BEFORE THE HONOURABLE KERALA STATE ELECTRICITY REGULATORY COMMISSION

In the Matter of	**:**	**REVIEW PETITION AGAINST KSERC ORDER NO: 1007/F&T/2016/KSERC dated 17th APRIL 2017 IN THE SUO MOTU PROCEEDINGS FOR DETERMINATION OF TARIFF FOR ELECTRICITY FOR THE FINANCIAL YEAR 2017-18 APPLICABLE TO THE STRATEGIC BUSINESS UNITS (GENERATION, TRANSMISSION AND DISTRIBUTION) OF KSEB LTD AND FOR OTHER LICENSEES**
Petitioner	**:**	**Kerala State Electricity Board Limited, Vydyuthi Bhavanam, Pattom, Thiruvananthapuram**

THE PETITIONER HUMBLY STATES THAT:

1. Hon'ble Commission, as per order dated 17th April 2017 "*in the suo motu proceedings for determination of tariff for electricity for the financial year 2017-18 applicable to the strategic business units (Generation, Transmission and Distribution) of KSEB LTS and for other licensees",* has approved a revenue gap as Rs 400.12 crore for the year 2016-17 and a revenue surplus of Rs 490.92 for 2017-18. Honourable Commission has also approved tariff revision for an additional revenue of Rs 550 crores and thereby allowing recovery of a portion of approved and un-bridged revenue gap to the tune of Rs.1040.92 crore, after adjusting the approved surplus of Rs.490.92 crore.

2. KSEBL had fully participated in the Suo motu proceedings by furnishing its views on various aspects along with its estimations of ARR & ERC with sufficient and valid reasons.

3. However, it is seen that the ARR & ERC approved by the Hon'ble Commission for the year 2016-17 and 2017-18 vary significantly from the estimations furnished by KSEBL. KSEBL humbly submits that non approval of reasonable expenses under purchase of power, interest and finance charges, O&M expenses etc may adversely affect its various obligations to provide quality power.

4. A comparison of the various items of ARR &ERC estimated by KSEBL and those approved by the Hon’ble Commission is furnished below for ready reference.

Table-1

Comparison of KSEBL estimation and approval by KSERC (Rs in crore)

Particulars	2016-17			2017-18		
	Estimation of KSEBL	**Approved by KSERC**	**Difference**	**Estimation of KSEBL**	**Approved by KSERC**	**Difference**
Cost of Generation & power purchase (fuel cost of BDPP& KDPP only)	8423.31	7752.76	-670.55	7966.95	7339.34	-627.61
Interest and Finance charges	1828.46	1488.27	-340.19	2037.73	1506.55	-530.98
Depreciation	475.26	414.8	-60.46	475.26	414.8	-60.46
O&M expenses	2980.24	1596.15	-1384.09	3169.84	1737.27	-1432.57
RoE	542.35	489.86	-52.49	542.35	489.86	-52.49
Total ARR	14249.62	11741.84	-2507.78	14192.13	11487.82	-2704.31
Less :Non Tariff income	431	441	+10	439	449	+10
Net ARR	13818.62	11300.84	-2517.78	13753.13	11038.82	-2714.31
Revenue from Tariff	10920.03	10900.72	-19.31	11529.74	11529.74	0
Revenue gap(-) /surplus(+)	-2898.59	-400.12	-2498.47	-2223.39	490.92	-2714.31

5. As submitted above, the deviation in approval on revenue gap in comparison to estimates of KSEBL is Rs.2498.47 crore and Rs 2714.31crore respectively for 2016-17 and 2017-18. The details of disallowance made by KSERC as against reasonable estimation by the utility is given in the table below :

Table 2 ARR & ERC component wise variation in approval

Sl. No	Description	2016-17 (Rs. in cr)	2017-18 (Rs. in cr)
1	Cost of power purchase	670.55	627.61
2	Interest and finance charges	340.19	530.98
3	Depreciation	60.46	60.46
4	O&M Expenses	1384.09	1432.57
5	Return on equity	52.49	52.49
6	Non Tariff income	10.00	10.00
7	Revenue from Tariff	-19.31	0.00
6	Total	2498.47	2714.31

6. Aggrieved by the considerable adverse variation in approval as above, KSEBL submits the following for kind review and issue of favorable orders by the Hon'ble Commission.

7. O&M Expenses and Return on Equity: Hon'ble Commission determined the operation and maintenance expenses in line with the norms contained in the KSERC Terms and Conditions of Tariff Regulations 2014. Since the norms contained in 2014 Regulations are quite inadequate to recover genuine expenditure of KSEBL. The matter has been presented before this Hon'ble Commission with relevant details during the framing of the Regulations itself. As such pleadings were not heeded to by the Hon'ble Commission while issuing the Regulations, KSEBL had challenged the Regulations, before the Hon'ble High Court of Kerala in Writ petition No. 465/2015. Hence KSEBL once again requests before the Hon'ble Commission to review the amounts allowed under O&M expenses and Return on equity subject to judgment on the above writ petition.

8. Cost of power purchase:

1. KSEBL estimated the power purchase cost for 2016-17 as Rs.8423.31 crore and for 2017-18 as Rs.7966.95 crore. Hon'ble Commission has only allowed Rs.7752.76 crore and Rs.7339.34 crore for these years.

2. Hon'ble Commission has not approved any cost towards

a. Power purchase from sources like RGCCPP, Kayamkulam, Kasargod Solar park

b. Renewable Energy Certificate worth Rs.15 crore purchased during 2016-17 as per the direction of the Hon'ble Commission

Power procurement proposed through DBFOO basis has also not been fully approved.

3. It is humbly submitted that power purchase cost being an uncontrollable cost, Hon'ble Commission may kindly true up the actual power purchase cost along with carrying cost, for 2016-17 and 2017-18 subject to prudence check.

9. Interest and finance charges:

A. Hon'ble Commission has only approved Rs.1488.27 crore and Rs.1506.55 crore towards interest and finance charges for 2016-17 and 2017-18 respectively against the KSEBL's estimation of Rs 1828.46 crore and Rs 2037.73 crore, because of which the approval fell short of KSEBL estimation by Rs.340.19 crore and Rs.530.98 crore for these years as tabulated below:

Table 3 Statement showing comparison of Interest & Finance charges (Rs in crore)						
Particulars	Projections by KSEBL		As per KSERC Order		Variation from KSEBL projections	
	16-17	17-18	16-17	17-18	16-17	17-18
	A	B	C	D	E=C-A	F=D-B
Interest on long term loans	439.99	604.99	412.85	412.85	-27.14	-192.14
Interest on Security deposit	171.60	185.00	120.12	129.64	-51.48	-55.36
Interest on Overdraft	240.00	240.00	0.00	0.00	-240.00	-240.00
Interest on GPF	152.47	183.14	131.24	140	-21.23	-43.14
Other interest	10.00	10.00	10.00	10.00	0.00	0.00
Interest on Master Trust bonds	814.40	814.40	814.40	814.40	0.00	0.00
Total	**1828.46**	**2037.53**	**1488.27**	**1506.55**	-340.19	-530.98

B. Deviations in approval are mainly under interest on additional borrowings, interest on PF, interest on security deposit and interest on overdrafts availed to make good the approved and un bridged revenue gap. Hon'ble Commission may kindly true up actual expenses after prudence check.

C. **<u>Interest on long term loans</u>:** Hon Commission assessed the interest on outstanding capital liabilities at Rs.412.85 Cr each for the years 2016-17 and 2017-18 on an amount of Rs.3753 Cr towards loans and bonds as on 31-3-2016. But no interest has been approved on account of additional borrowings proposed by KSEBL for capital investments for the financial year 2016-17 and 2017-18, reasoning that KSEBL has not filed any application for investment approval. In this connection, the following submissions are made.

i. KSEBL, as per ARR & ERC petition for the year 2015-16, had submitted the details of capital investment plan for that year with a total invesment of Rs 1353 crore (Chapter 3 of the ARR petition). Against this proposal, KSEBL has actually achieved a financial progress of Rs.1239.44 crore, which is almost 92%.

ii. Capital expenditure plan for the year 2016-17 proposing an investment of Rs.1562.72 Crore was submitted before the Hon'ble Commission on 30.05.2016. A review meeting was held on 02.06.2016 on this and as per letter dated 05.09.2016, Hon'ble Commission directed KSEBL to furnish certain clarifications and quarter wise details of capital and revenue expenditure for the year 2016-17.

iii. KSEBL has already filed the details sought by Hon'ble Commission. Details of capital expenditure and revenue expenditure for the first three quarters of 2016-17 were also submitted before the Hon'ble Commission. Details pertaining to the 4th quarter could not be submitted in time due to time constraints. It is humbly submitted that KSEBL will furnish the same shortly.

iv. KSEBL has actually invested about Rs.1565.93 crore (as per provisional accounts) in capital works during the year 2016-17. This is in tune with the proposal.

v. Hon'ble Commission had fixed T&D loss reduction targets of 0.30% for 2016-17 and 0.25% for 2017-18. These targets can be achieved only by undertaking the required capital works. Unless capital expenditure along with corresponding additional borrowings is approved, KSEBL may not be in a position to achieve the ordered loss reduction target. Further, infrastructure development would have to be ensured to fulfill various statutory obligations cast upon KSEBL especially with regard to catering to the increasing business volume.

vi. Details of capital expenditure for 2017-18 in line with the direction of the Hon'ble Commission are being prepared and the same will be submitted for approval.

vii. In view of the above submission, it is humbly requested that the Hon'ble Commission may consider the details and may be pleased to approve the capital expenditure for the year 2016-17 and 2017-18 along with additional borrowings. Approval may also be granted for the interest on additional borrowings proposed by KSEBL to the tune of Rs.165 crore for 2017-18.

