexure 4.1 (Renewable purchase/generation) of the instant Petition. The RPO obligation to be met by the Petitioner for the FY 2018-19 to FY 2021-22 is tabulated below:

Table 14: RPO Targets to be met by the Petitioner

Particulars	FY 2018-19		FY 2019-20		FY 2020-21		FY 2021-22	
	KSEBL	**Objector**	**KSEBL**	**Objector**	**KSEBL**	**Objector**	**KSEBL**	**Objector**
Energy sales excl bulk licensees(1)	21054.25	21054.26	22336.68	21893.07	23294.98	22719.52	24298.35	23581.50

Particulars	FY 2018-19		FY 2019-20		FY 2020-21		FY 2021-22	
	KSEBL	Objector	KSEBL	Objector	KSEBL	Objector	KSEBL	Objector
Hydro(2)	7886.44	7886.44	6998.42	6998.42	6564.44	6564.44	6471.77	6471.77
Small hydro(3)	665.36	665.36	725.61	725.61	824.80	824.80	863.28	863.28
Net Energy sales(1)-(2+(3)	13833.17	13833.18	16063.86	15620.26	17555.34	16979.88	18689.85	17973.01
Non solar RPO %		7.00%		8.00%		9.00%		10.00%
Solar RPO %		2.75%		4.00%		5.25%		6.50%
Non Solar RPO Targets	968.32	968.32	1285.11	1249.62	1579.98	1528.19	1915.71	1797.30
Solar RPO Targets as per RE regulations	380.41	380.41	642.55	624.81	921.66	891.44	1261.57	1168.25

2.38 Further, the Petitioner in its Petition submitted that the shortfall in the RPO compliance will be met through additional purchases and submitted that it is taking efforts for entering contracts with generators/traders (viz. NTPC, NHPC etc.) for procuring the remaining solar power as well as non-solar power to meet the obligation from FY 2019-20 and has considered different power purchase rates (Rs/kWh) for meeting the RPO obligations.

2.39 The Objector is of the view that the Petitioner has not submitted any relevant documentation to support its claims for the purchase of power from additional RPO sources. Further, the rates proposed by the Petitioner from various sources hold no rationale. The Objector notes with concern that considering such high rates for procurement of energy (Rs 4 per kWh) would result in unnecessary frontloading of costs leading to heavy burden on consumers. The Objector wishes to draw the attention of the Hon'ble Commission to the rates discovered in the recent solar bidding happened during the first half of FY 2018-19.

Table 15: Tariff discovered in Solar bidding during H-1 of FY 19

State	Agency	Capacity (MW)	Month-Year	lowest tariff discovered(Rs/kWh)
PAN India	NTPC	2000	August 2018	2.59
Odisha	GRIDCO	200	July 2018	3.04
Andhra Pradesh	SECI	750	July 2018	2.70
PAN India	SECI	2000	July 2018	2.50
Karnataka	SECI	200	May 2018	2.82
Maharashtra	MSEDCL	1000	May 2018	2.72
Andhra Pradesh	NTPC	750	May 2018	2.73
Weighted average				**2.63**

2.40 In view of the same, the Objector humbly requests the Hon'ble ***Commission to consider an average tariff of Rs 3 per kWh*** for any purchase above the existing solar capacity for the purpose of projections to meet the RPO obligations. Similarly, any additional procurement to meet the Non solar RPO is expected to be met through additional wind power procurement at a **rate of Rs 2.90 Rs/kWh**, in line with the submissions made by the Petitioner. The Commission at the time of Truing up may consider any variation in the actual costs up for the respective financial year.

2.41 Accordingly, the power purchase from IPPs to meet the RPO obligation as estimated by the Objector is tabulated below:

Table 16: Power purchase from IPPs as estimated by the Objector

Source	Energy at periphery(MU)		Total Cost(Rs Cr)		Difference (Rs. Cr)
	KSEBL	**As per Objector**	**KSEBL (-1)**	**As per Objector (-2)**	**(Obj-Pet)**
FY 2018-19					
Small Hydel	99.74	99.74	36.90	36.90	0.00
Wind	107.47	107.46	39.68	39.68	0.00
Solar	72.88	72.88	26.74	26.74	0.00
Total	**280.09**	**280.08**	**103.32**	**103.32**	**0.00**
FY 2019-20					
Small Hydel	99.74	99.74	36.90	36.90	0.00
Wind	557.46	521.97	170.18	159.88	(10.30)
Solar	561.69	543.94	185.60	168.06	(17.54)
Total	**1218.88**	**1165.65**	**392.68**	**364.83**	**(27.85)**
FY 2020-21					
Small Hydel	99.74	99.74	36.90	36.90	0.00
Wind	753.10	701.31	226.92	211.89	(15.03)
Solar	835.80	805.58	275.46	246.55	(28.91)
Total	**1688.64**	**1606.63**	**539.28**	**495.33**	**(43.95)**
FY 2021-22					
Small Hydel	99.74	99.74	36.90	36.90	0.00
Wind	961.85*	931.94	313.12	278.77	(34.35)
Solar	1117.43*	1082.39	389.33	329.59	(59.74)
Total	**2325.80**	**2114.07**	**739.35**	**645.25**	**(94.10)**

**computational error by the Petitioner in the Petition*

2.42 The Objector takes note of the other sources through which the Petitioner expects to meet the RPO viz. own generation, banking arrangement etc. to meet the solar and Non solar RPO from FY 2019-20 to FY 2021-22 as per annexure 4.1 to the Petition. The RPO obligation considering the aforementioned provisions is tabulated below:

Table 17: Solar RPO Obligation (MUs) as estimated by the Objector

Particulars	FY2018-19		FY2019-20		FY2020-21		FY2021-22	
	KSEBL	Objector	KSEBL	Objector	KSEBL	Objector	KSEBL	Objector
Solar purchased	72.88	72.88	532.66	543.94	792.50	805.58	1117.43	1082.39
Own Generation	14.49	14.49	42.61	42.61	47.60	47.60	47.60	47.60
Banking and GBI	38.26	38.26	38.26	38.26	38.26	38.26	38.26	38.26
Total -Solar	**125.63**	**125.63**	**613.53**	**624.81**	**878.36**	**891.44**	**1203.29**	**1168.25**

Table 18: Non-Solar RPO Obligation (MUs) as estimated by the Objector

Particulars	FY 2018-19		FY 2019-20		FY 2020-21		FY 2021-22	
	KSEBL	Objector	KSEBL	Objector	KSEBL	Objector	KSEBL	Objector
Non Solar purchased	207.21	207.20	599.15	621.71	778.61	801.05	1061.60	1031.68
Own hydel Stations	499.83	499.83	560.07	560.07	659.26	659.26	697.74	697.74
Through Banking arrangement - SHP	65.80	65.80	65.80	65.80	65.80	65.80	65.80	65.80
Own Generation-Wind	1.25	1.25	2.04	2.04	2.08	2.08	2.08	2.08
Total –Non- Solar	**774.09**	**774.08**	**1227.06**	**1249.62**	**1505.75**	**1528.19**	**1827.22**	**1797.30**

2.43 The Objector requests the Petitioner to issue strict directions to the Petitioner to comply with the RPO as the same has not been met by the Petitioner till FY 2018-19. The Objector humbly requests the Commission to allow the power purchase cost from IPPs as per it submission, as there are many computational errors crept in the calculations made by the Petitioner.

c. Power Purchase through Long term contracts

2.44 The Objector has estimated the power purchase through long-term contracts adopting the same methodology as followed for the estimation of power purchase through CSGS stations. However, the Objector notes with concern that the rate of power purchase from Long term contracts is comparatively higher than the average power purchase cost for every year.

2.45 Further, it is estimated that the ratio of fixed charges to variable charges for the power purchased through long-term contracts is very high as compared to the power procured through CSGS stations, due to which the Petitioner has proposed high fixed charges in the revised tariff schedule. The ratio of fixed charge to variable charge of power purchase as estimated by the Objector for CSGS and long term contracts has been tabulated below:

Table 19: Cost comparison of CGS and long term contracts as estimated by the Objector

Particulars	**Fixed cost (in Rs Cr)**	**Variable cost (in Rs Cr)**	**Total cost (in R Cr)**	**% of FC to overall cost**
CSGS				
FY 19	880.86	2775.64	3656.50	24%
FY 20	891.99	3125.75	4017.74	22%
FY 21	874.15	3202.39	4076.54	21%
FY 22	865.55	3266.44	4131.99	21%
Long term contracts				
FY 19	2,131.12	1,283.44	3414.56	62%
FY 20	2,088.31	1,407.36	3495.67	60%
FY 21	2,046.07	1,435.50	3481.57	59%
FY 22	2,016.36	1,464.21	3480.57	58%

2.46 Hence, we humbly request the Hon'ble Commission to look into the same and re-determine the charges for long term power purchase contracts accordingly, wherever applicable. , the power purchase cost as estimated by the Objector has been tabulated below:

Table 20: Power purchase cost (in Rs Cr) and Quantum (MU) as estimated by the Objector for long-term contracts

FY	**Ex bus Energy (MU)**		**Fixed Cost (Rs Cr)**		**Variable Cost (Rs Cr)**		**Incentive Cr)**		**Total Cost (Rs Cr)**		**Difference**
	KSEBL	**Objector**	**KSEBL**	**Objector**	**KSEBL**	**Objector**	**KSEBL**	**Objector**	**KSEBL –(1)**	**Objector –(2)**	**(1-2)**
FY 19	8,321.40	8,321.40	2,131.12	2,131.15	1,283.44	1,283.43	-88.69	-88.70	3,325.87	3,325.88	0.00
FY 20	8,994.76	8,994.76	2,088.31	2,088.30	1,407.36	1,407.36	-92.27	-92.27	3,403.40	3,403.40	0.00
FY 21	8,994.76	8,994.76	2,046.07	2,046.06	1,435.50	1,435.50	-91.55	-91.56	3,390.02	3,390.00	0.00
FY 22	8,994.76	8,994.76	2,016.36	2,016.38	1,464.21	1,464.23	-91.31	-91.31	3,389.27	3,389.27	0.00

2.47 The PoC charges have been estimated in line with the methodology adopted for the estimation of PoC charges for CSGS. Accordingly, the transmission charges estimate has been tabulated below:

Table 21: PoC Charges for Long-term contracts (in Rs Cr) as estimated by the Objector

FY	Transmission charges (in Rs Cr)		Difference (in Rs Cr)
	KSEBL –(1)	Objector –(2)	(Obj-Pet)
FY 19	120.56	111.83	**(8.73)**
FY 20	120.56	111.83	**(8.73)**
FY 21	120.56	111.83	**(8.73)**
FY 22	120.56	111.83	**(8.73)**

2.48 The Objector requests the Hon'ble Commission to verify the power purchase schedule and actual bills of power purchase from long-term contracts while allowing the power purchase cost and also check if any foul play is involved.

2.49 The Objector has also looked at the variable cost of long-term contracts in other States. For example, Jhabua Power Ltd has a long term agreement signed with Madhya Pradesh Distribution Company to sell power at a Fixed and Variable cost per unit of Rs. 1.93/kWh and Rs. 2.28/kWh. The Fixed cost as a percentage of total cost is ~46%, whereas in Kerala, the fixed cost paid to this station is ~65% of the total cost.

d. Power Purchase through liquid fuel based generating station (RGCCPP) & Short term power purchase

2.50 The Petitioner in the instant Petition submitted that due to high fuel cost and consequent power cost, no power is proposed to be used from RGCCPP plant during extreme exigencies and there is a fixed charge obligation of **Rs. 200 Cr per year**. The Objector is of the view that the Petitioner is able to meet its peak demand by power purchase from various sources. Further, the Petitioner has proposed to procure power from short term sources to meet its power demand and as such procuring power from high cost power stations would unnecessarily burden the consumers.

2.51 The Objector would like to draw the attention of Hon'ble Commission to its ruling in paragraph 9.10 of the Suo-moto Order for the FY 2017-18 wherein the Hon'ble Commission has not allowed the fixed cost related to RGCCPP. The relevant extracts of the Order has been reproduced below:

" 9.10

*The PPA with BKPL expired on 31-10-2015 and it has not been renewed by the KSEBL Ltd. The Commission has, as per the order dated 26.10.2016 in Petition OP No. 34 of 2015, declined the request of M/s BKPL to extend the PPA. Hence, there is no fixed charge commitment for BKPL for the years 2016-17 and 2017-18. The Commission is of the considered view that, with the energy available from generators and traders outside the State at competitive rates, there is no necessity to continue the PPA with RGCCPP Kayamkulam**. Hence, the Commission has not approved any fixed charge commitments for RGCCPP Kayamkulam during the years 2016-17 and 2017-18.***

[Emphasis added]"

2.52 Keeping in view the above Judgment, the Objector requests the Hon'ble Commission to disallow the fixed cost and the cost pertaining to transmission charges of RGCCPP station in the interest of consumers.

2.53 With respect to short-term power purchase, the Petitioner requests the Hon'ble Commission to consider the peak short term power purchase rate for the FY 2017-18 which is around Rs 3.91 per kWh. Accordingly, the Power purchase cost as projected by the Objector for the FY 2018-19 is as tabulated below:

Table 22: Power purchase cost (in Rs Cr) as projected by the Objector for the FY 2018-19

Source	Ex bus Energy (MU)	Energy at periphery (MU)	Fixed Cost (Rs Cr)	Variable Cost (Rs Cr)	Other charges (Rs Cr)	Total Cost (Rs Cr)
CSGS						
RSPTS Stage I & II	1763.58	1696.40	123.85	416.27		540.12
RSTPS Stage III	426.10	409.66	33.00	98.52		131.52
TALCHER - Stage II	3105.98	2975.83	215.04	484.45		699.49
Simhadri Exp	550.33	531.04	89.01	156.50		245.51
NLC-II- Stage-1	397.35	382.32	29.90	117.55		147.45
NLC-II- Stage-2	557.67	536.44	44.25	165.55		209.80
NLC- Exp- Stage-1	429.02	413.12	44.00	117.12		161.12
NLC - II Exp	282.58	272.34	73.24	77.18		150.42
MAPS	85.30	82.18		23.81		23.81
KAIGA Stg I	486.75	467.18		176.90		176.90
KAIGA Stg II						0.00
Kudamkulam I	1285.78	1232.69		525.40		525.40
Kudamkulam II						0.00
Vallur JV with	346.70	335.12	61.53	100.23		161.76

Source	Ex bus Energy (MU)	Energy at periphery (MU)	Fixed Cost (Rs Cr)	Variable Cost (Rs Cr)	Other charges (Rs Cr)	Total Cost (Rs Cr)
NTPL (Tuticorin JV)	486.64	466.11	79.04	151.10		230.14
Kudgi Unit I	472.19	454.96	88.02	165.05		253.07
Kudgi Unit II						0.00
Kudgi Unit III						0.00
Bhavini						0.00
Central Gen Stations	**10675.96**	**10255.39**	**880.86**	**2775.63**		**3656.49**
IPPs within the State						
Small Hydel	99.74	99.74		36.89		36.89
Wind	107.46	107.46		39.67		39.67
Solar	72.88	72.88		26.74		26.74
Sub Total	**280.08**	**280.08**	**0.00**	**103.30**	**0.00**	**103.30**
Long Term contracts						
Maithon power limited	991.63	960.83	155.10	188.41	0.00	343.51
Maithon power limited	991.63	960.83	155.10	188.41	0.00	343.51
DVC-Mejia TPS	686.96	666.03	101.92	151.76	0.00	253.68
DVC-Reghunathpur TPS	244.94	237.45	058.15	57.88	0.00	116.03
Jindal Power Ltd-Bid I	1486.29	1420.67	392.47	170.51	-22.03	540.95
Jindal Power Ltd-Bid II	1117.19	1067.86	375.24	133.43	-19.48	489.19
Jindal India Thermal Ltd	695.25	669.93	258.40	71.53	-12.09	317.84
Jhabua Power Ltd-Bid I	733.26	700.19	180.88	131.95	-11.44	301.39
Jhabua Power Ltd-Bid II	**625.27**	**597.06**	**216.46**	**108.28**	**-11.32**	**313.42**
BALCO	748.98	718.46	237.43	81.27	-12.34	306.36
Sub Total	**8,321.40**	**7,999.31**	**2,131.15**	**1,283.43**	**-88.70**	**3,325.88**
RGCCPP			**0**			**0.00**
Short term market etc	**236.98**	**229.54**		**75.66**		**75.66**
ISTS Transmission charges						
CGS				425.89		425.89
Long Term Contracts				111.83		111.83
RGCCPP						00.00
Sub Total	**0**	**0**	**0**	**537.72**	**0**	**537.72**
Total Power Purchase	**19514.42**	**18764.32**	**3012.01**	**4775.74**	**-88.70**	**7699.05**

