



KERALA STATE ELECTRICITY REGULATORY COMMISSION

**ORDERS IN THE
PETITION FILED BY KSEB LTD FOR THE APPROVAL OF
ARR, ERC AND TARIFF PROPOSALS FOR THE CONTROL
PERIOD 2022-23 TO 2026-27**

OP NO. 11/2022

25TH JUNE 2022

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KSERC (Terms and Conditions for Determination of Tariff) Regulations, 2021, the Commission hereby passes the following Order.

Dated this the 25th Day of June, 2022

Sd/-
Adv. A J Wilson
Member (Law)

Sd/-
Preman Dinaraj
Chairman

Approved for Issue

Sd/-
Secretary

Chapter -1

INTRODUCTION

1. Kerala State Electricity Board Limited (*hereinafter referred to as KSEB Ltd or the licensee*), vide letter dated 31.01.2022, filed a petition for approval of Aggregate Revenue Requirements (ARR) / Expected Revenue from Charges (ERC) for the Control Period from 2022-23 to 2026-27, before Kerala State Electricity Regulatory Commission (*hereinafter referred to as KSERC or as the Commission*). Thereafter, KSEB Ltd, vide letter dated KSEBL/TRAC/G/Tariff Revision/2022-27/710 dated 10.02.2022 filed the Tariff Revision Proposal for the Control Period from 2022-23 to 2026-27. The petition for ARR in Tariff proposal had filed in accordance with the KSERC (Terms and Conditions for Determination of Tariff) Regulations, 2021 (*hereinafter referred to as Regulations or Tariff Regulations*).
2. KSEB Ltd had earlier filed petition for approval of Capital Investment Plan of KSEB Ltd for the Control Period from FY 2022-23 to 2026-27, vide its letter No. KSEB/TRAC/CG/KSERC/CAPEX/2021-22/644 dated 10.01.2022, along with DPR of SBU G and SBU T.
3. KSEB Ltd, vide letter No KSEBL/TRAC/G/Tariff Revision/2021-22/719 dated 18.02.2022 made additional submission to the Tariff Proposal to include the cross-subsidy surcharge applicable to Railways and KMRL, which they have excluded in the original submission due to oversight. Further, KSEB Ltd, vide letter No. TRAC/CIP/21-22/724 dated 21.02.2022 submitted the DPRs of Capital Investment Plan of SBU-D for the Control Period from 2022-23 to 2026-27 before the Commission.
4. KSEB Ltd, vide letter No. KSEBL/TRAC/G/Tariff Revision/2021-22/740 dated 25.02.2022 has made additional submission before the Commission for incorporating corrections in view of some clerical errors crept in the Tariff Revision proposal. On 24.02.2022, KSEB Ltd, vide letter No KSEBL/TRAC/G/Tariff Revision/2021-22/736 submitted another additional submission for categorisation/ recategorization and rationalisation of tariff.
5. The petition contained the following:
 - Capital expenditure plan for SBU-G, SBU-T and SBU-D for the Control Period from 2022-23 to 2026-27
 - ARR & ERC for SBU-G and SBU-T and their transfer cost to SBU-D
 - ARR & ERC for SBU-D and the revenue gap thereon
 - Proposal for Revision of Retail Supply Tariff applicable to all licensees in the State

- Proposal for revision of Open Access Charges (Cross Subsidy Surcharge, Wheeling Charges)
- Proposal for revision of low voltage supply surcharge, power factor incentive and penalty, Bulk Supply Tariff applicable to licensees other than KSEB Ltd
- Proposal for classification/ reclassification of tariff

6. In their petition, KSEB Ltd has considered the ARR of SBU-G and SBU-T as the transfer cost to SBU-D. Thus, the revenue gap is only for SBU-D. KSEB Ltd projected the revenue gap for SBU-D for the control period as shown below:

Particulars	2022-23	2023-24	2024-25	2025-26	2026-27
	Rs.crore	Rs.crore	Rs.crore	Rs.crore	Rs.crore
Net ARR	18829.56	20246.99	20967.55	22048.27	23382.67
Net Revenue	15976.98	16217.80	16787.28	17381.63	18203.38
Revenue Gap	2852.58	4029.19	4180.26	4666.64	5179.29

7. The revenue gap estimated by KSEB Ltd is inclusive of the amortisation of the approved past Revenue gap to the tune of Rs.850 crore per year. According to KSEB Ltd there is an approved unbridged revenue gap of Rs 6864.13 Crore pending recovery as on petition date. KSEB Ltd has also claimed Rs.407.20 Crore per year as repayment of Master Trust bonds. The additional contribution to Master Trust per year as proposed by KSEB Ltd is Rs.400.00 Crore. KSEB Ltd had proposed to bridge the revenue gap through tariff revision during the 5 year Control Period from 2022-23 to 2026-27. According to the petitioner, the tariff revision proposal is as per the provisions of the Electricity Act 2003, Tariff Policy 2016, KSERC (Terms and Conditions for Determination of Tariff) Regulations 2021, and various judgment of Hon'ble APTEL.
8. The Commission had issued Order dated 08.07.2019 determining tariff, in which the tariff was revised for Retail supply, Open access charges, Bulk Supply Tariff etc., effective from 08.07-2019 to 31-03-2020. The Commission had extended the validity of the tariff order from 01-04-2020 to 31-03-2021 and further from 01.04.2021 to 31-3-2022 vide orders dated 30-03-2020 and 19.03.2021 respectively. The Commission further, vide the order dated 24.03.2022 had extended the validity of the tariff order dated 08.07.2019 till from 01.04.2022 to 30.06.2022, or till the date of effect of the new Tariff Order to be determined by the Commission for the Control Period 2022-23 to 2026-27, whichever is earlier.

Statutory provisions:

9. Section 61 of the Act confers power on the Electricity Regulatory Commissions to specify by regulations, the terms and conditions for the determination of tariff in accordance with the principles stipulated therein. Section 62 of the Act empowers the Commission to determine tariff for generation of electricity, transmission of electricity, wheeling of electricity and for retail sale of electricity. Section 64 of the Act prescribes the procedure for determination of tariff and issuance of Tariff Order. The Commission has, in exercise of its powers under Section 61 of the Act, and after following the due process issued vide notification No.1234 /Con.Engg./2021/KSERC dated 16-11-2021, the KSERC (Terms and Conditions for Determination of Tariff) Regulations, 2021, notified in the Official Gazette 3432 dated 22.11.2021 (hereinafter referred to as the Tariff Regulations, 2021), which specify the detailed principles and procedures for determination of tariff for the Control Period
10. Clause (f) of Section 61 of the Electricity Act, 2003, stipulates that MYT Principles shall be introduced while issuing the Tariff Regulations and the Commission has incorporated MYT Principles in the Tariff Regulations, 2014. Clause (h) of para 5.11 of the Tariff Policy, 2016, also stipulates the guidelines for introduction of MYT Tariff. As per Regulation 9, of the Tariff Regulations, multi-year tariff frame work shall be applicable. Relevant provisions are given below:

Regulation 8 specifies the Control Period of this Regulations:

8. Control Period. –

- (1) *The Control Period is the period for which the principles and norms specified under these Regulations shall be applicable.*
- (2) *The Control Period shall be a block of five financial years starting from the first day of April, 2022 and ending on the thirty first day of March, 2027:*

Provided that the Commission may, if considered necessary, through an Order extend the validity of these Regulations beyond the thirty first day of March, 2027, to such period or periods as deemed appropriate.

Regulation 9 provides for the principles for multi-year tariff frame work

9. Multi-year tariff (MYT) framework. –

- (1) *The multi-year tariff framework under these Regulations shall be applicable for determination of tariff by the Commission, on matters covered under clauses (i) to (vii) of Regulation 2 of these Regulations, for a generating business/company, transmission business/ licensee, distribution business/ licensee and the State Load Despatch Centre.*

(2) *The multi-year tariff framework for the generating business/ company, transmission business/ licensee, distribution business/ licensee and the State Load Despatch Centre, for calculation of Aggregate Revenue Requirement and Expected Revenue from Tariff and Charges (ARR & ERC), shall be based on the following elements:-*

- (i) *Forecast of Aggregate Revenue Requirement (ARR) for the Control Period along with the expected revenue from the existing and proposed tariff and charges, separately for each year of the Control Period;*
- (ii) *Truing up of the expenses and revenue of the respective year based on the audited accounts of the business/ licensee vis-à-vis the Commission approved forecast and variation, caused by the controllable factors and uncontrollable factors, as specified in Regulation 12 of these Regulations;*
- (iii) *The mechanism for pass-through of the approved gains or losses on account of the uncontrollable factors as specified by the Commission in Regulation 13 of these Regulations;*
- (iv) *The mechanism for sharing of the approved gains arising out of controllable factors as specified by the Commission in Regulation 14 of these Regulations;*
- (v) *Approval of the Aggregate Revenue Requirement of the business/ licensee by the Commission for the Control Period along with the determination of tariff for each year of the Control Period;*
- (vi) *Mid-term Performance Review (MPR) in year 2024-25, based on the trued-up figures for 2022-23 and 2023-24 and the annual performance review upto September 2024. The Commission shall take into account, the uncontrollable parameters and the variations in actual performance on account of the controllable parameters for the respective years of the Control Period; vis-à-vis, the ARR approved for the Control Period and the revised forecast for the years 2024-25, 2025-26 and 2026-27, on account of the unanticipated variations, if any, on the controllable and uncontrollable parameters.*

11. As per the Second Transfer Scheme notified by the Government under Section 131 of the Electricity Act, 2003, the activities of the company are being carried out through Strategic Business Units (SBUs) for each of the functions of Generation, Transmission and Distribution. In line with the transfer scheme, KSEB Ltd has filed petition for approval of separate ARR&ERC for three SBUs viz., SBU-G, SBU-T and SBU-D.
12. The Commission admitted the petition as OP 11/2022. After admitting the petition, the Commission has displayed a copy of the petition in its website and issued notice to KSEB Ltd informing the admission of the petition and directed KSEB Ltd to upload in their website. It was also directed that abstract should

be published in dailies for information of public at large. KSEB Ltd submitted the abstract on 26.02.2022 for approval of the Commission. The Commission vide letter dated 28.02.2022 approved the abstract submitted by KSEB Ltd and informed the date of public hearing. The Commission directed the licensee to publish the approved summary of the petition by giving time till 31-03-2022 for providing comments by the public and stakeholders. The licensee published the summary of the petition in the following dailies.

- Mathrubhoomi daily dated 13-03-2022
- Deshabimani daily dated 13-03-2022
- The Hindu daily dated 13-03-2022

13. Based on the request of KSEB Ltd and in view of the national strike on 28th and 29th of March, the Commission rescheduled the dates originally proposed. The Commission also issued press releases through the Department of Information and Public Relations.

Public Hearings

14. Public hearings on the petition were held at following places as shown below:

Date	Venue	Time
01.04.2022	Corporation Town Hall, Ernakulam	11:00 AM
06.04.2022	Jimmy George Indoor Stadium, Thiruvananthapuram	11:00 AM
11.04.2022	Nalanda Auditorium, Kozhikode	11:00 AM
13.04.2022	EMS Smaraka Hall, Jilla Panchyath, Palakkadu	11:00 AM

15. The lists of persons who attended the Public Hearings are given in Annexure-I. The Commission has received several comments and objections from the consumers and general public on the petition of KSEB Ltd during the public hearing and also through written submissions. A list of stakeholders who furnished written comments are enclosed as Annexure – II.
16. KSEB Ltd has vide letter No. KSEB/TRAC/Tariff Revision/2021-22/167 dated 23.06.2022 has forwarded its comments on various issues to the Commission
17. The Commission, after duly considering the views, suggestions and objections submitted by the consumers, the licensees and other stakeholders as well as the views expressed by KSEB Ltd in this regard, hereby issue the following orders on the petition No. OP 11/2022 filed by KSEB Ltd.

Chapter 2

Comments of stakeholders

- 2.1 The Commission has received several comments against the ARR and Tariff petition filed by KSEB Ltd for the MYT period from 2022-23 to 2026-27. The Commission has examined the same in detail. The major issues raised by the stake holders and the views of the Commission is given in the following paragraphs.

Bulk Supply Tariff (BST)

- 2.2 **Assistant Secretary, M/s Thrissur Corporation Electricity Department (TCED)** submitted that, as per the Truing up orders of the Commission, the accumulated revenue surplus upto the FY 2019-20 is Rs.152 crores.

The major component in the aggregate surplus is the amount TCED disbursed for pension. TCED is remitting pension contribution to Government and the Government is not disbursing the amount required for the pension. TCED further submitted, an amount of Rs 50.00 crore is incurred for pension disbursement in these years. But the Commission has not allowed the amount spent in this regard as expense and treated it as surplus. Moreover, additional interest income is also charged on this surplus amount yearly. The excess interest on accumulated surplus after deduction of pension fund amounts to 1729.73 lakhs.

TCED further submitted that the Section 3 duty remitted to Govt. is an expense for TCED but it is not considered as expense by the Commission while truing up of the account. Accordingly, the expense of Section 3 duty is transferred as income and interest on it is calculated and added up to accumulated surplus. Thus from 2013 - 20 an amount of 5,64,49,126 is remitted in Govt. by TCED converted as income and an amount of Rs. 13377178/- corresponding interest income is added to accumulated surplus.

- 2.3 **M/s Kannan Devan Hills Planation Company Private Ltd (KDHPCL)** submitted that whenever KSEB Ltd seeks tariff revision for its consumers, revision of tariff of the Licensees also done based on the revised tariff revenue for each year of the Control Period. KDHPCL requested to follow the same practice during current revision also.
- 2.4 **Shri. Sajeev, KPUGL** submitted that about 72% of the sales and revenue of KPUGL is contributed by the industrial consumers under HT 1A and HT 1B categories. It was pointed out that KSEB Ltd has not proposed any increase in the Demand Charges for the industrial consumers under HT 1A and HT 1B during the MYT control period. On the other hand, KSEB Ltd has proposed a

yearly hike of 32.35%, 41.18%, 44.12%, 47.06% and 54.41% in the BST Demand charges applicable for KPUPL for the control period in comparison to the existing tariff. KPUPL have to purchase the power at a higher tariff and give it at a lower rate to HT 1A & 1B category. Therefore, the Commission may ensure proportionate increase in BST and RST.

- 2.5 Military Engineer Services (MES)** submitted that the Indian Navy has established number of units in Kerala State including the Headquarters of Southern Naval Command and Indian Naval Academy. These units are consuming electricity from the KSEB Ltd, through Military Engineer Services (MES). The MES is paying an average Tariff of ₹2.2 Crores per month to KSEB Ltd. The present charges of MES are Demand Charges ₹390/kVA and Energy Charge of ₹5.85/unit. Moreover, out of 11 Discoms in the State, six have BST lower than MES. Hence MES requested before the Commission to review and reduce the electricity tariff of MES, Demand Charges at ₹340/kVA and Energy Charges at ₹ 4/unit.
- 2.6 M/s Rubber Park India Pvt Limited(RPIPL)** submitted that KSEB Ltd proposed high BST Demand charges for the control period. KSEB Ltd had proposed a yearly hike of 32.35% 41.18%, 44.12% 47.05% and 54.41% in the BST Demand charges applicable for RPIPL for the control period in the tariff proposal. About 90% of the sales and revenue of RPIPL is contributed by the HT - 1A industrial consumers. The demand charge in the retail supply tariff proposed by KSEB Ltd for the HT-1 A industrial consumer for the second year of the control period onwards is lower than the demand charges proposed for Rubber Park. KSEB Ltd has not proposed any increase in the Demand Charges of HT-1 A industrial consumers from the second year of the Control Period. The Commission has fixed the demand charges applicable for M/s RPIPL at par with the demand charges of HT - 1A industrial consumers in the past tariff orders. Hence, M/s RPIPL requested before the Commission to consider the same procedure as followed in the previous tariff Order.
- 2.7 Cochin Special Economic Zone Authority (CSEZA)** submitted that KSEB Ltd has proposed steep hike in the demand charge for CSEZA-about 35% hike from the existing rate. CSEZA submitted that the Commission may review the necessity of this huge hike. As,80% of CSEZA's consumption is by HT industrial consumers. Referring to the KSEB Ltd's tariff revision proposal, CSEZA is not able to realise fully the proposed increased demand charge especially from HT 1(A) and HT 1(B) category. It was requested that CSEZA's Demand charge may be fixed at par with those fixed for HT 1(A) and HT 1(B) category. KSEB Ltd has also proposed a considerably higher BST energy charge rate (variable charge) for CSEZA for the MYT period compared to the existing rate.

Over and above the power purchase cost, CSEZA has to meet additional O&M expenses to provide quality and reliable power supply to Consumers and to

account for depreciation and return on NFA. Though CSEZA as Licensee is allowing Power Factor incentive to its consumers as per KSERC tariff Orders, the same is disallowed by KSEB Ltd to CSEZA. CSEZA also has to meet Section 3 electricity duty which cannot be passed on to consumers.

Opinion of the Commission

2.8 The Commission noted the suggestions of all licensees. The Commission has been following uniform RST in the State. Hence as and when tariff is revised to the consumers of the incumbent licensee KSEB Ltd, the same RST is made applicable to consumers of other licensees also. This would result in additional revenue to the licenses. Further, as per the latest truing up orders, all the licensees except Infopark and Smartcity had accumulated surplus. The Commission shall look into all these aspects while revising the BST.

The Commission has also noted the request of MES to review their tariff. The Commission may consider the same in the tariff revision exercise.

Request to include consumption of licensees under BST also in the RPO obligation of buyer licensees.