D. <u>Interest on overdrafts</u>:

An amount of **Rs.240** crore was disallowed on the amount estimated by KSEBL towards interest on overdrafts for the years 2016-17 and 2017-18, stating that KSEB Ltd has not submitted sufficient details for assessing the working capital. Following points are submitted in this regard:

i. Honorable Commission disallowed interest on overdraft, treating it as working capital. The amount is not entirely for working capital requirement of current year. Huge amount of overdraft is a reflection of debt financing of approved and un bridged revenue gaps of previous years. Carrying cost due to huge un bridged revenue gaps has not been considered by the Hon'ble Commission in the order.

ii. Nomenclature used by KSEBL to disclose the expenditure in accounts as 'interest on working capital' may have misguided the Hon'ble Commission in reaching the erroneous conclusion. Hon'ble Commission may kindly consider the following in this regard:

- **a.** Kerala State Electricity Board had compiled its Annual Statement of Accounts till 31.10.2013 in accordance with the related provisions of the Electricity (Supply) Act, 1948 and the rules made there under it viz. Electricity Supply Annual Accounting Rules, 1985 (ESAAR), which is saved under section 185(2)d of the Electricity Act, 2003.
- **b.** As per ESAAR, the overdrafts availed by the Board are to be disclosed under Schedule 30 of the Annual Statement of Accounts titled 'Borrowings for Working capital'. Interest on such borrowings is to be disclosed under 'Interest on borrowings for working capital', a sub item of schedule 12 titled 'Interest and Finance charges'. Accordingly, KSEB has disclosed the details in the Annual Statement of Accounts.
- **c.** Section 59 of the Electricity (Supply) Act, 1948 mandates to carryout operations and adjust the tariff so as to ensure a surplus not less than 3% of the value of net fixed assets of the Board at the beginning of the year. This statutory requirement negate the need for short term borrowings to meet the revenue gap arising out of operations and necessitates only with regard to the working capital borrowings. Hence ESAAR, 1985 had contained the nomenclature as mentioned above. It is pertinent to mention that from the year 2014-15 onwards, overdrafts were classified under Note 7 to the Annual statement of Accounts titled 'Short Term Borrowings' and 'interest on overdrafts' under Note 30 Finance cost.
- **d.** It is humbly clarified that even though nomenclature under which disclosure is made in accounts were that of 'working capital' in reality, overdrafts were availed by KSEB to make good the revenue deficit.
- **e.** Hon'ble Commission may kindly consider the fact that KSEBL had to avail overdrafts to meet the accumulated revenue gap and the interest on such borrowings were prayed to be allowed as carrying cost of Revenue gap in the submission.

iii. Hon'ble APTEL as per judgment dated 10.11.2014 in appeal petition no 1 of 2013 and 19 of 2013, judgment dated 06.05.2016 in the appeal no 135 of 2014 and judgment dated 27.04.2016 in appeal no 81 of has directed to pass orders in terms of its findings along with carrying cost. It is humbly submitted that the decision of this Hon'ble Commission in not allowing carrying cost is in deviation to the specific direction of the Hon'ble APTEL to allow carrying cost while issuing consequential orders.

iv. The Hon'ble Commission as per order on ARR & ERC for the year 2014-15 dated 14.08.2014 had allowed Rs. 50.89 crore towards carrying cost on trued up revenue gap till 2010-11. Additional revenue gap in view of the Hon'ble APTEL orders dated 10.11.2014 and 06.05.2016 in the matter of Truing up of Accounts for 2010-11 and 2009-10 should have invariably been considered along with Rs.424.11 crore revenue gap already trued up. Hon'ble Commission has approved Rs.107.90 crore for 2009-10 and Rs.204.70 crore for 2010-11.

v. Hon'ble Commission has taken the stand in the provisional order that the carrying cost for approved gaps for 2011-12 and 2012-13 can be allowed only from the dates on which they are formally declared by the Commission as regulatory asset.

vi. KSEBL submits that this is not in consonance with the directions of the Hon'ble APTEL as per judgment dated 11.11.2011 in Appeal No. 1 of 2011 (Para 62) that this would "*create a problem of cash flow for the distribution licensees which are already burdened with heavy debts*" and that *"opening balances of uncovered gap must be covered through transition financing arrangement or capital restructuring", "Carrying Costs of Regulatory Asset should be allowed to the utilities"* and the "*Recovery of Regulatory Asset should be time-bound and within a period not exceeding three years at the most and preferably within control period"* among other things.

vii. Hon'ble APTEL's judgment dated 18 th October-2012 on Appeal petition No. 7 of 2011, 46 of 2011 and 122 of 2011, in respect of creation of regulatory asset and ordered that *carrying cost be allowed for such additional expenditure if approved during truing up, recovery is differed or allowed subsequently by a superior authority.*

viii. In the order dated 30-05-2014 in appeal nos. 147, 148 and 150 of 2013, Hon'ble APTEL has clearly spelt out the circumstance in which carrying cost has to be allowed to utilities, as under:

(a) Expenditure is accepted but recovery is deferred.

(b) Claim not approved within a reasonable time.

(c) Disallowed by Commission but subsequently allowed by superior authority.

(d) Revenue gap as a result of allowance of legitimate expenditure in true up.

ix. Hon'ble Commission had already identified a revenue gap of Rs 424.11 Cr up to 31-03-2011 as per truing up orders for the year up to 2010-11. An amount of Rs 2500.91 Cr has already been recognized as revenue gap that has not been bridged through tariff revision in the ARR orders for the years from 2011-12 to 2014-15. Thus an amount of Rs 2925.02 Cr comes under cases (a) and (d) identified by Hon APTEL as above and KSEBL is eligible for carrying cost for this amount, as detailed below, without even considering the subsequent additional revenue gap now identified during truing up process for the years 2011-12 and 2012-13.

Table 4 Approved and un-bridged gap as per the orders of the Commission

Year	Revenue gap (Rs. Cr)	Remarks
Up to 2010-11	424.11	As per truing up order for 2010-11
2011-12	928.61	As per ARR order for 2011-12
2012-13	632.03	As per ARR order after tariff revision impact
2013-14	460.98	As per ARR order after tariff revision impact
2014-15	479.28	As per ARR order after tariff revision impact
Total	2925.01	

x. In addition, Rs 107.90 Cr in 2009-10 and Rs 204.70 Cr in 2010-11 is now approved by the Hon'ble Commission as revenue gap as part of implementing the Hon'ble APTEL order regarding true up of respective years. Thus a further amount of Rs 312.60 Cr (107.90+204.70) has also become eligible for carrying cost as per ratio held by Hon APTEL vide (c) above.

xi. Hon'ble Commission, as per order dated 16.03.2017 and 20.03.2017 had issued truing up orders for 2011-12 and 2012-13 by approving revenue gap to the extent of Rs.1386.97 crore and Rs.3132.97 crore for these years. Hon'ble Commission may kindly note that the trued up revenue gap exceeded by Rs 2959.30 crore over the value approved as per ARR order as detailed below. This additional revenue gap is also eligible for carrying cost as per ratio held by Hon APTEL vide (d) above.