2.54 The summary of overall power purchase cost including PGCIL charges as estimated by the Objector for the FY 2018-19 to FY 2021-22 is as below:

Table 23: Power purchase quantum (in MU) & cost (in Rs Cr) as purchased from external sources as estimated by the Objector

Financial Year	Purchased Energy (at Kerala Periphery)		Purchase Cost		Difference
	MU	MU	Rs Cr	Rs Cr	
	Petitioner	Objector	Petitioner – (1)	Objector – (2)	(Obj-Pet)
FY 19	18764.36	18764.32	7942.01	7699.05	**(242.96)**
FY 20	21199.68	21146.45	8,672.27	8371.39	**(300.88)**
FY 21	21738.85	21656.85	8,884.51	8562.09	**(322.42)**
FY 22	22466.61	22466.61	9,184.58	8803.36	**(381.22)**

2.55 The power purchase cost and quantum as estimated by the Objector considering own generation of KSEBL for the FY 2018-19 to FY 2021-22 is as below:

Table 24: Power purchase quantum (in MU) & cost (in Rs Cr) from own generation as estimated by the Objector

Financial Year	Energy (at Kerala Periphery)		Generation Cost		Difference
	MU	MU	Rs Cr	Rs Cr	
	Petitioner	Objector	Petitioner –(1)	Objector – (2)	(Obj-Pet)
FY 2018-19	7819.52	7819.52	522.94	390.18	**(132.76)**
FY 2019-20	6969.23	6969.23	560.87	427.77	**(133.10)**
FY 2020-21	6545.04	6545.04	657.72	523.93	**(133.79)**
FY 2021-22	6453.43	6453.43	792.44	657.16	**(135.28)**

2.56 Thus, the Objector requests Hon'ble Commission to allow the purchase cost as proposed by the Objector against the cost proposed by KSEBL.

2.57 As per the estimations of the Objector, the Petitioner is left with surplus power after accounting for the sales and considering the loss levels as considered earlier. The Petitioner submitted that it had already intimated Hon'ble Commission regarding its sale agreements with Bihar and Chattisgarh state power utilities. Further, the Petitioner is planning to sell energy through day-ahead markets. Hence, in line with the submissions made by the Petitioner an **average rate of Rs. 5/kWh** has been considered for the revenue to be accrued through selling of surplus units as tabulated below:

Table 25: Revenue accrued from the sale of surplus power (in Rs Cr) as estimated by the Objector

S No	Particulars	FY 2018-19	FY 2019-20	FY 2020-21	FY 2021-22
1	Energy required at Gen. Points in MU	24774.21	25646.47	26498.11	27383.51
2	Energy available (MU)	27101.08	28115.68	28201.89	28920.04
3	Surplus energy (MU)	2326.87	2469.21	1703.79	1536.53
4	Per unit sale cost (Rs/kWh)	5.00	5.00	5.00	5.00
5	**Revenue from sale of surplus power**	**1163.44**	**1234.61**	**851.89**	**768.27**

2.58 The Objector humbly requests the Hon'ble Commission to allow the revenue from the sale of surplus power as proposed by the Objector.

Capital Investment for SBU-Generation

2.59 The KSEBL has proposed development of new power plants, which include 45 MW of Hydel and 10.10 MW of solar power plant. The project cost is estimated as Rs. 535 Crore for hydel plant and 57.51 Crore for solar plant.

2.60 The Objector would like to highlight that the project cost considered by the KSEBL is very high as compared to industry benchmark[2]. For Hydel, the Objector have considered capital cost estimated as per CERC Renewable tariff order 2018-19. Similarly, for solar power plant, the KSEBL has proposed project cost in a range of Rs. 5.4- 5.7 Crore/MW. It shall be noted that with reduction in module prices over the past has significantly reduced the capital cost of the projects[3] and thus, the Objector requests Hon'ble Commission to sanction the lower solar project cost (Rs. 4 Cr/MW), which is a true reflection of the current market practice.

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[2]http://www.cercind.gov.in/2018/orders/02.pdf/and https://pv.energytrend.com/

[3]The cost of Multi-Crystalline panel has declined from $0.38/Wp in Jan 2017 to $0.26/Wp in Jul 2018**(~32% reduction)**. Similarly, the cost of Mono-crystalline panel has declined from $ 0.40/Wp in Jan 2017 to $0.295/Wp in Aug 2018**(26% reduction).**

2.61 The contrast has been tabulated below:-

Table 26: Project cost of proposed new power plants

	Name of the scheme	Size (MW)	Technology	KSEBL		As per Objector	
				Per MW cost (Rs. Cr/MW)	Project cost (Rs Cr)	Per MW cost (Rs Cr/MW)	Project cost (Rs Cr.)
1	Pazhassi Sagar	7.50	Hydel	11.73	87.99	9.00	67.5
2	Peruvanamuzhi	6.00	Hydel	14.54	87.23	9.00	54
3	Chinnar	24.00	Hydel	11.79	283	9.00	216
4	Anakkayam	7.50	Hydel	10.33	77.51	9.00	67.5
	Total Hydel	**45.00**			**535.73**		**405.00**
5	Brahmapuram	6.50	Solar	5.71	37.14	4.00	26
6	Kottiyam	0.60	Solar	5.45	3.27	4.00	2.4
7	Kanjikode	2.00	Solar	5.70	11.40	4.00	8
8	Agali	1.00	Solar	5.70	5.70	4.00	4
	Total Solar	**10.10**			**57.51**		**40.40**

2.62 The Objector requests Hon'ble Commission to direct the petitioner to strictly adhere to the current market practice to arrive at the project costs.

Capital Investment Plan- SBU Distribution

2.63 The Objector observes that the Petitioner has proposed an addition of Gross Fixed Assets (GFA) of Rs. 2,620.45 Crores, Rs.1,521.74 Crores, Rs.1,362.97 Crores and Rs.1,270.24 Crores in each year of the upcoming control period of FY 2018-19 to FY 2021-22 respectively, with an objective to strengthen its distribution network.

2.64 The Objector wants to bring the attention of the Hon'ble Commission on the fact that the Petitioner had only capitalised assets of Rs. 632.63 Crores in FY 2014-15 and Rs. 491.41 Crores in FY 2015-16, while for FY 2016-17 and FY 2017-18 it has not submitted the relevant details even though being directed by the Hon'ble Commission.

2.65 The Objector had estimated the additions to GFA for the FY 2016-17 & FY 2017-18 based on the financials as submitted by the Petitioner in its tariff filing formats. Upon scrutiny of the same, it has been found that the additions during FY 2016-17 were to the tune of Rs 908 Cr and Rs 551 Cr for the FY 2017-18 for SBU-D of KSEBL. The additions to GFA for SBU-D has been tabulated below:

Table 27: Past trends in additions to GFA (in Rs Cr) for SBU-D

Particulars	FY 2014-15	FY 2015-16	FY 2016-17	FY 2017-18
Additions to GFA for SBU-D	632.63	491.41	908.26	550.82

2.66 For the next control period, the additions to GFA as proposed by the Petitioner is tabulated below:

Table 28: Additions to GFA (in Rs Cr) as proposed by the Petitioner for SBU-D

S No.	Particulars	FY 2018-19	FY 2019-20	FY 2020-21	FY 2021-22
1	Normal woks -Dhyuthi 2021	808.64	1300.55	1139.26	787.86
2	Estimated & other funded Works	199.7	201.69	203.71	205.74
3	System strengthening & IT works	1593.91	-	-	-
4	IT related works (CAP)	-	-	-	258.14
5	Safety	18	19.5	20	18.5
	Total	**2620.25**	**1521.74**	**1362.97**	**1270.24**

2.67 The Objector proposes to approve the below capital expenditure against the proposed capital expenditure of the Petitioner

S No	Particulars	FY 2018-19		FY 2019-20		FY 2020-21		FY 2021-22		Total	
		KSEB	Objector	KSEB	Objector	KSEB	Objector	KSEB	Objector	KSEB	Objector
A	**Dhyuthi**										
1	Normal - Dhyuthi (Normal work + Falty meter Repl)	783.64	274.27	1275.55	446.44	1114.26	389.99	762.86	267.00	3936.31	1377.71
2	Continued Electrification	5	1.75	20	7.00	20	7.00	5	1.75	50	17.50
3	Special Projects like SCADA	5	1.75	20	7.00	20	7.00	5	1.75	50	17.50
	Sub Total	**793.64**	**277.77**	**1315.64**	**460.44**	**1154.26**	**403.99**	**772.86**	**270.50**	**4036.3**	**1412.71**
B	**Other Funded Works *(New Capital works)***	**199.7**	**69.90**	**201.69**	**70.59**	**203.71**	**71.30**	**205.74**	**72.01**	**810.84**	**283.79**
C	**Centrally Aided Projects**										
C 1	**System Strengthening works**										
1	R APDRP PART B - ***(ongoing Capital works)***	111	111.00	0	0.00	0	0.00	0	0.00	111	111.00

S No	Particulars	FY 2018-19		FY 2019-20		FY 2020-21		FY 2021-22		Total	
		KSEB	**Objector**	**KSEB**	**Objector**	**KSEB**	**Objector**	**KSEB**	**Objector**	**KSEB**	**Objector**
2	IPDS (***ongoing Capital works)***	507.31	507.31	0	0.00	0	0.00	0	0.00	507.31	507.31
3	DDUGJVY (***ongoing Capital works)***	246.29	246.29	0	0.00	0	0.00	0	0.00	246.29	246.29
	Sub Total	**864.6**	**864.60**	**0**	**0.00**	**0**	**0.00**	**0**	**0.00**	**864.6**	**864.60**
C 2	**IT Related works**										
1	IPDS- Phase II Incr IT	7	2.45	11	3.85	4.86	1.70	0	0.00	22.86	8.00
2	IPDS--ERP	4	1.40	26	9.10	12.64	4.42	0	0.00	42.64	14.92
3	IPDS-Smart Metering @ Kumarapuram	19.525	6.83	0	0.00	0	0.00	0	0.00	19.525	6.83
4	IPDS-Smart metering-UDAY	19	6.65	32	11.20	13.36	4.68	0	0.00	64.36	22.53
5	Smart Grid	0	0.00	20	7.00	40	14.00	43.4	15.19	103.4	36.19
6	RT-DAS	1	0.35	3	1.05	1.25	0.44	0	0.00	5.25	1.84
7	Cyber security	0.5	0.18	0	0.00	0	0.00	0	0.00	0.5	0.18
8	RAPDRP PART A- IT - SCADA ***(Ongoing work)***	17	5.95	17	5.95	0	0.00	0	0.00	34	11.90
	Sub Total	**68.025**	**23.809**	**109**	**38.150**	**72.11**	**25.239**	**43**	**15.190**	**292.135**	**102.387**
D	**Safety Works**										
1	Safety (***New Capital works)***	18	6.30	19.5	6.83	20	7.00	18.5	6.48	76	26.60
	Total Distribution	**1943.96**	**1242.38**	**1645.83**	**576.01**	**1450.10**	**507.53**	**1040.10**	**364.18**	**6079.98**	**2690.10**

2.68 With regards to capitalization of the proposed capital expenditure, the Objector notes that the Petitioner has proposed a capitalisation of Rs. 1,593.91 Crores on the system strengthening & IT works in 2018-19, which primarily comprise the central aided projects that were deferred in the past. The Objector requests the Hon'ble Commission to phase out these proposed projects in four years (40% in FY 2018-19, 30% in FY 2019-20, 20% in FY 2020-21 & remaining 10% in FY 2021-22).

2.69 Based on the above discussed facts, the Objector has estimated the following GFA additions during the control period FY 2018-19 to FY 2021-22 that ensures the Petitioner to achieve its objective of system strengthening & reliability while safeguarding the interests of consumers via a minimal tariff hike The Objector humbly requests the Hon'ble Commission to consider the proposed GFA additions for the upcoming control period and have a prudence check on the same at the time of its true-up exercise.

Table 29: Addition to Gross fixed assets (Rs. Crore)

S.No	Particulars	FY 2018-19	FY 2019-20	FY 2020-21	FY 2021-22
1	Normal woks -Dhyuthi 2021	283.02	455.19	398.74	275.75
2	Estimated & other funded Works	69.90	70.59	71.30	72.01
3	System strengthening & IT works	637.56	478.17	318.78	159.39
4	IT related works (CAP)	0.00	0.00	0.00	90.35
5	Safety	6.30	6.83	7.00	6.48
	Total	**996.78**	**1010.78**	**795.82**	**603.98**
	Difference (Pet – Obj)	**1623.47**	**510.96**	**567.15**	**666.27**

Table 30: Gross Fixed Assets Balance (Rs. Crore)

Particulars - GFA	FY 2018-19		FY 2019-20		FY 2020-21		FY 2021-22	
	KSEBL	Objector	KSEBL	Objector	KSEBL	Objector	KSEBL	Objector
Beginning of the year	8390.00	8390.00	11010.25	9386.78	12531.99	10397.57	13894.96	11193.39
Additions during the year	2620.25	996.78	1521.74	1010.78	1362.97	795.82	1270.24	603.98
Deletions (if any)	-	-	-	-	-	-	--	-
Closing GFA	**11010.25**	**9386.78**	**12531.99**	**10397.57**	**13894.96**	**11193.39**	**15165.20**	**11797.36**

2.70 The Objector humbly requests the Hon'ble Commission to approve the GFA balance as estimated by it so that there is no unnecessary burden on the consumers.

Interest and Finance Charges

Interest on Capital liabilities

2.71 As per clause 29 "Interest and finance charges" of the Distribution Tariff Regulations, 2018

*"**29. Interest and finance charges***

(1)……………..

(2) 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.

(3) Notwithstanding any moratorium period availed by the generating business/company or the transmission business/licensee or the distribution business/licensee, the repayment of loan shall be considered from the first financial year of commercial operation of the project and shall be equal to the depreciation allowed for that financial year.

(4) The rate of interest allowed shall be the weighted average rate of interest calculated on the basis of the actual loan portfolio at the beginning of each financial year applicable to the generating business/company or the transmission business/licensee or the distribution business/licensee or State Load Despatch Centre:

Provided that if there is no actual loan for a particular financial year of the control period but normative loan is still outstanding, the weighted average rate of interest on the last available loan shall be considered:

Provided further that if the regulated business of the generating business/company or the transmission business/licensee or the distribution business/licensee or State Load Despatch Centre does not have actual loan, but normative loan is outstanding, then interest shall be allowed at the base rate.

(5) The interest on loan shall be calculated average loan as per the norms approved by the Commission for the financial year by applying the weighted average rate of interest.

(6)……………….

(7)……………….

(8) 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 the First day of April of the financial year in respect of in which the petition is filed:

Provided that interest on security deposit actually paid to the users of the transmission system or distribution system and to the consumers during the financial year, shall only be considered at the time of truing up for the financial year."

2.72 In line with the relevant clauses of the Tariff Regulation, the Objector has computed the various applicable items under total Interest and Finance Charges, as elaborated in the table below.