2.9 M/s Rubber Park India Limited (RPIPL) submitted that as per the tariff petition, KSEB Ltd had considered the RPO obligation excluding the sales to the bulk supply distribution licensees for arriving the revenue gap and RST for the control period. The power purchase from the KSEB Ltd is governed by PPA and the purchase of renewable power to meet RPO is not practically possible. Moreover, KSEB Ltd had informed vide letter dated 28.05.2019 requested for meeting the Renewable power purchase obligation of RPIPL by KSEB Ltd can be considered from 2021-22 onwards: RPIPL also requested to introduce separate BST rates for Renewable power from the seller licensee (KSEB Ltd) for the control period.

Opinion of the Commission

2.10 The Commission noted the request made by RPIPL. The Commission observed the Commission has considered the issue while issuing the KSERC (Renewable Energy), Regulations, 2020 and Regulation 4(6) provides as follows:

(6) A distribution licensee which is engaged in bulk purchase of electricity from another licensee shall not have separate obligation for purchase of renewable energy if,-

(i) the seller licensee meets the renewable purchase obligation for the

- energy sold to the licensee or*
- (ii) *The licensee reimburses to the seller licensee the additional cost incurred as approved by the Commission by the seller licensee for the generation or purchase of renewable energy to meet the renewable purchase obligation of the licensee.*

The Commission further clarifies that any issues related to Renewable Energy may be taken up with the Commission while amending the Renewable Energy Regulations or through a separate petition.

PF incentive

- 2.11 Rubber Park India Pvt Ltd** submitted that in the Regulation 85(11) of the Terms and Conditions for Determination of Tariff Regulations, 2021 the PF incentive to the distribution licensees also included. In this context, M/s RPIPL requested before the Commission to introduce PF incentive in the BST applicable for the small distribution licensees in the tariff Order.
- 2.12 Kohuveli MSME Association** submitted that the reward for the power factor improvement should be more encouraging and penalty should be to educate the consumers.
- 2.13 Krishna Kumar. K, TCCL** submitted that as per the latest tariff regulation, the Commission redesigned the existing power factor from 0.9 - 1.00 to 0.95-1.00 which has resulted in the power factor incentive getting halved. It is therefore requested that the power factor incentive which existed before this shall be retained.
- 2.14 Shri. Saji Mathew, MRF, Kottayam** submitted that a pf of 0.90 to 0.95 lag shall be allowed without any penalty/incentive and a 0.2 % incentive shall be provided to the consumers who maintains Unity power factor. It was also suggested to adopt KVARh billing which will be beneficial to KSEB Ltd also.
- 2.15 HT & EHT Association** made comments of power factor incentive and made the proposed that:
- For HT Consumers
 - (a) PF incentive starting from 0.90 to 0.95 should be reinstated as provided earlier.
 - (b) PF incentive for achieving unity PF should be revised to 5%.
 - For EHT & Bulk Licensees:
 - (a) Follow the CEA guidelines on PF incentive. The PF incentive for each step increase of 0.01 from 0.95 to Unity shall be 1% .

- (b) For PF below 0.90, Penalty can be imposed. From PF between 0.90 to 0.95, a buffer zone of no penalty and no incentive should be the given.
- (c) For PF above 0.95 to unity, for each step increase of 0.01 PF, incentive of 1% should be given with 5% incentive for attaining unity power factor.

Comment of KSEB Ltd

2.16 KSEB Ltd submitted that the power factor penalty and incentive as per the tariff order dated 08.07.2019 in OP No. 15/2018 may be retained. If any relaxation in the existing standards is given to the consumers, then it can adversely affect the discipline followed in the grid. The continuation of the existing power factor penalty and incentive may also help in reducing the loss on the system which in turn will be beneficial for the network.

Opinion of the Commission

2.17 The Commission while issuing ARR &ERC and Tariff order dated 08.07.2019 has considered the issues and detail and decided as follows:

6.117 The Commission has noted that, Central Electricity Authority (CEA), the statutory authority constituted under Section 70 of the Electricity Act, in exercise of the powers conferred on it under Section 73(b) read along with Section 177(2)(e) of the EA-2003 notified the Regulations on Technical Standards for Connectivity to the Grid. The Part IV of the Regulation deals with Grid Connectivity Standards applicable to the Distribution Systems and Bulk Consumers. In para-2 under Part-IV of the said Regulation specified that, the bulk consumer shall maintain PF not less than 0.95 or above. The relevant portion of the Regulation is extracted below.

“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.”

The said Regulation also defines the ‘bulk consumer’ as the consumers availing supply at 33 kV or above. Accordingly, all such consumers of the State shall maintain a power factor not less than 0.95.

6.118 The Commission has examined the existing PF incentive and penalty with reference to the provisions in the CEA (Technical Standards for Connectivity to the Grid) Regulations, 2007. As per the CEA Regulations, it is mandatory that, all bulk consumers has to maintain the PF at 0.95, however, there is no mandate for such consumers to maintain the PF above 0.95. Hence, the Commission is of the view that, an incentive can be provided for those consumers who maintain the PF

above 0.95. There is no merit in the argument of the KSEB Ltd that, since the existing consumers are already compensated for the capacitors and other investments made for maintaining the power factor, there is no requirements for providing PF incentives. The Commission after due consideration has decided to provide incentive @0.50% of the energy charges for each 0.01unit increase in power factor from 0.95.

6.119 Though the Commission has decided to provide incentive to the consumers who maintain the PF above 0.95, it is also decided that, no penalty shall be levied for the PF between 0.90 to 0.95. However, if the PF maintained by the consumers is below 0.90, the existing disincentive @1% of the energy charge for every 0.01 fall in power factor from 0.90.

6.120 The PF incentive and disincentive approved is given below.

*Table 6.94
Power factor incentive and dis-incentive approved*

<i>PF range (lag)</i>	<i>Incentive/ Penalty</i>
<i>Incentive</i>	
<i>Above 0.95 and upto 1.00</i>	<i>0.50% of the Energy Charge for each 0.01 increase in power factor from 0.95</i>
<i>Penalty</i>	
<i>0.90 and upto 0.95</i>	<i>0.50% of the Energy charge for every 0.01 fall in PF below 0.95 and upto 0.90</i>
<i>below 0.90</i>	<i>1% of the energy charge for every 0.01 fall in PF from 0.90</i>

The Commission also decided that, no penalty and incentive shall be allowed for the consumers with leading PF.

2.18 The Commission vide the Regulation 85(11) of the Tariff Regulations, 2021, specified to extend the PF Incentive/ penalty approved is made applicable to other distribution licensees who purchases power from KSEB Ltd. Since KSEB Ltd has not proposed to revise the PF/incentives for the current MYT period, the Commission decided to retain the same, but extended the same to other licensees also.

Demand Based Tariff for domestic tariff – common connection of residential apartments

2.19 Shri. S. Madhu (Project & Equipment Consultant, Cochin) submitted that as per the Supply Code 2014 low voltage surcharge is specified. Even though the connected load of the apartment is 155 kVA, the contract demand is in the order of 30 kVA only. No low voltage surcharge is fixed for the domestic category, but KSEB Ltd demands low voltage surcharge based on HT tariff. Hence, requested that the low voltage surcharge may be made applicable considering the nature of usage.

- 2.20 Shri. Mathew Kuruvilla, (MD, Tall County Apartments), CHANDY'S, Kottayam** submitted that the Commission vide Order dated 17.03.2021 ordered that the matter raised by Tall County Apartments can be considered in the next tariff revision exercise. Tall County Apartments have a common connected load of 217.6 kW with a contract demand less than 100 kVA. Although Tall County Apartments installed 1600 kVA transformer for cater their load. The present tariff of the Tall County Apartments is LT- 1 A, due to this KSEB Ltd billing them with low voltage surcharge. Hence, Tall County Apartments requested to include demand-based LT Tariff, for all applicants including LT-1 A, occupying in multi storeyed building with own transformer.
- 2.21 KSEB Ltd** also requested the Commission to include all consumers under optional demand-based tariff.

Opinion of the Commission

- 2.22** The Commission, has considered the request and decided to include all consumers under optional demand-based tariff.

Open Access –Transmission Charge, Wheeling charge and Cross Subsidy Surcharge

- 2.23 M/s Rubber Park India Limited** submitted that Govt of India and Government of Kerala are taking effective steps to promote RE integration on the order of 450-500 GW by 2030. Investment in the interstate and Intrastate Transmission lines and economical loading of the grid may also be kindly considered. Hence, RPIPL requested to set aside the proposal for enhancement of transmission charges and wheeling charges.
- 2.24 Shri. N.Venugopal, DGM (Engg), Travancore Titanium Products Limited (TTP)** submitted that the proposed increase in cross subsidy surcharge and transmission charges will make the open access un attractive, which is against the basic intent of allowing competition.
- 2.25 The Travancore Cochin Chemicals Ltd (TCCL)** submitted that about 35 % of energy is procured through Short Term Open Access, at present. The additional expenses in Open Access overhead charges due to the proposed MYT Tariff would be Rs 5.25 crores in 2022-23 and Rs 11 Crores in 2026-27, which makes Open access totally unviable. The Commission may conduct detailed examination into the increase in transmission charges and cross subsidy surcharge. The TCC Employees Association (CITU), The TCC Employees Union (INTUC), and The TCC Thozhilali Union in their joint submission has submitted that TCCL may be permitted to avail open access exempting transmission charge and cross subsidy surcharge.

- 2.26 Sri. Jacob Cheriyan, Palakkad unit Production Manager, Malayala Manorama** submitted that impact of proposed revision of Transmission and Wheeling charges is Rs 72 – 138 Lakh / Yr. He added that Renewable energy projects will not be viable by paying the high proposed charges in addition to the Transmission losses, Wheeling losses, Grid Support & Banking charges.
- 2.27 The HT & EHT Association** submitted that the loss level considered at HT level is on the higher side, and needs to be considered realistically. The Association has computed the Wheeling Charges as Rs. 0.41/kWh to Rs. 0.43/kWh for HT level and Rs. 1.57/kWh to Rs. 1.67/kWh for the LT level, as against KSEB Ltd projections of Rs. 0.69/kWh for HT level and Rs. 2.65/kWh for LT level
- 2.28 Smt. Neenu Skaria,ETLS Pvt Ltd** requested to bring down the transmission and wheeling charges.
- 2.29 Shri. Sarath, FACT** pointed out that KSEB Ltd has proposed an increase in transmission charges from 41% in the first year to 103% in the last year which is totally unreasonable and shall not be encouraged.
- 2.30 Shri.M. Ramadas, CUMI,** submitted that KSEB Ltd shall also explore the possibility of creating an open access portal. In order to facilitate Open access, it was suggested that the wheeling charges shall be reduced.
- 2.31 Shri. Krishna Kumar. K, TCCL submitted that their** transmission charges will increase by 0.79 Crores
- 2.32 Shri.C.P.George, DyCE, KSEB Ltd (Rtd)** submitted that with more than 70% of the electricity being imported through interstate transmission networks above 400kV voltage level, an evaluation of the losses at minimum number (3-5 transformation stages when energy reaches an LT consumer) of voltage transformation stages (the transformer loss) and the line losses at different voltage levels while transmitting and distributing electricity do not provide any sensibility over the claim of low T&D loss claim.

Cross subsidy surcharge

- 2.33 M/s Saint Gobain** requested Commission to encourage industries to take more power from open access system by reducing the cross-subsidy charge which are now at Rs1.2 per unit.
- 2.34 Shri. K N Gopinath, General Convenor, Standing Council of Industrial Trade Unions** requested that increase in Cross Subsidy amount raised due to the tariff hike should not be approved.

- 2.35 Adv. P. Satheesh for telecom industry** has requested that the cross subsidy shall be substantially reduced in accordance with tariff policy.
- 2.36 Rajesh Kuruvilla J, Deputy General Manager Manufacturing, CUMI** pointed out that 11-13% increase in Cross Subsidy Surcharges on Open Access has been proposed for the 5-year period of the MYT which is against the MYT Tariff guidelines on Cross Subsidy Reduction year by year. National Tariff policy directs to achieve progressive reduction of Cross Subsidy Surcharges. It was requested that the Commission shall reject the KSEB Ltd's proposal to increase the Cross Subsidy surcharge and transmission charges, as these are envisaged to discourage Open Access procurement by consumers.
- 2.37 Shri. Krishna Kumar. K, TCCL** submitted that the cross-subsidy charges will increase to 1.33 Crores in 5 years and hence objected to the proposed increase and requested that the transmission and cross subsidy charges shall be shunned for open access consumers.
- 2.38 Shri. Venugopal, DGM (Engg), Travancore Titanium Products Limited (TTP)** submitted that the proposed increase in cross subsidy and transmission charges will make the open access non beneficial, which is against the basic intent of allowing competition.
- 2.39 Shri. Johnson, Deputy Chief Engineer Operation, Southern Railway** requested that cross subsidy charge shall be waived for open access by Railways. He added that as per the Solicitor General of India, *"the railway act will prevail up on by the electricity act on the same ground no cross subsidy surcharge or additional charges can be levied from Indian railway for the power procured through Open Access."* He added that Railway desires to continue as embedded customer and not to go out through open access fully.
- 2.40 Shri V R Sudhi, Seniors Forum** submitted that the cross-subsidy surcharge may be fixed limiting the same within 20% of cost of supply.
- 2.41 The HT & EHT Association** submitted that the parameters for approving CSS have to be revised based on the prudence check to be done by the Commission based on its analysis and the comments and suggestions received from the stakeholders.

Opinion of the Commission

- 2.42** The Commission noted the suggestions of stakeholders. The Commission has been following the provisions of the Electricity Act, 2003, principles prescribed in the National Tariff Policy and KSERC (Terms and Conditions for determination of Tariff) Regulations, 2021 while deciding on the cross-subsidy surcharge, transmission charges and wheeling charges in the State of Kerala.

General Comments on Tariff

- 2.43 Sri K N Gopinath** submitted that any increase in tariff of industrial consumers will force them to close down and requested the Commission not to approve the tariff increase..
- 2.44 Shri. K. Mohammed Rafeek AKLWA** submitted that, KSEB Ltd was converted into a company in 2013 on a zero-liability basis. But as on date it has a liability of around Rs 2200 crore which needs to be effectively addressed by KSEB Ltd. Since KSEB Ltd has made a profit, he appealed that no tariff hike should be allowed. It was also submitted that fixed charges of domestic customers should be avoided.
- 2.45 KPBOF** submitted that tariff revision must be related to inflation.
- 2.46 Shri. Sarath FACT** submitted that, the tariff hike proposed by KSEB Ltd is beyond affordable. This tariff increase will have a huge impact on domestic consumers. The Commission is requested to issue a tariff order which will not provide a shock to the consumers.
- 2.47 Shri. Mahesh Yuvajanatha Dal** submitted that, based on tariff hike proposal submitted by KSEB Ltd and on examining the last year revenue and expenditure figures, it was observed that the company was at a profit of Rs 469 crore which indicates that there is no need for a tariff hike.
- 2.48 Kuchappuram Thankappan, Secretary Vyapari Vyavasayi Association State Committee** submitted that they are supporting overall tariff hike of 10%, 5.5 % for small scale Industries and 5% for large industries from the present tariff.
- 2.49 Jose Paul, Nalpatt Veedu, Koratti, Thrissur** submitted that meter rent may not be increased and stated that LT VI General category shall be exempted from tariff hike.
- 2.50 Rajesh Kuruvilla J, Deputy General Manager Manufacturing, Carborundum Universal Limited**, submitted that KSEB Ltd's Tariff Revision Proposal is based on a Projected Revenue Gap and the projected revenue gap requires a tariff hike of Rs. 2.00/ unit from current level to 2026-27. The proposed tariff hike will result in an average increase of Rs. 1.60/ unit from current level to 2026-27. The total impact of new Tariff proposal in Carborundum Universal Limited factories for next 5 years of almost Rs 70 Cr without considering the additional impact on Open Access Purchases. It is therefore requested that the Commission may put on hold any proposal for Tariff hike including any revision of ToD time zone, Open Access charges till Capital investment plans are vetted and provisional clearance is given.
- 2.51 Shri. Girish. R, Malabar Cements** submitted that they pay around Rs. 2.5 crore per month on electricity bills and based on the proposed tariff for 2022-23, their company will incur an additional loss of Rs 50 to 60 lakhs. The company requested that the Commission shall take a stand on safeguarding

the interests of Malabar Cements which is a public sector undertaking. It was further requested that the Commission shall sanction a special tariff for public sector undertakings and requested not to approve this tariff hike proposed by KSEB Ltd.

- 2.52 Southern Railway** submitted that KSEB Ltd has assessed that the approximate refund amount for Traction service alone amounting to Rs 3.0 crore per month. Hence, it is requested that the Railway being the single largest EHT consumer in Kerala State and prompt payer of monthly bills may be given due consideration in reducing the Traction Tariff.
- 2.53 KSEB EA** submitted that a tariff rationalisation is required and proposed the following
- Adjust the two-part tariff to accurately reflect the actual fixed and variable costs to prevent under-recovery of fixed costs.
 - Quarterly tariff adjustments to ensure timely recovery of variable costs
 - Simplify the tariff structure by minimizing customer categories and tariffslabs.
 - Regulatory assets to be recovered through future tariff hikes
- 2.54 Shri. Jose Paul**, Thrissur submitted that the prevailing meter rent have to be continued till 2027.
- 2.55 InSDES** submitted that the tariff increase requested by KSEB Ltd is reasonable. InSDES also submitted that increase in tariff should be minimised to the extent possible in the best interest of the consumers and the development of the State; however, at the same time the existence of the licensee should be ensured by reasonable tariff increase. Annual tariff increase should be ensured so that a sudden increase is not felt and the long-term strategies can also be made in the power sector.
- 2.56 Kerala State Small Industries Association (KSSiA)** submitted that the present system of fixing fixed charges is unscientific and proposed to merge the fixed charge with the energy charges or to fix fixed charges in proportion to the energy charge or to allow usage of quantum of power equivalent to the fixed charge.
- 2.57 Shri. Sreelal.P. S (General Secretary, Kerala Samsthana Cherukida Rice & Oil Millers Association)** submitted that the petition filed by KSEB Ltd did not have any mention about the arrears. The pending arrears shall be collected. The increase demanded by KSEB Ltd at present should not be allowed.