Table 5 Additional revenue gap as per Truing up order over ARR &ERC order

Year	Revenue gap trued up (Rs. in crore)	Revenue gap as per ARR order(Rs. in crore)	Increase in revenue gap(Rs. in crore)
2011-12	1386.97	928.61	458.36
2012-13	3132.97	632.03	2500.94
Total	4519.94	1560.64	2959.30

xii. In consideration of the above, KSEBL humbly submits before Hon'ble Commission that carrying cost for previously identified revenue gap of Rs 2925 Cr and that for Rs 312.60 Cr identified on implementation of APTEL order also may kindly be allowed. Carrying cost for additional revenue gap now identified as part of true up for 2011-12 and 2012-13 amounting to Rs.2959.30 crore may also be allowed either from the date of filing of true-up petition or at least from the date of expiry of 3 months time period (time stipulated in the regulations for issuing orders on the tariff petition) after filing of true-up petition in accordance with the ratio held by APTEL under (b) and (d) above.

xiii. Actual revenue gap as per the audited accounts during the period from 2011-12 to 2014-15 was Rs.8847.04 crore, which exceeds the approved gap substantially by Rs.6346.14 crore, as detailed in Annexure XI of the response filed by KSEBL.

xiv. It was also submitted that a sum of Rs.4360.49 crore out of the revenue gap as furnished above has resulted due to increase in power purchase cost and cost of generation, over the approval as detailed in Annexure XII of the response filed by KSEBL.

xv. Hon'ble Commission has already determined the revenue gap as Rs.5258.45 crore till 2012-13. Even after the proposed tariff revision the same is expected to be at Rs.4217.53 crore, as detailed below:

Table 6 Summary of approved and unbridged revenue gap as per KSERC orders

Sl.No	Particulars	(Rs in crore)
1	Un bridged revenue gap as on 31.03.2011 as per truing up order for 2010-11.	424.11
2	Provisional additional gap for 2009-10 as per APTEL order.	107.90
3	Provisional additional gap for 2010-11 as per APTEL order.	204.70
4	Provisional revenue gap for 2011-12	1386.97

5	Provisional revenue gap for 2012-13	3132.97
6	Total(sum of 1 to 5)	5258.45
7	Recovery proposed to be allowed in Tariff revision	1040.92
8	Balance (6-7)	4217.53

xvi. The revenue gap , overdrafts, interest etc are showing increasing trend year after year as tabulated below, which clearly reveals that the revenue gap is increasing year after year justifying the increase in overdraft:

Table 7 Comparison of revenue gap and overdraft

Year	Cumulative approved and un bridged revenue Gap	Revenue gap as per audited Accounts-Year on year accumulation.	Cumulative Generation and Power purchase cost over approval	Overdraft outstanding at the year end.	Interest on OD for the year
31.03.2011	424.11			310.36	35.78
2011-12	1352.73	1934.13	731.71	1114.36	82.25
2012-13	1984.75	5933.27	3294.67	1942.96	167.94
2013-14	2445.73	7031.79	3849.26	2303.62	265.43
2014-15	2925.01	8847.04	4360.49	2110.48	269.08

Note: The Overdraft as on 31.03.2015 after considering FD maturity proceeds aggregating to Rs.524.68 crore with interest Rs.53.74 crore in March 2015 for repayment of Overdrafts.

xvii. Overdraft as on 31.03.2016 has been Rs.2171.94 crore and KSEBL incurred Rs.229.43 crore towards interest on OD for 2015-16. The following table reveals comparison of actual and approved revenue gap till 2014-15.

Table 8 Comparison of the approved revenue gap and actual as per accounts

Year	Un-bridged gap as per KSERC orders	Actual gap as per audited accounts including RoE	Increase over approval	Remarks
	(Rs. Cr)	(Rs. Cr)	(Rs. Cr)	
Up to 2010-11	424.11	3393.86		As per truing up order for 2010-11
2009-10	107.90			As per order dated 09.05.2017.
2010-11	204.70			As per order dated 19.05.2017.
2011-12	1386.97	1934.13	547.16	As per True up order (Rs.928.61 cr as per ARR order)
2012-13	3132.97	3999.14	866.17	As per True up order (Gap as per ARR order Rs. 632.03 crore, after tariff revision impact)

2013-14	460.98	1098.52	637.54	ARR order
2014-15	479.28	1815.25	1335.97	ARR order
Total	6514.31	12240.90		

xviii. The increasing trend in overdraft amply proves the fact that heavy borrowings were resorted to make good the huge revenue gap of earlier years. The OD balance as on 31.03.2008 was Rs.51.81 crore, which increased steadily thereafter and never receded owing to the year on year increase in revenue gap. The following table giving details of month wise balance of overdrafts from 2007-08 clearly establish the fact that the borrowings are directly related to the ever increasing revenue gap.

Table9 Details of month end balance of Overdraft

Month	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15
Apr	0.26	25.95	263.47	244.63	345.35	1275.76	2381.63	2431.58
May	28.11	20.16	303.59	252.07	464.23	992.85	2240.95	2619.45
Jun	53.00	52.58	282.04	98.63	317.99	1329.23	2666.25	2938.32
July	1.39	36.18	250.87	365.35	457.58	1479.85	2582.55	2572.77
Aug	39.22	140.86	491.67	232.59	600.89	1414.12	2651.03	2609.24
Sep	10.06	246.39	221.10	214.84	630.91	1368.81	2578.67	2517.98
Oct	0.26	219.41	146.67	139.13	763.95	1568.64	2816.5	2522.47
Nov	2.81	175.29	179.40	246.95	837.07	1511.65	2631	2602.21
Dec	-0.18	277.45	203.32	295.62	917.13	1624.01	2681.9	2858.46
Jan	38.89	356.33	159.20	276.69	968.53	1761.65	2545.43	2517.08
Feb	0.41	360.93	62.27	717.07	1239.33	1842.15	2716.03	2686.26
Mar	51.81	230.13	153.20	310.36	1114.36	1942.96	2303.62	2110.48
Interest on OD	**2.80**	**22.14**	**24.58**	**35.78**	**82.25**	**167.94**	**265.43**	**269.08**

xix. From the table it can also be seen that the Overdrafts has gone up to Rs.2110.48 crore as on 31.03.2015 from Rs.51.81 crore as on 31.03.2008. KSEBL, being a regulated utility, increase in PF balance and non cash flow expenses like depreciation and Return on equity etc do not ensure cash availability to it as long as these are allowed to be fully recovered through tariff. The huge un bridged gap amply makes it clear that the expenses were not allowed to be recovered fully, which in turn resulted in borrowing.

xx. It is humbly submitted that Hon’ble Commission, in due recognition of these realities, had been pleased to approve interest on overdraft in full till 2010-11 as per orders on truing up for the respective years. However, it is seen from the truing up orders for 2011-12 and 2012-13 that amount spent on this account has been disallowed in full even though ad hoc allowances were made in the respective ARR orders as detailed below.

Table 10 Details of actual interest on OD and approval by KSERC (Rs in crore)

Year	Actual Interest on Overdraft	Interest approved as per truing up order	Order reference
2007-08	2.80	2.80	10.06.2011
2008-09	22.15	22.15	10.06.2011
2009-10	24.58	24.58	25.10.2012
2010-11	35.78	35.78	30.10.2012
2011-12	82.25	0.00	16.03.2017
2012-13	167.94	0.00	20.03.2017

xxi. However, it may kindly be noted that the Hon'ble Commission, as per ARR order dated 01.06.2011 and 28.04.2012, allowed Rs.15 crore and Rs.20 crore towards interest on OD for 2011-12 and 2012-13 respectively.

xxii. Hon'ble Commission may kindly note that interest on overdrafts actually paid by KSEBL from 2011-12 till 2015-16 has exceeded Rs.1000 crore and denial of this expense would result in grave financial difficulty to the utility. The details are furnished below:

Table 11 Details of year end OD and interest for the year (Rs in crore)

Year	Year end OD balance	Interest for the year
2011-12	1114.36	82.25
2012-13	1942.96	167.94
2013-14	2303.62	265.43
2014-15	2110.48	269.08
2015-16	2171.94	229.43
Total		1014.13

xxiii. As stated earlier, considering the reality and gravity of the situation, Hon'ble Commission, as per orders on ARR for 2014-15 dated 14.08.2014 had approved an amount of Rs. 50.89 crore towards interest as carrying cost for approved revenue gap till 2010-11 as per truing up orders. However, similar consideration of the matter was not accorded while issuing orders on truing up for 2011-12 and 2012-13.

xxiv. Moreover, the actual interest projected is well within the limits specified by the Hon'ble APTEL and hence eligible for pass through as explained below:

xxv. Hon'ble APTEL, as per judgment dated 08.04.2015 in Appeal 160 of 2012 and batch has laid down the principle on which carrying cost is to be allowed. The decision was reiterated in judgment dated 22.04.2015 in Appeal 174 of 2013 as well. The same is reproduced below:

42. We find that for carrying cost, the State Commission has considered the revenue gap to be applicable from the end of *the year of the occurrence of the revenue gap up to the middle of the year in which the same is proposed to be recovered. This is not correct. The interest to be calculated for the period from the middle of the financial year in which the revenue gap had occurred up to the middle of the financial year in which the recovery has been proposed…This is because the expenditure is incurred throughout the year and its recovery is also spread out throughout the year. Admittedly, the revenue gap will be determined at the end of the financial year in which the expenditure is incurred. However under or over recovery is the resultant of the cost and revenue spread out throughout the year. Similarly, the revenue gap of the past year will be recovered throughout the financial year in which its recovery is allowed. Therefore interest on revenue gap as a result of true up for a financial year should be calculated from the mid of that year till the middle of the financial year in which such revenue gap is allowed to be recovered.*

43. To explain this point let us assume that there is a revenue gap of 12 crore in the true up of FY 2010-11. If the cost and the revenue and the permitted expenditure had been properly balances, this gap of 12 crore would have been recovered throughout the 12 months of FY 2010-11. Now, this revenue gap is allowed to be recovered in tariff during FY 2013-14. The recovery of gap of Rs. 12 crore from the distribution licensee consumers will be spread over the 12 months period of 2013-14. Therefore carrying cost would be calculated from the middle of FY 2010-11 to middle of FY 2013-14 ie 3 years.

xxvi. In short, Hon’ble APTEL through various judgments has established the fact that carrying cost for the revenue gap is a legitimate expenditure, specified the components of revenue gap as eligible for carrying cost and the manner in which carrying cost is to be allowed.

xxvii. It is humbly submitted that the Hon’ble Commission may kindly consider the fact that the revenue from tariff as well as the non-tariff income for the year has fully been considered on accrual basis while approving the orders on truing up. Further, KSEBL has no business other than the regulated business and therefore left with no option other than to borrow to make good the accumulated revenue gap.

xxviii. In view of the above submission, Hon’ble Commission may kindly note that KSEBL has claimed only the reasonable interest on this overdraft for 2016-17 and 2017-18 considering the substantial un bridged revenue gap. Hence Hon’ble Commission may kindly review the decision not to allow the interest on Overdraft and may be pleased to approve the same estimated by KSEBL towards carrying cost of approved and un bridged revenue gap.

10. Depreciation

1. Hon'ble Commission has approved depreciation on fixed assets as on 01.04.2014, which implies that fixed assets added in 2014-15 to 2016-17 has not been considered for the computation of depreciation.
2. Hon'ble Commission may kindly consider the additions to fixed assets during the period while truing up.

11. Cross subsidy Surcharge

I. KSEBL requested before the Hon'ble Commission to revise the cross subsidy surcharge based on the revised formula as per the revised National Tariff Policy 2016 and to introduce additional surcharge. Hon'ble Commission vide tariff order dated 17.04.2017 has revised the cross subsidy surcharge which is given as **Annexure A**.

II. Hon'ble Commission vide the KSERC (Terms and Conditions for determination of Tariff) Amendment Regulations, 2017, notified on 21st March-2017, had adopted the surcharge formula as per the Tariff Policy, for determining the cross subsidy surcharge for open access consumers. Accordingly, the surcharge formula specified in the Tariff Regulations is detailed below.

Surcharge formula:

S= T – [C/ (1-L/100) + D+ R]

Where S is the surcharge

T is the tariff payable by the relevant category of consumers, including reflecting the Renewable Purchase Obligation

C is the per unit weighted average cost of power purchase by the Licensee, including meeting the Renewable Purchase Obligation.

D is the aggregate of transmission, distribution and wheeling charge applicable to the relevant voltage level.

L is the aggregate of transmission, distribution and commercial losses, expressed as a percentage applicable to the relevant voltage level.

R is the per unit cost of carrying regulatory assets.

Provided that the surcharge shall not exceed 20% of the tariff applicable to the category of consumers seeking open access.

Provided further that the Commission in consultation with the Government shall exempt levy of cross subsidy surcharge on railways, as defined in Indian Railways Act 1989 being a deemed licensee on electricity purchase for its own consumption.

III. While determining the cross subsidy surcharge , Hon'ble Commission deviated itself from the regulations and National Tariff Policy as detailed below

i. **Calculation of weighted average cost of power purchase(C) adopted in cross subsidy surcharge formula.**

ii. **Separate cross subsidy surcharge is fixed for embedded open access consumers by taking energy charges of category as Average Tariff for embedded open access consumers (T) adopted in cross subsidy surcharge formula.**

IV. KSEBL submits before the Hon'ble Commission its apprehension on the disparity in the calculation of 'C' the weighted average cost of power purchase in the cross subsidy surcharge in the suo motu tariff order dated 17-4-2017. Hon'ble Commission vide paragraph 14.84 of the suo motu order has determined the average power purchase cost of KSEBL as extracted below.

Quote

14.84: The weighted average cost of power purchase per unit, of KSEB Ltd for the year 2017-18, as per the cost of generation power purchase approved for the year 2017-18 is given in the table below.

<u>Table-12</u>

Weighted average cost per unit of power purchase for the year 2017-18

Sl No	Particulars	Quantity (MU)	Amount (Rs. Cr)
1	Own Generating stations of SBU-G	6473.62	677.48
2	CGS	11000.05	3755.97
3	IPP- wind and SHPs	142.00	45.87
4	Traders	5729.80	2195.02
5	Short-term market	1946.98	778.79
6	PGCIL transmission charges		563.70

7	**Intra state transmission charges**		**905.20**
	Total	25292.45	8922.03
Weighted average cost of power purchase (Rs/unit)			3.53

Unquote

V. Honourable Commission has included "**Intra State transmission charges"** amounting to **Rs 905.20 crores** for calculating the weighted average cost of power purchase **(Rs 3.53 per unit)** in the table above. Therefore Intra State transmission charges is included in the factor **weighted average cost of power purchase 'C' of** cross subsidy surcharge in table 14.57 of the order. However while calculating the cross subsidy surcharge , Honourable Commission again included **Intra State transmission charges of Rs 0.37 per unit** in the factor 'D' of cross subsidy surcharge formula. Thus the component of **Intrastate transmission charges** has been taken twice in the cross subsidy surcharge calculation in para 14.87 of the order and this double counting needs to be rectified.

VI. When the "**Intra State transmission charges"** amounting to **Rs 905.20 crore** is excluded from the calculation of weighted average cost of power purchase, the revised weighted average cost of power purchase will be Rs 3.17 per unit as shown below.

Table 13: Revised Weighted average cost of power purchase

Total Quantity of power purchased (by the Distribution SBU)	**25292.45**	**MU**
Total power purchase cost including intrastate transmission charges	**8922.03**	**Rs in crores**
Less intrastate transmission charges	**905.20**	**Rs in crores**
Power purchase cost excluding Intrastate transmission charges	**8016.83**	**Rs in crores**
Weighted average cost of power purchase for cross subsidy surcharge calculation	**3.17**	**Rs/unit**

VII. Further Honourable Commission has also worked out two separate cross subsidy surcharges for "opted out" consumers (Table 14.57) and "embedded open access consumers" (Table 14.58). KSEBL submits before the Honourable Commission its apprehension on the disparity in the calculation of 'T' the tariff payable by relevant category in determining the cross subsidy surcharge for embedded consumers in the suo motu tariff order dated 17-4-2017. Honourable Commission has stated that

Quote

"The embedded consumers avail the facility of open access, while continuing in the system of SBU-D of KSEB 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'"

Unquote

VIII. In this regard it may please be noted that as per National Tariff Policy 2016 as well as KSERC Tariff regulations, T is the Tariff payable by *relevant category of consumers, including reflecting the Renewable Purchase Obligation.* The tariff payable by relevant category includes the fixed/demand charges and energy charges. *As per KSERC Tariff Regultions, 2014, tariff means the schedule of charges for generation, transmission, wheeling or supply of electricity together with the terms and conditions for application thereof. ie; the component T includes both demand charges and energy charges* . But while determining the cross subsidy surcharge of embedded open access consumers, the Commission has taken only energy charges for component T. This is in violation to the National Tariff policy as well as KSERC (Terms and Conditions for determination of Tariff) Amendment Regulations, 2017, notified on 21st March-2017.

IX. Open Access is introduced in Electricity sector as per the mandate under Sections 38, 39, 40 & 42 of the Electricity Act 2003. Sections 39(2) (d) (ii) and 40(c) (ii) of the Electricity Act, 2003 provides that, Cross Subsidy Surcharge as determined by the State Commission has to be levied on the consumers who opt for open access. The main purpose of levying Cross subsidy surcharge is to compensate the licensee from the revenue loss arising out of loss of cross subsidizing consumers and to avoid passing on the burden to the others consumers.