2.73 The Interest on normative loan is determined after considering asset addition and deducting consumer contribution, grants and allowable depreciation for each year of the control period. As per the estimated GFA additions, the Interest on capital liabilities has been assessed as tabulated below:

Table 31: Interest on Capital liabilities for SBU-D (Rs. Crores) as assessed by the Objector

S No	Particulars	FY 2018-19	FY 2019-20	FY 2020-21	FY 2021-22
As per KSEBL					
1	Opening loan	2142.78	4275.39	5451.45	6446.82
2	GFA addition	2620.25	1521.74	1362.97	1270.24
3	Less: Consumer contribution & Grants	377.92	201.69	203.71	205.74
4	Less: Allowable depreciation	109.72	143.99	163.89	181.71
5	Normative loan during the year	2132.61	1176.06	995.37	882.79
6	Closing normative loan	4275.39	5451.45	6446.82	7329.61
7	Average normative loan	3209.08	4863.42	5949.14	6888.21
9	**Interest for the year**	**304.86**	**486.34**	**594.91**	**688.82**
As per Objector					
1	Opening loan	2142.78	2897.38	3714.61	4302.92
2	GFA addition	996.78	1010.78	795.82	603.98
3	Less: Consumer contribution & Grants	132.27	70.59	71.30	72.01
4	Less: Allowable depreciation	109.91	122.97	136.21	146.63
5	Normative loan during the year	754.60	817.22	588.31	385.33
6	Closing normative loan	2897.38	3714.61	4302.92	4688.25
7	Average normative loan	2520.08	3305.99	4008.76	4495.59
8	Interest rate for the year	9.50%	10%	10%	10%
9	**Interest for the year**	**239.41**	**330.60**	**400.88**	**449.56**
	Difference (Obj-Pet)	**(65.45)**	**(155.74)**	**(194.03)**	**(239.26)**

Interest on Security deposits

2.74 The Petitioner has claimed that the Interest on security deposits as tabulated below:

Table 32: Interest on security deposits (in Rs Cr) as submitted by KSEBL

S No	Particulars	FY 2017-18	FY 2018-19	FY 2019-20	FY 2020-21	FY 2021-22
1	Opening: SD as on 1st April	2597.51	2836.96	3086.96	3386.96	3686.96
2	Addition during the FY	239.45	250.00	300.00	300.00	300.00
3	Closing SD as on 31st March	2836.96	3086.96	3386.96	3686.96	3986.96
4	Average SD during the FY	2717.235	2961.96	3236.96	3536.96	3836.96
5	Average interest rate (%)	6.75%	6.75%	6.75%	6.75%	6.75%
6	Interest Charges	**175.33**	**199.93**	**218.49**	**238.74**	**258.99**

2.75 The Objector is of the view that the Petitioner has not substantiated his claims on how such opening balance for FY 2018-19 has been arrived at, hence, the Objector has arrived at the opening balance for the FY 2017-18 as per the value approved by the Commission in the True-up Order for FY 2016-17, further the additions to security deposits during the year has been considered as per the value approved by the Commission in its suo-moto Order for the FY 2017-18. Accordingly, the interest on security deposits as estimated by the Objector has been estimated below:

Table 33: Interest on security deposits (in Rs Cr) as estimated by the Objector

S No	Particulars	FY 2017-18	FY 2018-19	FY 2019-20	FY 2020-21	FY 2021-22
1	Opening: SD as on 1st April	2287.32	2457.32	2707.32	3007.32	3307.32
2	Addition during the FY	170	250.00	300.00	300.00	300.00
3	Closing SD as on 31st March	2457.32	2707.32	3007.32	3307.32	3607.32
4	Average SD during the FY		2582.32	2857.32	3157.32	3457.32
5	Average interest rate (%)		6.75%	6.75%	6.75%	6.75%
6	Interest Charges		**174.31**	**192.87**	**213.12**	**233.37**
	Difference (Pet-Obj)		**25.62**	**25.62**	**25.62**	**25.62**

Interest on General Provident fund

2.76 The Petitioner has claimed that the Interest on GPF as part of their Interest and Financing charges. KSEBL has considered that the closing balance of PF account for the year 2017-18 as Rs. 2207.33 crore.

2.77 The Objector wants to bring to the notice of Hon'ble Commission to the Suo-moto order for 2017-18 dated 17th April 2017, where the Hon'ble Commission has approved an amount of Rs. 1,600 crore as closing balance of GPF for the year FY16-17[4], which has been considered as opening balance for FY18. From the balance sheet, it has been observed that net increase to GPF has been Rs. 409.9 Crore during FY18. Thus, the opening balance of FY19 shall be Rs. 2009.9 crore, instead of KSEBL proposed Rs. 2029.9 crore. The Objector has recalculated interest on provident fund as follows:-

Table 34: Interest on Provident fund

As per KSEBL Projection					
Item	**FY 2017-18**	**FY 2018-19**	**FY 2019-20**	**FY 2020-21**	**FY 2021-22**
Opening: Provident Fund as on 1st April 2017	2029.93	2207.33	2357.33	2507.33	2657.33
Addition (net)during the Financial Year	177.40	150	150	150	150
Closing: Provident Fund as on 31st March 2018	2207.33	2357.33	2507.33	2657.33	2807.33
Average PF during the Financial Year	2118.63	2282.33	2432.33	2582.33	2732.33
Average interest rate (%)		8.40	8.40	8.40	8.40
Interest Charges - Rs. Cr	**156.26**	**191.72**	**204.32**	**216.92**	**229.52**
As per Objector					
Opening: Provident Fund as on 1st April 2017	1600	2009.9	2159.9	2309.9	2459.9
Addition (net)during the Financial Year	409.9	150	150	150	150
Closing: Provident Fund as on 31st March 2018	2009.9	2159.9	2309.9	2459.9	2609.9
Average PF during the Financial Year		2084.9	2234.9	2384.9	2534.9
Average interest rate (%)		8.40%	8.40%	8.40%	8.40%
Interest Charges - Rs. Cr		**175.13**	**187.73**	**200.33**	**212.93**
Difference (Obj-Pet)		**(16.59)**	**(16.59)**	**(16.59)**	**(16.59)**

[4] KSERC Suo-moto order 2017-18, Page No. 68, Clause 4.14.

2.78 The SBU wise interest on the provident fund is re-arrived as follows:-

Table 35: SBU wise Segregation of Interest on Provident fund (in Rs Cr)

As per KSEBL Projections					
SBU	**Ratio**	**FY 2018-19**	**FY 2019-20**	**FY 2020-21**	**FY 2021-22**
SBU G	5.13%	9.83	10.48	11.12	11.77
SBU T	11.32%	21.7	23.12	24.55	25.97
SBU D	83.56%	160.19	170.72	181.24	191.77
Total	**100%**	**191.72**	**204.32**	**216.92**	**229.52**
As per Objector					
SBU G	5.13%	9.0	9.6	10.3	10.9
SBU T	11.32%	19.8	21.3	22.7	24.1
SBU D	83.56%	146.3	156.9	167.4	177.9
Total	**100%**	**175.13**	**187.73**	**200.33**	**212.93**
Difference (Obj-Pet)		**(16.59)**	**(16.59)**	**(16.59)**	**(16.59)**

2.79 The Objector is under the dark to ascertain the actual GPF balance of KSEBL in the past without availability of audited financial accounts. Thus, it is requested to approve the interest on Provident fund calculated based on the GPF balance as suggested by the Commission in suo-moto order.

Interest on Working capital loan

2.80 The KSERC Tariff regulations, 2018, Clause 32 stipulate the method for calculation of working capital requirement for generation, transmission and distribution business.

2.81 The petitioner has claimed the requirement of working capital for its generation and transmission business as shown below, whereas no working capital requirement has been sought for its distribution business.

2.82 The Objector is of the view that the petitioner has not arrived at the working capital requirement correctly for its generation and transmission business. On scrutiny of annual statements submitted by petitioner, the net current assets for SBU-G and SBU-T for the year FY 16, FY 17 and FY 18 is revealed negative. The key elements from annual statements is reproduced below:-

Table 36: Net current assets (in Rs Cr) of SBU-G and SBU-T as per annual statements provided by KSEBL

SBU – Generation	**FY 2017-18**	**FY 2016-17**	**FY 2015-16**
C) Net Current Assets			
(1) Current assets, loans and advances			
a)Inventories*	54.6	23.05	26.16
b)Receivables against Sale of Power			
c)Cash & bank balances	25.03	6.32	20.24
d)Loans and advances		5.42	9.84
e)Sundry receivables	82.55	109.95	174.69
Total (C)(1)	**162.18**	**144.74**	**230.93**
(2) Current liabilities & provisions			
a)Borrowings for working capital	**250.73**	**351.99**	**868.78**
b)Payments due on Cap. Liabilities			
c)Other current liabilities	304.55	309.99	305.54
Total (C)(2)	555.28	**661.98**	**1174.32**
Net Current Assets (C) [(C(1)) - (C(2))]	**(393.1)**	**(517.24)**	**(943.39)**

SBU – Transmission	**FY 2017-18**	**FY 2016-17**
C) Net Current Assets		
(1) Current assets, loans and advances		
a)Inventories*	41.75	56.82
b)Receivables against transmission charges		
c)Cash & bank balances	25.59	8.96
d)Loans and advances		4.63
e)Sundry receivables	72.96	33.69
Total (C)(1)	**140.3**	**104.1**
(2) Current liabilities & provisions		
a)Security Deposits from Consumers		
b)Borrowings for working capital	**298.76**	**264**
c)Payments due on Cap. Liabilities		
d)Other current liabilities	531.53	519.44
Total (C)(2)	**830.29**	**783.44**
Net Current Assets (C) [(C(1)) - (C(2))]	**(689.99)**	**(679.34)**

2.83 For the previous years, it can be observed from the annual accounts that the net current assets are negative for generation and transmission business, owing to the borrowing for working capital and other current liabilities {majorly trade payables(due but not paid)}. The treatment of such current liabilities has not detailed in the petition for the control period.

2.84 The Hon'ble Commission shall note that all along previous years, it has been established that the KSEBL has been cash rich entity, with negative working capital requirements. However, for the control period from FY 19, the KSEBL has proposed the working capital.

2.85 In light of the arguments provided above, the Objector requests that the Hon'ble Commission may take similar stand as taken in recent truing up process and disallow the interest on working capital requirement as proposed by KSEBL.

Table 37: Working capital requirement (in Rs Cr) for SBU-G, T and D as per Objector's projections

As per KSEBL projections				
Particulars	**FY 2018-19**	**FY 2019-20**	**FY 2020-21**	**FY 2021-22**
SBU-G	5.86	6.19	6.89	8.38
SBU-T	17.24	19.79	24.66	30.03
SBU-D	0.00	0.00	0.00	0.00
As per Objector				
SBU-G	0.00	0.00	0.00	0.00
SBU-T	0.00	0.00	0.00	0.00
SBU-D	0.00	0.00	0.00	0.00
Difference (Obj-Pet)	**(23.1)**	**(25.98)**	**(31.55)**	**(38.41)**

Interest on Master Trust Bonds

2.86 The KSEBL has mentioned that due to the delay in operationalization of the Master Trust (from April 1, 2017), the unfunded liability, gratuity liability, and leave surrender liability has increased by Rs. 3,728.98 crore. To honor this additional liability, it is decided to issue 20 years bonds amounting to Rs. 3,728.98 crore at a coupon rate of 10% to the Master trust. Accordingly, the additional interest liabilities is claimed as shown below:-

Table 38: Interest on Master Trust (in Rs Cr) as claimed by the Petitioner

Interest on Master Trust					
Item	**FY 2017-18**	**FY 2018-19**	**FY 2019-20**	**FY 2020-21**	**FY 2021-22**
Bond Amount	8144	7736.8	7329.6	6922.4	6515.2
Repayment	407.2	407.2	407.2	407.2	407.2
Interest	**814.4**	**773.68**	**732.96**	**692.24**	**651.52**
Balance	7736.8	7329.6	6922.4	6515.2	6108
Interest on Additional Bond to MT		**372.90**	**372.90**	**372.90**	**372.90**
Total		**1146.58**	**1105.86**	**1065.14**	**1024.42**
Total Interest on the total Liability to Master Trust					
G	5.13	58.79	56.7	54.72	52.53
T	11.32	129.76	125.15	120.54	115.93
D	83.56	958.03	924.01	889.98	855.96
Total	**100.00**	**1146.58**	**1105.86**	**1065.14**	**1024.42**

2.87 The Objector would like to bring to the kind attention of the Hon'ble Commission to Truing up order of accounts of FY 17. Since the Master Trust didn't operationalize on time, the Commission in the intermediate period had considered and allowed Rs. 1221.06 crore of terminal liability. The funding of this terminal liabilities shall be carried out through:-

(a) Rs. 814.44 crore through truing up

(b) Rs. 406.66 crore to be funded by Government

2.88 The Hon'ble Commission in the True up order highlighted the following:-

"that the balance amount of Rs. 406.66 crore shall be deemed to be the ***contribution of the State Government*** *as per the G.O (P) No.3/2015/PD dated 28-1-2015 and KSEBL Ltd shall take necessary steps to get the balance amount from the Government* ***either by adjustment of electricity duty retained or through subvention as per the discretion of the Government for fulfilling the obligation of the Government in funding terminal benefits*** *during the interim period/till the Master Trust is formed."*

2.89 Thus, the Objector requests Hon'ble Commission to take similar stand again for the treatment of additional liability as claimed by KSEBL. **The additional liability of Rs. 3728.98 on account of delay in formation of master trust, which is proposed to be recovered through interest on additional bonds shall not be burdened to the existing electricity consumers of the State**.

Table 39 : Summary of Interest and finance charges of KSEBL (Rs. Crores)

S.No	Particulars	FY 2018-19	FY 2019-20	FY 2020-21	FY 2021-22
	As per KSEBL				
1	Interest on capital liabilities	562.23	871.38	1,222.54	1,508.49
2	Interest on security Deposit	199.93	218.49	238.74	258.99
3	Interest on GPF	191.72	204.32	216.92	229.52
4	Interest on MT Bonds	773.68	732.96	692.24	651.52
5	Interest on additional Trust Bonds	372.9	372.9	372.9	372.9
6	Interest on working capital	23.1	25.98	31.55	38.41
7	**Total Interest & Finance Charges**	**2,123.56**	**2,426.03**	**2,774.89**	**3,059.83**
	As per Objector				

S.No	Particulars	FY 2018-19	FY 2019-20	FY 2020-21	FY 2021-22
1	Interest on capital liabilities	496.78	715.64	1,028.51	1,269.23
2	Interest on security Deposit	174.31	192.87	213.12	233.37
3	Interest on GPF	175.13	187.73	200.33	212.93
4	Interest on MT Bonds	773.68	732.96	692.24	651.52
5	Interest on additional Trust Bonds	0	0	0	0
6	Interest on working capital	0	0	0	0
7	**Total Interest & Finance Charges**	**1,619.90**	**1,829.20**	**2,134.20**	**2,367.05**
	Difference (Obj-Pet)	(503.66)	(596.83)	(640.69)	(692.78)

Operation and Maintenance- Transmission

2.90 The KSERC Tariff regulations, 2018 specified the O&M norms for the transmission business. The number bays and circuit km of transmission line proposed by KSEBL is given in the table below:-

Table 40: O&M cost- Transmission as projected by KSEBL

SNo	Item	FY 2018-19	FY 2019-20	FY 2020-21	FY 2021-22	Remarks
1	O&M cost for Bay (Rs lakh /Bay)	10.71	11.23	11.77	12.34	Norm
2	O&M cost (Rs lakh /circuit km)	0.93	0.98	1.03	1.08	Norm
3	Bays (No.) (for Previous year)	2564	2682	2914	3007	Projected
4	Line (Ckt-Km)(for previous year)	9529.589	9823.195	10670.15	11130.965	Projected
5	**Normative O&M cost (Rs.Cr.)**	**363.23**	**397.46**	**452.88**	**491.28**	Estimated

2.91 The Objector wants to highlight that the bays and line infrastructure projection considered for O&M cost calculation is very high as compare to the historical growth, as detailed below:-

Year	No of Bays	Transmission Line ckt km
2010-11	1994	9047
2011-12	2016	9048
2012-13	2028	9107
2013-14	2056	9139
2014-15	2085	9267
2015-16	2114	9396
2016-17	2144	9528
2017-18	2174	9661

CAGR- 7 year	**1.24%**	**0.94%**

2.92 The actual growth rate of bays and transmission line remains at 1.24% and 0.94% respectively. Whereas, the KSEBL has projected a growth rate of ~5%.