Domestic tariff

- 2.58 Shri. J Sudhakaran Nair** submitted that the justification for higher rate for higher consumption is not substantiated.

- 2.59 Seniors Forum** submitted that some anomalies are noted in the increase in domestic tariff. The fixed charge increase for domestic consumers is totally unreasonable. He added that three phase service is better for the distribution system and hence tariff of domestic consumers may be fixed considering all these.
- 2.60 Shri. C A Narayanan, Kuruppumpady**, submitted that the telescopic tariff for household consumers shall be extended up to 500 units. Further, there is no justification in collecting different fixed charges for higher consumption.
- 2.61 Shri. Gopakumar A (Secretary, FERKA) and Shri. Eloor Gopinath, RACCO**, requested not to increase the tariff of domestic consumers.
- 2.62 E Babu Rajendran, Convener**, Friends of Electricity Employees and Consumers (FEEC) submitted that the prevailing average tariff of LT 1 Domestic is ₹4.79/unit, which steeply increases to ₹5.69/ Unit. In the year 2026-27 it will be ₹6.54/unit. It was suggested to provide the increase in pro rata basis rather than a steep increase.

Opinion of the Commission

- 2.63** The Commission noted the suggestions and the same may appropriately be considered while determining the tariff of the consumers.

Domestic – Water Supply

- 2.64 Shri. Sunilkumar.S, Vice president, ElappullyGrama Panchayath** submitted that panchayath is taking initiatives to supply drinking water to many villages where there is no water supply from KWA. Drinking water supply schemes was previously included in Jaladhara, Jalanidhi schemes and charges were below ₹3 per unit. Now, the tariff has been changed to domestic tariff and the panchayat is struggling to avoid disconnection. Hence, the panchayat requested to take appropriate actions to reduce the present tariff.
- 2.65 Shri. C.Moorthi, Chairman, Cousappara Mini Drinking water supply scheme** has submitted similar request before the Commission. He added that the scheme is financed, build and transferred to the Association by the Government for the conduct of the scheme. The remittance of electricity bill, maintenance and all other related works are done by the Association. Therefore, the proposed tariff hike will create extra burden.

Opinion of the Commission

- 2.66** As per the prevailing tariff order dated 08.07.2019, water supply schemes executed by local bodies and by utilisation of MP & MLA funds etc are included under Domestic tariff. The Commission has also specified the billing the methodology for billing the electricity being used for such water supply schemes, by dividing the total monthly consumption by number of beneficiaries. The electricity tariff of the beneficiary is determined using the domestic tariff applicable.

Kochi Metro Rail Limited.

2.67 A Manikandan (General Manager (O&M)), Kochi Metro Rail Limited (KMRL) submitted that, as per the GO. (P) No 171/2013/LSGD dated 10th May 2013, KMRL is categorized as an essential service to the public. KMRL further submitted that as per the DPR approved by Govt of Kerala, the cost of electricity forms 25 to 30 percent of annual working cost, and hence is a key element for the financial viability of the project. The annual energy consumption is assessed to be about 41 million units in the initial years which will increase to about 58 million units by the year 2025. In addition to ensuring optimum energy consumption, it is also necessary that the electric power tariff be kept minimum in order to contain the O&M Costs. Therefore, the power tariff for this corridor should be at effective rate of purchase price (at 110 kV voltage Level) plus nominal administrative charges i.e., on a no profit no loss basis. This is expected to be in the range of Rs. 2.75-3.50 per unit. It is proposed that Government of Kerala takes necessary steps to fix power tariff for Kochi Metro at “No profit No Loss” basis.

Total Annual Financial Repercussion due to change in Tariff Order is Rs 1.02 crores (approx.) in the period 2022-23. The pay out from KMRL to KSEB Ltd is seen to be proposed to increase at an average of 12.85 % in the period 2022-23 to 2026-27, which is a drastic and the proposed tariff will seriously affect the financial viability of the project. The revenue operations were stopped for 222 days due to COVID-19 pandemic and nationwide lockdown and afterwards, keeping in view of social distancing norms, Kochi Metro operated at reduced passenger capacity and even now capacity utilisation is only 6% while the operation expenses remain unchanged.

Revenue Potential of KMRL is limited to passenger tickets sold only and to be distinguished from Indian Railways which is engaged in Passenger service as well as goods transport and generating revenue from upper class and special high speed train ticket fares. As metro transport requirement is not there during the night, its working hours are restricted to 06.00 hrs to 23.00hrs. Commission in its tariff for 2017-18, has already endorsed the same and permitted a different tariff category for KMRL.

KMLR submitted that their jurisdiction is within the of Kochi suburban area and presently operating for a length of 25.6 KM. Indian Railway is one of the largest railway networks in the world and both cannot be matched in terms of its operation and revenue. Hence, it is requested to treat both tariffs separately and requested that the Commission may accord sanction to continue present tariff applicable to KMRL for the period from 2022-23 to 2026-27 with Maximum demand charge - Rs 275/KVA and Energy charge - Rs 4.80/KWh and that the proposal for rationalization of KMRL tariff and Railway Traction Tariff under single category to be dropped.

2.68 Shri. V.R. Sudhi, Seniors Forum submitted that parity shall not be brought between the tariff of Railways and KMRL and the present subsidy shall be continued.

Opinion of the Commission

- 2.69** Considering KMRL as a public utility service and the social obligations, the Commission has been providing electricity to KMRL at a highly subsidized rate.

Tariff EHT Railway

- 2.70 T C Johnson, Sr. Divisional Electrical Engineer (Traction), Southern Railway** submitted that the Railway Traction Tariff was fixed higher than Kochi Metro Tariff in the Tariff revision w.e.f from 08.07.2019. Southern Railway has given several representations to revise the Traction tariff at par with Kochi Metro Tariff. It is further submitted that the Railway has heavily subsidized the Passenger Ticket even during the pandemic situation, the benefit of which was passed on to the public at large.

It is pointed out that Government of Kerala issued G.O. No.67/2020/PD dated 01.06.2020 allowing rebates/concessions to the consumers of KSEB Ltd which has been approved the Commission in the order dated 31.12.2020 but KSEB Ltd is yet to provide the rebate to railway traction and non-Traction service for the month of March, April and May 2020 even after several correspondence.

It is further submitted that KSEB Ltd has assessed that the approximate refund amount for Traction service alone amounting to Rs 3.0 crore per month. Hence, it is requested that the Railway being the single largest EHT consumer in Kerala State and prompt payer of monthly bills may be given due consideration by reducing the Traction Tariff. Tariff in Kerala is higher than 16 other States for Railway.

Opinion of the Commission

- 2.71** The prevailing electricity tariff for railway traction is less than the average cost of supply of the utility. Considering the railway as a public utility service, the Commission has limited the tariff increase at average cost of supply.

Cochin International Airport Limited (CIAL).

- 2.72 Shri. ACK Nair, Airport Director, Cochin International Airport Limited (CIAL)** submitted that, during the FY 2020-21, the company's operation was severely affected by the spread of Covid 19 pandemic, resulting in a net loss. Hence any increase in tariff at this juncture can severely hamper business operation in the aviation sector in Kerala. He also submitted that Airports are already paying a higher and further increase maybe disallowed.

Tariff - Agriculture

- 2.73 Shri. Raymond Antony, Karshaka Samkhadana** submitted that, at present, the Department of Agriculture is remitting the bills on behalf of agricultural consumers. But it is noticed that any delay from the part of Department of Agriculture often contribute to disconnection of supply. Therefore, it was requested before the Commission that the payment of bills may be passed on to an empowered committee.
- 2.74 Jose Paul, Thrissur** submitted that LT V(A) Agriculture & LT V(B) Agriculture to LT V Agriculture, may not be merged till 2027.It was also submitted that
- (i) The agriculture category shall be exempted from tariff hike till 2027. Currently, the agriculture connection is given on "own your electric connection by charging line rent for 200 meters up to 3 years. This requires to be reviewed.
 - (ii) Remitting 0.50 paise/unit for the agriculture connection in the Krishi Bhavan have to be avoided.
 - (iii) Un metered supply has to be provided to the agricultural consumers. Hence, the meter can be used for the other consumers of KSEB Ltd.
- 2.75 Shri. Vamadevan.V, KSEB Seniors' Forum** submitted that there is an anomaly existing in the merging of the agricultural categories like LT 5(A) & LT 5 (B). In LT VI there are 7 categories, LT(VI) A to G and need of so many categories were questioned and requested to minimize those.

Opinion of the Commission

- 2.76** Considering agricultural sector as a primary sector and duly considering the socio-economic reasons, the Commission has been providing electricity to Agriculture categories at a highly subsidized rate. The Commission has also rejected the proposal of KSEB Ltd to merge LT VI A & VI B categories.
- 2.77 Power Department** has forwarded two letters from Agriculture department for consideration of the Commission. According to the Director of Agriculture, Kaipuzha Vechoor Puthenkayal Agriculture Co-operative society has an Electric connection for the agricultural purpose in the Vechoor lake. After the recategorization, the agricultural connection of the block 5 of Vechoor has been categorized under LT IV. The LT IV being industrial category, there is an impediment for the department of Agriculture to make the payment to the Head of Account of the free electricity Scheme. The Agriculture Development & Farmers Welfare Department further submitted, that in order to resolve the technical impediment, the tariff of the Block – 5 has to be categorized under LT V to include in the free electricity Scheme.

Tariff of Telecom Sector

2.78 Adv. P. Sathisan representing M/s Vodafone Idea Limited, M/s Bharti Airtel Ltd, and Indus Towers Limited submitted that as the entire telecom network including towers, switch centres etc and the various services provided with the help of Information technology, telecom shall be treated as IT or IT enabled service to be brought under LT-IV B at least if not LT-IV A. Information technology Act defines information as an inclusive definition of data, message, text, image, sound, voice, codes, computer programme, software and data base or micro film or computer generated micro fiche. It was also submitted that telecom is classified as an essential service as per Essential Services Maintenance Act and Disaster Management Act as per Section 62(3) of the Electricity Act, 2003 provides non-discriminatory and equal treatment to consumers. Telecommunication service providers, has to provide services whenever asked for by the Government agencies, that too even free of cost.

Vodafone also requested that the cross subsidy shall be substantially reduced for telecom sector too. APTEL in Appeal No 102 of 2010 has specified that tariff of all consumers except BPL shall be in 20% band. They provide free of cost service to Government and public utilities in various fields including in Security segment, Law enforcement, Health care, educational development and the like. On the other hand it is mulcted with exemplary high cost for the supply of electricity to it as against IT enabled industries which are not providing any of these public services. Therefore, the treatment of telecom sector in a substantially discriminatory pedestal compared to IT enabled industries is an anathema to the Article 14 of the Constitution of India. What is needed is to incentivize the telecom sector.

Vodafone further pointed out that the consumption is uniform throughout for all the telecom towers whereas the same is ranging from 0 to peak consumption for commercial consumers, particularly during holidays in comparison with other working days. As, telecom sector is providing social service and essential service to the public it requires a tariff category change from the present LT VI F(G) to LT IV B in the said standards.

2.79 M/s. Vodafone Idea Limited submitted that it is a Telecom Service Provider and is in the business of telecom service industry having Central Government Licenses. Petitioner is classified Telegraph Authority as per Sec. 19 (B) of Indian Telegraph Act, 1885, pursuant to due notification. Further, M/s. Vodafone Idea Limited submitted that they are classified as an essential service provider as per ESMA Act and had been classified so by the Order of the Secretary, Disaster Management No. G.O. (MS) No. 49/2020/GAD dated 23/03/2020. M/s. Vodafone Idea Limited submitted that it is in Telecom Service Industry and is entitled to have tariff classification under industrial tariff. Hon'ble Appellate Tribunal for Electricity vide the judgement in the Appeal No. 337 of 2016 reiterates the need for industrial tariff for Telecom Service Industry.

Opinion of the Commission

2.80 The Commission has noted the suggestion of the stakeholders

Tariff - Multiplex

2.81 **Sri K Nandakumar, Managing Partner, United Film Exhibitors** requested the Commission to clearly define the difference between standalone cinema theatre and multiplex. He submitted that in their compound only 3 cinema theatre is functioning and no other shopping activity is included. The definition of multiplex clearly states that in a multiplex shops, retail area must be available. **The Managing Director, Issac & Maria A/C Movie House and Sri Jacob V Thomas, managing Partner, Vallakalil Cine Complex** also submitted that they are having 2 theatres only in their compound, but categorised under Multiplex. **The Kerala Film Chamber of Commerce, Shri George, partner of Abhinaya Theaters and Abhilash Theaters** has also made a similar submission.

Tariff – Hotels

2.82 **The President, Association of approved and Classified Hotels of Kerala** submitted that the Association consists of members owning/managing classified hotels in the State of Kerala. The units of most of the members of the Association consume more than 30,000 units of electricity per month. It was further submitted that while considering the history of previous litigations including the judgment of the Hon'ble APTEL disapproving the categorisation based on consumption namely above and below 30,000 units may kindly be reckoned. It is needless to elucidate that one of the worst hit sectors on account of COVID-19 Pandemic is the hospitality/tourism sector. The Association of approved and Classified Hotels of Kerala submitted that they must be treated as separate category wherein the tariff will be fixed taking into account their plight and consistent with the difficulties.

KSEB Ltd has been categorising the Hotels under HT-IV (B) category along with other commercial establishments. The Hotels have been grouped together with Marriage Halls, Convention Centres, shopping malls, Multiplexes and other commercial establishments who fall under LT-VII(A) and LT-VII(C) who consume electricity supply provided at High Tension except those classified as HT-IV (A). Association further submitted that the grouping of the hotels along with Cinema theatres and marriage halls is not tenable, since the activities carried out in these places are entirely different. Association further submitted that, the proposed tariff for HT IV(B) Commercial category is not consistent with the principles relating to cross subsidy. The determination of tariff for this category is considered by taking in to account the pendency of pending litigations in the Hon'ble APTEL. Further the Association requested before the Commission that the tariff for the hotels will be fixed in accordance with law as contained in the provisions of the National Electricity Policy, Tariff Policy, Regulations of the Commission as also the Judgements of Hon'ble APTEL.

Tariff – On line media

2.83 Malayala Manorama submitted that ‘Online news channels’ or similarly placed units using electricity have not been categorised under any tariff category in the tariff Order dated 08.07.2019 issued by the Commission. However, representations have been received from ‘On line media channels’ which are operated in the same premise as that of printing dailies for Industrial tariff. Further, as per tariff revision Order dated 08.07.2019, installations of cellular mobile communications, satellite communications, exchanges of telecom companies, offices of telecom companies except the administrative offices of BSNL, offices or institutions of All India Radio (AIR), Doordarshan and other television broadcasting companies, cable TV networks and radio stations are categorized under LT VI(F) General. KSEB Ltd. is of the opinion that ‘on line media activities’ can be better categorized along with ‘TV broad casting companies’ as Tariff applicable to ‘printing presses including presses engaged in printing dailies’ does not appear to be the correct categorization of the consumer in view of the activities reported in these premises and requested the Commission to provide a suitable category to online media.

Tariff - Industry/HT/EHT /LT

- 2.84** **Shri.M. Sambasivan, CITU, Kalamassery** submitted that it is the first time that KSEB Ltd has proposed a tariff hike in the past five consecutive years and the hike will have severe impact on the industrial sectors in Kerala. The industries should be given due consideration. Hence, it was requested that this tariff hike needs to be reconsidered.
- 2.85** **Mr. Suji Paul, Deputy General Manager (Electrical)Bharat Petroleum Corporation Limited - Kochi Refinery (BPCL)** submitted that, BPCL is an EHT consumer of KSEB Ltd, drawing power at 220 kV and has an enhanced contract demand of 50 MVA with KSEB Ltd. The proposed tariff hike would have an impact of up to Rs. 22 Crores in 22-23 and Rs 44 Crores in 26-27. BPCL requested not to approve the hike in tariff
- 2.86** **Shri. Rajesh Kuruvilla J, Deputy General Manager Manufacturing, Carborundum Universal Limited**, submitted that the proposed tariff hike if approved will be the highest industrial tariff in any of the States.
- 2.87** **Shri. Shibu Kurian, Asst. General Manager (Electrical),TCCL** submitted that, TCCL is the single largest consumer in the State. The energy cost accounts for about 40% of cost of production and the tariff hike proposed by KSEB Ltd will cause a 14.5% increase in cost of power in 2022-23 to 16.9 % in 2026-27.
- 2.88** **Shri. Krishna Kumar. K, Employees Association (CITU)** further submitted during the hearing that at present TCCL’s electricity charges are around 93 Crores which will increase to around 115 Crores with the proposed tariff hike. The impending tariff hike will have a negative impact on the Government of Kerala’s policy to promote the State as business friendly. Hence, it was requested that the Commission may approve only a reasonable tariff hike.

2.89 The TCC Employees Association (CITU), The TCC Employees Union (INTUC), and The TCC Thozhilali Union in their joint submission submitted that KSEB Ltd's new tariff proposal will be detrimental to the power intensive industries like TCCL. As far as TCCL is concerned, there is a tariff hike of 14.51 % to 16.89 %. At present the 50 % of production cost is for electricity charges and if this tariff hike is materialized, the same will be around 70 %. It is further submitted that, heavy increase proposed in Open Access charges leads to an additional expense of 5.52 Crores to 11.13 Crores. Along with that there is an increase of transmission charges of 0.55 Crores to 0.79 Crores. Cross subsidy charges also increase from 1.29 Crores to 1.33 Crores in 5 years.

Shri. Varghese L, expressed similar view points during the hearing.