X. Section 42(2) of the EA,2003 stipulates that the State Commission shall introduce open access in such 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 The relevant section of the EA,2003 is extracted below:

"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: Provided that 1[such open access shall be allowed on payment of a surcharge] in addition to the charges for wheeling as may be determined by the State Commission: Provided further that such surcharge shall be utilised to meet the requirements of current level of cross subsidy within the area of supply of the distribution licensee : Provided also that such surcharge and cross subsidies shall be progressively reduced 2[***] in the manner as may be specified by the State Commission: Provided also that such surcharge shall not be leviable in case open access is provided to a person who has established a captive generating plant for carrying the electricity to the destination of his own use: 3[Provided also that the State Commission shall, not later than five years from the date of commencement of the Electricity (Amendment) Act, 2003, by regulations, provide such open access to all consumers who require a supply of electricity where the maximum power to be made available at any time exceeds one megawatt.]

XI. As extracted above, as per section above provisions of the EA,2003

- The State Commission shall introduce open access in such phases .
- A consumer who is permitted open access will have to make payment to the generator, the transmission licensee whose transmission systems are used, distribution utility for the wheeling charges and, in addition, the cross subsidy surcharge.
- That such surcharge shall be utilised to meet the requirements of current level of cross subsidy within the area of supply of the distribution licensee :
- Such surcharge and cross subsidies shall be progressively reduced and eliminated in the manner as may be specified by the State Commission.

XII. Section 8.5 of the National Tariff Policy, 2016 issued by MoP vide the notification No. 23/2/2005-R&R (Vol-IX). Dated 28-1-2016 provides provisions on the calculation of cross subsidy surcharge payable by open access consumers. As per the provisions of National Tariff Policy,

- The computation of cross subsidy surcharge, needs to be done in a manner that it compensates the distribution licensee and the interest of the licensee is protected.

- Further, the Tariff Policy stipulates that SERCs may calculate the cost of supply of electricity by the distribution licensee to consumers of the applicable class as aggregate of <u>(a) per unit weighted average cost of power purchase including meeting the Renewable Purchase Obligation; (b) transmission and distribution losses applicable to the relevant voltage level and commercial losses allowed by the SERC; (c) transmission, distribution and wheeling charges up to the relevant voltage level; and (d) per unit cost of carrying regulatory assets</u>, if applicable as follows:

  Surcharge formula:

  S= T – [C/ (1-L/100) + D+ R]

  Where

  S is the surcharge

  T is the tariff payable by the relevant category of consumers, including reflecting the Renewable Purchase Obligation

  C is the per unit weighted average cost of power purchase by the Licensee, including meeting the Renewable Purchase Obligation

  D is the aggregate of transmission, distribution and wheeling charge applicable to the relevant voltage level

  L is the aggregate of transmission, distribution and commercial losses, expressed as a percentage applicable to the relevant voltage level

  R is the per unit cost of carrying regulatory assets.

- The surcharge shall not exceed 20% of the tariff applicable to the category of the consumers seeking open access.

XIII. "Cross subsidy" in general and as per the Regulations issued by Hon'ble Commission is the difference between the applicable average tariff of that consumer category/sub-category and the average Cost of Supply. Therefore when "cross subsidy surcharge" is calculated for compensating the loss of "cross subsidy", it has to consider all the cost a utility has to bear to supply power to the consumer. Taking into consideration these aspects, Ministry of Power has calculated cross subsidy surcharge, S as the difference between tariff, T of the consumer and the cost of supply to the consumer. The cost of supply of a utility includes its own generation cost plus power purchase cost and the transmission and distribution charges and losses the utility has to bear in supplying power to the consumer category.

XIV. Ministry of Power in the revised Tariff Policy has further directed the State Electricity Regulatory Commissions to review and vary the cross subsidy surcharge applicable in their respective states in line with the methodology and formula envisaged in the revised Tariff Policy, 2016.

XV. It is additionally submitted that the approach adopted by Hon'ble Commission for fixing separate cross subsidy surcharge for embedded open access consumers is inconsistent with the provisions of EA, 2003 and Tariff Policy, 2016 as submitted below:

i. There is no provision under the EA, 2003 and National Tariff Policy, 2016 to fix separate cross subsidy surcharge for embedded open access consumers.

ii. Further, no State Electricity Regulatory Commission has so far allowed separate cross subsidy surcharge for embedded open access consumers.

iii. As said above ,as per the formula for cross subsidy surcharge stipulated in Tariff Policy, the tariff 'T' adopted in Hon'ble Commission is tariff inclusive of both 'demand charge' and 'energy charge'. There is no provision in the Tariff Policy to calculate cross subsidy surcharge based on only 'energy charge'.

iv. As per the Tariff Policy, the tariff 'T' has to be differentiated based on the consumer category and not on the basis of whether the consumer is 'embedded' or not.

v. Determination of Cross subsidy surcharge for an embedded open access consumer by considering only energy charge in Tariff is against the very concept of 'cross subsidy surcharge' for open access.

vi. Honourable APTEL vide order dated Appeal No. 178 or 2011 decided vide judgment dated 02.12.2013 titled Reliance Industries Ltd v/s Maharashtra Electricity Regulatory Commission has clearly specified that Tariff of subsidising consumers is generally in two parts i.e. fixed charges and energy charges and therefore, the term tariff is the effective tariff for that category of consumers. The relevant portion is extracted hereunder:-

Quote

" .. 8. We shall now take up each of the above issues one by one. Before we attempt to address each of the above issues, it would be profitable to explain the steps that are required to be taken to fix the Tariff and CSS. These are: --------

- S***ince category wise sale of power has already estimated,***

***expected revenue from such sale is* estimated from current tariff. Let it be 'RCT' (Revenue from current tariff).**

♣ *Difference between ARR and RCT is the gap in revenue.*

♣ *The GAP so arrived at is filled up by redesigning thecategory wise tariff.*

♣ CSS is the difference between the tariff for category of consumer and the cost of supply. CSS is determined by using the figures of Tariff (T) for the year in question and cost of power purchase (C) in that year.

- *Tariff of subsidising consumers is generally in two parts i. e. fixed charges and energy charges. Therefore, the term tariff is the effective tariff for that category of consumers.* o *Since fixed charges remain constant irrespective of consumption by the consumer, the effective tariff varies and gets reduced with increase in consumption as can be seen from following illustration:... ....*
- ***Effective tariff shown in last col is also known as Average Billing Rate (ABR) for that particular consumer. ABR for a consumer category is determined by dividing total expected revenue from the category by total expected sale to that category*** *(Tribunal*'*s judgment dated 30.5.2011 in Appeal No. 102 of 2010 and Batch-Odisha case). Mathematically, it can be represented as: ABR of a category of consumer = Total Expected Revenue from a category/Total Sale of power to that category.*"

Unquote

This clearly specifies that average tariff includes both demand charges and energy charges.

vii. Honourable APTEL vide order on Appeal No. 181 or 2015 decided vide judgment dated 26.005.2017 has explained and settled that in the National Tariff Policy

formula, "T" is the Tariff payable by relevant category of consumers which has two components viz. Fixed/ Demand charge and Energy charge

Quote

"The Cross Subsidy Surcharge is the difference between the tariff for category of consumer and the cost of supply. CSS is determined by using the figures of Tariff (T) for the relevant category of consumer for the year in question

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*19**. In the National Tariff Policy formula, "T" is the Tariff payable by relevant category of consumers. The Tariff has two components viz. Fixed/ Demand charge and Energy charge and hence, for the purpose of calculating cross- subsidy surcharge**, **the State Commission has considered Average Billing Rate in Rs/ KWh for the respective category as "T" as it reflects the effective combination of fixed/demand and energy charges payable by that category of consumers. We are in agreement with the formulation of the State Commission for using Average Billing Rate for a consumer category to be used while determining Cross Subsidy Surcharge.***

20. On examining the submissions made by State Commission regarding computation of CSS and the relevant findings in its Impugned Order, we have found that the value of "T" and "C as used by State Commission in its of the Impugned Order is in line with the formulation specified in the National Tariff Policy and the cross subsidy surcharge specified by State Commission as Rs. 1.51 per unit for EHT category and Rs. 1.41 per unit for HT category is in order.

21. Since we have found that the Cross Subsidy Surcharge has been determined by the State Commission as per the formula stipulated in the National Tariff Policy using the factors "T" and "C" appropriately, hence we do not find any error in determination of the CSS by the State Commission in its Impugned Order. "

Unquote

viii. There is no stipulation in the Tariff Policy that demand charge of a consumer will compensate a DISCOM for loss of cross subsidy as claimed by the petitioner.

ix. Therefore it is earnestly appealed that Hon'ble Commission may follow the provisions in the Tariff Policy , its own regulations and concerned APTEL Judgements in the matter of fixation of the Cross Subsidy Surcharge applicable for the open access consumers.

XVI. It is a fact that embedded open access consumers are creating more financial burden and operational constraints than other open access consumers, disturbing the power procurement plan and optimum scheduling. If KSEBL has only open access consumers who have permanently opt out of KSEBL system, KSEBL can plan its power procurement and schedule optimally by excluding the requirements of such consumers.