2.93 The Objector is skeptical about the growth rate projected by KSEBL. Based on the historical growth rate, the O&M cost of transmission is arrived as follows:-

Table 41: O&M cost- Transmission as per Objector

SNo	Item	FY 2018-19	FY 2019-20	FY 2020-21	FY 2021-22	Remarks
1	O&M cost for Bay (Rs lakh /Bay)	10.71	11.23	11.77	12.34	Norm
2	O&M cost (Rs lakh /circuit km)	0.93	0.98	1.03	1.08	Norm
3	Bays (No.) (for Previous year)	2,201	2,228	2,256	2,284	At growth rate of 1.24%
4	Line (Ckt-Km)(for previous year)	9,752	9,844	9,937	10,030	At growth rate of 0.94%
5	**Normative O&M cost (Rs.Cr.)**	**326.42**	**346.71**	**367.88**	**390.18**	
6	**Difference over KSEBL projection (Obj-Pet)**	**(36.81)**	**(50.74)**	**(85.00)**	**(101.10)**	

2.94 With regard to the following, key objections, the Objector requests for a detailed response of the Hon'ble Commission and KSEBL and also request the Hon'ble Commission to take measures to implement them for the betterment of the sector.

Operation and Maintenance - Distribution

2.95 As per clause 79 "Operation and maintenance expenses" of the Distribution Tariff Regulations, 2018

> ***"79. Operation and maintenance expenses –***
>
> *(1) The distribution business of KSEBL Limited shall be allowed to recover operation and maintenance expenses as per the norms specified in Annexure-IX to these Regulations for each financial year of the Control Period:"*

2.96 As per Annexure IX "O&M norms for the distribution business/licensees" of the Distribution Tariff Regulations, 2018

*“**Annexure-IX - O&M norms for the distribution business/licensees***

Table 1 (a) O&M norms (Employee expenses and Administration & General expenses) for distribution business of KSEBL Limited

	Control period			
	2018-19	***2019-20***	***2020-21***	***2021-22***
No. of consumers (Rs. Lakh/'000 consumers)	*4.80*	*5.03*	*5.27*	*5.53*
No. of Distribution transformers (Rs.lakh/Distribution transformer)	*0.64*	*0.67*	*0.70*	*0.73*
Length of HT line (Rs.lakh/km of HT line)	*0.79*	*0.83*	*0.87*	*0.91*
Energy sales (Rs.per unit)	*0.19*	*0.20*	*0.21*	*0.22*

Table 1 (b) Repair and Maintenance expenses of distribution business of KSEBL Ltd:

(i) 3% of Opening GFA (excluding value of land and land under lease) of distribution business of each year of the control period.

(ii) Repair and Maintenance expenses for assets added during the year of the control period shall be allowed after prudence check by the Commission on a pro-rata basis subject to production of details of the assets.”

2.97 The Objector has computed each component of O&M expenses as per the relevant regulations mentioned in 3.13 and 3.14. The estimates for Employee Cost and A&G expenses have been done based on the projections of consumers, Distribution transformers, HT line length, Energy sales done by the Petitioner and the corresponding norms as per Annexure IX of the Tariff Regulations 2018.

Table 42: Employee Cost and A&G cost projection (Rs Crores)

S No	Particulars	FY 2017-18	FY 2018-19	FY 2019-20	FY 2020-21	FY 2021-22
1	consumers (Rs. L/1000)		4.80	5.03	5.27	5.53
2	Dist. Transformers (Rs. L/DTr)		0.64	0.67	0.70	0.73
3	Length of HT line (Rs. L/km)		0.79	0.83	0.87	0.91
4	Energy sales (Rs/unit)		0.19	0.20	0.21	0.22
5	No. of consumers	12592890	12611100	12957080	13314526	13683932

S No	Particulars	FY 2017-18	FY 2018-19	FY 2019-20	FY 2020-21	FY 2021-22
6	No. of Dist. Transformers (Nos)	76860	80064	81537	82897	83950
7	HT Line (Ckt-Km)	72949	66225	69686	72654	74729
8	Energy sales in MU	21840	21647.29	22511.78	23365.01	24254.93
9	**Employee, A&G Cost (Rs Cr)**		**1979.53**	**2153.38**	**2332.61**	**2516.62**

Table 43 : R&M expense projection (Rs Crores)

S No	Particulars	FY 2018-19	FY 2019-20	FY 2020-21	FY 2021-22
1	Opening GFA	8390.00	9386.78	10397.57	11193.39
2	R&M expenses @ 3%	251.70	281.60	311.93	335.80
3	Addition during the year	-	-	-	-
4	**Total**	**251.70**	**281.60**	**311.93**	**335.80**

2.98 The Objector has estimated the Repair and Maintenance Expenses at 3% of Opening GFA of each year of upcoming control period, while it feels that the pro rata R&M expenses considered by the Petitioner for the assets added in each year (Rs. 10.13 Crores, Rs. 15.10 Crores, Rs. 13.50 Crores and Rs. 9.99 Crores), may be allowed only during the final true up exercise done by the Hon'ble Commission once the actual month wise data is available. The total O&M expenses is tabulated below:

Table 44: Normative O&M Cost as projected by the Objector (Rs Crores)

S No	Particulars	FY 2018-19	FY 2019-20	FY 2020-21	FY 2021-22
As per KSEBL					
1	Employee & A&G costs	1979.53	2153.38	2342.23	2529.65
2	R&M expenses	261.83	345.41	389.46	426.84
3	**Normative O&M expenses**	**2241.36**	**2498.79**	**2731.69**	**2956.49**
As per the Objector					
1	Employee & A&G costs	1979.53	2153.38	2332.61	2516.62
2	R&M expenses	251.70	281.60	311.93	335.80
3	**Normative O&M expenses**	**2231.23**	**2434.98**	**2644.54**	**2852.42**
	Difference (Obj-Pet)	**(10.13)**	**(63.81)**	**(87.15)**	**(104.07)**

Depreciation

2.99 As per clause 27 "Depreciation" of the Distribution Tariff Regulations, 2018

*"**27. Depreciation***

…………..

(2) The generation business/company or transmission business/licensee or distribution business/licensee shall be permitted to recover depreciation on the value of fixed assets used in their respective business, computed in the following manner:-

(a) depreciation shall be computed annually based on the straight line method at the rates specified in the Annexure-I to these Regulations for the first twelve financial years from the date of commercial operation;

…………………..

(c) the generating business/company or transmission business / licensee or distribution business/licensee, shall submit all such details and documentary evidence, as may be required under these Regulations and as may be required by the Commission from time to time, to substantiate the above claims;

(d) the salvage value of the asset shall be ten per cent of the allowable capital cost as approved by the Commission excluding cost of assets created out of contributions and grants and depreciation shall be a maximum of ninety per cent of such approved capital cost of the asset.

(3) 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.

………………………..

Provided further that depreciation shall be re-calculated for assets capitalised during the financial year at the time of truing up, based on documentary evidence for capitalisation of assets submitted by the applicant, subject to the prudence check of the Commission, in such a way that the depreciation is calculated proportionately from the date of capitalisation."

2.100 The Objector has considered the Petitioner's approach of estimating Depreciation on the basis of rates allowed by the Hon'ble Commission in the Truing up order for 2015-16. Basis these rates and the methodology specified as per regulations quoted in 3.17, the net allowable depreciation for each year of the upcoming control period tabulated below. The variation in the below computation with the Petitioner's estimates is due to the variation in projections of GFA additions.

Table 45: Depreciation for SBU-D (Rs Crores)

No	Particulars	FY 2018-19	FY 2019-20	FY 2020-21	FY 2021-22
	As per KSEBL				
1	Opening GFA (excl revaluation)	8390.00	11010.25	12531.99	13894.96
2	Addition during the year	2620.25	1521.74	1362.97	1270.24
3	Total	11010.25	12531.99	13894.96	15165.20
4	Depreciation for the year	323.94	425.10	483.86	536.48
5	Less: Claw back depreciation	214.22	281.12	319.97	354.77
6	**Net depreciation allowable**	**109.72**	**143.99**	**163.89**	**181.71**
	As per Objector				
1	Opening GFA (excl. revaluation)	8390.00	9386.78	10397.57	11193.39
2	Addition during the year	996.78	1010.78	795.82	603.98
3	Total	9386.78	10397.57	11193.39	11797.36
4	Depreciation for the year	323.85	362.33	401.35	432.06
5	Less: Claw back depreciation	213.95	239.36	265.14	285.43
6	**Net depreciation allowable**	**109.91**	**122.97**	**136.21**	**146.63**

Bad Debts

2.101 The petitioner has requested to create provision of Rs.15 crore for estimated bad debt the next control period.

2.102 The Objector is of the view that no justification has been provided in the petition and thus it is requested to the Hon'ble Commission to disallow this amount.

One time expense – donation to CMDRF

2.103 KSEBL has donated Rs. 35 crore to CM's Flood relief fund, which has been included in the ARR as one time expense. As per the Objector, any donation made on this behalf shall be deducted from Return on equity as claimed as part of ARR. It shall not be a pass on to the consumer. Hence, the Objector requests the Hon'ble Commission to not to allow this expense as a part of ARR.

Return on Equity

2.104 The KSEBL has proposed INR 489.86 crore as Return on Equity for the year 2016-17 wiz. 14% of INR 3,499 Crore of equity base.

2.105 The Hon'ble Commission in its ARR Order for 2012-2013 has discussed the issue of Return on Equity in detail. The abstract is reproduced below for the easy reference:

"Accordingly, instead of providing a return on net fixed assets, a return was allowed based on the equity shown in the accounts of the Board. However, the Government order subsequent to the conversion of Government loans, and the observation of the ***C&AG revealed that the equity booked by the Board is not proper.*** *Hence, in the absence of having a base for allowing a return, the Commission in the ARR&ERC order for 2010-11 & 2011-12 and in the truing up order for 2006-07, 2007-08 & 2008-09 decided to provide a return on a provisional basis directed the Board to have a study based for arriving at a proper rate base.*

2.106 The Objector wants to highlight the remarks made by Hon'ble Commission on Return on Equity in ARR & ERC order 2014-15. The Commission remarked-

"Though the licensee has claimed that increase in equity is an infusion of capital, ***in fact, it is only accounting entry adjustments to match the increase in assets due to revaluation*** *and to facilitate the repayment of bonds to be issued for funding terminal liabilities.* ***Hence, the equity additionally claimed does not materially enhance any benefits to the consumers****, but the Commission as a matter of principle approves the second transfer scheme and hence the enhancement of equity announced by the Government is recognized."*

2.107 The Objector also wants to highlight the remarks made by Hon'ble Commission on Return on Equity in ARR & ERC order 2013-14. The Commission remarked-

"The Commission has been maintaining a policy that legitimate return should be allowed to the entities to function in a financially viable manner. The Commission in the order dated 13-4-2012 has decided to consider the letter of the Government for providing ***a return on Equity provisionally, till the matter is finalized based on the study reports of the Consultants engaged for developing regulations for determination of Tariff under section 62 of the Act."***

2.108 The Objector would like to invite the kind attention of the Hon'ble Commission to APTEL's Order dated 18 November 2015, Appeal No. 247 of 2014 (Kerala HT EHT Industrial Consumers Association v/s KSEBL & KSERC).

APTEL directed the Commission to determine the RoE as per the recommendation of the consultant. The suggestions of the Consultant engaged by the State Commission on Return on Equity are *quoted below:*

"…Further, in the case of new capitalization, RoE is allowed only when actual equity is infused into the Company for incurring capital expenditure, else only interest is allowed on the loan component. According to the consultant even under the Companies Act, 1956 and the relevant Accounting Standards, the Revaluation Reserve is not allowed as a source to increase the equity capital, and only actual paid-up equity capital is considered for all purposes. Hence, they recommended that the ***Commission may allow RoE either on the equity capital allowed earlier by the Commission or on the reduced equity capital of Rs. 283.91 crore (Rs. 1553 crore - Rs. 1269 crore)…."***

2.109 Hence, abiding by KSERC Terms and Conditions for Determination of Tariff 2018, the Objector requests Hon'ble Commission to allow 14% return on equity of INR 283.91 crore (i.e. INR 39.75 crore).

2.110 The Objector requests Hon'ble Commission to consider the re-estimated Return on Equity as presented in the table below-

Table 46: Objector's analysis on Return on Equity

Particulars	KSEBL Petition	As per the Objector
Equity (INR Crore)	3499.00	283.91
Return on Equity %	14%	14.0%
Return on Equity (INR Crore)	**489.86**	**39.75**
	SBU wise	
SBU-G	116.38	9.44
SBU-T	119.99	9.73
SBU-D	253.5	20.57

Non-Tariff Income

2.111 The Objector has considered the Petitioner's approach of estimation of Non-Tariff income and Other income for the purpose of estimation of ARR for the control period.

Summary of ARR

The objector has undertaken an ARR component-wise analysis of the filings of the Petitioner and provided in detail observations in the above sections. The summary of observations is provided in the table below.

Table 47: Summary of ARR of KSEBL as estimated by the Objector

SN o	Particulars(Rs. Crore)	FY 2018-19		FY 2019-20		FY 2020-21		FY 2021-22	
		Petitioner	Objector	Petitioner	Objector	Petitioner	Objector	Petitioner	Objector
1	Cost of Generation	522.94	388.39	560.87	427.77	657.72	523.93	792.44	657.16
2	Cost of Power Purchase	7942.01	7699.05	8672.27	8371.39	8884.51	8562.09	9184.58	8803.36
3	Cost of Intra State Transmission	951.47	734.64	1106.58	873.02	1394.65	1117.26	1637.52	1333.54
4	NLDC /RLDC charges	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00
5	O&M Expenses	2241.36	2231.23	2499.00	2434.98	2731.69	2644.54	2956.49	2852.42
6	I&F charges on long-term loans	304.86	239.41	486.34	330.60	594.91	400.88	688.82	449.56
7	Interest on Trust Bonds	646.45	646.45	612.43	612.43	578.40	578.40	544.38	544.38
8	Interest on additional bonds	311.58	0.00	311.58	0.00	311.58	0.00	311.58	0.00
9	Interest on Provident Fund	160.19	146.34	170.72	156.87	181.24	167.40	191.77	177.93
10	Interest on Security Deposit	199.93	174.31	218.49	192.87	238.74	213.12	258.99	233.37
11	Interest on WC and deposits	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12	Carrying Cost on Gap	281.17	0.00	200.32	0.00	104.68	0.00	9.03	0.00
13	Depreciation	109.72	109.91	143.99	122.97	163.89	136.21	181.71	146.63
14	One Time expenses	29.24	-	-	-	-	-	-	-
15	Bad debts written off	15.00	0.00	15.00	0.00	15.00	0.00	15.00	0.00
16	Recovery of previous gap	806.47	-	806.47	-	806.47	-	806.47	-
17	**Total Revenue Expenditure**	**14525.39**	**12372.72**	**15807.05**	**13525.90**	**16666.49**	**14346.82**	**17581.79**	**15201.34**
18	Return on Equity	253.50	20.57	253.50	20.57	253.50	20.57	253.50	20.57
19	Tax on RoE	0.00		0.00		0.00		0.00	
20	**Aggregate Revenue Requirement**	**14778.89**	**12393.29**	**16060.35**	**13546.47**	**16919.99**	**14367.39**	**17835.29**	**15221.91**
21	Total Other Income (Rs Cr.)	357.80	357.80	371.99	371.99	393.00	393.00	414.03	414.03
22	Total Non-Tariff Income (Rs Cr)	173.75	173.75	176.11	176.11	178.23	178.23	180.33	180.33
23	**Net ARR**	**14247.24**	**11861.74**	**15512.25**	**12998.37**	**16348.76**	**13796.16**	**17240.93**	**14627.55**
24	**Difference in ARR (Obj-Pet)**		**2385.50**		**2513.88**		**2552.60**		**2613.38**

Note:- ARR of generation and transmission has been accounted under "1 Cost of Generation" and "' 3 Cost of Intra State Transmission"-

2.112 Based on the re-estimation of each head presented in table above, the Objector requests Hon'ble Commission to consider the re-estimated ARR.