2.90 Shri. Rajagopal K, (Senior General Manager Manufacturing), GTN Textiles submitted that the unit has incurred substantial loss for the last ten years and current year results are also showing the same trend. The Power cost constitutes more than 16% of the production value of the unit and as far as the Company is concerned, the Tariff Revision (MYT) petition for the year 2022-23 to 2026-27 given by KSEB Ltd in turn will increase the power tariff by Rs 0.50 to Rs 0.60 per unit. Besides this, KSEB Ltd proposes a hike in fixed charges from Rs 330/- per KVA to Rs.390/- per KVA in the first year and to Rs.400,410,415 and 420 in the consecutive years. It is further submitted that if the tariff increase is imposed without any consideration to the limping industries, the additional burden may lead to closure of the unit. The Commission may not allow the hike which will result in the survival of only few industries

Shri. Sijo Paulose (AITUC) expressed similar views during the hearing and requested to reduce the expenses of KSEB Ltd and avoid any tariff hike.

2.91 Shri. M Y Kuriachan, (CITU)], Shri. K C Sunil Kumar (BMS) and Shri. N K Raju (INTUC) on behalf of The Joint Trade Union Movement – Hindustan Organic Chemicals Ltd (HOCL) submitted that currently HOCL has a financial burden of 1100 Crores and if the proposal of KSEB Ltd is approved, it will impose an additional burden of Rs 3.6 Crore in 2022-23 and Rs 3.75 Cr in 2026-27, which will be the final nail in the coffin for Industries like HOCL. It is further submitted that KSEB Ltd is trying to pass on its liability due to wage revision to the consumers like HOCL, which is denying wage revision for its employees on the basis ongoing financial crisis. It is also pointed out that the burden of Industrial consumers will increase by 5.2% due to the proposed unscientific change in Time of Day (TOD).

Shri.Sugosh.G. Pillai, HOCL expressed similar view points during the hearing.

2.92 Shri.M. Ramadas, CUMI submitted that due to the proposed tariff hike, the overall production cost of their units in Kerala will come up to one crore per month. It was set forth that the expensive raw materials, soaring transportation cost, along with the proposed tariff, is a threat to the survival of the industry.

2.93 PATSPIN India Ltd submitted that they are a 110 kV consumer engaged in the manufacture of cotton yarn whose industrial unit is situated at Palakkad which commenced commercial production since 1994. The unit works round the clock, consuming around 25.50 lacs units / month. Company employs around 600 people directly and gives indirect employment to equal no of people.

The operating margin for last few years has come down drastically threatening the very existence of the unit. The industry is still to recover from the business disruptions caused by the spread of Covid 19 pandemic. PATSPIN India Ltd further submitted that during the last 3 years alone, the unit has incurred an accumulated loss of Rs.6434.10 lacs. At present the cost of power of the company constitutes more than 15% of the production cost of the unit. As per the tariff proposal of the KSEB Ltd for the year 2022-23 to 2026-27 the cost of power increases by Rs.0.60 per unit which will be a bad hit. PATSPIN India further submitted that instead of penalizing the poor consumers, KSEB Ltd can think about viable hydro-electric projects and Solar energy projects which provides an additional benefit of being green energy, saving earth from global warming, financial assistance from developed countries etc.

Hence, PATSPIN India requested that the Commission may direct the KSEB Ltd to curtail the operational expenses and issue appropriate orders denying any proposal which adds to the cost of power of the industry.

2.94 Shri. Suresh.K, Secretary, CITU PATSPIN Textile Mill Workers Union submitted that PATSPIN India Limited also submitted its argument in similar lines. He added that earlier industries are set up in Kerala due to low power tariff. Now the situation reversed and the situation in Kerala is no more attractive to new entrepreneur as the electricity charges are being increased. Due to the total electrification of the State, apparently the tariff has to decrease. Moreover, the cost of power purchase is the least in India. KSEB Ltd has to recover all the pending arrears and to increase efficiency and quality rather than going for tariff hike. PATSPIN has no option than to close down. The Union requested to exclude the Textile and Mill industries from the proposed tariff hike.

2.95 Shri. C. Moorthy (Secretary, Patspin India Limited Employees Association) submitted that the Patspin India Limited established in 1993 as a thread manufacturing industry. About 300 employees are working in the company. Any hike in tariff will have heavy impact even though the company had reduced their employee strength to reduce their production cost. The tariff hike is mainly due to the lack of long vision of KSEB Ltd and to be addressed and corrected. KSEB Ltd has to curtail their administrative expenses by properly fixing norms and wages. Shri C. Moorthy therefore requested to avoid the tariff hike. Sri. Ananthan M (General Secretary, Palakkad District Textile Mazdoor Sangham) has also made similar request before the Commission.

2.96 Apollo Tyres submitted that the tariff hike will have significant impact on the industries. As per the proposal submitted by KSEB Ltd, the peak time has been increased by 50% from 4 hours to 6 hours and the demand charge increased by

18% which alone can bring about an additional liability of around Rs 2.5 crores in the year. The companies like Apollo Tyres are competing in the international market and hence cannot increase the production cost which will result in loss of production. It was also submitted that KSEB Ltd should adopt innovative methods to reduce their costs and requested that Commission shall not provide a tariff hike.

Shri. George Oommen, Apollo Tyres submitted that, the industries set up their plants in Kerala because of the low electricity rates in Kerala and now is in dire straits because of higher tariff rates. Currently, Apollo Tyres is in financial crisis and the tariff hike will bring in an additional liability of around Rs 9 crore. The plant will be forced to shut down. KSEB Ltd's proposal to increase tariff to increase revenue may lead to a reverse impact. KSEB Ltd should rather, take measures to increase consumption. KSEB Ltd should take necessary efficiency measures also

Shri. K.K. Gopi submitted that when the proposed tariff hike, will lead Apollo Tyres to a loss of 6.4 Crores. Moreover, as the factory operates 24*7, further loss is expected on account of ToD time change. Hence, requested the Commission that tariff hike shall not be approved.

2.97 Shri. Sarath, FACT submitted that they use 14 million units a year and it was pointed out that it generates a revenue of around Rs.90 crore to KSEB Ltd. FACT avails around 1 million units through the Open Access. It was submitted that KSEB Ltd has backtracked from the voltage wise tariff in the proposal and also submitted that the Renewable Energy shall be further promoted and open access made more transparent through which KSEB Ltd.'s power purchase cost can be further reduced.

Shri. Jabbar, FACT Employees Association submitted that M/s FACT will incur an additional burden of Rs 12.29 crore in 2022-23 and which will increase to Rs 15 crore by 2025 if the Commission moves ahead with the tariff hike. The Employee strength of FACT is being reduced to cope with this situation. Therefore, it was requested that KSEB Ltd shall also take similar measures to reduce their employee strength and not to proceed with this tariff hike.

2.98 Managing Director, Western India Plywoods Ltd submitted that, a 10% increase in tariff will cost them around Rs.8 lakh to Rs.10 lakh. The change, in ToD zones will also cost around 4 to 6 Lakhs resulting in an annual increase of Rs.144 lakh to Rs.192 Lakh for the year 2022-23. Being a 110kV consumer, KSEB Ltd have to bear only minimal expense for providing them supply. If there is a steep increase in tariff, the company will be forced to stop production leading to unemployment of 1000 workmen. Western India Plywoods Ltd requested before the Commission to consider the above information while taking the decision on the proposal submitted by the KSEB Ltd for the tariff hike.

- 2.99 Shri.K.K. Sebastin, Neeta Gelatine** submitted that the company will incur an additional liability of Rs 2 crore due to the proposed tariff hike. As Neeta Gelatine is a pharmacy company, and tariff hike will increase the price of medicines. Hence it was requested not to approve the tariff hike.
- 2.100 Shri. A.P Unnikrishnan, AGM,Precot Limited, Palakkad** submitted that Precot Ltd is a textile unit having manufacturing units in all southern states. In Kerala the average monthly cost of electricity is 250 Lakh/month. The additional burden due to proposed increase in tariff is 38 Lakh/month. Normally textile industry is running with 3 -5 % margin. The contribution of power in overall cost is 33%, so the proposed increase of 15% will contribute to increase in cost by 5%. This leads to the very survival of the industry in Kerala in question.
- 2.101 Shri.K.Suresh (Secretary, CITU Pudussery** Division Committee Palakkad District) submitted that Industrial sectors are badly affected due to COVID-19 pandemic. At a time when the industrial sectors are slowly recovering from the pandemic situation, the proposed tariff hike will pave way for the close down of industries in Kerala. Moreover, the proposed tariff hike will affect the new entrepreneurs. He pointed out that the tariff increase will also hinder the proposed industrial corridor being developed by KINFRA. Hence, they requested before the Commission at least to exclude the industrial sector from the proposed tariff hike.
- 2.102 Shri. Uthaman.K. West Hill, Kozhikode** submitted that due to high fixed charge for the HT connection, the consumers who have connected load above 100KVA are availing supply at more than one registration. Due to this the KSEB Ltd incur a loss of ₹ 17000 approximately. In order to tackle the loss incurred to KSEB Ltd, it should have to consolidate the fixed charges of Industrial connections. Providing, High Voltage Rebate to HT consumers for loads below 100KVA, may encourage the customers to avail HT connection instead of LT.
- 2.103 M/s Saint Gobain India Private Ltd** submitted that they are a multinational company with daily average power consumption more than 35 Lakhs units. For M/s Saint Gobain only one major reason to continue the business in the State of Kerala is power tariff as all other factors like raw materials, man power charges etc. are on the adverse side in comparison with other states of the country. Hence, a hike in energy cost will nullify these benefits. The proposed hike by KSEB will have a direct cost impact of INR 3.5 crore per year for energy. The proposed tariff hike of KSEB Ltd will curtail further Capital investment of business units in the State which will prove detrimental to the State's industrial growth. Saint Gobain have long term contract and hence price hike cannot be factored in price of product.
- 2.104 Shri. M. V. Shreyams Kumar, The Indian News Paper Society** submitted that KSEB Ltd's proposal to increase the tariff applicable to printing presses under HT 1A/LT IV A (Industry) by 13% to 18% of the current rate will be the death knell for the print industry in Kerala. As the cost of newsprint is increasing manifold due to increase in price of raw materials, spiralling fuel cost, reduction in advertisement, decline in circulation/subscription due to migration to digital media, print Industry

in Kerala cannot take any additional burden on energy cost, and there is no justification or valid reasons for KSEB Ltd to enhance the energy cost by 13% to 18%. Hence, it has been requested to reject the tariff petition ,2022

2.105 Shri.Thomas Vadakkal (Secretary),The Edayar Small Scale Industries Association submitted that the proposed tariff hike for LT industries is 19-26% in fixed charge and 6.5-10% in energy charge. It is also pointed out that even though KSEB Ltd has directed KSEB Ltd to exempt fixed charge component of Industries during the Covid 19 lockdown period during 2020 (3 months), a lot of consumers are still not in a state to remit the balance amount. In this scenario, if the monthly bill again increased most of the institutions have to shut down completely. It was also suggested that instead of increasing the tariff, KSEB Ltd can enhance the revenue by selling more electricity to the industries because LT industrial tariff is already much above the cost of supply. It was requested that the Commission may recommend the Government to reduce the electricity duty collected from LT IV consumers from 57.5 paise to 10 paise per kWh. He requested the Commission not to allow tariff hike in view of the bad financial situation of industries resulted due to Covid and Flood

2.106 Shri. Sreelal.P.S. S (General Secretary, Kerala Samsthana Cherukida Rice & Oil Millers Association) submitted that, small businesses, including the small flower oil mill, are in crisis due to Covid- 19. Hence, the Association requested before the Commission that the increase in charges should be avoided and also to exclude the fixed charge for unconsumed energy up to 20kW. Kohuveli MSME Association also submitted a similar request before the Commission. They have stated that hike in power is paradoxical at a time when the industry is expecting price reduction.

Shri. P. Moidheen Haji (General Secretary, Kerala Samsthana Cherukida Rice & Oil Millers Association - KESFOMA), Shibin G Varghese, Treasurer, Idukki District Committee, Kerala Samsthana Cherukida Rice, Flour & Oil Millers Association and J.M.M. Anzar Treasure State Committee also submitted similar arguments during the hearing.

2.107 Shri. Kiran Kumar.R, General Secretary, Kanjikode Industries Forum submitted that the proposed tariff hike will be devastating for industries. Kanjikode Industries Forum further requested to waive the fixed charges on industries which are under the cloud of Covid 19. They pointed out that the Industries in the Kanjikode suffer losses due to frequent power outages. The section office of KSEB Ltd at Kanjikode is lacking in adequate manpower and facilities to deal quickly in case of power issues.

2.108 Shri. Sunil Joseph, District Secretary, KSSiA, Palakkad submitted that the industrial sector in Kerala is in dire straits due to the floods and Covid 19and hence tariff hike may not be allowed. Industries more than 10 years old should be exempted from the fixed charge. It was further suggested that incentive should be given to the industrial consumers to increase the energy sales of KSEB Ltd.

2.109 Shri. Jacob Cheriyan, Palakkad unit Production Manager, The Malayala Manorama Co. Pvt. Limited, submitted that it is publishing the daily Malayala Manorama from eleven printing plants across the State of Kerala. They have FM Radio Stations namely Radio Mango and television broadcasting channel namely MM TV Limited. The studios are located at Aroor and Trivandrum. Malayala Manorama uses green energy for their units. He submitted that the overall Burden to the company: due to proposed tariff is Rs 270 Lac's / Yr. It was submitted that the proposed increase in FC and EC will badly affect their Daily Printing plants, Publications and Television media.

2.110 Shri. K.A. Joseph, State General Secretary, The Kerala State Small Industries Association (KSSIA) submitted that MSME units in Kerala are in very bad situation at present. Tariff hike may lead to close down of many units. It is also pointed out that even though KSERC has directed KSEB Ltd to exempt fixed charge component of during the Covid 19 lockdown period during 2020 (3 months), a lot of consumers are still not in a state to remit the balance amount. In this scenario, if the monthly bill again increased, most of the institutions will have to shut down completely.

It was also suggested that instead of increasing the tariff, KSEB Ltd can enhance the revenue by selling more electricity to the industries because LT industrial tariff is already much above the cost of supply. It was requested that the Commission may recommend the Government to reduce the electricity duty collected from LT IV consumers from 57.5 paise to 10 paise per kWh. KSSIA requested that small businesses may be exempted from the tariff hike.

Mr. Ali M A, Secretary, KSSiA also made submission in similar lines.

Shri. Balakrishnan Kannimari (District Vice President, Kerala Samsthana Cherukida Rice & Oil Millers Association) requested not to allow any tariff hike and also to exclude the fixed charge for unconsumed energy up to 20kW.

2.111 Shri. K.Narendran (General Secretary, Palakkad District Rice, Flour & Oil Mini Millers Association) submitted that about 3500 rice and flour mills are functioning in Palakkad District. These mills provide employment in the village sector but now they are in the verge of closing down. The Association further submitted that these mills are to be treated as agriculture allied industry, a special tariff similar to the tariff allotted to the agricultural sector may be allotted to this industry also. It is requested that the fixed charge be halved and the meter rent of the mills which have been in operation for 50 years be waived off since the amount collected as meter rent exceeds the cost of meter. The Association requested before the Commission to grant concessions on electricity tariff hike on both fixed and energy charges for the upliftment of the agriculture and industrial sector.

2.112 TCCL submitted that KSEB Ltd always adopted stands to penalize the bulk consumers like imposing cross subsidy surcharge etc. TCCL requested the Commission to provide incentives to large consumers. TCCL also submitted that no proposal for sale of surplus energy to open access consumers within the State was made in the tariff proposal.

Rationalization of Tariff of EHT consumers

2.113 TCCL submitted that merger of some categories will be required for administrative convenience. But this may not lead to increase in cost. The tariff proposed after merger of 66kV, 110kV and 220 kV is that of 66kV, which is the highest. TCCL requested that the Commission may ensure that none of the categories are adversely affected due to merger.

The TCC Employees Association (CITU), The TCC Employees Union (INTUC), and The TCC Thozhilali Union in their joint submission has submitted that fixing same tariffs for different voltage levels of 66kV, 110kV and 220 kV is against the basic principles of voltage wise cost of supply, voltage wise tariff etc.

2.114 Shri. Suji Paul, Deputy BPCL submitted that, one proposal of KSEB Ltd that defies all logic is the proposal to drastically increase the energy charges of 220 kV EHT consumers to bring it at par with 66 kV tariff by 26-27. Further, while KSEB Ltd is building up transmission losses, transformation losses and distribution losses in tariff, denying the benefit of lower losses at 220 kV level to the 220 kV consumer is beyond comprehension.

2.115 Shri. Rajesh Kuruvilla J, Deputy General Manager Manufacturing, Carborundum Universal Limited, submitted that as per the Tariff Proposal, there is no difference between the Unit rates and fixed charges of 66 kV, 110 kV and 220 kV Consumers. Hence, the proposal is totally against the basic principles of electricity distribution. It was also pointed out that the proposal is ignoring the technical fact that losses are significantly lower at higher levels of voltage which will discourage any existing 66 kV consumers to upgrade to 110 kV or 220 kV connections in future. Hence, it was requested to reject the proposal submitted by KSEB Ltd to unify the Power Tariff across 66 kV, 110kV, 220 kV consumers.

2.116 Shri. Saji Mathew, MRF submitted that the Commission should not approve the tariff consolidation of 66 kV, 110 kV, 220 KV EHT consumers. FACT also opposed to the unification of EHT tariff.

2.117 Shri. Viswanathan. K submitted that the energy flow and loss is different at various voltages ranging from 220 kV to 415V and the minimum loss will be at 220 kV Voltage. The Transmission and distribution losses occur when the voltage is further stepped down from 220 kV. Hence, he opposed to a common tariff for 66kV to 220 kV.

2.118 Sri. K N Gopinath submitted that unification of extra high-tension tariff of different EHT category shall not be allowed. He added that the attitude of KSEB Ltd towards the industries needs change.