XVII. However, in the case of embedded Open access consumers, they draw power through open access whenever the price in the short-term market is less than their prevailing tariff and on day-ahead basis. Hence KSEBL cannot forecast the exact quantum of energy wheeled by them and this has jeopardized the power purchase plan of the utility substantially. KSEBL has to always keep the capacity ready and is forced to surrender the same when consumers opt for open access, leading to huge revenue loss which ultimately burdens the other consumers.

XVIII. 'Embedded consumer' status is utilized by these consumers as a 'right' to come back to KSEBL system, whenever the market is adverse. In other words, being as an 'embedded open access consumer' is for the benefit of such consumers only. It is submitted that there are no restriction on Embedded consumers to opt out of KSEBL system permanently.

XIX. Even though embedded open access consumers pay demand charges to the DISCOM, even that demand charges are not sufficient for the full recovery of the fixed cost incurred by the DISCOM to cater to the needs of these embedded open access consumers. The details fixed cost recovery from fixed charges is detailed in the table below.

Table 14

Particulars	**Financial year 2016-17 (Amount (Rs. Cr))**	
	Approved by Commission vide order dated 17.04.2017	**KSEBL estimation vide additional submission dated 17.01.2017 for all the SBUs**
Cost of own power Generation (ARR of SBU-G)	672.61	87.37(Fuel cost only)
Transmission charges (ARR of SBU-T)	881.3	
Power Purchase	7752.76	8335.95
Interest & Finance charges	981.79	1828.46
Depreciation	58.12	475.26
O&M expenses	1326.62	2980.24
RoE	68.64	542.35

Total ARR	11741.84	14249.63
Fixed cost component of ARR excluding the fixed cost commitment of power purchase	3989.08	5826.31
Fixed charges recovered from all categories of consumers for the year 2016-17	1473.91	1473.91
% of fixed cost component of ARR recovered from fixed charges recovering from consumers for 2016-17	36.95	25.30

XX. It is evident from the above table that even 40% of fixed cost component of ARR cannot be realized from existing fixed charges. The remaining fixed cost component of ARR is loaded in energy charges.

XXI. Thus, payment of demand charges by embedded consumers in no way can be equated as compensation for loss to DISCOM from cross subsidy and hence the removal of demand charges in term “T” of cross subsidy surcharge formula is against the principle and purpose of levying cross subsidy surcharge from open access consumers.

XXII. It is additionally submitted that the loss of cross subsidy for a DISCOM due to open access is not correctly recovered through the cross subsidy surcharge stipulated in the Tariff Policy, 2016 due to the limit set for Cross subsidy surcharge as 20% of the tariff. But in the case of Kerala , about 55% of total consumption is consumed by domestic consumers, agriculture consumers and public lighting consumers who are subsidized consumers. The extent of cross subsidization is tabulated in the table below.

Table 15

Particulars	**% of total consumption**	**Average cost of supply approved by the Commission for the year 2016-17**	**Average realisation from subsidized categories**	**% cross subsidisation**
	%	**Rs/Unit**	**Rs/Unit**	**%**
Domestic	51.63	5.48	3.76	31.37
LT Agriculture	1.37	5.48	2.39	56.38
HT Agriculture	0.03	5.48	4.8	12.39
LT Public	1.83	5.48	3.75	31.56

lighting				
Total	54.87	5.48	3.73	32.00

XXIII. It is seen that 55 % of total consumption is subsidized to the extent of 32%. Thus by limiting Cross subsidy surcharge as 20% of the tariff will adversely affects the State of Kerala to a greater extent due to the peculiarity in consumption mix of Kerala. Further the approach adopted by Hon'ble Commission for fixing separate cross subsidy surcharge for embedded open access consumers by calculating the cross subsidy surcharge payable by the embedded consumers based on the energy charges applicable to the category to which the consumer belong will further increases the cross subsidy burden of utility which inflate the burden of these under recovery on other consumers.

XXIV. Even though there are only around 18 embedded open access consumers in the State as of now, the quantum of energy drawn by them through open access is very significant. In the year 2016-17, the open access energy drawn by embedded open access consumers was 411.91 MU at consumer end. The cross subsidy surcharge approved by the Commission is not sufficient resulting in under recovery of cross subsidy burden is evident from the table 2 below. The category wise energy wheeled by embedded open access consumers for the year 2016-17 and the contributory revenue loss on account of open access, taking the energy charges approved for the year 2017-18 is tabulated in the table 4 below. When the consumers opt for open access, the licensee has to pay fixed cost commitment, but the licensee is relieved from paying variable charges. The fixed charges approved by Honourable Commission for the year 2016-17 @ Rs 0.835 per unit and variable charges approved by Honourable Commission for the year 2016-17 @ Rs 2.456 per unit of Central Generating Stations is considered for the calculation below.

Table -16

Category	Energy wheeled by open access consumers for the year 2016-17	Contributory Revenue loss from energy charges corresponding to this MU	Power purchase cost saved (Variable charges only) corresponding to this Mu @ Rs 2.456/unit	Net revenue loss incurred by the utility due to non recovery of cross subsidy component	Per unit loss incurred by the utility due to non recovery of cross subsidy component
	MU	Rs in crores	Rs in crores	Rs in crores	Rs/unit
	A	B	C	D=C-B	E=D/A
EHT 66 KV Industrial	171.60	89.66	42.14	47.52	2.77
EHT110 KV Industrial	217.33	111.04	53.38	57.66	2.65
HT I(a) Industrial	22.98	13.65	5.64	8.01	3.48
Total	411.92	214.35	101.17	113.18	2.75

XXV. Taking the cross subsidy surcharge approved for the year 2017-18 the net revenue loss due to under recovery of cross subsidy component is given in table 17 below

Table 17

Category	Consumption	Per unit loss incurred due to non recovery of cross subsidy component by the utility	Transmission/ wheeling charges approved by Commission vide suomotu order dated 17-04-2017	Cross subsidy surcharge for embedded open access consumers approved by Commission vide suomotu order dated 17-04-2017	Net revenue loss due to under recovery of cross subsidy component by the utility after considering the cross subsidy surcharge approved by the Hon Commission	Per Unit revenue loss due to under recovery of cross subsidy component
	MU	Rs/unit	Rs/unit	Rs/unit	Rs in crores	Rs/unit
	(1)	(2)	(3)	(4)	(5)=(1)*{(2)-[(3)+(4)]}/10	(6)=(5)*10/(1)

EHT 66 KV Industrial	**171.6**	2.77	0.37	1.04	23.32	1.36
EHT110 KV Industrial	**217.33**	2.65	0.37	1.02	27.45	1.26
HT I(a) Industrial	**22.98**	3.48	0.68	0.91	4.35	1.89
Total	**411.92**	2.75			55.13	1.34

XXVI. As per Section 42 of Electricity Act 2003 Open Access, once permitted, could be availed by a consumer on payment of a surcharge to the Distribution Licensee in addition to wheeling charges **and such surcharge would be utilised to meet the current level of cross subsidy.** From the above table it is clear that the **approved cross subsidy surcharge is not sufficient to recover cross subsidy component from each category** and thus cannot meet the current level of subsidy and the net loss is Rs 1.34 per unit at the present cross subsidy surcharge approved by the Commission for the year 2017-18 corresponding to 411.92 MU of energy wheeled. Hence KSEBL requests before the Honourable Commission **to include the demand charges also in the component T of cross subsidy surcharge formula and revise the cross subsidy surcharge. As this charge is also inadequate for meeting the current level of subsidy KSEBL humbly requests before the Honourable Commission not to limit the cross subsidy surcharge within 20% of average tariff considering the peculiliar consumer mix of Kerala (majority subsidized consumers).**

XXVII. In addition to the above in the case of embedded Open access consumers, they draw power through open access whenever the price in the short-term market is less than their prevailing tariff and on day-ahead basis and hence KSEBL cannot forecast the exact quantum of energy wheeled by them and this has jeopardized the power purchase plan of the utility substantially. KSEBL has to always keep the capacity ready and is forced to surrender the same and is liable to pay the fixed charges as per PPA even in the case of non scheduling of power. In the absence of additional surcharge KSEBL is not able to recover this fixed cost component of power purchase from embedded open access consumers. Taking into account of the non recovery of fixed cost commitment the net loss incurred by the utility tabulated in table below.