Revenue from existing tariff

2.113 The Petitioner in its Petition and tariff filing formats has not provided adequate information (actual slab wise data for the FY 2017-18 and projections thereon for all the tariff categories as approved by the Commission) for the computation. Hence, the Objector is not in a position to compute detailed slab wise revenue from each of the tariff category as approved by the Hon'ble Commission. The Objector is constrained to consider the revenue as submitted by the Petitioner in proportion to the projected sales.

2.114 The Objector has not considered the PF incentive in the computation of revenue at this point of time and requests the Hon'ble Commission to consider the same is based on the actual data at the time of truing up.

2.115 Accordingly, the revenue at existing tariff as estimated by the Petitioner and as computed by the Objector is tabulated below:

Table 48: Revenue in existing Tariff (in Rs Cr) as estimated by the Objector

Particulars	FY 2018-19		FY 2019-20		FY 2020-21		FY 2021-22	
	Petitioner	Objector	Petitioner	Objector	Petitioner	Objector	Petitioner	Objector
Revenue from existing tariff	12449.82	12449.82	13254.67	12990.44	13874.14	13531.15	14523.36	14095.35
PF incentive	97.79		104.21		108.85		113.73	
Net revenue	12352.03	12449.82	13150.46	12990.44	13765.29	13531.15	14409.63	14095.35
Fuel surcharge	81.65	81.65		0.00		0.00		0.00
Revenue from external sales	712.96	1163.44	962.74	1234.61	518.19	851.89	312.38	768.27
Total revenue	**13146.64**	**13694.91**	**14113.20**	**14225.05**	**14283.48**	**14383.05**	**14722.01**	**14863.61**
Difference in Revenue (Obj-Pet)		**548.27**		**111.85**		**99.57**		**141.60**

Revenue Gap/ (surplus)

2.116 The revenue gap at as estimated by the Petitioner and as computed by the Objector is tabulated below:

Table 49: Revenue Gap/(Surplus) (in Rs. Cr) as estimated by the Objector

Particulars	FY 2018-19		FY 2019-20		FY 2020-21		FY 2021-22	
	Petitioner	Objector	Petitioner	Objector	Petitioner	Objector	Petitioner	Objector
Net ARR	14247.24	11861.74	15512.25	12998.37	16348.76	13796.16	17240.93	14627.55
Net Revenue at existing Tariff	13146.64	13694.91	14113.20	14225.05	14283.48	14383.05	14722.01	14863.61
Revenue Gap/(surplus) at existing Tariff	**1100.60**	**(1833.17)**	**1399.05**	**(1226.68)**	**2065.28**	**(586.88)**	**2518.92**	**(236.06)**

2.117 As per the above observations, it is estimated that the Petitioner is left with Revenue Surplus at the end of the year FY 2018-19. Hence, the Objector humbly requests the Hon'ble Commission to adjust the revenue surplus against the unbridged revenue gap and approve the tariff, as per the existing tariff schedule without any revisions.

Revenue Gap and Carrying Cost

2.118 The Hon'ble Commission has allowed for the recovery of Rs. 1040.92 Crores during the FY 2017-18. However, there has been an unbridged revenue gap which the Commission has determined during the True-up for the FY 2011-12 & FY 2012-13. The Commission in its notice dated 22-6-2016 issued by the Commission as a part of this suo-motu proceedings, it was stated that the revenue gaps for 2011-12 and for 2012-13 would also be considered for determination of tariff. Hence, the Objector has considered the same for the estimation of revenue gap.

2.119 ***The Objector has not considered carrying cost in line with its judgemen***t in the suo-moto Order for FY 2017-18. The Objector has not considered carrying cost for any year as the Petitioner failed to file its Petition within the timelines set by the Hon'ble Commission. The relevant extracts of the Order has been reproduced below for ready reference

> *"12.66 The Commission has, as per its order dated 16.03.2017 in the application for truing up of accounts of KSEBL Ltd for the financial year 2011-12, determined the revenue gap as Rs1386.97 crore. Further the Commission has, as per its order dated 20.03.2017 in the application for truing up of accounts of KSEBL Ltd for the financial year 2012-13, determined the revenue gap as Rs 3132.97 crore. In the notice dated 22-6-2016 issued by the Commission as a part of this suo motu proceedings, it was stated that the revenue gaps for 2011-12 and for 2012-13 would also be considered for determination of tariff. The lions' share of the said revenue gaps is additional cost of power purchase which is an uncontrollable item as per the Tariff Regulations. The licensee could have realized such additional cost of power purchase by way of fuel surcharge immediately after each financial year. The licensee has not realized such additional cost of power purchase from the consumers.* ***In view of the delay in filing the application for truing up of accounts, the Commission does not propose to allow the carrying cost on such revenue gaps and therefore the licensee has to bear the burden of carrying cost.***
>
> *….."* ***[Emphasis added]***

2.120 The Objector would like to bring key insights from the Government of Kerala order dated May 13, 2015, G.O.(Ms.) No. 17/2015/PD upon Re-vesting of the assets and liabilities of erstwhile KSEBL to KSEBL- Netting off the dues between Govt and KSEBL:-

"13. In the aforesaid circumstances, Government are pleased order as follows in the matter:—

*(i) The proposal of KSEBL Ltd. for finalizing accounts after **netting off of dues between KSEBL and Government, up to 31-10-2013, the date of re-vesting the assets and liabilities of erstwhile KSEBL into the Kerala State Electricity Board Limited stands approved.** The netting off of accounts has been done on the basis of the principal figures of Electricity Duty and Surcharge (excluding penal interest on non-payment of Electricity Duty and Surcharge), as furnished by the KSEBL Limited and after the adjustment, the balance Electricity Duty available with KSEBL Ltd. as on 31-10-2013 is Rs. 435.62 crore.*

(ii)…

*(iii) In continuation to the adjustment of dues as on 31-10-2013, **the dues between Government and KSEBL Limited up to 31-12-2014 stands provisionally netted off, on the basis of the provisional figures furnished by KSEBL Ltd. regarding electricity duty to be paid to Government by KSEBL Ltd. as on 31-12-2014.**…*

….

(vi) The ***entire duty collection after 31-12-2014 will be transferred to pension fund account as Government contribution***, as provided under Clause 2(2) of the G.O., read as eighth paper above"

[Emphasis added]

It shall be noted that the net dues as on 31-12-2014 to be paid to the government was netted off. KSEBL had anticipated receivables from government on account of subsidies and pension liabilities. In return, KSEBL was expected to pay the electricity duty collected from the consumers to the government. Accordingly, the transaction of electricity duty (from KSEBL to Govt) and pension liabilities & subsidies (from Govt to KSEBL) was netted off.

The Hon'ble Commission has allowed KSEBL to recover the pension liabilities through ARR/truing up process. The electricity duty collected till 31-12-2014 amounting to Rs. 3,056.32 crore has been retained by KSEBL for meeting pension liabilities. In other words, the KSEBL is doubly accounting the money as it has collected pension liabilities from consumers and retained electricity duty.

The KSEBL has collected electricity duty from April 2008 to 31-12-2014 as follows:-

Table 50: Collection of Electricity duty by KSEBL (in Rs Cr)

S No.	Particulars	Amount in (Rs. Cr)
1	From 2008-09 to 31-10-2013	2,396.36
2	From 1-11-2013 to 31-12-2014	659.96
3	**Total till 31-12-2014**	**3,056.32**

Thus, the Objector requests the Hon'ble Commission to disallow the revenue gap to an extent of Rs. 3,056.32 crore to balance out the electricity duty collected in the past and not paid to the government. The revised revenue gap calculation is as follows:

Table 51: Unbridged revenue gap (in Rs Cr)

S No.	Particulars	Amount in (Rs. Cr)	Amount in (Rs. Cr)
1	Total un bridged revenue gap as on 31-03-2011 (as per Table 1.3 of the order dated 14-8-2014 in OP No. 9/2014)	424.11	
2	Revenue gap as per the orders on truing up for the year 2011-12	1386.97	
3	Revenue gap as per the orders on truing up for the year 2012-13	3132.97	
4	**Total**	**4944.05**	
5	Less: Recovery permitted for 2017-18	1040.92	**3903.13**
6	Add: Remand order dtd 09.05.17-2009-10		107.90
7	Add: Remand order dtd 19.05.17-2010-11		204.70
8	True up order 2013-14 dated 20.06.2017		195.50
9	True up order 2015-16 dated 21.08.2018		202.97
10	True up order 2016-17 dated 14.09.2018		1031.06
11	**Total**		**5645.26**
	Revenue gap proposed by KSEBL to be recovered each year		**806.47**
	Disallowance on account of collection of electricity duty, which was netted off against receivables from govt. (Pension Liabilities)		3056.32
	Total outstanding revenue gap as per Objector		**2588.94**

2.121 As per Objectors estimation of ARR gap/surplus, the Petitioner is left with a surplus in ARR every year for the MYT Control period. Hence, the Objector requests the Hon'ble Commission to adjust the unbridged revenue gap against the surplus in ARR estimated in the first year.

2.122 The Objector is of the view that after adjustment of the outstanding revenue gap from the first year revenue surplus, an unbridged revenue gap of Rs. 755.77 crores will still be left over, which may be treated as a regulatory asset and adjusted against the surplus estimated in the second year of the control period. Having done so, the Petitioner is still left with surplus from FY20 onwards**. *Hence, the Objector humbly requests the Hon'ble Commission to retain the existing tariff without any revision*.** Basis the above calculation the Objector has presented the final gap/(surplus) for the MYT control period as below.

Table 52: Final Revenue Gap/(Surplus) post adjustment of outstanding revenue gap (in Rs. Cr) as estimated by the Objector

Particulars	FY 2018-19		FY 2019-20		FY 2020-21		FY 2021-22	
	Petitioner	Objector	Petitioner	Objector	Petitioner	Objector	Petitioner	Objector
Net ARR	14247.24	11861.74	15512.25	12998.37	16348.76	13796.16	17240.93	14627.55
(Less) Net Revenue at existing Tariff	13146.64	13694.91	14113.20	14225.05	14283.48	14383.05	14722.01	14863.61
Revenue Gap/(surplus) at existing Tariff	**1100.60**	**(1833.17)**	**1399.05**	**(1226.68)**	**2065.28**	**(586.88)**	**2518.92**	**(236.06)**
(Less) Outstanding revenue gap to be adjusted	**-**	**1833.17**	**-**	**755.77**	**-**	**-**	**-**	**-**
Final Revenue Gap/ (surplus)	**1100.60**	**0.00**	**1399.05**	**(470.91)**	**2065.28**	**(586.88)**	**2518.92**	**(236.06)**

Open access charges

Transmission and Wheeling charges

2.123 Based on the objections raised in previous section, the transmission and wheeling charges for open access consumers is arrived as follows:-

Table 53: Transmission charges calculation per the Objector

SNo	Item	FY 2018-19	
		KSEBL	Objector
1	Energy injected into the system (MU)	24846.15	24774.21
2	Percentage of loss (%)	4.05%	4.05%
3	Loss of energy (MU)	1006.27	1003.36
4	Energy handled (MU) (1-3)	23839.88	23770.85
5	**ARR of Transmission Business unit (Rs Cr)**	**951.08**	**734.64**
6	**Transmission Charges (Rs./unit)**	**0.40**	**0.31**

Table 54: Wheeling charges calculation per the Objector

SNO	Particulars	FY 2018-19	
		KSEBL	Objector
1.	Energy injected into the system (MU)	24846.15	24774.21
2.	Percentage of loss (%)	4.05%	4.05%
3.	Loss of energy (MU)	1006.27	1003.36
4.	Energy handled (MU)	23839.88	23770.85
5.	Sale of energy at 66 KV system and above	2023.64	2023.64
6.	Less auxiliary consumption of substation	15.58	15.58
7.	Energy transmitted to HT system	21800.66	21731.63
8.	HT loss	5.35%	5.35%
9.	Energy handled at HT level (MU)	20634.33	20568.99
10.	Distribution ARR (excl Gen, PP, Trn & carrying cost)	3743.29	3039.66
11.	Distribution ARR (at HT level) (25 % of Dist ARR)	935.82	759.92
12.	**Wheeling Charges**	**0.45**	**0.32**

Cross Subsidy Surcharge estimation

2.124 The Objector would like to invite the Hon'ble Commission's attention to itsSuo-moto order for determination of tariff for 2017-18 dated 17th April'2017. In the said Order, the Hon'ble Commission had clearly stated the need for estimating the Cross Subsidy Surcharge (CSS) ***separately for embedded consumers and consumers who opt out of the system of SBU-D of KSEBL***. The correct rationale that the embedded consumers continue to pay demand charges (as applicable) to KSEBL even while procuring energy through open access has been amply pointed out. Thus, the inclusion of demand charges again in the formula for estimation of CSS would result in burdening the embedded open access consumers through double imposition of demand charges. The relevant extract from the Suo moto order has been reproduced below:

> *"14.88 The embedded consumers avail the facility of open access, while continuing in the system of SBU-D of KSEBL Ltd and of other licensees. Therefore, the embedded consumers have to pay the demand charges in accordance with the agreement executed between the consumers and licensee. When the embedded consumer avails power through open access, the licensee loses only the energy charge. Therefore, the cross subsidy surcharge payable by the embedded consumers has been worked out based on the energy charges applicable to the category to which the consumer belongs. Thus, for computation of cross subsidy surcharge payable by embedded consumers the energy charge is taken as 'T'."*

2.125 Further, the objector would also like to point out that the Tariff Policy of 2016 (TP) allows the State Regulatory Commission to review and vary the formula as it deems fit. The TP also clearly indicates that the estimation of CSS is to compensate the distribution utility for the cross subsidy that it loses when a subsidising consumer opts out of the utility supply but at the same time it should not impede open access market development.

> *"As per 8.5.1 of the NTP-2016, "**The computation of cross subsidy surcharge, therefore, needs to be done in a manner that while it compensates the distribution licensee, it does not constrain introduction of competition through open access"***

2.126 The Objector would like to place on record that this consideration is key as it will have a far-reaching impact on the survival of the open access market in the State. This is said in light of the fact that KSEBL in its petition has proposed significant increase in the Demand Charge component of tariff for FY 19 and FY 21.If the same component is included in the calculation of CSS, it would burden the embedded consumers to a great degree and effectively render open access an unviable option for consumers.

2.127 The Objector has undertaken the revised estimation of CSS for FY19 in line with the methodology followed by the Hon'ble Commission in its Suo-moto order for FY18. The estimation for FY19 is presented below.