2.119 The President, Association of approved and Classified Hotels of Kerala submitted that KSEB Ltd had found out the Average cost of supply, but without reckoning the Voltage wise cost of supply, the actual cost of supply incurred by KSEB Ltd cannot be found out.

Comments of KSEB Ltd

2.120 KSEB Ltd submitted that the retail supply tariff of different consumer category shall be determined after considering the estimated average cost of supply. The estimated average cost of supply shall be computed as the ratio of approved aggregate revenue requirement of the distribution business /licensee for each financial year of the control period and calculated in accordance with the regulation 76 to the total sale of the distribution business/ licensee for the respective financial year. Hence, KSEB Ltd. has submitted its proposal based on the average cost of supply without any demarcation of voltage levels.

Opinion of the Commission

2.121 The Commission noted the views expressed by the stakeholders has decided to retain different tariff for different voltage levels.

Tariff – LT VI General –Tariff of the Educational Institution

2.122 The Director, Institute of Land & Disaster Management (ILDM) submitted that ILDM is a training centre under the Revenue Department of Kerala and hence to be categorized under the tariff of the Government educational institutions. The Director, ILDM requested before the Commission to categorize them under the tariff applicable to Government Training Institutions.

2.123 Institute of Human Resources Development (IHRD) submitted that it was Government of Kerala institution established in 1987 primarily with the aim of augmenting capacity in the Government education sector. Government Of Kerala issued vide G.O.(MS) No.55/2017/HEDN dated 14.02.2017 treating all Institutions under IHRD on par with Government or Aided institutions, including for the purpose of electricity tariff by the KSEB Ltd. The matter was taken up with KSERC and the Commission in Order No.1007/F&T/2016/KSERC dated 17.04.2017 placed the Institutions run by IHRD under LT-VI(A) category along with Government or aided educational institutions.

Subsequently, KSEB Ltd had changed the tariff category for educational institutions run by autonomous bodies under that of IHRD and LBS to LT VI (F) General from LT VI (A) General, with effect from 08.07.2019. IHRD approached the Commission to retain the earlier tariff category to IHRD institutions. The Commission directed IHRD to take up the matter at next tariff revision process. IHRD further submitted that Government have been providing grants for IHRD both for revenue and capital expenditure. While the whole expenditure on

infrastructure requirements is met from Plan grant-In-aid, a significant part of the administrative expenses including salary are being provided under non-plan grant-in-aid. The Government is meeting more than half of the total expenditure of IHRD including salary and other expenditure. IHRD is not running on commercial basis but by providing quality education at affordable rates fixed by Government. Moreover, the criteria for deciding the Tariff category are not based on the fees collected, but on whether the institution is Government/Government Aided/Private. Government have issued orders deeming IHRD institutions on par with Government/Aided institutions and the said Government Orders still prevail.

Further, IHRD institutions have been availing funds for infrastructure development from MPLADS, MLA-SDF, LAC-ADS, NABARD and MHRD which are normally granted only to Government institutions. Hence IHRD requested before the Commission to retain their tariff as **LT VI(A)**.

Tariff - Recognised School

2.124 Shri. Ramesh NFPS Association submitted that, there are about 35,000 schools in the private sector in Kerala which are billed in commercial category. These schools do not receive any fund from the Kerala Government. Moreover, during the pandemic times there was a fall in student strength as the classes were online. Due to the above reasons these schools are striving hard to meet ends. Hence it was requested before the Commission to shift their tariff from commercial Tariff to Domestic tariff.

2.125 Sri. Anand Kannasa, General Secretary, State Committee, Kerala Recognised School Management's Association submitted that prior to 2007 electricity tariff revision, educational institutions in Kerala, was categorised under tariff VI A, irrespective of its nature of ownership whether Government, Aided or Un aided or financed by Government or not. The 2007 tariff revision private schools were brought under LT VII A. Kerala Recognised School Management's Association requested the Commission reinstate Kerala Government Recognised unaided Schools up to Higher Secondary Level to LT VI A tariff category meant for Government-and government aided educational institutions taking into consideration the fact that school education is not a commercial activity but is meant for the social development of the society. The Association submitted that the tariff hike should not be considered equally to un aided professional colleges who imposes high fees and un aided schools who run by collecting only nominal fees.

Kerala Recognised School Management Association submitted that the private unaided schools in the State of Kerala are placed at a very disadvantageous position vis-a-vis the aided schools in the State. The private unaided schools are also not extended the benefit of various academic initiatives introduced by the Government of Kerala though the same is extended to aided schools.

The categorization of private and unaided schools under LT VII-A has been upheld by the Hon'ble Supreme Court. The Kerala Recognised School Management Association the Association pleaded before the Commission regarding the compelling circumstances that warrant a compassionate view in the matter. It is further submitted that the average cost of supply for the year 2022-23 is Rs.7.30 per kWh. Under the existing tariff regime, the average tariff of the LT VII-A commercial category under which the private unaided schools are categorised comes to Rs.10.17 per kWh. The deviation from the average cost of supply is 139.38%, which mean the average tariff for the category will therefore be on a disproportion scale which is evident from the cross-subsidy table furnished.

The situation is therefore clear in that the private unaided schools in the State cross subsidise the other categories by more than 20%. Though the judgment of the Hon'ble Supreme Court did not uphold the plea of arbitrariness in the matter of differential pricing, the situation emerges from the requirement to comply with the other settled parameters concerning the determination of tariff was not an issue before the Hon'ble Supreme Court.

Further the association requested before the Commission to kindly treat all schools subject to recourse of the Government of Kerala and teaching the same syllabus viz. approved by the SCERT to be placed in the same category for the purpose of fixation of electricity tariff.

Self-financing college

2.126 The Principal, Providence Women's College, Kozhikode submitted that various Government/Aided colleges carry out the self-financing courses approved by the Government along with the regular courses. Even though there is no separate category in the tariff, penalty is being imposed by KSEB Ltd. Hence Providence Women's College requested before the Commission to take the matter seriously and allot a separate tariff to these campuses where two types of courses are carried out.

Opinion of the Commission

2.127 The Commission noted the request of IHRD, ILDM, Shri. Ramesh, NFPS Association, General Secretary State Committee, School Management Association and others for determining their tariff at par with electricity tariff applicable to Govt educational institutions/ Aided educational institutions. The Commission has been approving the Retail tariff of electricity in the State as per the provisions of the Electricity Act 2003 and Tariff Regulation 2021. The Commission noted that in the case of Government/ Aided Educational Institutions all the expenses associated with the administration of educational institutions are met by the Government from its exchequer. However, the administrative expenses of autonomous bodies such as IHRD, LBS etc are not met by State Government, though grants are provided by Government to such institutions.

The fees collected by autonomous bodies and private educational institutions are much higher when compared to Government/ Aided educational Institutions.

Hon'ble Appellate Tribunal for Electricity in various judgements have observed that the Government/ Aided educational institutions cannot be compared with Private Educational Institutions, though both are providing education. Hence the Commission cannot extend the Tariff applicable to Govt/Aided institutions to educational institutions run by autonomous bodies/private institutions.

LT VI D and LT VI G

- 2.128 Shri. V.R. Sudhi, Seniors Forum** submitted that the tariff of Public Sector Undertakings shall be reduced. It was further submitted that fixed charges of non-domestic consumers shall be increased uniformly rather than a monthly increase for some category of consumers and per kW increase for remaining.
- 2.129 Shri. Ekarath Moithu Haji (Chairman), Pain & Palliative Care Unit, Vellamunda** submitted that KSEB Ltd was providing electricity at LT VI D tariff category to this Dialysis centre. The unit provides free dialysis to those who are under palliative care. Recently a KSEB Ltd team has inspected the site and has given a site Mahazer and changed the tariff category to LT VI G by considering this centre as a private health care institution. The higher tariff due to this category change was not affordable to this institution as it is providing free service to the Dialysis patients. Hence, it is requested to include this Dialysis Centre as part of Palliative Care in LT VI D tariff category for continuing the service of this centre which runs entirely on funds provided by the public.
- 2.130 Rev. Moncy P Joy Lahari Vimochana Samithi** submitted that these days de-addiction centers are increasing in Kerala, and are working for among economically weaker sections on a non-profit basis. The tariff under which they are categorized is LT IV G, which is on the higher side and requested before the Commission to include them under the VI D tariff category.
- 2.131 Navajeeva Kendram** submitted that, they are working as a de-addiction and rehabilitation center in Malayalapuruzha. At present Navajeeva Kendram is categorized under LT VI G, which is categorized along with private hospitals. Moreover, the organization is functioning based on the stipulations of the social justice department and Orphanage Control Board. Although, Navajeeva Kendram is a non-profitable organization and getting exemptions under 80 G for the donations received. They requested to include them under the LT VI D tariff category.
- 2.132 Malankara Marthoma Syrian Church** submitted that under the Malankara Marthoma Syrian Church, 9 numbers of de addiction centers are there. Among these de addiction centers two of the centers, viz, Mukthi, Wayanadu and Darsana, Attappadi, are working among the peoples who are economically weaker. All the de addiction centers are working on nonprofit basis and are

registered under Societies Act. The preset tariff category is LT IV G and requested to include them under the appropriate category, considering the above.

Opinion of the Commission

2.133 The Commission noted the comments in detail and is of the considered opinion that the dialysis centers, where free dialysis is done, may be categorized to a lower tariff whereas the other centers which receives payment for treatment shall be continued in the present tariff.

Tariff LT VII Commercial.

2.134 Sri. Santhosh Photo world, General Secretary and Girish Pattampi, President, All Kerala Photographers Association submitted that studios and video editing shop are currently categorised under LT VII A, which is on the higher side. It was further submitted that in this era, flash units having very low power consumption are being used compared to their older variants. It was requested that studios and flash units shall be shifted to a lower tariff category to save these businesses.

2.135 Kerala Television Federation submitted that Television channels are in the nature of 'Essential Service' as was evident during the Covid Pandemic onslaughts. The Government classified the television channel in the must run category during the COVID-19 pandemic period. Kerala Television Federation submitted that the tariff proposed for Print Media be extended to Television also. Television channels are currently being categorized in HT II (B)/ LT VI (F). The Print media is categorized under HT 1 (A)/LT IV (A). It is submitted that print media enjoys concessional tariff which as a natural extension be applicable for Television also. Kerala Television Federation requested before the Commission to include television channels under HT 1(A)/LT IV(A) category.

2.136 Shri. M. V Shreyams Kumar (President) and Shri. Baby Mathew Somatheeram (General Secretary), Kerala Television Federation submitted that the television and in particular, News channels have been accepted by the authorities as essential service. It is also submitted that the television channels are being charged considering them as a commercial entity viz, HT II (B)/LT VI (F) while newspaper publishers rendering the same kind of service are treated as industrial units and classified as HT1A/LT IV (A). Apart from that, the present category viz:HT (B)/LT VI (F) is seeking a 10% hike in the proposal for increase in tariff by KSEB Ltd which will be a huge financial burden on the already ailing Television industry. Hence, it is requested to relook at the revision and maintain the existing rates under this slab at the same time considering their request to be classified under HT I (A)/LT IV (A).

2.137 Shri. Sasi.B Mattom, Idukki submitted that in the upcoming tariff determination process the business like photostat shops, small scale resorts and juice shops should be re categorized from VII(A) to VII(B).

Opinion of the Commission

2.138 As per the prevailing Tariff Order dated 08.07.2019, the subsidized commercial tariff, LT VII B, is applicable for small bunks, shops etc and is limited to those who have connected load upto 1000 watts. Commission noted that these consumers are running these shops, bunks etc for their daily livelihood. Considering the fact that even a mixie and refrigerator can cause the connected load to cross 1000 watts. Considering the fact that there are more than 5 lakh consumers in the state, presently being billed under this category the Commission has decided to enhance the connected load of LT VIII B commercial category from 1000 watts to 2000 watts.

Tariff - Street Light

2.139 Shri. Dijo Kappen, submitted that KSEB Ltd has increased the fixed charge of street light which shall not be permitted.

2.140 KSEB EA submitted that Unmetered supply for streetlight 8A Tariff may be abolished, since Supply code doesn't allow unmetered supply as per Regulation 102(7). It was also submitted that the Street light charges shall be further increased so that Local bodies will be forced to install energy efficient lighting system in place of Sodium vapour lamp or MH lamp

2.141 Shri Sathjith.V.H submitted that automatic cut-off system should be installed on street light.

2.142 M/s TCED submitted that the proposed tariff for street light has been augmented owing to the increase in fixed charges this must be reduced as street light comes under the public utility and the burden of the same is on local self govt. bodies has to be mitigated.

2.142 The Secretary, Kozhikode Municipal Corporation submitted that Kozhikode Municipal Corporation (KMC) has implemented the LED street light projects by replacing conventional street lights, to achieve high energy savings. The Annual expenditure on the O&M of Street Lights were Rs 6.01 Crores and Rs. 6.76 Crore for the financial years 2017-18 and 2018-19. Out of this 4.1 Crore and 4.5 Crores were spent alone as the energy charges to KSEB Ltd for the years 2017-18 and 2018-19. It is further submitted that 9600 numbers of the conventional street lights were replaced with Energy efficient LED Lights and the total connected load was reduced to 855KW. i.e., 62% Energy savings is achieved by the conversion of the conventional Street Lights to LED. The total monthly consumption was reduced from approximately 8 Lac Units to 3 lakh Units and this will help to reduce the peak hour load of KSEB Ltd. The savings helped KMC to increasing access to lighting to low income and underserved areas. However, the proposed tariff hike of Rs 5.2 per unit will result in an increase in Rs 50 per month per connection and

an increase of 90 paise per unit will result in an additional expenditure of Rs 3.2 lakh per month and Rs 38.5 lakh per annum. Considering an annual increase of 10% in the number of lights corresponding increase in the energy consumption will make the expenses manyfold.

KMC has estimated that, it takes approximately Rs 120 to Operate and Maintain LED Street Light/Month and with the opportunity to light up the streets with increase in tariff 3.2 lakhs, the opportunity to light up the streets with a minimum of 2600 More LED Lights Per Month is lost. KMC, therefore requested to retain the tariff of LT VIII B as the same for 2020-21 and for a discounted tariff for the LED street lights in Kozhikode taking into consideration the energy saving measures adopted by KMC.

- 2.143 Secretary Pulpally Grama Panchayath** submitted that Pulpally Grama Panchayath is spending around ₹50000 to KSEB Ltd as street light charges. There has been a significant decline in the revenue due to the COVID-19 pandemic. Further, the revenue of the panchayath has been over-expended for the disaster relief activities. The increase in the tariff for the street light will affect the financial stability of the panchayath. Majority of the street lights of KSEB Ltd are un-metered. KSEB Ltd should have to take initiatives to implement metering on the street lights. Panchayath requested that the tariff hike should be postponed till the total metering implementation of street lights. Panchayath had spent crores of amounts for the installation of street lights and power lines. Since KSEB Ltd is giving supply to others through these lines, the panchayath is entitled to get a profit share. Hence the panchayath requested before the Commission that the increase in the electricity tariff for the street lighting by Local Self Government bodies should be avoided.
- 2.144 Seniors Forum** submitted that energy needs to be metered and there was no need for different rates based on type of lamp, like LED or CFL.
- 2.145 Shri. Jose Paul, Nalpatt Veedu, Koratti, Thrissur** submitted that the Supply provided to Street light shall be metered and this category shall be exempted from tariff hike.

Tariff EV

- 2.146 Shri. Jose Paul** submitted that tariff for the EV charging stations should be viable for the public.

TOD Tariff and the ToD Time zone change

- 2.147 KSEBEA** submitted that TOD tariff shall be made applicable to all consumers at the earliest encouraging them to use the power during off peak hours.
- 2.148 Shri. Diyo Kappen,** submitted that ToD tariff for the domestic consumers shall not be approved by the Commission.

- 2.149 Shri. Viswanathan. K, Residents Association** submitted that the high tariff on peak hours should be stopped.
- 2.150 KSEB EA** submitted that as part of flattening the Load Curve by shifting peak load, the peak ToD time zone may be revised as from (18.00 hrs - 22.00 hrs) to (17.00 hrs - 23.00 hrs)
- 2.151 Shri. Saji Mathew, MRF** submitted that the Commission should not consider changing the ToD time zone and requested not to approve the proposal to change the peak time as it will have a grave impact on the small-scale industries in the state.
- 2.152 Shri.Jacob Cheriyan, Production Manager, Malayala Manorama, Palakkad unit,** submitted that shifting peak load cannot be approved as it would badly affect the newspaper and other industries having three shift production. It was also proposed to provide incentives for the industries working at off peak hours.
- Shri. N. Vijaya Gopalan, The President, Association of approved and Classified Hotels of Kerala and Shri.K.K. Sebastin, NGIL** also opposed to the higher price in peak time.
- Jose Paul, Nalpatt Veedu, Koratti, Thrissur, Shri. V.P. George, State Vice President, INTUC, Shri.K.K. Sebastin, NGIL, Shri.M.Ramadas, CUMI, Apollo Tyres and FACT** objected to the time change.
- 2.153 Shri. Venugopal KSEB Seniors Forum** submitted that changing ToD time zone will adversely affect the industries. He added that ToD Time change shall be proposed by KSEB Ltd only after conducting load flow studies.
- 2.154 M/s Saint Gobian India Pvt. Ltd** submitted that proposal to change peak hour duration is highly unfair. It was requested to exempt continuous process industry from ToD concept which was introduced when India was power deficient.
- 2.155 Shri. Venugopal, DGM (Engg), Travancore Titanium Products Limited (TTP)** submitted that the proposed revision in ToD time zone alone will result in an increase in charges to around 5.2%.
- 2.156 TCCL** submitted that the present ToD is fixed in such a way that the continuous operating factories get power with effective rate, same as the tariff fixed by the commission. The proposed change in time of the ToD will increase the effective rate to 105.20%, which is not correct considering the concept of ToD followed all these years.
- 2.157 The TCC Employees Association (CITU), The TCC Employees Union (INTUC), and the TCC Thozhilali Union** in their joint submission has submitted that a continuous process industry like TCCL may be exempted form Peak time

restrictions. It was pointed out that TOD timing will cause an additional burden of more than 6 Crores per year.