Table 18

Category	Energy wheeled by open access consumers for the year 2016-17	Per Unit revenue loss due to under recovery of cross subsidy component	Fixedcost incurred for the year 2016-17 for CGS stations	Revenue loss due to non recovery of fixed cost component from open access consumers in the absence of additional surcharge	Total loss to the utility in the considering the cross subsidy surcharge approved by Commission and in absence of additional surcharge
	MU	Rs/unit	Rs/unit	Rs in crores	Rs per unit
EHT 66 KV Industrial	171.60	1.36		14.33	2.19
EHT110 KV Industrial	217.33	1.26		18.15	2.10
HT I(a) Industrial	22.98	1.89		1.92	2.73
Total	411.92	1.34	0.84	34.40	2.17

XXVIII. Thus it can be seen that the net loss incurred by the utility on account of open access at the rate of cross subsidy surcharge approved by Honourable Commission for the year 2017 18 is Rs 2.17 per unit corresponding to the 411.92 MU of energy wheeled. Thus the approach adopted by Hon'ble Commission for fixing separate cross subsidy surcharge for embedded open access consumers by calculating the cross subsidy surcharge payable by the embedded consumers based on the energy charges applicable to the category to which the consumer belong will further increases the cross subsidy burden of utility which ultimately burdens the other consumers.

XXIX. Further as explained in table above, the demand charges of the consumers are not sufficient (less than 40 % is recovered through fixed charges and the remaining is loaded in energy charges) so as to ensure the recovery of the full fixed cost of the utility to supply power to them and also with the limit of 20% of tariff set for CSS recovery, the utility is at a heavy loss due to open access which is finally passed on to the other consumers of this State.

XXX. Pursuant to the revision of the Tariff Policy by Ministry of Power in January 2016, many State Electricity Regulatory Commissions have taken steps to issue orders fixing cross subsidy surcharge as per the formula stipulated therein. Almost all State Electricity Regulatory Commissions are determining the Cross Subsidy Surcharge as per the revised Tariff Policy, 2016 through their tariff orders for the FY 2016-17. The details of orders issued by various State Electricity Regulatory Commissions revising the Cross subsidy surcharge as per the revised Tariff Policy, 2016 are submitted below.

i. Orissa Electricity Regulatory Commission order dated 11-4-2016 in case no.61, 62,63,64/2015.

ii. Andhra Pradesh State Electricity Regulatory Commission order dated 19-11-2016 in OP No.15 and 16/2016.

iii. Gujarat State Electricity Regulatory Commission vide tariff order dated 31-3-2016 for the distribution licensees in the state has revised the CSS applicable for open access consumers.

iv. Maharashtra Electricity Regulatory Commission tariff order dated 3-11-2016 in case no.48 of 2016.

v. Haryana State Electricity Regulatory Commission tariff order dated 1-8-2016.

vi. Madhya Pradesh Electricity Regulatory Commission tariff order dated 5-4-2016.

XXXI. In all these orders the above Commissions have taken the component “T” as tariff including both fixed and energy charges.

XXXII. Considering all the above, KSEBL humbly request Hon’ble Commission to review the decision and revise the cross subsidy surcharge determined in the order dated 17-4-2017 by removing the error on double counting of ‘intra state transmission charges’. It is also requested that the approach adopted by Hon’ble Commission to fix separate cross subsidy surcharge for ‘Embedded open access consumers’ may be reviewed and it is requested that the cross subsidy surcharge applicable to the consumers who opt out of the system of SBU-D of KSEB Ltd. may be made applicable for ‘embedded open access consumers also.

XXXIII. The cross subsidy surcharge calculated based on the revised parameters of C and T as per National Tariff policy is enclosed as **Annexure –B** for kind approval of Honourable Commission.

12. <u>Additional Surcharge</u>

1. KSEBL vide petition dated 09.08.2016 has requested to approve the additional surcharge to be levied from open access consumers. The Commission has not approved the additional surcharge and commented the following.

“In order to approve the additional surcharge, KSEB Ltd has to submit necessary and sufficient details before the Commission, to convincingly demonstrate the details of the stranded capacity and the fixed cost liability thereon in terms of its existing power purchase commitments , on account of providing open access. The Commission may consider such applications as and when received and will take appropriate decisions.”

2. Regulation-41 of the KSERC (Connectivity and Intrastate Open Access) Regulations, 2013, stipulates that the additional surcharge for obligation to supply shall become applicable only if it is conclusively demonstrated that the obligation of the licensee in terms of existing power purchase commitments has been and continues to be stranded or there is unavoidable obligation and incidence to bear fixed costs consequent to such a contract. The distribution licensee, whose consumer intends to avail open access, shall submit to the Commission within fifteen days of receipt of application, a detailed calculation statement of fixed cost which the licensee is incurring towards his obligation to supply.
3. As per KSERC (Connectivity and Intrastate Open Access) Regulations, 2013, additional surcharge shall be determined consumer wise. Considering the number of Open Access consumers and the fluctuation of their open access energy drawal, the computation of stranded cost incurred by the Petitioner due to the universal supply obligation would be very difficult on case to case basis. Determination of Additional Surcharge on case to case basis would also not be practicable considering that the cost incurred by DISCOMs for providing Open Access will not be consumer specific. All the cost incurred to meet Universal Supply Obligation, purchase of power, etc are common and the fixed cost of stranded capacity is not specific to any particular plant.
4. It may please be noted that the quantum of power surrendered everyday due to open access is not uniform and power surrendered everyday is also not from a specific plant. Hence the fixed cost associated is also different. Further additional surcharge is actually a post-facto charge, depending upon the extent of demonstrable stranded costs, computation of Additional Surcharge on case to case basis is very difficult and time consuming and would not be conducive for the power market.
5. Various State Electricity Regulatory Commissions have repealed their regulations for determining the additional surcharge on a case to case basis as determination on case to case basis is difficult. Rajasthan Electricity Regulatory Commission has repealed the open access Regulations which provide the determination of additional surcharge on case to case basis , on 27.01.2016.
6. Hence KSEBL may request the Commission to repeal Regulation-41 of the KSERC (Connectivity and Intrastate Open Access) Regulations, to compute additional surcharge on yearly basis.

13. <u>Power Factor Incentives</u>

1. Honourable Commission vide order dated 17.04.2017 in the matter of determination of Tariff for the year 2017-18 on suomotu

proceedings has ordered to allow an incentive @ 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.

2. Honourable Commission has issued public notice on 01.12.2016 for revision of tariff for retail supply of electricity for the years 2016-17 and 2017-18. In the notice, Honourable Commission has not made any specific proposal for revising the power factor incentive/penalty applicable for ToD billed consumers. But M/s HT&EHT Industrial consumer’s Association, while submitting their views and remarks on the notice, appealed for revision of power factor incentive.

3. KSEBL vide additional submission dated 17.01.2017 has pointed out that the prevailing power factor incentive scheme was in vogue for the past 12 years and the penalty for low power factor is not sufficient to motivate such consumers to improve power factor. At the time the power factor incentive/ penalty was implemented in the Board, there was no specific grid standards followed with respect to the power factor. As per the Commission order dated 14.01.2005 only the same was fixed as 0.9 for the HT & EHT consumers. Now, many regulations have been issued by various apex bodies regarding the grid discipline to be followed by the utilities. The relevant rules and regulations issued in this behalf are extracted below.

   - As per section 16 of the Grid Code the Reactive power compensation should be provided by STU’s Transmission licensees as far as possible in the low voltage system close to the load points thereby avoiding the need for exchange of reactive power to/from ISTS and to maintain grid voltage.

   - As per CEA (Technical Standards for Connectivity to the Grid Regulations, 2007) Part IV para 2 ‘Reactive Power- The distribution licensees shall provide adequate reactive compensation to compensate the inductive reactive power requirement in their system so that they do not depend upon the grid for reactive power support. **The power factor of the distribution system and bulk consumer shall not be less than 0.95.**

4. In view of the above standards specified in the regulations, giving incentives to the consumers having low power factor than 0.95 is not justifiable. Moreover, the quality of the equipments available in the market has improved a lot during the years thereby providing higher power factor on their use. Hence, in order to clear the above anomaly, the incentive given to the consumers from 0.9 to 0.95 has to be eliminated and considering the fact the one fourth of the consumers are still paying penalty, the penal amount

has to be increased.

5. In view of the above facts KSEBL recommended the following before the Honourable Commission vide letter dated 17.01.2017;

    1. The minimum power factor to be maintained by consumer be raised to 0.95 in tune with the existing statutes
    2. The incentive being provided to high power factor be withdrawn, since the incentive provided to existing consumers have already surpassed and over compensated the investment made by them. No incentive is provided in Tamil Nadu and Karnataka.
    3. The penalty for low power factor be increased to 2% to discourage consumers from keeping low power factor.
    4. The scheme of such incentive be made a part of the tariff orders and revised along with tariff revision.