Table 55: Weighted average cost of power procurement as estimated by KSEBL and by the Objector

Financial Year	Total Energy Available and corresponding cost				Wt Avg cost	
	MU	MU	Rs Cr	Rs Cr	Rs/unit	
	KSEBL	Objector	KSEBL	Objector	KSEBL	Objector
2018-19	26583.88	27101.08	8464.95	8089.23	3.18	2.98
2019-20	28168.91	28115.68	9233.14	8799.16	3.28	3.13
2020-21	28283.89	28201.89	9542.23	9086.02	3.37	3.22
2021-22	28920.04	28920.04	9977.02	9460.51	3.45	3.27

Table 56: Transmission and Wheeling losses and charges as estimated by KSEBL and by the Objector

SL. No	Particulars	2018-19	
		KSEBL	Objector
1	Transmission loss (%)	4.05%	4.05%
2	Loss at HT level (%)	5.35%	5.35%
3	Weighted average loss in the system for providing supply at HT level (%)	9.18%	9.18%
4	Aggregate Transmission Charges(Rs/unit)	0.40	0.31
5	Aggregate wheeling Charges(Rs/unit)	0.45	0.32
6	Regulatory Asset (Rs/unit)	0.13	0.00

Table 57: CSS for consumers who opt out of the system of SBU-D of KSEBL for FY19

Category	T = Avg tariff	C= Avg. cost of PP	L = T& D Loss	D = Trans & wheeling charges	R= carrying cost	Surcharge as per formula	Surcharge limit (20% avg. tariff)	Cross subsidy surcharge
	(Rs/unit)	(Rs/unit)	(%)	(Rs/unit)	(Rs /Unit)	(Rs/unit)	(Rs/unit)	(Rs/unit)
HT-I(A)	6.62	2.98	9.18%	0.63	0.00	2.70	1.32	1.32
HT-I(B)	7.66	2.98	9.18%	0.63	0.00	3.74	1.53	1.53
HT-II(A)	6.99	2.98	9.18%	0.63	0.00	3.07	1.40	1.40
HT-II (B)	8.45	2.98	9.18%	0.63	0.00	4.53	1.69	1.69
HT-III(A)	5.38	2.98	9.18%	0.63	0.00	1.47	1.08	1.08
HT-III(B)	4.50	2.98	9.18%	0.63	0.00	0.59	0.90	0.59
HT-IV	9.28	2.98	9.18%	0.63	0.00	5.37	1.86	1.86
HT-V	8.01	2.98	9.18%	0.63	0.00	4.09	1.60	1.60
EHT 66 kV	5.77	2.98	4.05%	0.31	0.00	2.35	1.15	1.15
EHT 110kV	5.60	2.98	4.05%	0.31	0.00	2.19	1.12	1.12
EHT 220 kV	5.83	2.98	4.05%	0.31	0.00	2.41	1.17	1.17
EHT-General A	5.77	2.98	4.05%	0.31	0.00	2.35	1.15	1.15
EHT-General B	8.24	2.98	4.05%	0.31	0.00	4.82	1.65	1.65

2.128 For the Embedded consumers, the Objector has considered the proportion of demand charges to total revenue as per revised tariff. Since the Objector has strongly contended the increase in the demand charges, it has not considered the increased proportion of demand charges in the total revenue. If it had considered the same proportion as estimated by KSEBL, the CSS would have been further reduced for the embedded consumer by the absolute proportion of fixed charges.

Category	Cross subsidy surcharge for non-embedded consumers	Fixed charges payable	Cross subsidy surcharge for Embedded consumers as computed by the Objector
	(Rs/unit)	(Rs/unit)	(Rs/unit)
HT-I(A)	1.32	1.20	0.12
HT-I(B)	1.53	1.67	0.00
HT-II(A)	1.40	1.52	0.00
HT-II (B)	1.69	1.33	0.36
HT-III(A)	1.08	2.76	0.00
HT-III(B)	0.59	1.23	0.00
HT-IV	1.86	1.97	0.00
HT-V	1.60	2.36	0.00
EHT 66 kV	1.15	0.84	0.32
EHT 110kV	1.12	0.69	0.43
EHT 220 kV	1.17	1.20	0.00
EHT-General A	1.15	0.71	0.45
EHT-General B	1.65	1.52	0.13

2.129 Hence the Objector would like to strongly state that the Hon'ble Commission should continue to determine CSS for embedded and consumers who have opted out of the KSEBL's system separately.

Voltage wise Cost of Supply Calculation

2.130 The Objector would like to point out that the Hon'ble Commission has been giving directions to KSEB to conduct necessary studies and to submit proposal for determination of voltage wise cost of supply (VCoS) to different categories of consumers. KSEB has not so far submitted to the Commission, the application for the same with all necessary and sufficient data and details from the studies conducted by it.

2.131 In its petition KSEB has estimated (VCoS) based on the loss levels pertaining to FY18. It appears that the KSEB has undertaken this calculation as a mute exercise and not with an intention to apply VCoS to calculate CSS and eventually tariff, as intended. It is apparent from the estimation itself that KSEB has miscalculated the VCoS for the EHT, HT and LT voltage levels. The Petitioner's estimation has been presented below.

Table 58: VCoS estimation by KSEB for FY 19

No	Item	Unit	EHT	HT	LT	Total
1	Energy sale at voltage levels	MU	2022.82	3760.98	15865.11	21648.91
2	Dist loss at voltage levels	%	**4.05%**	**5.50%**	**7.45%**	
3	Dist Loss	MU	81.92	200.68	2113.60	2314.28
4	Energy input at voltage levels	MU	2108.21	3979.87	17142.20	23230.28
8	Total cost (apportioned)	Rs Cr	1228.28	2318.75	9987.36	**13534.39**
5	Total Variable Power Purchase cost	Rs Cr	382.78	722.60	3112.42	4217.80
6	Total Fixed cost component	Rs Cr				9316.59
7	Demand/Connected load	MVA/MW	483.69	1106.47	20372.02	
8	Connected load at LT (excl domestic)	MW			4837.86	
8	MW required (MWA x 0.9)	MW	435.32	995.82	2138.26	
9	Input MW required (MW/loss)	MW	453.70	1098.26	2548.04	4100.00
10	FC apportioned on input basis	Rs Cr	1102.80	2669.54	6193.54	9965.88
11	FC proposed for LT I domestic	Rs Cr			500.00	
12	Balance amount	Rs Cr	1102.80	2669.54	5693.54	9465.88
13	FC for others per KVA / KW	Rs	1899.98	2010.56	980.73	
14	VCoS per unit (based on sale)	Rs/ kWh	**6.07**	**6.17**	**6.30**	**6.25**

2.132 The Objector makes the below observations from the above estimation made by KSEB.

(a) It is seen from the above estimation that the VCoS for LT category is only Rs. 0.05/kWh (6.30-6.25) higher than the Average cost of supply (ACoS) at Rs. 6.25/ kWh while the reverse is true for HT and EHT with a difference of only Rs. 0.07/kWh and Rs. 0.18/ kWh lower than the ACoS. This again is a clear indicator of erroneous calculation and hence should not be considered by the Hon'ble Commission.

(b) Further there is inconsistency in the Net ARR numbers that the KSEB has estimated in various chapters of its petition. The Net ARR of Rs.**13534.39 Crs** as indicated above appears erroneous, as the Net ARR and revenue gap estimated in the relevant chapter of the petition stands at Rs. 14247.34 Crs, for FY 19. This lower Net ARR value is causing the ACoS to appear deflated by Rs. 0.33/ kWh.

2.133 The Objector has relied on the methodology followed by the Hon'ble Commission in its Suo moto tariff order for FY18, for estimation of VCoS. It would like to state here that this methodology is in line with the Hon'ble APTEL direction to it in its order dated 31.05.2013 in Appeal No 179/2013. In the above judgment, Hon'ble APTEL has stated that it had, vide its judgment dated 30.05.2011 in Appeal petition No. 102 of 2010 (Tata Steel case and related batch of cases), given a formulation to assess the VCoS in the absence of availability of detailed data. The relevant portions of the judgment are extracted below.

"31. We appreciate that the determination of cost of supply to different categories of consumers is a difficult exercise in view of non-availability of metering data and segregation of the network costs. However, it will not be prudent to wait indefinitely for availability of the entire data and it would be advisable to initiate a simple formulation which could take into account the major cost element to a great extent reflect the cost of supply. There is no need to make distinction between the distribution charges of identical consumers connected at different nodes in the distribution network. It would be adequate to determine the voltage-wise cost of supply taking into account the major cost element which would be applicable to all the categories of consumers connected to the same voltage level at different locations in the distribution system. Since the State Commission has expressed difficulties in determining voltage wise cost of supply, we would like to give necessary directions in this regard. 32. Ideally, the network costs can be split into the partial costs of the different voltage level and the cost of supply at a particular voltage level is the cost at that voltage level and upstream network. However, in the absence of segregated network costs, it would be prudent to work out the voltage – wise cost of supply taking into account the distribution losses at different voltage levels as a first major step in the right direction. As power purchase cost is a major component of the Tariff, apportioning the power purchase cost at different voltage levels taking into account the distribution losses at the relevant voltage level and the upstream system will facilitate determination of voltage wise cost of supply, though not very accurate, but, a simple and practical method to reflect the actual cost of supply.

33. The technical distribution system losses in the distribution network can be assessed by carrying out system studies based on the available load data. Some difficulty might be faced in reflecting the entire distribution system at 11 KV and 0.4 KV due to vastness of data. This could be simplified by carrying out field studies with representative feeders of the various consumer mix prevailing in the distribution system. However, the actual distribution losses allowed in the Annual Revenue Requirement which include the commercial losses will be more than the technical losses determined by the system studies. Therefore, the difference between the losses allowed in the Annual Revenue Requirement and that determined by the system studies may have to be apportioned to different voltage levels in proportion to the annual gross energy consumption at the respective voltage level. The annual gross energy consumption at a voltage level will be the sum of energy consumption of all consumer categories connected at that voltage plus the technical distribution losses corresponding to that voltage level as worked out by system studies. In this manner, *the total losses allowed in the ARR can be apportioned to different voltage levels including the EHT consumers directly connected to the transmission system of GRIDCO. The cost of supply of the Appellant's category who are connected to the 220/132 KV voltage may have zero technical losses but, will have a component of apportioned distribution losses due to difference between the loss level allowed in Annual Revenue Requirement (which includes commercial losses) and the technical losses determined by the system studies, which they have to bear as consumers of the distribution licensee.*

2.134 *34. Thus, Power Purchase Cost which is the major component of Tariff can be segregated for different voltage levels taking into account the transmission and distribution losses, both commercial and technical, for the relevant voltage level and upstream system. As segregated network costs are not available, all the other costs such as Return on Equity, Interest on Loan, depreciation, interest on working capital and O&M costs can be pooled and apportioned equitably, on pro-rata basis, to all the voltage levels including the Appellant's category to determine the cost of supply Segregating Power Purchase cost taking into account voltage-wise transmission and distribution losses will be a major step in the right direction for determining the actual cost of supply to various consumer categories. All consumer categories connected to the same voltage will have the same cost of supply. Further, refinements in formulation for cost of supply can be done gradually when more data is available".*

2.135 Based on the estimation carried out in previous sections on various elements of ARR and revenue, the Objector is humbly submitting voltage wise cost of supply calculation.

Table 59: Details of the energy input into the KSEBLsystem as per the Objector

SL. No.	Particulars	Value
1	Total Own generation + PP	24774.21
2	Transmission loss %	4.05%
3	Less Transmission loss units	1,003.36
4	Sale of energy at EHT level (MU)	2039.22
5	**Energy transferred to HT system**	**21,731.63**
6	Distribution loss HT level (%)	5.35%
7	Distribution loss associated with sale of energy at HT level (MU)	1,162.64
8	Sale of energy at HT level (MU)	3760.16
9	**Energy transferred to LT system**	**16,808.83**
10	Loss at LT level (%)	5.62%
11	Distribution loss associated with sale of energy at LT level (MU)	945.34
12	Sale of energy at LT level (MU)	15,863.49

Table 60: GFA as on 01.04.2018

Particulars	Generation	Transmission	Distribution	Total
GFA as on 01.04.2018 (Crs)	4413.63	5314.77	8390	18118.4
%	24.36%	29.33%	46.31%	100.00%

2.136 Based on the above proportion of GFA as on 01.04.2018, the ARR elements of ROE, Other Income and Non-Tariff Income have been apportioned to Generation, Transmission and Distribution functions. The same apportionment of the Net ARR has been shown below.

Table 61: Apportionment of ARR elements to the functional heads

Particulars	Generation (Crs)	Transmission (Crs)	Distribution (Crs)	Total (Crs)
ARR	8087.44	737.64	3917.49	12742.57
RoE	5.01	6.03	9.52	20.57
(Less) Other Income	87.16	104.96	165.68	357.80
(Less) Non Tariff Income	42.33	50.97	80.46	173.75
Net ARR - Function wise	**7,962.96**	**587.75**	**3,680.87**	**12,231.59**

Table 62: Voltage wise energy flow

Sl. No.	Particulars	Units	EHT	HT	LT	Total
1	Energy sale at different voltage level (as per chapter-4)	(MU)	2039.22	3760.16	15863.49	21662.87
2	Loss associated with energy sale at different voltage level	(%)	4.05%	5.35%	5.62%	
3	Input energy required	(MU)	2125.30	4140.39	18508.52	24774.21
4	Proportion of input energy required at voltage level	%	9%	17%	75%	100%
5	Energy handled at each voltage system	(MU)	23770.85	20568.99	15863.49	

2.137 The Objector has followed the methodology laid down by the Hon'ble Commission and has used the Input energy required to achieve projected sales at individual voltage levels, to apportion the Generation related costs. It has further used the energy handled at EHT, HT and LT levels to allocate the Transmission and Distribution costs. The Distribution cost has further been allocated in 25:75 ration between the HT and LT levels. The calculations for the same has been presented below.

Table 63:VCoS calculation as per the Objector for FY 19

Sl. No.	Particulars	Units	EHT	HT	LT
1	Cost of Generation and Power Purchase	**Rs/ kWh**	3.35	3.54	3.75
2	Cost of Transmission (EHT)	**Rs/ kWh**	0.25	0.25	0.25
3	Cost of Distribution (HT)	**Rs/ kWh**		**0.45**	**0.45**
4	Cost of Distribution (LT)	Rs/ kWh			1.74
5	**Cost at each interface points**	**Rs/ kWh**	**3.60**	**4.23**	**6.19**

2.138 The above table shows the voltage wise cost of supply of KSEB at the EHT, HT and LT voltage levels and is indicative of the difference in the cost of supplying consumers connected at different voltage levels.

2.139 The Objector would also like to draw the attention of the Hon'ble Commission to the Tariff Order passed by Hon'ble APERC for the FY 2018-19 for AP Discoms. In Chapter VII, Cost of Service, the Hon'ble APERC has estimated the voltage wise cost of supply based on the embedded cost approach, wherein the Coincident and Non-coincident peak demand at customer voltage level for FY2018-19 is estimated using the load curves and FY 2018-19 projected sales of each category. The fixed cost apportionment is based on the estimated demand and the energy charges were apportioned based on the volume of consumption for different voltage levels. The Objector is of the view that such scientific methodology portray the true picture for the estimation of VCoS. The Objector requests the Hon'ble Commission to direct the Petitioner to perform study on estimation of coincident and non-coincident peak demand, consumer category wise and provide such data as required for the estimation of VCoS.

Other Issues

Tariff Rationalization - Increase in fixed costs

2.140 In Order to bridge the estimated revenue gap for the FY 2018-19, the Petitioner has proposed a revised tariff schedule applicable for the FY 2018-19. The Petitioner submitted that the proposed tariff schedule ensures recovery of fixed charges to the extent of 40%, wherever possible. The Petitioner further submitted that the tariff does not cause huge tariff shock to any of the categories.