2.158 Shri. Rajesh Kuruvilla J, Deputy General Manager Manufacturing, Carborundum Universal Limited, submitted that there is no justification behind proposing a drastic change in time zones especially increasing the peak time zone from 4 hours to 6 hours which will have a huge impact on power bills and requested to put the proposal on hold.

2.159 Shri. Krishna Kumar. K, TCCL submitted that the change in peak time will lead to an additional burden of more than 6 Crores per year and peak time change shall not be made applicable for continuous process industries.

2.160 Regarding ToD pricing, Kerala Television Federation submitted as follows:

“In any industry the price is fixed and announced for ‘first quality’ product exhibited in the shelf. Seconds and damaged goods are then sold at a discount in relation to the ‘first quality’ product. In the proposed (as also existing) tariff structure, there is a glaring anomaly in the tariff fixation method in so far as the Tariff announced is being charged for consumption during day light times and an exorbitant premium is being charged for the consumption during night timings when actually there is a compelling need for consumption. This is an unfair practice, more so in relation to our members since any operation of a television channel ensuring any sort of viewership is concentrated during the evening period till 10 pm and therefore perforce, they are being loaded with exorbitant premium rates for the part which is crucial to their operations and existence of business. In effect, the pricing method adopted in relation to our members is deceptive, in a way. Drawing an analogy to print media, their consumption of electricity for printing is always during late night when the tariff is at a discount to even the so called normal tariff nomenclature. This aspect needs to be examined and extended to television channels for “Prime Time” since the time from 6 pm to 11 pm is the time when the industry needs to function. The Authority is only considering the supply constraints and has not considered the “demand constraints” in classifying television channels for the purpose of tariff fixation.”

2.161 The HT &EHT Association strongly objected to the grant of in-principal approval to change the peak ToD time zone from 18:00 hours-22.00 hours to 17.00 hours-23.00 hours, in the absence of any comprehensive study and data/report shared by KSEB Ltd. The Association added that KSEB Ltd had surrendered the surplus CGS power in 2020-21 of around 2200 MU and done OA sales through power exchange due to low internal demand. Even in this petition, KSEB Ltd is showing

power to be surplus in first three years. The Association therefore requested the Commission to disallow this proposal.

Comments of KSEB Ltd

2.162 KSEB Ltd submitted that they had to rely on energy exchanges for meeting the power demand during peak hours. The market clearing price varies in the exchanges in each of the four time zones and the price is on the higher side during peak hours. In exchanges, the day is segregated in to four time zones and trading hours during peak hours is from 17.00 hrs to 23.00 hrs instead of 18.00 to 22.00 hrs., now followed by the utility. Thus, the utility has to supply costly power procured from the exchanges to its consumers at an incentivized rate during 22.00 hrs to 23.00 hrs.

Opinion of the Commission

2.163 The Commission noted the comments of stakeholders on the changing the time zone from ToD Tariff as proposed by KSEB Ltd. KSEB Ltd itself submitted that they propose to implement/change the time zone of ToD with the implementation of smart meter only. The Commission is yet to grant approval for implementation of smart meters in the State. Hence the Commission decides to continue with the present time zone for ToD pricing, till such time the Commission takes appropriate decision on such change through public consultation based on a comprehensive proposal as a petition filed before the Commission

Renewable Energy

2.164 **KSEB Officers Association** submitted that the impact of price difference between generation and consumption of solar at peak and off-peak hours has to be studied and possibility of gross metering may be considered. Further network usage charge may be introduced.

2.165 **Shri. Dijo Kappen**, submitted that service charges shall not be rendered from the roof top solar consumers

2.166 **Shri. C.P.George, DYCE, KSEB LTD (Rtd)** submitted that KSEB Ltd shall purchase Solar Power to meet the RPO through open tariff-based tender to purchase power at cheaper rates. He submitted that a historic low tariff was achieved for Solar during 11/2020 (Rs.2.00/unit) and for Wind during 12/2017(Rs.2.43/unit) through the introduction of transparent reverse bidding process by SECI. In the recent reverse auctions conducted by SECI, the derived value of solar energy was around Rs.2.25/- to Rs. 2.50/- per unit and wind was @ Rs.2.90/- to 3.00/- per unit. The contracted rate of procurement shown by KSEB Ltd is much higher than the market value. He also stated that Net-metering with banking may be restricted for prosumers below 20kWp and Gross Metering and net billing (with feed in tariff) may be adopted for prosumers

from 20 kWp up to 500kWp as specified in Gol Electricity (Rights of Consumers) Rules, 2020.

2.167 Shri. Vamadevan.V, KSEB Seniors' Forum submitted that when power is brought from outside, the issues faced by the central power plants will have an impact on KSEB Ltd. It is seen that the Power Purchase amount of KSEB Ltd shows an upward trend during the period 2023-24. The reason for the increase is mainly due to additional generation tariff owing to installation of FGD by generators and the requirement of fly ash utilisation. The impact due to these in the tariff can be segregated as an additional tariff component by the term "**GREEN TARIFF**".

2.168 KSEBEA submitted that Gross Metering shall be implemented at the earliest for all prosumers with more than 5kW installed capacity.

KSEBEA added that during the control period the solar generation capacity established by prosumers alone is set to go beyond 1 000 MW. As more and more consumers opt for rooftop solar, the recovery of network related costs already incurred by the utility becomes uncertain. At the same time the prosumers will be using the network for pushing their surplus energy during day time and drawing it back during evening and night hours increasing the burden of the utility.

As this is a new and emerging issue, appropriate regulatory measures to properly regulate the sector needs to be put in place in time. Cost of storage may be recovered from prosumers (units drawn from grid). Network usage charge may be levied solar plant capacity). Settling APCC needs to be reconsidered.

2.169 Shri. Nandakumar N, KSEBOA submitted that in case of battery storage system, the indicated levelized tariff of Rs 9. 80 per unit does not include the cost of energy used during the charging cycle. Thus, the price of energy available for discharge can be roughly more than Rs 13 per unit. This is not commercially justifiable. It was further submitted that in the cost benefit analysis, the Charging cost considered is at Rs 2.50 /unit and the charging hours per day is considered as 5 hours with peak power purchase rate of Rs 5 /unit @2 escalation, with this NPV-60 56 and IRR-1 %. Thus, the project may be treated as a pilot experimental project and may be funded through grants from either state or central government, partially or fully Based on the level of availability of grant (at least on a viability gap funding basis) the affordability of the project may be reevaluated. Such systems can be implemented in the event that large amounts of renewable energy sources come into the grid in the future and affect the stability of the grid The cost of this can also be borne by the developers.

2.170 Shri. Vamadevan.V, KSEB Seniors' Forum submitted that if **Battery Storage System (BSS)** are implemented, the excess power can be stored during the day time and used during peak time. The Solar prosumers may also contribute

a share since, KSEB Ltd's infrastructure is being used for the sale and storage of electricity generated by these solar producers.

The KSEB Seniors Forum submitted that as more and more consumers opt for rooftop solar, the recovery of network related costs incurred by the utility becomes uncertain. At the same time the prosumers will be using the network for pushing their surplus energy during day time and drawing it back during evening and night hours increasing the burden of the utility. As this is a new and emerging issue, appropriate regulatory measures to properly regulate the sector has to be put in place.

The Forum added that the cost of storage may be recovered from prosumers against the units drawn from the grid. Similarly, a network usage charge commensurate with the solar plant capacity of each prosumer may be introduced in due course. The Commission may rectify the above issue in the form of a draft regulation.

Opinion of the Commission

2.171 The Commission observed that most of the concerns made by different stakeholders requires amendment in the Renewable Energy Regulations.

Introduction of Green Tariff

2.172 **Seniors Forum** submitted that thermal energy will increase by 0.45 paise in the coming years. The increase in Power Purchase Cost is mainly due to additional generation tariff owing to installation of FGD by generators and the requirement for fly ash utilization. The impact due to these in the tariff should be segregated and charged under a separate head as Green Tariff which shall be made applicable to prosumers to discourage the drawal of thermal energy from the grid.

2.173 **Sri. K N Gopinath**, General Convenor, Standing Council of Industrial Trade Unions suggested that KSEB Ltd shall reduce the power purchase cost by successfully adopting open access, renewable energy methods like solar and wind and also by exiting long term power purchase agreements.

2.174 **KSEB Officers Association** submitted that the major portion of ARR is the cost of power purchase. The cost will increase due to installation of environmental norms and cost of fly ash disposal. The cost of emission control system may be recovered through clean energy cess. Central and State Governments bear the cost of fly ash transportation. Further, a component as green tariff may be introduced.

2.175 **InSDES submitted that** the Power Purchase Cost suddenly increases in 2023-24, mainly due to the assessment regarding additional thermal generation tariff owing to installation of mandatory flue gas desulphurisation (FGD) and fly ash utilisation. The impact due to these in the tariff can be segregated as an additional tariff component by the term GREEN TARIFF. Whenever CERC

determines the green tariff, the same can be progressively enforced. The green tariff may be made applicable to drawal of energy of prosumers as well, to discourage drawal of thermal energy from the grid.

General Comments

2.176 Shri P C Abdul Latheef, Chairman, Public Affairs Committee, Kerala Jana Vedi State Committee, Kozhikode submitted that the Commission should provide opportunity for stakeholder to express their opinion before entering into agreements by KSEB Ltd for power purchase, rather than to take such decisions by their own and to approach consumers to bridge the loss due to it. The practice of keeping profit with KSEB Ltd and passing loss to consumers should be avoided. It was also submitted that, a certain percentage of the power from the Hydro generation must be reserved for the domestic consumers to reduce their tariff. A special tariff has to be made for this, since the rainfall are natural resources and the general public have legitimate claim on that.

Kerala Jana Vedi State Committee therefore urged the Commission to cancel the PPA for the 550 MW and to distribute 80% gain to consumers. Explanation must be sought from the concerned persons who are responsible for the liability to KSEB Ltd due to the un necessary PPAs. The details must be published for the information of public.

2.177 FACT submitted that KSEB Ltd should put an end to long term contracts which are unscientific.

2.178 KSEBOA submitted that the Renewable purchase obligation (RPO) targets for the entire control period are fixed at 10.5% each for solar and non-solar components. This may require upward revision as the target declared by India is 50% renewable by 2030, which requires a higher target by 2026-27 is 50% renewable by 2030. They also submitted that the increasing revenue gap is a major concern. The Association proposed that instead of loading in retail tariff a separate component as a regulatory charge may be introduced and collected from all those including prosumers and open access consumers.

2.179 The President, Association of approved and Classified Hotels of Kerala submitted that as per the tariff proposal, there is a huge gap in revenue as between the year 2022-23 and 2023-24. The revenue gap between the two years is close to Rs. 1300 Crores. Association further submitted that the Commission may not be inclined to approve such a huge revenue deficit.

2.180 Shri. Dejo Kappan submitted before the Commission to re-examine the tariff proposal submitted by the KSEB Ltd and requested not to pass on any tariff shock to the general public and further requested the Commission to consider the public interest before finalizing the tariff proposals. KSEB Ltd's tariff proposal

will bring in additional burden to certain section of consumers. The tariff hike is a result of the mismanagement of the company. It was also submitted that average price per unit of electricity purchased from outside for the financial year 2018-19 is Rs 3.49 whereas, prices had fallen to Rs 3.06 in 2020-21, which is a reduction by 43 paise. This savings has not been passed on to the deserving consumers. The overhead charge for supply of power in Kerala is Rs 2.85 per unit, which is on a higher side. It was also submitted that IIM had conducted a study on the operating expenses of KSEB Ltd and submitted a report. It was requested that the Commission shall implement the report at the earliest. According to the proposal submitted by KSEB Ltd, domestic consumers will incur an additional liability of Rs 1180 crore by the year 2022, a hike never seen before. It is not farfetched to say that KSEB Ltd, which has invested just Rs 15,000 crore in the last 60 years, will be able to invest Rs 28,000 crore in the next five years. As per the Tariff Regulations 2021, consumers will incur an additional liability of Rs 407 crore on the Master Trust fund. He prayed to re-examine the tariff proposal submitted by KSEB Ltd and requested not to pass on any tariff shock to the general public.

- 2.181 Cochin Special Economic Zone Authority (CSEZA)** submitted that the steep hike proposed in tariff will adversely affect the financial viability and competitiveness of the export units within the zone and requested to allow only reasonable hike in tariff.
- 2.182 Shri. V.P. George, State Vice President INTUC** submitted that the petition submitted by KSEB Ltd shall be examined in detail by the Commission and excessive increase in electricity charges of industrial sectors should be avoided as this will adversely affect the development and sustainability of the industrial sector. He added that KSEB Ltd should take measures to curtail cost rather than to increase tariff. KSEB Ltd is a public sector undertaking should exist and to keep its goodwill. A reasonable increase only may be allowed.
- 2.183 Shri. K George Varghese, Cochin University** submitted that KSEB Ltd is one of the most inefficient organisations of the State. KSEB Ltd has been producing/procuring power at rates much above optimal rates. The high cost of production is on account of high T&D Loss, plant operating much below its installed capacities, high wages, low productivity and highly unionized labour etc. He also submitted that Generation and Distribution of electricity are two distinct functions undertaken by KSEB Ltd. Therefore, the two activities must be separated.
- 2.184 Shri. Jacob Jose, Muthirenthickal House, Paroppadi, Kozhikode** submitted that the proposed tariff hike of KSEB Ltd will severely impact the general public of Kerala. One of the prime reasons for the increase in tariff hike is that the potential of Small Hydro Projects is not used properly. He submitted that 128 Small Hydro Projects with an aggregate capacity of 798 MW are still pending and requested the Commission to advise the concerned to speed up such SHEPs in the State.

- 2.185 Shri. E Babu Rajendran**, Convener, Friends of Electricity Employees and Consumers (FEEC) submitted that KSEB Ltd will not be able to proceed without the tariff hike. But in the current scenario of high competition, drastic increase in charges should be avoided.
- 2.186 Shri. Jose Paul, Nalpatt Veedu, Koratti, Thrissur** submitted that increase should not be allowed for both single and three phase consumers having consumption up to 500 units, Agricultural Consumers as well as LT VI (General) until 2027. The Supply provided to Street light shall be metered. He also submitted that the Consumers having bi-monthly consumption up to 500 units, shall be exempted from the tariff hike.
- 2.187 Dr. Mohan G Madhava Mangalam, Vyttila, Kochi** pointed out that raising the fixed charges is gross injustice from the side of KSEB Ltd as it is the money the consumers pay even if they don't use electricity. Hence, requested the Commission to do away with fixed charges.
- 2.188 Shri. M.T Varghese**, Ernakulam District Residence Association submitted that the fixed charge proposed for the three phase consumers is much more than that proposed for the single-phase consumers. To promote three phase connection, this may be equalised.
- 2.189 Shri. A R Satheesh Kerala Productivity Council** submitted that Kerala is a State with about one crore domestic consumers and the proposed hike in the domestic category for the first year is 1180 Crores ie average of 0.88 paise / unit. It accounts to 52.4% of the total tariff hike which is totally unscientific. It was also recommended that KSEB Ltd has to promote the renewable usage
- 2.190 Shri. Sasi.B Mattom**, Idukki submitted that KSEB Ltd have to conduct a survey to re organize the connected load of all consumers, whereby KSEB Ltd can generate a revenue of Rs1500 Crores approximately. Initiatives from KSEB Ltd has to be taken to reduce Transmission Loss.
- 2.191 Shri James Zacharias** was further submitted that, KSEB Ltd have to initiate measures to control the cost and establish accountability and highlighted the requirement of comparison with other States.
- 2.192 Anonyms letter dated 09.02.2022**, It was pointed out that the distribution works in KSEB Ltd are currently being carried out by contract employees. It was suggested that these works shall be carried out by employees of KSEB Ltd so that unnecessary expenditure can be avoided. It was also opined that the benefits provided to small- and large-scale cash crop consumers and cardamom processing industry shall be stopped to make KSEB Ltd profitable.

- 2.193 Shri. Sebastian.A.C, Kallumkal**, Kozhikode submitted that it is not justifiable that KSEB Ltd has proposed the tariff revision when the people in the State of Kerala are only slowly recovering from the impact of Covid 19. The proposed tariff will make Kerala one of the State with highest tariff rate. One of the prime reasons for the tariff hike is the high capital investment proposed by KSEB Ltd.
- 2.194 Shri. Sukumaran**, (Secretary, Thrissur District Consumers Protection Association) was also alleged that the property of KSEB Ltd has been in unauthorised use and 90% of the agricultural connections are being misused.
- 2.195 Shri. N. Vijayagopalan, Thiruvananthapuram** through e mail submitted that the Commission shall not impose the tariff hike and KSEB Ltd should take efforts to collect arrears.
- 2.196 Shri. Bhadran Rama** submitted that the concerned authority shall compare the Pay Scale of KSEB Ltd with other departments. He also stated that KSEB Ltd shall be directed to collect all pending arrears. The current financial crisis due to the pandemic shall also be considered prior to approving the tariff.
- 2.197 Shri. K Ramachandran, Srinivas, Palakkad** submitted that the realisation of security deposits is not done as per rules by KSEB Ltd. The pending arrears shall be realised from defaulters in a timely manner. The people are still under the after effects of the pandemic and in this situation tariff hike shall be rejected. It was further submitted that KSEB Ltd should resort to efficiency measures like reasonable work force for each work, switching off streetlight at right time, proper use of materials etc.
- 2.198 Shri.O.Harees, Tamanna Bhawan, Thazhava** submitted that, the staff strength in electrical sections is to be reduced as the Commission had directed KSEB Ltd to take efforts for optimum utilisation of manpower to reduce the R& M expenditure. KSEB Ltd had overcome this by including R& M works to the capital works. It was requested that the Commission shall carry out a prudent study in the man power utilisation of KSEB Ltd. He added that the huge capital investment in the areas of transmission and distribution should reduce the employee cost.
- 2.199 Shri.C.S. Tilakan (Secretary, Applicants and Consumers Forum)** submitted that when the general public in Kerala has not completely recovered from the Covid -19 pandemic, a tariff hike cannot be substantiated. It was found from the reports that KSEB Ltd has an arrear that amounts to ₹ 3160 Crores and a liability of ₹ 9057 Crores. He further submitted that, the loss is due to the high pay scale of employees.