6. **But the Honourable Commission vide order dated 17.04.2017 ,without making any special reference to this issue any where in the tariff order, notified the incentive rate as '0.5% of the energy charge for each .01 increase in power factor from 0.9'. Honourable Commission has not given any speaking order for increasing the power factor incentive from 0.25 % to 0.5 % of energy charges and on the recommendations furnished by KSEBL. Further there was no reference for this increase in the press release of Honourable Commission issued on 17.04.2017 announcing the tariff revision for 2017-18. Since there is no detailed analysis of KSEBL recommendations and no specific remarks for increasing the power factor incentive, it is suspected that there occurs a typographical error.**

7. Power factor incentive is given by the licensee to the consumer to maintain the system at proper power factor and it is the duty of licensee to maintain a power factor of 0.95 as per CEA regulations. Hence it is requested to maintain the base power factor at 0.95 and incentive can be given for consumers who are maintaining a power factor of above 0.95 for supporting the system. In view of the above standards specified in the regulations, giving incentives to the consumers having low power factor than 0.95 is not justifiable and Commission may review the matter. Moreover, the quality of the equipments available in the market has improved a lot during the years thereby providing higher power factor on their use. Hence, in order to clear the above anomaly, the incentive given to the consumers from 0.9 to 0.95 has to be eliminated and considering the fact the one fourth of the consumers are still paying penalty, the penal amount has to be increased. Further, it

is observed that many states including the Tamil Nadu and Karnataka is not providing incentive to the consumers for power factor, whereas they charge only penalty from the consumers for having low power factor below 0.9. The TNERC has gone to the extent of amending their own regulation of providing incentive/ penalty on power factor vide Notification No. TNERC/TR/5/2-11 dated 13.03.2014 to claiming penalty only. The incentive/ penalty scheme followed in various states in the Country is attached herewith as **Annexure C**. It can be seen that majority of the states doesn't provide incentive below 0.95pf.

8. It may please be noted that the annual commitment for providing power factor incentive paid for the year 2016-17 is around Rs 42 crores/annum and a net cash flow of Rs 29.20 crores (41.72-12.52) for the year 2016-17. By increasing the power factor incentive vide tariff order dated 17.04.2017 , the annual commitment will become around Rs 83.44 crores per annum for paying power factor incentives and the net cash outflow towards power factor incentive/penalty will be 70.92 crores ,considering the same consumption of 2016-17 for 2017-18 also. Since all the expenses approved by Commission is a pass through to tariff the common consumer has to bear the burden of these incentives and this is not justifiable. The financial loss incurred by utility on implementing the power factor incentive and penalty as directed by the Commission, is as stated below

Table 19

<u>Details of amount paid towards power factor incentive and received against the power factor penalty from 2010-11 to 2016-17 and estimation for 2017-18</u>

Year	**Incentive**	**Penalty**	**Net Amount**
	(Rs)	**(Rs)**	**Rs in crores**
2010-11	106047549.80	71353910.66	3.47
2011-12	113800929.00	74032295.47	3.98
2012-13	217190953.60	94778639.38	12.24
2013-14	312222236.10	104240618.30	20.8

2014-15	359056815.90	115028222.20	24.4
2015-16	377916837.10	116456132.40	26.15
2016-17	417226346.04	125257391.18	29.20
2017-18 estimated (at increased rate of power factor incentive for the same consumption as in 2016-17*	834452692.08	125257391.18	70.92

*growth for 2017-18 not considered

9. Thus it can be seen that there is a cash outflow of Rs 70.92 crores for the year 2017-18 if the trend of consumption of the consumers for 2016-17 continues for 2017-18 also. This may increase due to the growth in demand.

10. Considering the standards specified CEA (Technical Standards for Connectivity to the Grid Regulations, 2007) Part IV para 2 'Reactive Power and considering the financial loss KSEBL humbly requests before the Honourable Commission to review the same and revise the following

    1. Retain the power factor incentive at .25 % of energy charges by rectifying the typographical error in order dated 17.04.2017 instead of 0.5 % of energy charges
    2. The minimum power factor to be maintained by consumer be raised to 0.95 in tune with the existing statutes
    3. Eliminate the power factor incentive for consumers having power factor from 0.9 to 0.95.
    4. The penalty for low power factor be increased to 2% to discourage consumers from keeping low power factor.

Prayer

Considering the reasons and other details submitted in the foregoing paragraphs as detailed above, KSEB humbly prays before the Hon'ble Commission to review the KSERC order No. 1007/F&T/2016/KSERC dated 17th April 2017 ORDERS IN THE SUO MOTU PROCEEDINGS FOR DETERMINATION OF TARIFF FOR ELECTRICITY FOR THE FINANCIAL YEAR 2017-18 APPLICABLE TO THE

STRATEGIC BUSINESS UNITS (GENERATION, TRANSMISSION AND DISTRIBUTION) OF KSEB LTD AND FOR OTHER LICENSEES, on the matters as detailed in the petition as above.

Sd/-
Chief Engineer (Commercial & Tariff)

Annexure-A

Category	Cross subsidy surcharge approved (Rs/unit)	
	Embedded consumers	Non embedded consumers
EHT-1	1.04	1.14
EHT-II	1.02	1.16
EHT-III	0.63	1.34
EHT-G	1.26	1.62
HT-1(A) Industry	0.91	1.28
HT-I(B) Industry	1.16	1.33
HT-II(A)	0.81	1.38
HT-II (B)	1.34	1.66
HT-III(A)	0.00	0.16
HT-III(B)	0.00	0.00
HT-IV	1.36	1.80
HT-V	0.91	1.53

Annexure B

Cross subsidy surcharge as per revised parameters of 'C' & 'T' for embedded as well as non embedded open access consumers' submitted by KSEBL for approval

Category	T = Average Tariff approved by the Commission (Rs/unit)	C= Avg. cost of PP (Rs/unit)	L = Aggregate transmission & distribution loss (in %)	D= transmission and wheeling charges (Rs/unit)	R= Per unit carrying cost	Surcharge as per formula (Rs/unit)	Surcharge limit (20% energy charge) (Rs/unit)	**Cross subsidy surcharge as per revised parameters of C& T as per National Tariff policy for approval of KSERC (Rs/unit)**
EHT-1	5.68	3.17	4.50%	0.37	0.00	1.99	1.14	**1.14**
EHT-II	5.79	3.17	4.50%	0.37	0.00	2.10	1.16	**1.16**
EHT-III	6.71	3.17	4.50%	0.37	0.00	3.02	1.34	**1.34**
EHT-G	8.12	3.17	4.50%	0.37	0.00	4.43	1.62	**1.62**
HT-1(A) Industry	6.39	3.17	9.75%	0.68	0.00	2.20	1.28	**1.28**
HT-I(B) Industry	6.64	3.17	9.75%	0.68	0.00	2.45	1.33	**1.33**
HT-II(A)	6.90	3.17	9.75%	0.68	0.00	2.71	1.38	**1.38**
HT-II (B)	8.30	3.17	9.75%	0.68	0.00	4.11	1.66	**1.66**
HT-III(A)	4.75	3.17	9.75%	0.68	0.00	0.56	0.95	**0.56**
HT-III(B)	4.38	3.17	9.75%	0.68	0.00	0.19	0.88	**0.19**
HT-IV	9.00	3.17	9.75%	0.68	0.00	4.81	1.80	**1.80**
HT-V	7.63	3.17	9.75%	0.68	0.00	3.44	1.53	**1.53**

Annexure C

PF INCENTIVE/PENALTY CHARGES OF OTHER STATES

State	Incentive		Penalty	
	Pf value	Rate	Pf value	Rate
Manipur	above 0.95	1% of Energy charges for every 0.01 increase	0.9 to 0.85	1% of Energy charges (EC) for every 0.01 decrease from 0.9
			below 0.85	2% of Energy Charges for every 0.01 decrease from 0.9
Tamil Nadu	No Incentive		0.9 to 0.85	1% of EC for every 0.01 decrease from 0.9
			0.85 to 0.75	1.5% of EC for every 0.01 decrease from 0.9
			Below 0.75	2% of EC for every 0.01 decrease from 0.9
Gujarat	Above 0.95	1% of Energy charges for every 0.01 increase	0.9 to 0.85	1% of EC for every 0.01 decrease from 0.9
			Below 0.85	2% of EC for every 0.01 decrease from 0.9
Orissa	Above 0.97	0.5% of EC and DC for every 0.01 increase	0.92 to 0.7	0.5% of EC and DC for every 0.01 decrease from 0.9
			0.7 to 0.3	1% of EC and DC for every 0.01 decrease from 0.7
			Below 0.3	2% of EC and DC for every 0.01 decrease from 0.3
Karnataka (Bescom)	No Incentive		Below 0.9	3 paise per unit consumed for every 0.01 decrease below 0.9
Sikkim	Above 0.95	0.5% of Energy charges for every 0.01 increase	Below 0.95	1% of EC for every 0.01 decrease from 0.95