2.141 The existing tariff applicable for HT & EHT industries and revised Tariff as proposed by the Petitioner has been tabulated below:

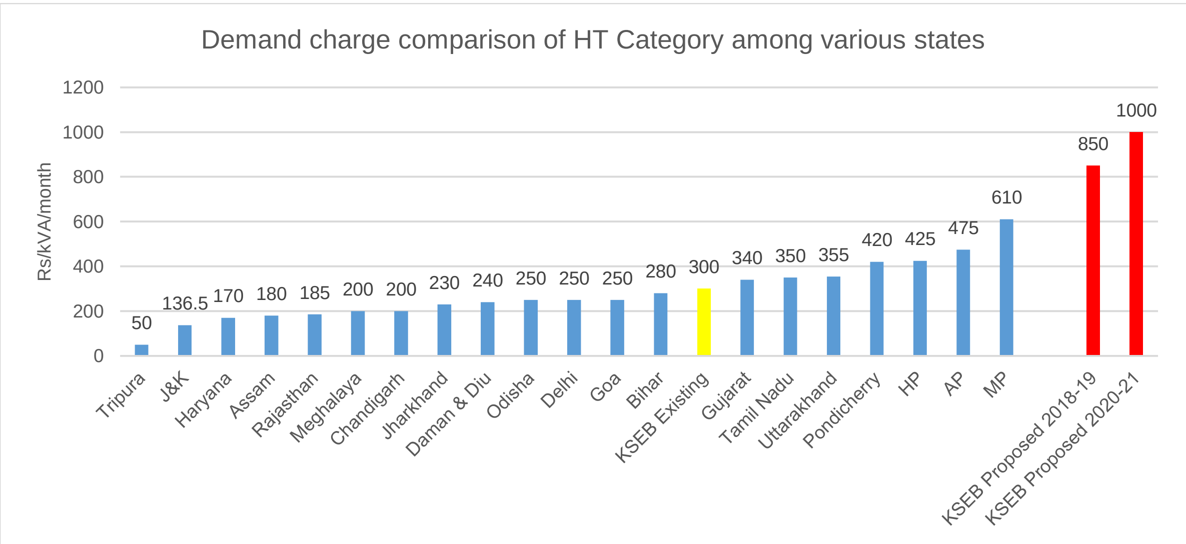
Category	Units for FC	Existing Charges		Proposed Charges for FY 2018-19		% increase/decrease in charges	
		Fixed Charges	Energy Charges (Rs/kWh)	Fixed Charges	Energy Charges (Rs/kWh)	Fixed Charges	Energy Charges (Rs/kWh)
HT Categories							
HT-1 (A)	(Rs/kVA/month)	300	5.5	600	4.80	100%	-13%
HT-1(B)	(Rs/kVA/month)	300	5.8	450	5.00	50%	-14%
HT-II A	(Rs/kVA/month)	350	5.4	800	4.20	129%	-22%
HT-II B							
0 to 30000 units	(Rs/kVA/month)	400	6.2	800	4.80	100%	-23%
Above 30000 units	(Rs/kVA/month)	400	7.2	800	5.90	100%	-18%
HT-III(A)	(Rs/kVA/month)	170	2.8	180	2.90	6%	4%
HT-III(B)	(Rs/kVA/month)	170	3.3	180	3.40	6%	3%
HT-IV							
0 to 30000 units	(Rs/kVA/month)	400	6.3	745	5.00	86%	-21%
Above 30000 units	(Rs/kVA/month)	400	7.3	745	5.50	86%	-25%
HT-V	(Rs/kVA/month)	350	5.5	475	4.40	36%	-20%
Extra High Tension (EHT)							
EHT 66 kV Industrial	(Rs/kVA/month)	300	5.2	850	4.50	183%	-13%
EHT-110 kV Industrial	(Rs/kVA/month)	290	5.1	825	4.40	184%	-14%
EHT- 220 kV Industrial	(Rs/kVA/month)	280	4.7	700	3.80	150%	-19%
EHT Commercial							
0 to 60000 units	(Rs/kVA/month)	400	6.1	850	4.60	113%	-25%
Above 60000 units	(Rs/kVA/month)	400	7.1	850	4.90	113%	-31%
EHT - General B							
0 to 60000 units	(Rs/kVA/month)	370	5.8	850	4.30	130%	-26%
Above 60000 units	(Rs/kVA/month)	370	6.8	850	4.80	130%	-29%
Railway traction	(Rs/kVA/month)	250	5.1	650	4.30	160%	-16%

2.142 The Objector would like to draw the attention of the Hon'ble Commission to the fact that although there has been a downward revision in the proposed energy charges, the revision in fixed charges as proposed by the Petitioner is abnormally high and would result in huge tariff shock to already cross-subsidizing HT & EHT consumers.

2.143 It is imperative to mention that HT & EHT category consumers have power cost as one of the most critical components of their overall variable cost. Any increase in tariff would be highly unviable and with the inherent cross subsidy involved in the computation of tariff, imparts huge financial impact on the HT & EHT consumers which may lead to the units being non-operational.

2.144 With the proposed increase in power tariff, the power cost will become prohibitive. Further, the industry is facing stiff competition in global markets primarily from China, which enjoys very low power tariffs as well as have low cost for manufacturing the required raw material. The actions by the Stakeholders towards improving cost competitiveness of this industry will encourage their growth in a sustainable manner, which is vital for the growth of downstream industries and for overall economic growth and employment opportunities in the State. Therefore, the survival of these industries is solely dependent on 'affordable power tariff'.

2.145 At this juncture, the Objector would like to draw the attention of the Hon'ble Commission that the existing fixed costs in Kerala are among the higher side in the country. A comparison of the existing fixed costs for HT categories is depicted below:



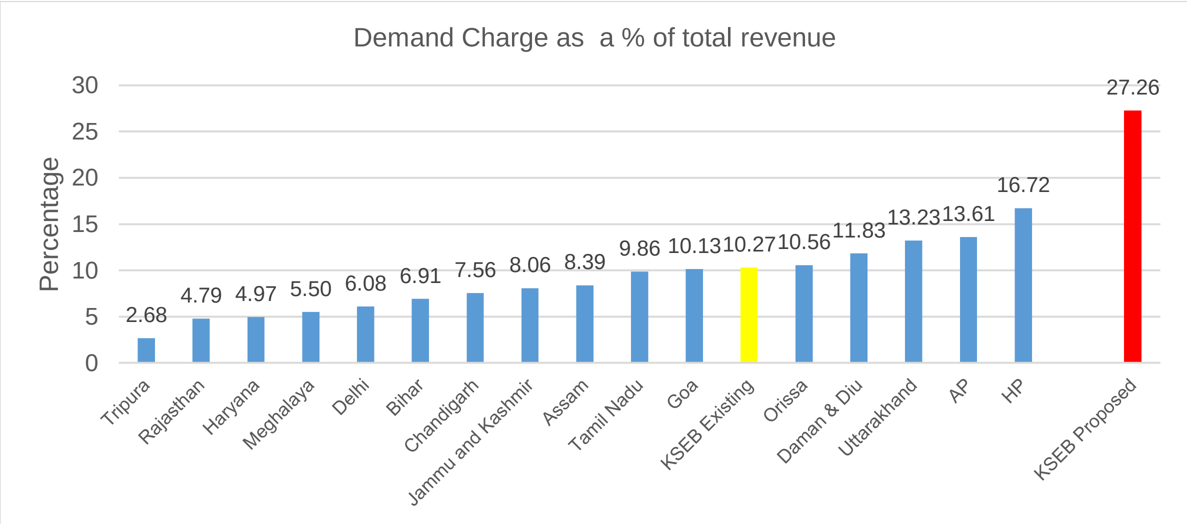
2.146 From the above analysis it can be clearly seen that the Demand charges in Kerala are already high and any further increase would have a severe impact on the consumers.

2.147 Hon'ble MERC in its MYT Order of MSEDCL for the period from FY 2016-17 to FY 2019-20 in paragraph 8.10 Rationalization of fixed cost, stated that

"The Commission has noted the increase in the supply availability of MSEDCL and, therefore, there is now a strong case for increase in the Fixed / Demand Charges, which were substantially reduced from the Order in Case No. 72 of 2007. ***However, such increase in Fixed Charges should be gradual and not steep. Therefore, the Commission has approved a gradual increase in Fixed / Demand Charges over the 3rd Control Period, just sufficient to keep the revenue recovery from Fixed Charges at around 17% of the total revenue of MSEDCL***

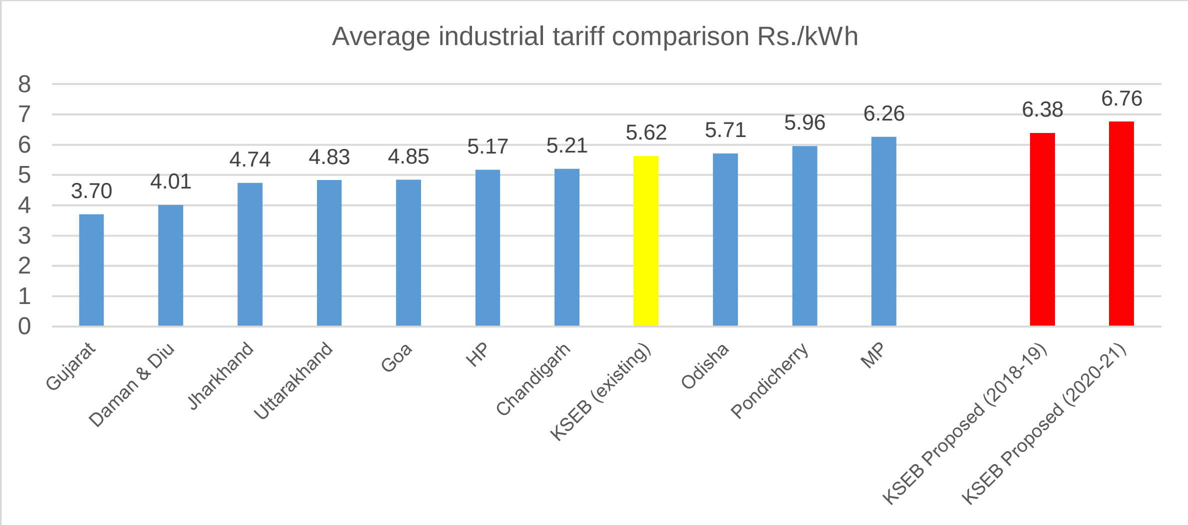
[Emphasis added]*."*

2.148 The percentage composition of demand charge to overall revenue from existing tariff in various Indian states is depicted below. It can be observed that there has been a huge increase in the percentage of recovery through demand charges as proposed by KSEBL. Such sudden increase will have a huge impact on many industries.



2.149 The comparison of average tariff applicable in Kerala with other States is given below[5]:-

[5]At 60% load factor for industries



2.150 From the above judgement of the Hon'ble Commission, it is clear that the increase in fixed charges should be gradual over a period of time and should not be steep, unnecessarily burdening the consumers. While in states like Andhra Pradesh there were no demand charges for few industrial categories, the Petitioner in its Petition has sought **for 40% of recovery from existing 13% which is highly irrational.**

2.151 Also as per Section 42 of the Indian Electricity Act, 2003

"Section 42. (Duties of distribution licensee and open access):

(1) It shall be the duty of a distribution licensee to develop and maintain an efficient, co-ordinated and economical distribution system in his area of supply and to supply electricity in accordance with the provisions contained in this Act.

(2) The State Commission shall introduce open access in such phases and subject to such conditions, (including the cross subsidies, and other operational constraints) as may be specified within one year of the appointed date by it and in specifying the extent of open access in successive phases and in determining the charges for wheeling, it shall have due regard to all relevant factors including such cross subsidies, and other operational constraints

…"

2.152 As per the above provisions of the Electricity Act 2003, the State Commission shall introduce and encourage open access in the state. With the recent push from the GoI to achieve its ambitious target of 175 GW of renewable capacity addition by FY 22 and the declining trend in tariffs in the recent renewable auctions, the HT and EHT consumers are encouraged to procure power through open access route. If the Hon'ble Commission revises the fixed charges in line with the submissions made by the Petitioner, the HT and EHT consumers would require to pay higher fixed charge to the Discom without consuming any power form the Discom. This coupled with the open access charges may not yield any benefit to the open access consumers.

2.153 Further, it is imperative to mention that there are few industries which are operational principally during certain seasons or limited periods in the tariff year and if the main plant is regularly closed down during certain months of the tariff year. Had the fixed charges been increased to such huge extent, such consumer may be charged heavily for the months during which the plant is shut down (which period shall be referred to as the off-season period) which may severely affect the financials of the industry.

2.154 In view of the above reasons, we request the Hon'ble Commission to consider the submissions made by the Objector while approving the revised tariff by ensuring that there is not much variance in the proportion of the fixed charges/demand charges to the overall revenue contribution.

Introduction of kVAh billing for HT/EHT Consumers

2.155 The Objector submits that introducing kVAh billing will serve the purpose of simplification of billing, dispensing away power factor incentive and system strengthening. Power factor of system is governed by nature of Load and generally low power factor is caused by the high inductive load on the system. Due to low power factor actual working component of the power gets reduced leading the system to overloading, Higher Line Losses and Voltage Dips.

2.156 Presently, KSEBL levies the electricity charges in two forms namely fixed charge and energy charge from consumers against power consumption. The fixed charges varies on consumer category/ sub-category and are being charged based on per connection, load and demand basis. However, energy charges are being imposed in per unit (kWh) basis across consumer categories.

2.157 The industrial load which consists of inductive load generates some amount of reactive power for them to function. This reactive power is compensated by the capacitor bank installed in parallel to the load. However, other categories of consumers viz. residential, commercial etc. do not install capacitor banks at their end leading to the power equipment drawing the reactive power from the grid which KSEBL has to draw from the grid. This leads to reduction in power factor and system inefficiency.

2.158 If the tariff is only fixed for active energy measured (kWh basis), the supplier has to meet the loss in the supply system due to this additional current drawn due to the poor power factor of the load maintained by other consumers. Reducing the power factor incentive and increasing the power factor penalty for all the consumers, as proposed by the Petitioner, to maintain power factor has a negative impact on the large HT & EHT consumers. To eliminate the losses, regulatory measures have to be initiated upon the consumers who do not maintain the power factor of the load at unity or a specified value. Imposing penalty to consumers who create this burden, by identifying them through special tasks, are not practical and feasible for the utility, which may further lead to billing disputes. Therefore, consideration of apparent power (active as well as reactive) or also known as KVAh while billing the consumers is inevitable as reactive power being the integral part of the power supplied to consumers.

2.159 It is pertinent to mention that KVAh billing shall enable the responsibility of the consumer to maintain the quality of the load by improving its power factor or the consumers automatically pay themselves for the additional burden due to poor power factor of the load maintained by them. In kVAh billing system as the electricity bills conceive this additional burden for consumers who create it, no separate penalty need to be imposed. This is very much beneficial to the large HT & EHT consumers who usually maintain their power factor by installing capacitor banks.

2.160 It is pertinent to mention that many states in India have migrated to kVAh based billing (for e.g. Maharashtra, Bihar, Chhattisgarh, Delhi, Uttar Pradesh etc.) A brief of few states in which the kVAh based billing is operational is tabulated below:

State	**Yearof implementation**	**Reason for migration to kVAh billing**
Delhi	2000-01	Improved power factor
Chhattisgarh	2005-06	Improved power factor, Better Voltage Profile, Reduction in T&D losses & Overloading, Better Consumer Discipline
Jammu& Kashmir	2007-08	Greater Transparency, Reduction in Billing Errors, Reduced Admin. Burden, Better Power Factor.
Himachal Pradesh	2001-02	Improvement in system Power Factor, Reduction in billing errors, Reduction in losses, reduction in admin Burden.

State	Yearof implementation	Reason for migration to kVAh billing
U.P	2001-02	Improvement in system power factor, reduction in losses.
Uttrakhand	2003-04	Improvement in system power factor, reduction in losses.
Andhra Pradesh	2011-12	Improvement in power factor, reduction in demand & demand charges, reduction in system losses & overloading, improvement in voltage profile
Haryana	2012-13	Improvement in system power factor, reduction in losses
Punjab	2014-15	Improvement in system parameters, reduction in technical losses
Jharkhand	2018-19	Improved power factor, Better Voltage Profile, Reduction in T&D losses & Overloading, Better Consumer Discipline

Benefits of proposed (kVAh) based billing

(a) **Complete recovery of costs of utility for active and reactive power:** Since reactive power is also a useful and integral part of the power supplied by the distribution licensee, charges for supplying the same are also recovered from the kVAh tariff.