2.200 Sri. Babu Pradeep submitted that while considering tariff revision, the consumers cost for installation of UPS to ensure quality uninterrupted supply shall be taken into account.

2.201 Shri. Antappan Joseph, Palakkad submitted that many of the companies are slowly relieving from the impact of COVID 19 pandemic. It is highly disappointing that KSEB Ltd proposed the tariff hike in this situation. He submitted that for cost reduction as well as customer convenience KSEB Ltd should eliminate power interruptions, and bifurcate the distribution system with isolators. He also mentioned that there is no need to switch off the whole area to repair a local network.

He added that many industrial feeders are connected to domestic feeders. Hence, all those needs to be switched off to give a new connection. Many HT feeders have been converted to insulated ABC conductors. This conversion should be implemented to LT industrial feeders passing through heavy vegetations. It will help to reduce energy loss and accidents.

2.202 Shri.Kunnukuzhi S. Mani, Journalist cum Historian, Thiruvananthapuram submitted that pending arrears need to be realised. KSEB Ltd is not disclosing the accounts of excess power generated and sold. The employee cost of KSEB Ltd is on the higher side. He added that the highest cost of power across India is already in Kerala and requested not to consider the proposed tariff hike.

Shri. Ajay Nair through e mail submitted before the Commission not to consider the tariff hike.

2.203 Shri. Mohamed Hassan, DVC Member, Thirungadi through e mail submitted that the Sabarigiri project, which was renovated at a high cost, is still stagnant. The Minister for Electricity stated in the Legislative Assembly, that the arrears of KSEB Ltd up to 31.12.2021 is Rs 2771 Crores. It is further submitted that the Accountant General has given a letter to KSEB Ltd stating that the debt of Rs 1200 Crores in KSEB Ltd is not sanctioned by the Government of Kerala. KSEB Ltd has implemented the Power Purchase Agreement for 25 years without the approval of Commission leading to an additional debt of Rs 15000 crores. Out of 33000 employees, 6000 employees do not have the sanction of the Commission. The dams of KSEB Ltd have water level at 79%, much higher compared to previous years. Consumers are not getting quality power supply. The Consumers who consume up to 200 units shall be exempted from tariff hike.

2.204 Shri. Biju, Cherthala submitted that the fixed charge should be changed to minimum charge. If the energy charge is higher than the minimum charge then no fixed charge may be collected. The Fixed charge should not be charged for

more than 15 years. The Fixed charges for single phase consumers should be limited to a maximum of Rs 100 per month instead of computing on the basis of kilowatt. KSEB Ltd should be directed to provide ₹5/ unit to the domestic consumers who had installed grid on solar power plants. While installing the smart meters the salary of the meter readers will be minimised, and hence, there is no need to pass on the expenditure for the installation of smart meters to the consumers.

- 2.205 Shri. Amaladasan Pereira, (Thiruvananthapuram Coastal View)** submitted that, KSEB Ltd is in loss primarily due to the mismanagement of the company and also the involvement of the trade unions in day-to-day activities of KSEB Ltd shall be mitigated.
- 2.206 Shri. J Sudhakaran Nair, Thiruvananthapuram** submitted that there is no increase for the display lamps and advertisement boards. The HT energy charge proposed by KSEB Ltd is around 6.50/ unit and the LT rate is ₹ 6.40/ unit. The LT charges have to be higher than HT charges since the loss in LT is around 702 times that of HT. The tariff of bulk supply to licensees seems not based on cost of supply. Electricity Act 2003 stipulates that tariff should reflect the cost incurred by the licensee. The proposed Low Voltage surcharge is low if it is increased only the consumers from LT will shift to HT. There is no mention about the higher voltage incentive. In the proposal, KSEB Ltd avoided the ToD billing for the pumping stations of Municipalities. It is requested to reduce the number of categories drastically and simplify the tariff. The complexity leads to disputes. He also mentioned that the special tariff for the police clubs alone is discriminatory.
- 2.207 KSEB Officers Association** submitted that tariff increase alone will not be sufficient for the overall development of the electricity sector in Kerala. The Association put forward the following recommendations
- (i) Increase sales
 - (ii) Curtail unnecessary expenditure
 - (iii) Reorganisation of activities and proper Deployment of employees
 - (iv) Increase income from other business
- 2.208 Shri. James Vadakkan (Managing Trustee, Centre for Consumer Education Pala)** submitted an elaborate study on the different aspects, and pointed out the importance of developing hydro power being environmentally friendly projects.
- 2.209 Shri. Gopakumar A (Secretary, FERKA)** The profit / loss accounts submitted by the KSEB Ltd before the Commission is incorrect and requested the Commission to audit these accounts by independent agencies. It was further submitted that, consumers in the State are badly affected by the flood as well as COVID-19 pandemic and requested the Commission not consider the tariff petition of KSEB Ltd.

- 2.210 Kohuveli MSME Association** submitted that KSEB Ltd should be more consumer friendly. KSEB Ltd should make arrangements to have Executive Engineer level meeting with the consumers. They added that Power interruption without proper notice will affect them badly.
- 2.211 Shri.C.K.Abubaker (Secretary, Kerala Federation of Blind)** submitted that they are functioning in Kerala since 1967 as a non-profitable organization for improving the life of blind people. The COVID-19 pandemic imposed heavy financial crisis to the members of the association. The public is already in crisis due to price hike in water, gas and other day to day essentials and requested to exclude the blind people from the proposed tariff hike.
- 2.212 Southern Railway** submitted that Government of Kerala has issued G.O. No.67/2020/PD dated 01.06.2020 allowing rebates/concessions to the consumers of KSEB Ltd which has been approved by the Commission vide Order dated 31.12.2020 but KSEB Ltd is yet to provide the rebate to railway traction and non-Traction service for the month of March, April and May 2020.
- 2.213 Er. Rajan. M. Menon, Sr. Consultant** submitted that the KSEB Ltd had collected the Security Deposit from the consumers, which is not required if the consumer changes the meter to Smart meter. As per Clause 73(1) of KSEB Terms and Conditions of Supply, 2005 the adequacy of security deposit of all consumers is to be reviewed in the first quarter of the financial year and based on the review, demand for short fall or adjustment of excess deposit is to be done in the first quarter itself. He submitted before the Commission to take into consideration the irregularities of similar type which are likely to be committed all over the State and the amount collected thus is likely to be remitted as arrears into the accounts of the KSEB Ltd, thereby levying the consumers the benefit of interest as well as refund. It is further submitted that the refund of the excess Security deposit available may be directed to be adjusted in the arrears on energy bill during the Covid 19 period. It was also submitted that the fixed charges should be waived and necessary steps shall be taken to implement prepaid meters at the earliest.
- 2.214 Shri. E. Babu Rajendran, Convener, Friends of Electricity Employees and Consumers (FEEC)** submitted that, expenditures proposed are as per the provisions of Regulation and can be approved after checking.
- 2.215 Sri. K N Gopinath** submitted that sustainability of industrial consumers help in the sustainability of KSEB Ltd. Any reduction in consumption of energy in industrial sector will lead to a dangerous situation. It was pointed out that power intensive industries like Binani Zinc is already closed and he urged that KSEB Ltd should take efforts to retain the bulk consumers and withdraw from tariff hike.

- 2.216 Shri. Prabhakaran. K.V, Consumer** submitted that the water in the dams are being wasted unnecessarily and requested that all the water in the dam be used up before the summer. The rule curve of the dams can be lowered slightly.
- 2.217 Shri. B. Radhakrishnan, Steel Manufactures Association** submitted that the steel industry was severely affected by Covid 19 as the construction sector was totally paralyzed and requested that this tariff hike shall be deferred until people recover from Covid 19. Steel industry is the largest power consuming industry of KSEB Ltd and the proposed tariff hike will have adverse effect on the steel industry.
- 2.218 Sri. Aneesh Thomas, Research Scholar, Annamalai University Environmental Administration** submitted that the consumers of the State should get electricity at affordable rates. It is submitted that about 70% of the energy used in Kerala comes from the thermal power stations and 30% from the hydro projects of KSEB Ltd. The cost of generation from Idukki is only 10 paise. It is also pointed out that 70% of the energy purchased from outside is thermal energy which is responsible for carbon emissions. It was requested that the Commission shall review the viability of the capital projects proposed by KSEB Ltd for the control period 2022-27. It was also submitted that, electricity should be available at lower rates in order to attract investments in the State. The power should be provided at a subsidised rate to agricultural consumers. It shall be ensured that the Salary and Pension expense of KSEB Ltd shall not be passed on to the consumers.
- 2.219 Shri. Bobby** submitted that, only if the State and utility are separated, corporate governance be brought by. Only if KSEB Ltd is turned into a separate entity they can supply electricity to the people at a reasonable cost.
- 2.220 Shri. C.P. George, DYCE, KSEB Ltd (Rtd)** submitted that the claim of KSEB Ltd needs to be supported with appropriate data from the field or with appropriate study reports based on actual measurement. It was point out that the technical evaluation of the data presented with the ARR petition do not provide a holistic picture.
- 2.221 Shri. Sathjith.V.H** submitted that the advertisement published by KSERC in the newspapers has not included KSEB Ltd's latest audited report, profit and loss account, objections by auditor etc. which is required to be considered which considering the tariff proposal. It was further submitted that without the copies of necessary documents the public cannot represent properly in the hearing. This will give unilateral advantage to KSEB Ltd for their unnecessary demand for tariff hike and requested the Commission to dismiss the petition. He added that the internal generation of KSEB Ltd is very less which needs to be increased. The Capital investment should be re-evaluated and non-viable projects is to be rejected.

- 2.222 Shri. V. Sudarsan Panicker**, submitted that the Commission is to direct KSEB Ltd to realise all the pending arrears and suggested that KSEB Ltd shall do away with the meter rent when the amount reaches thrice the original value of the meter. It was also submitted that the prevailing tariff structure of the domestic consumers has to be changed and the energy meter reading should be taken on a monthly basis instead of the present system of bi monthly readings.
- Shri. Venugopal KSEB Seniors Forum** submitted that KSEB Ltd should carry out maximum network strengthening work, for increased reliability and decreased loans.
- 2.223 Dr.Thempamood Sahadevan Convenor, Human Rights Protection Forum, Venjaramood** suggested that monthly billing system may be introduced in KSEB Ltd as bi monthly bills are resulting in hefty bills, even after using LED bulbs. He pointed out that large amount is being collected by KSEB Ltd as duty charge and is also charging meter rent for meters purchased by consumers He stated that the practice is injustice and violation of human rights and civil rights of citizens. It was suggested that faulty meters shall be replaced by KSEB Ltd in presence of consumers. The long pending dues of various consumers of KSEB Ltd shall be recovered mandatorily which will add to the profit of KSEB Ltd. It was requested that the Commission should intervene and control the extravagant expenditure of KSEB Ltd and take necessary action.
- 2.224 Shri.Panakonttukonam Vijayan, Vyapari Vyavasayi Association** submitted that the business activities have been shutdown due to Covid 19 and KSEB Ltd had not taken any steps to waive the electricity charge for these two months. Now the increase in tariff is an injustice to the sector and requested that KSEB Ltd has to withdraw from the proposal to increase electricity charges. He also mentioned that the Commission should direct KSEB Ltd to convene an open forum focusing on sections of KSEB Ltd and submit a directive to each consumer to hear their grievances. He submitted that the Solar Power still needs to be promoted and pending arrears should be recovered immediately.
- 2.225 Shri. Fasiludeen, KSSIA** submitted that the new industrial policy of the state government is to create one lakh new industries and 5 lakh job opportunities within the next one year. KSEB Ltd. was requested to co-operate with this policy. It was suggested that a moratorium should be allowed for the industries for at least two years in view of Covid 19 pandemic. It is further suggested that the fixed charge shall be charged only based only on the used Contract Demand.
- 2.226 Shri. Saji Mathew, MRF** submitted that the Commission should examine the audited accounts of KSEB Ltd and the details provided in the ARR, ERC & Tariff proposals and take into account only the correct facts. The Commission should examine the figures of accumulated losses. KSEB Ltd. should make the company profitable and contribute to offset the accumulated loss.

2.227 InSDES submitted that the RPO target is considered only as 10.5% for both solar and non-solar. It requires an up-ward revision since the target declared by India Renewable Purchase Obligation (RPO)

InSDES submitted that the increase in ARR, Sales volume and ACoS during the control period are 28.7%, 18.9% and 8.2% respectively. The high increase in ARR is probably due to the provision given to meet the past gap also. But KSEB Ltd should endeavour to contain the ACoS by increasing the sales volume. Now there is opportunity for this by effectively addressing the Go Electric Campaigns in EV and E-cooking. There are no such plans or projections seen in the ARR petition. The commission shall issue directives in this regard in the order on this ARR.

2.228 Institute for Sustainable Development and Energy Studies (InSDES) suggested that it is time for KSEB Ltd to implement various measures to increase the power quality without giving financial burden. Measures to be taken to enhance operational efficiency and customer services. The organisation stressed the need for implementation of IT (Information Technology) tools and ERP (Enterprise Resource Planning).

- System Optimization and Restructuring

It was submitted that KSEB Ltd shall conduct an optimization study on the processes and procedures with at most care, leveraging the advanced technologies and best practices, so as to have a lean and mean organization, thus to reduce the cost of supply. It was further submitted that the Skill, Systems, Strategy and Structure of the organization shall be revisited based on the restructuring reports prepared in KSEB Ltd, so that the operational efficiency and customer services are maximized. It was also opined that the special rules and conditions stipulating the recruitment, promotion, training etc in KSEB Ltd may be implemented for enhancing the productivity of the organization.

- Using ICT in Business

It was submitted that all repetitive processes and procedures in KSEB Ltd shall be automated through appropriate integrated ERP software and the manpower may be re-deployed for improving the services. Some of the areas which can be fully automated with minimal manual interaction Human Resource Management LT/HT/EHT Billing and Collection, Supply Chain Management, Planning & Projects Monitoring, Office Automation and MIS, Technology Adoption & Quality wherein KSEB Ltd has been attempting to implement ERP, but not fully materialized so far. It was suggested that the safe and quality power at affordable cost shall be provided to all consumers of the State. Hence the adoption of the state-of-the-art technologies and benchmarked practices shall be imbibed by KSEB Ltd quickly.

All consumers shall be mandated to have ELCB in their premises to avoid danger due to earth leakages in the premise. It was further suggested that use of LT ABC/Covered conductors/UG cables must be insisted to avoid the danger from electric lines and supply interruption due to bare conductors, wherever necessary. The use of auto reclosers with remote control must be provided in HT feeders from substations. The LV side feeders of Transformers shall be provided with Circuit Breaker/MCCB protection system as per CEA regulation 2010, to reduce the supply interruption time and to ensure public safety. All 33kV substations shall be automated in a phased manner to have robust sub-transmission system to improve quality of power and reduce the cost of operation.

- Commission to go Digital.

It was submitted that the Capital Investment plan and Tariff petition shall be cleared within 120 days and it was suggested to issue a complete order including CIP so as to avoid the issues related to implementation of capital works and burden on customer at a later stage. Hence it was requested that KSERC also should make use of the ICT in their processes to minimize the time and other resources consumed, so as the compliance of all regulatory requirements are within stipulated time and less costly.

- 2.229 The Kerala High Tension and Extra High Tension Industrial Electricity Consumers' Association (HT & EHT Association)** submitted that during COVID period, 25% rebate was given on fixed charges for Industrial, Commercial and Private Hospitals. Also, KSEB Ltd has provided subsidy to domestic consumers during the lockdown period. The Association requested to ensure that the revenue loss due to rebate given during COVID period is borne either by KSEB Ltd or the Government of Kerala and not passed on to consumers by under recovery of revenue. Further, the compensation paid by the KSEB Ltd to the consumers due to the violation of SOP (Standard of Performance) Regulations may not be allowed to be recovered through ARR.
- 2.230 Shri. Prasanna Kumar, Secretary, Electricity Consumers Association (CITU)** submitted that tariff hike for economically weaker sections at par with that of economically stable consumers will make life difficult for the struggling population. He added that KSEB Ltd plays the major role in making the State not investor friendly. Hence this Tariff hike shall be shunned for small business units like small hotels, grocery shops, stationary shops etc.
- 2.231 Shri.M. Ramadas, CUMI** submitted that KSEB Ltd shall explore the possibility of creating an open access portal.
- 2.232 Shri.Viswanathan. K** submitted that the price of petrol varies from district to district in Kerala due to the variation in transportation cost. It was suggested

that, considering the same logic, KSEB Ltd can apply similar differential pricing in different voltage levels.