(b) **Zero/ Minimal drawl of reactive power from consumers by use of Capacitor Banks**: Under kVAh billing, it would automatically become the responsibility of the consumer to generate reactive power locally through installation of capacitors banks.

(c) **Reduction in power purchase cost:** Under kVAh billing, the distribution licensee does not have to buy the additional power in order to compensate for the reactive power which goes unaccounted at present.

(d) **Reduction in (I^2)*R loss:** Lower reactive power in the system results into lowering of supply voltage, which in turn increases the current. Due to this increase in current, the I^2R (heat loss) is increased resulting into higher technical losses.

(e) **Improvement in system voltage:** As explained in previous sections, decrease in reactive power causes voltage to fall while increasing reactive power causes voltage to rise. Thus, generation of reactive power using capacitor banks by the consumers would help in the improvisation of supply voltage also.

2.161 The Hon'ble Commission in it Suo-moto Order for FY 2017-18 had directed the Petitioner to submit a proposal for implementation of kVAh billing. However, it seems that the Petitioner has not taken due-cognizance of the directives of the Hon'ble Commission. The relevant extracts of the Order has been reproduced below for ready reference

*"**15.29** KSEBL Ltd shall, on or before 30.06.2017, submit a suitable proposal for introduction of kVAh billing for HT-EHT consumers"*

2.162 In this regard, the Objector humbly requests the Hon'ble Commission to introduce kVAh billing in a phase wise manner or re-direct the Petitioner to carry out a study on impact analysis of kWh to kVAh billing and submit a report based on which the Hon'ble Commission may implement such migration.

2.163 In case the Hon'ble Commission decides not to introduce kVAh billing at this juncture, we request the Hon'ble Commission to continue with the existing provisions on power factor incentive mechanism. Our Objections to the proposed power factor incentive and penalty mechanism are as below:

Decrease and eventual removal of Power factor incentive

2.164 Tariff, duly authorized by the regulatory authority, for most of the utilities, is based on the active energy measured at the consumers premises. Power factor is normally maintained within the prescribed limits by installing Static capacitors, wherever, loads are more inductive in nature. Power factor incentive is given to consumers, who maintain the average power factor more than the permissible limits.

2.165 It is imperative to mention that the HT and EHT consumers with inductive load incur significant capital costs to install capacitor banks at their premises to maintain the power factor over the prescribed limits as set by the Hon'ble Commission. At the point where the applicable tariff and the cross subsidy surcharge are significantly high for the HT & EHT consumers, the power factor incentive is the only incentive that a consumer is benefited to maintain its power factor.

2.166 The consumers can assist to maintain the network in accordance with the Grid Code, if the power factor of their installation lies within the limits approved. The maintenance of proper PF above the threshold levels would improve the voltage of the supply to the consumers and also enable optimizing their power consumption which in turn helps in reducing the demand of the system. This eventually would result in grid stabilization and benefit the Discom.

2.167 The Hon'ble Commission in its recent tariff Order vide order dated 17.04.2017 in the matter of determination of Tariff for the year 2017-18 on Suo-motu proceedings has ordered to increase the power factor incentive from 0.25 % to 0.5% of energy charges for each 0.01% unit increase in power factor from 0.9 'for power factor between 0.9 to 1.00' in the case of LT IV ToD billed consumers and HT & EHT consumers. Such increase in Power factor incentive is encouraging for the HT & EHT consumers to maintain the power factor within the permissible limits.

2.168 However, the Petitioner in its recent Petition has proposed that the minimum power factor to be maintained by consumer to be eligible for the power factor incentive is be fixed as 0.95 and the rate of incentive for power factor improvement be fixed as 0.25% of energy charges for each 0.01 unit increase in power factor for 2018-19 and 2019-20 and fixed as 0.12% for FY 2020-22 for eliminating incentive by next control period.

2.169 The petitioner has stated that the incentive distributed for 2017-18 towards PF incentive was 90.21 Cr, PF penalty collected was Rs.17.59 Cr resulting in a net outflow of Rs. Rs. 72.62 Cr. It is stated in the petition that "PP cost savings by improving PF by 0.01, Rs.035/unit will be saved". The working of this has been given in Table 6.49. The energy sales to HT & EHT category and bulk licensees during 2017-18 (Table 4.10) was 5410 MU. Thus for every improvement of 0.01 PF of HT & EHT consumers and bulk licensees, there will be a saving of Rs. 19 Cr per year. Needless to say, the saving for higher improvement in PF, the saving would be higher. Further, as per Table 4.102, an income of Rs.50 Cr has been projected every year towards reactive energy charges. This income is due to fairly high system PF. These aspects has to be considered while deciding the matter

2.170 The Objector strictly condemns the submissions made by the Petitioner as the decrease in power factor incentive and the proposal to remove the same may have adverse impact on the distribution network, as there is no motivation for the consumers to maintain the power factor at the prescribed limits incurring significant upfront capital expenditure. The capacitor banks installed at the premises of the consumers will also help the distribution utility, thereby reducing its need to install new capacitor banks.

2.171 Further the power factor incentive being a proportion of energy charges, and significant reduction in proposal of Energy charges by the Petitioner would further reduce the incentive being offered to the consumers. An illustration of the existing and proposed power factor incentive proposal along with proposed Energy charges for EHT 66kV consumer in the distribution network of Kerala, maintaining Unity power factor is shown below:

Incentive per unit (paise per kWh) comparison for EHT 66 kV Industrial consumer of KSEBL with Unity PF	Existing PF incentive for Unity PF – 5% of Energy charges	Proposed PF incentive for Unity PF – 1.25% of Energy charges
Existing Energy charges @ 5.2 per kWh	0.26	0.07
Proposed Energy charges @ 4.50 per kWh	0.23	0.06

2.172 From the above table it is very clear that the existing power incentive at the existing energy charges are very much beneficial to the HT and EHT consumers as the incentive is to the tune of Rs. 0.26 paise/kWh consumed. With the proposed charges and the incentive mechanism such incentive will drop to 0.06 paise/kWh which, as explained in the earlier sections may have an adverse impact on the industrial consumers.

2.173 Further, the Objector has made a comparison of the power factor incentive available across various states in India at Unity PF and the prospective average savings for HT/EHT tariff categories as tabulated below:

State	Power factor incentive % at Unity PF	Average Energy charges (Rs/kWh) for HT/EHT - Industrial Tariff	Incentive per unit (paisa/kWh)
Maharashtra	7%	6.98	49
Madhya Pradesh	7%	6.50	46
Goa	5% -(applicable on both fixed and Energy charges)	4.40	26
Chandigarh	5% -(applicable on both fixed and Energy charges)	5.00	30
Bihar	7.5% -(applicable on both fixed and Energy charges)	6.60	59
West Bengal	8%	7.15	57
Rajasthan	5%	6.15	31
Puducherry	5%	5.30	32
Gujarat	Rebate per unit consumed		27
KSEBL Existing	5%	5.20	26

State	Power factor incentive % at Unity PF	Average Energy charges (Rs/kWh) for HT/EHT - Industrial Tariff	Incentive per unit (paisa/kWh)
KSEBL Proposed FY19	1.25%	4.50	6
KSEBL Proposed FY21	0.6%	4.50	3

** Fixed charge considered to be 20% of the revenue composition for computation of PF incentive*

2.174 From the above comparison, it can be clearly seen that many states with significant industrial presence in the country have kept a provision for PF incentive to encourage industries. However the proposed tariff rationalization coupled with reduction in incentives id very discouraging for Industrial consumers. While in few states like Punjab, where the State Govt. has provided electricity subsidy[6] for Industrial consumers to encourage Industries, the proposal by KSEBL is abysmal and lacks any rationality. In view of the same, the Objector humbly requests the Commission to not to consider the submissions made by the Petitioner.

2.175 The Objector also likes to state that total incentive payable in the State of Maharashtra is Rs. 1,790 crore, which translates in to 7.65% of the HT and EHT billing revenue and 3.5% of the total revenue. Whereas, in Kerala, the PF incentive pay out is estimated as Rs. 72 crore (after deducting the penalty), which is merely 0.74% of the revenue.

2.176 In addition to the power factor incentive stated above, **Maharashtra also gives the following incentives**:-

(a) **Prompt payment discount** of 1% of the monthly bills (excluding taxes and duties) for payment of electricity bills within 7 days from the date of their issue.

(b) **Load factor incentive**: - Industrial Consumers having Load Factor above 75% and upto 85% will be entitled to an incentive in the form of a rebate of 0.75% on the Energy Charges for every percentage point increase in Load Factor from 75% to 85%. Consumers having a Load Factor above 85 % will be entitled to a rebate of 1% on the Energy Charges for every percentage point increase in Load Factor from 85%. The

[6] https://timesofindia.indiatimes.com/business/india-business/punjab-govt-to-bear-power-subsidy-for-industry/articleshow/62464041.cms

total rebate will be subject to a ceiling of 15% of the Energy Charges applicable to the consumer.

Given that Kerala is a power surplus state now, it is necessary to introduce load factor incentive to attract more consumption of energy by large consumers. Further to increase the prompt payment incentive from the existing 0.3% to at least 1% of the bill value. This will definitely be beneficial for KSEB themselves, as the prompt inflow of revenue will reduce their reliance on short term borrowings.

2.177 With respect to power factor penalty, the Petitioner submitted that the disincentive for the power factor penalty should be made 1.25% of the energy charges for every 0.01 fall from 0.95 PF. The Objector humbly submits that the decrease in proposed power factor incentive along with increase in disincentive will have a cascading effect on the consumers. In view of the same, the Objector humbly requests the Hon’ble Commission to continue with the Power factor Incentive & Penalty as per the existing provisions.

Power factor incentive for Open access consumers

2.178 The Objector appreciates the efforts of the Hon’ble Commission, to improve quality power by providing incentives and penalties. These initiatives have resulted in revolutionary changes. PF improvement in consumer side ultimately resulted in system improvement and reduction in T & D loss considerably.

2.179 It is submitted that KSEBL got benefitted by way of reduction in transmission losses due to PF improvement measures of the consumers. The Objector notes with concern that unfortunately, the PF incentive provision is silent in KSERC orders related to open access and KSEBL is conveniently denying the PF incentive for energy sourced through open access.

2.180 The Objector submits that the high consumer PF will reduce the reactive power loading of KSEBL and reduce the line current to deliver a fixed quantum of power to consumer and will improve the overall system of KSEBL. The Objector is of the view that the improvements and benefits to KSEBL out of the PF improvement made by the consumer is irrespective of the source of power - from KSEBL directly or through Open Access.

2.181 The Hon’ble APTEL in Appeal No.231 of 2012in its order dated 14th Nov 2013 in point no 33 & 34 stated that

“33

….

The very purpose of providing higher power factor incentive is to encourage the consumers to improve their power factor by providing shunt compensation and bring it as close as possible to unity so that the system losses are reduced to the minimum. This is pure technical and engineering principle and it does not distinguish as to whether the power has been drawn from the licensee or on availing the 'open access'"

"34

*"The above analysis would show that very purpose to provide higher power factor rebate is to encourage the consumer to maintain high power factor and to minimize the system losses. Any loss before the meter installed at consumer's premises is on account of the distribution licensee. In order to reduce these losses, the State Commission has incentivized high power factor based on pure technical and engineering principle**. It has nothing to do with the source of power. Accordingly, power factor rebate is payable to the consumer who also avails open access"***

[Emphasis added]"

2.182 Hence as per the above judgement of the Hon'ble Commission, it is clear that there is no logic or rationale in distinguishing the PF incentive between energy drawn from licensee and that drawn from Open Access route. Further, the Hon'ble APTEL in the same Order has concluded that the energy sourced through open access is also eligible to avail the benefits of PF incentive. The relevant extracts of the Order has been reproduced below:

"as to whether the Cross Subsidy Surcharge payable by the Open Access Consumer is to be treated as a part of the electricity charges and need to be taken into account as consumer charges while deciding on the rebate admissible for the power factor?"

"56 (iii) As per clause 2(19) of the Supply Code, the surcharge referred to in Regulation 3 is the Cross Subsidy Surcharge payable by Open Access consumer is a part of SoP charges and, therefore, the incentive on power factor would also be applicable on this amount.."

2.183 The Petitioner is of the view that the APTEL Order, beyond any doubt it spelt out that PF incentive is eligible for Cross Subsidy Surcharge amount paid by Open Access consumers also. Hence, we humbly request the Hon'ble Commission to explicitly specify that the PF incentive is applicable for Open access consumers. Further, we propose that the PF incentive should be made applicable on combined value of CSS charge and the applicable energy charge for Open access power consumed.

A3: PRAYER TO THE HON'BLE COMMISSION

The Objector with averments made above prays that the Hon'ble Commission may please consider the objections made on the KSEBL's petition for approval of ARR, ERC, Tariff Proposal & Capital Investment Plan for Control Period 2018-22 and consider the following submissions:

Parameter	Submissions
T&D Loss	• To enforce the minimum loss target as specified and disallow the excess T&D loss at the cost of highest marginal cost stations. • Issue clear directions to the Petitioner to adhere to the loss trajectory
Own generation and power purchase	• Cost of CSGS to be determined based on the CERC tariff Orders after prudence check. • PGCIL charges to be approved as per the CERC Orders. • Approve other sources of power purchase as per the methodology followed by the Objector. • Disallow the cost of power purchase (fixed cost and transmission charges) for RGCCPP (liquid fuel based generating stations) • Issue strict directions to comply with the RPO. • Any benefit in variation in the power purchase cost t be passed on to consumer in the subsequent true-up • Prudently verify the project cost for proposed new solar and hydel power plants
Capital Expenditure	• To allow the Capital expenditure vis-à-vis capitalization for the Control period based on the past trends and the submissions of the Objector.
Interest on long-term loans	• To disallow interest on loan corresponding to work in progress • To carry out the capex prudence check to verify the cost-benefit analysis and progress reports to ascertain the prudent capital expenditure to be approved for the purpose of calculation of interest on loans and bonds
Interest on working capital	• Disallow interest on working capital due to the availability of sufficient funds to meet working capital.
Interest on Master Trust	• Additional liability of pension due to delay in creation of Master Trust shall be disallowed
Depreciation	• To consider re-estimated depreciation by Objector based on revised additions to GFA as per KSERC Regulation 2018, which is significantly lower than the amount proposed by the KSEBL
O&M Expenses	• Accept the estimated O&M cost by the Objector per *KSERC (Terms and Conditions for Determination of Tariff) Regulations, 2018.* • Need in policy changes in recruitment and compensation. • To issue directives on improving the operational efficiency thereby optimizing O&M costs of the system.

Bad Debt	• To not consider bad debt in ARR. This may be dealt at the time of truing up
One Time Expense – Donation to CM Relief fund	• KSEBL has donated Rs. 35 crore to CM's Flood relief fund, which has been included in the ARR as one time expense. • As per the Objector, any donation made on this behalf shall be deducted from Return on equity as claimed as part of ARR.
Other income and Non-Tariff income	• The details related to material cost variance shall be verified before approving true up.
Return on Equity	• To allow 14% return on equity as per the equity balance specified in the balance sheet for SBU-D of the company.
Revenue Gap	• Disallow the carrying cost on the existing revenue gap as per the directions issued in the earlier Orders. • Consider the revenue gap as per the projections made by the objector. • To disallow the revenue gap to balance out the electricity duty collected in past and not paid to the government during netting off processes.
Revision of Tariff	• Consider the submissions of the Objector in approving the revised tariff. • Rationalization of Tariff (increase in fixed charges) if implemented, may be done without having much impact on the consumer category
Open Access charges	• Approve the open access charges as proposed by the Objector
Other issues	• Rationalization of Tariff, if implemented may be done in a phase wise manner without much impact on the consumers. • Introduce kVAh billing for HT/EHT consumers in phase wise manner • Continue existing provisions with respect to Power factor incentive and Penalty. • Power factor incentive to be made applicable for open access consumers. •