2.233 Sri. Sabu Pariyarath, General Secretary Aluva Taluk Pouravakasha Samrakshana Samithi (Human Rights Protection Council) submitted that the Tariff hike proposal of KSEB Ltd shall not be approved due to the situations like Covid 19 pandemic, fuel price hike, climatic conditions, slow down in economy due to implementation of GST etc. as the tariff hike is unbearable for the common man. He also pointed out that in Civil Appeal No. 1498/1502/2022 filed by CEA before the Hon'ble Supreme Court of India, wherein the mismanagement of KSEB Ltd in detail. Huge financial liability has arisen due to the appointment of twenty thousand employees, not fulfilling the qualification requirements and not having required qualifications and also due to the heavy pension given to retired employees. It was requested that the Commission should take urgent steps for correcting the inadequacies in the tariff and slab system and also for avoiding the surcharge. It was further submitted that the Transmission losses and other technical issues should also be resolved in a time bound manner keeping with the new age.

2.234 KSEBEA submitted that 77% consumption is of the domestic sector whereas the revenue share is 37.4 % only. KSEB Ltd should decrease power procurement costs by encouraging the domestic consumers to meet part of their load from renewable solar energy. Further, KSEB Ltd should be fairly compensated for the additional expenses they incur to integrate rooftop solar power generation. KSEBEA submitted that Dynamic tariffs, enabled by advanced metering and a smart grid, can reduce the power purchase costs of KSEB Ltd and help manage peak loads.

KSEB EA submitted that the Fixed cost component of ARR is 62.98% for FY 2020-21 whereas realisation of fixed charge through present tariff is only 15.84%. Hence recovery of fixed cost component through fixed charges is essential. The Association added that a proper energy accounting is the need of the day. The rapidly increasing Solar and other renewables penetration, growth of which cannot be accurately predicted, are likely to bring Utility into a "Death Spiral". The association also stressed the importance of smart metering and also mentioned the requirement of installing RMU,UG cable/Covered conductor/ABC in distribution mains to reduce electrical accidents and to improve customer satisfaction whereby reliability can be improved. They also stated that measures to be taken to promote e mobility and power quality penalties may be introduced to avoid harmonic dumping by consumers.

2.235 Shri. E Babu Rajendran, Convener, Friends of Electricity Employees and Consumers (FEEC) submitted that the Commission shall publish the details regarding SAIDI and SAIFI and take necessary steps to implement the Electricity (Rights of Consumers) Rule 2020, giving proper directions to the KSEB Ltd to conduct a study on the power quality in the State and to publish the report.

- 2.236 Shri. Wilson K.B** through e mail submitted that the price of electricity is higher in Kerala compared to other States. It was further submitted that KSEB Ltd shall recover the pending arrears from defaulters and tariff revision shall not be passed on to the common public.
- 2.237 Shri. Shibu.A. S, Kollod** submitted a proposal to curtail the involvement of unauthorized contractors in electrical work. According to the proposal, when a consumer submits an application for new electricity connection, the consumer has to submit an application mutually signed by the consumer and the authorized electrical contractor to the concerned Assistant Engineer of the section. Once the work is completed, the Assistant Engineer of the section will have to submit a completion certificate to the consumer. It was suggested that KSEB Ltd can charge ₹100 for the certificate, which can be utilised for welfare expenses.
- 2.238 Kuchappuram Thankappan, Secretary Vyapari Vyavasayi Association State Committee** pointed that KSEB Ltd has a total dues of Rs 2117 Crores pending with its various category of consumers and has requested that urgent action shall be taken to recover it and requested the Commission to allow only nominal increase.
- 2.239 Shri. Bobby Mathews** through e mail submitted that in order to make KSEB Ltd more efficient and economical, the distribution wing shall be separated and privatised for rationalising the cost, proper management and unbiased collection of revenue. It was also submitted that government should provide subsidy to economically weaker sections, industry and agriculture.
- 2.240 Smt. Neenu Skaria, ELTS Pvt Ltd, Kochi** submitted that KSEB Ltd has proposed lots of projects for which investment is too high. KSEB Ltd may, instead of investing in Renewable Energy and meeting RPO obligations, promote Open Access and Grid Connected Solar. It is pointed out that they can effectively and efficiently use their transmission and distribution lines and also add revenue to their exchequer. Smt. Neenu Skaria, also requested to make the procedures and proceedings simple for getting Open Access. The anomaly in electricity duty may be corrected by reducing the Electricity Duty of LT industrial consumers from 10% to 10 paise. She added that the Commission may direct KSEB Ltd to prepare midterm performance review so that the licensee will be more vigilant in preparing accounts.
- 2.241 Shri. Raymond Antony Karshakasamkhadana** submitted that, KSEB Ltd is currently issuing bi-monthly bill to domestic customers, which shall be discontinued and consumers shall be billed monthly.

Employee cost

- 2.242 Dr.Thempamood Sahadevan Convenor, Human Rights Protection Forum, Venjaramood** commented on the high salary being provided to KSEB Ltd employees. **Shri. Sasi.B. Mattom**, Idukki submitted that the employee strength.

- of KSEB Ltd also requires detailed examination. **Shri Sukumaran**, (Secretary, Thrissur District Consumers Protection Association) submitted that the excess staff strength of the KSEB Ltd had to be checked and a report submitted before the Commission.
- 2.243 Shri.Mohamed Hassan, DVC Member, Thirungadi** through e mail submitted that sanction from the State government has not been obtained for the Pay Revision 2016 which has resulted in a liability of 50 crores that is now being passed on to the consumers as tariff hike. The Employee strength of KSEB Ltd is on the higher side when compared to other states.
- 2.244 Shri. James Zacharias** through e mail brought to notice of the Commission that the employee cost of KSEB Ltd is on the higher side. He opined that contract work should be minimised. **Shri. Prasanna Kumar, Secretary, Electricity Consumers Association (CITU)** pointed out that, the pay revision implemented by KSEB Ltd without permission from the Commission and other unnecessary expenses created loss to KSEB Ltd. Efforts should be there to curtail these types of activities.
- 2.245 Shri. Amaladasan Pereira, (Thiruvananthapuram Coastal View)** submitted that the high pay scale given to the employees and pensioners is one of the causes for loss of KSEB Ltd. The employee cost of the KSEB Ltd is comparatively on the higher side.
- 2.246 Shri. Dejo Kappan** stated that new posts shall not be created without the approval of the Commission. **Shri. B. Radhakrishnan, Steel Manufactures Association** and **Shri Sathjith.V.H** submitted that the salaries of the employees of KSEB Limited are on the higher side which need to be reviewed.
- 2.247 Shri Antappan Joseph**, Palakkad submitted that the employee cost of the KSEB Ltd is on the higher side. Further, elimination of some of the posts will help reduce employee expenses.
- 2.248 Shri. Jose Paul**, Thrissur submitted that the employee strength of KSEB Ltd is on the higher side hence, appropriate measures will have to be taken for its reduction.
- 2.249 KSEB Ltd Workers Association** submitted that it is the duty of KSEB Ltd to provide services to the consumers of KSEB Ltd. It is requested before the Commission that the Employee Cost shall be calculated by considering the integrated structure of KSEB Ltd unlike at National level. The employees of KSEB Ltd provided good service to the people during the floods but that service is not being acknowledged. It was further requested to provide sanction for the additional 6,000 employees.

- 2.250** **Apollo Tyres** submitted that the Employee cost of KSEB Ltd is on the higher side and KSEB Ltd shall work towards cutting its employee cost and improving its working efficiency. Hence it was requested that the Commission shall take a stand conducive to industry.
- 2.251** **TCCL** submitted that employee cost of KSEB Ltd is high compared to other electricity companies in India, which leads to high O&M expenses. TCCL requested submitted that the O&M expenses may be allowed as per norms specified in the Tariff Regulation only.
- 2.252** **Shri. James Vadakkan (Managing Trustee, Centre for Consumer Education Pala)** submitted that the Salary cost, pension and previous pay revision in KSEB Ltd from 1981 onwards be investigated by an independent quasi-judicial Commission as the salary increase allowed in KSEB Ltd was much higher than the State Government employees and other State PSUs.
- 2.253** **KPBOF** submitted that the impact of pay revision is 12 %. At the same time inflation during the 5 years is 20 %. KPBOF further submitted that the comparing with other states is not correct. Here Generation Transmission and Distribution is considered together whereas in other states Discom alone is considered. Thus, it is not an apple-to-apple comparison, but comparing apples with orange.
- 2.254** **Sri. Muhammed Rafeek K, General Secretary, All Kerala licensed wireman Association** submitted that KSEB Ltd registered as a new company in 2013 November with zero debit. The debt of KSEB Ltd now is mainly due to the higher employee strength, higher salary and the involvement of trade unions. It was submitted that during 2019 and 2021 KSEB Ltd increased the salary of employees without the approval of State Government. The post of mazdoor was introduced in KSEB Ltd for making KSEB Ltd more profitable and curtailing the outside contract works. But the persons in this post does not have adequate knowledge about the works. This creates huge financial loss to KSEB Ltd. In order to curtail loss to KSEB Ltd, people who have ITI, Diploma, Engineering Degree holders who possess electrical supervisor /wireman license, should have to be considered for such posts. KSEB Ltd should have to complete the ongoing 200 MW projects immediately, redeploy employees from unnecessary places and deploy them in the places of Solar installations, EV charging station booths. KSEB Ltd should be with the public interest and avoid the unnecessary tariff hike. KSEB Ltd should have to look into the increasing number of employee strength. The companies in the neighbouring states makes more profit than KSEB Ltd with an employee strength of 1/3rd of KSEB Ltd. KSEB Ltd should curtail the expenditure in IT by adopting software. KSEB Ltd should have to implement smart metering, ABC cable and underground cables to minimise the manpower required in KSEB Ltd.

- 2.255 Association of approved and Classified Hotels of Kerala** submitted that KSEB Ltd is presently a government company that has come into existence in terms of the Transfer Scheme. The Board is however continuing to adopt the same set of service conditions prevalent in Government service. Though Section 133 of the Act guarantees protection to former employees, there has however been no attempt to restructure or revamp the staff pattern at least in respect of those employees who have joined the service on or after 31.10.2013 i.e. the date on which the statutory transfer scheme took effect. As a result, the Board continues to expend substantial amounts towards employee costs.
- 2.256 Shri. P C Abdul Latheef, Chairman, Public Affairs Committee, Kerala Jana Vedi State Committee, Kozhikode** submitted that the pay revision to the employees of KSEB Ltd had been implemented without the sanction of Government and has to be cancelled and the liability recovered from the Board members. Explanation must be sought from those who are responsible and the details shall be published.
- 2.257 Shri. Sabu, Aluva Pourevakasa Samithi** submitted that pay revision of KSEB Ltd is one of the reasons for loss to KSEB Ltd and has to be addressed.

Under -Statement of Employee Expenses by KSEB Ltd.

- 2.258 HT & EHT Association** submitted that KSEB Ltd has projected pay revision expenses as Rs 1404.31 Crore for the Control Period for pay revision of Officers/workmen of KSEB Ltd due from July/August 2023, to be claimed during True up. The HT&EHT Association requested to restrict the O&M expenses of SBUs in the MYT Order on normative basis as per Tariff Regulations, 2021. The O&M expenses of KSEB Ltd are already the highest in the country, and further pay revision will only increase the O&M expenses. Allowing pay revision during True up will link it with efficiency levels. KSEB Ltd may not provide pay revision till it become profitable.

The HT & EHT Association submitted that KSEB Ltd is under stating the employee expenses in order to hide the actual figure. The Association further submitted the following:

- (i) As a thumb-rule, the O&M expenses of Transmission Licensee are in the range of 20-25% and only 12-15% in case of Distribution Licensees.
- (ii) For KSEB Ltd as a whole, the O&M expenses are 31% of the total ARR, which is double that for other Distribution Licensees in the country.
- (iii) Employee expenses typically comprise around 65% of the O&M expenses; however, in case of KSEB Ltd, employee expenses (even after excluding terminal liabilities) are 76% of the O&M expenses, as per the True-up Order for KSEB Ltd for FY 2017-18. KSEB Ltd's employee expenses are 24% of the total ARR (76% of 31%), which is exorbitantly high. Moreover, KSEB Ltd has not claimed the impact of the Pay Revision. If that were added, then the employee expenses would be close to 27-28% of the ARR.

- (iv) The total employee cost of KSEB Ltd as a whole was only Rs. 693.64 Crore in FY 2003-04, and KSEB Ltd had overall surplus. The bloated employee expenses are projected to increase to Rs. 4519 Crore (24% of ARR) in FY 2022-23 and Rs. 5612 Crore in FY 2026-27, even without the anticipated salary increase.

The Association requested to disallow the employee expenses that are yet to be approved by the State Government/Hon'ble Commission

Opinion of the Commission

- 2.259** The Commission vide the notification dated 14.11.2021 has notified the KSERC (Terms and Conditions for Determination of Tariff) Regulations 2021 (hereinafter referred to as the Tariff Regulations 2021). The Commission has notified the said Regulation as per the statutory powers conferred on it under Section 181 of Electricity Act 2002. The Regulation was notified after completing the statutory procedures including pre-publication, stakeholder consultations including public hearings. The Tariff Regulations 2021 specifies the norms for Operation and Maintenance Expenses (O&M) of KSEB Ltd and other licensees. The O&M expenses include Employee expenses, Administrative & General Expenses and Repair and Maintenance expenses. The Commission while approving the ARR&ERC of the licensee including KSEB Ltd for the MYT Period from 2022-23 to 2026-27, shall approve the O&M expenses strictly as per the norms specified in the Tariff Regulations 2021 only. While approving the O&M expenses in the truing up of accounts of respective years, the Commission shall limit the O&M cost of KSEB Ltd as per the norms specified in the Tariff Regulations 2021 irrespective of the actual O&M expenses incurred by the licensee.

ARR & ERC/ Revenue Gap/Surplus

- 2.260 Shri. Dijo Kappen**, submitted that as per the available information KSEB Ltd is at a profit of 450 Crores, which means that the tariff shall be reduced. It was also submitted that there is a discrepancy between the figures in the budget and the proposals of KSEB Ltd, which should be examined by the Commission
- 2.261 The HT & EHT Association** submitted that the ARR proposed by KSEB Ltd is exorbitant and is only to get approval for higher tariffs. The Association requested the Commission to validate the computations done by KSEB Ltd based on the actual parameters for Fixed/Demand Charges, viz. Connected Load/Contract Demand and the related Fixed/Demand Charges, as applicable, and after considering the TOD tariffs, etc. It is also requested to specially look into the assumptions made by KSEB Ltd regarding the impact of rooftop solar installations and e-mobility,
- 2.262 The HT & EHT Association** had worked out a Revenue Surplus (rather than Revenue Gap, as projected by KSEB Ltd) ranging from Rs. 1000 Crore for FY 2022-23, which is estimated to increase to Rs. 1560 Crore in FY 2026-27. This

translates to a possible average tariff reduction of 6,3% in FY 2022-23 and subsequent reduction of 1.8%, 2.2%, 0.5%, and 0.1% for the next years of the Control Period.

Tariff Revision Proposal for the Control Period from FY 2022-23 to FY 2026-27

2.263 The HT& EHT Association submitted that KSEB Ltd should clearly reduce the Gap through efficiency improvements. It was also submitted that while computing Average Cost of Supply (ACoS), Commission may consider Voltage-wise Cost of Supply (VCoS). The Association requested the Commission to reduce the tariffs, in order to pass through the benefits of the Revenue Surplus computed by the Association, and in order to reduce the cross-subsidies within the allowable limits stipulated by the Tariff Policy.

Tariff Revision Proposals for HT and EHT categories for FY 2022-23

2.264 The HT & EHT association pointed out that KSEB Ltd has incorrectly considered the existing tariff for EHT 110 kV category for FY 2023-24, as it has considered the tariff existing at present as the existing tariff for FY 2023-24, though KSEB Ltd has proposed humungous tariff increase in FY 2022-23, and this revised tariff should be considered as the existing tariff for FY 2023-24.

The Association also submitted its view that the Demand Charges should reduce as the voltage of supply increases, on account of the lower O&M cost incurred for the higher voltages. Even though Commission has partly implemented this concept for HT and EHT categories, the Demand Charges for HT IA Industrial and EHT 66 kV category is the same, which needs to be changed, so that the EHT 66 kV category pays lower demand charges.

Comments of KSEB Ltd

2.265 KSEB Ltd submitted that the proposal is based on the recommendations made by Ministry of Power, Government of India and NITI Aayog for adjusting two part tariff to accurately reflect the actual fixed charges and variable charges to prevent under recovery of fixed cost of the utility. In order to level the disparity in fixed costs incurred by KSEBL and that recovered through fixed charges from consumers, a gradual increase in fixed charges is suggested. It was also submitted that the Retail inflation in Country surged to 7.79% on an annual basis in the month of April, 2022 which is also a reason for the proposed increase. It was further submitted that the demand charge is proposed in a reduced manner in accordance with the increase in voltage level.

Opinion of the Commission

2.266 The Commission noted the suggestions of the stakeholders. As per the provisions of the Electricity Act 2003, the retail tariff determination is one of the statutory functions of the State Commission. The Electricity Act 2003 and the Tariff

Regulation 2021 notified by the Commission, is consistent with provisions of the Act which has clearly specified the principles, methodologies and legal aspects to be considered while determining the tariff.

Regulatory Assets

- 2.267 KSEB Seniors Forum** suggested that instead of bundling the recovery of regulatory assets into the retail tariff a separate 'regulatory charge may be introduced. The same may be made applicable for consumption through open access and by prosumers as well, as this relates to past periods when these consumers have relied on the grid. The amount collected through the regulatory charge can be utilised for bridging the dues payable by KSEB Ltd to the pension master trust.
- 2.268 InSDES** submitted that the total provisional revenue gap up to 2021 is Rs 8919.19. Out of this, Rs 4902 Crores is proposed to be amortised in the control period. InSDES also agreed with Senior forum to introduce Regulatory Changes.
- 2.269 KSEBOA** submitted that the Regulatory assets are rising upwards and has an impact on state finance too. It was suggested that bundling recovery of regulatory assets into retail tariff shall be avoided. Instead of that a separate regulatory charge component shall be introduced on open access consumers and Prosumers. It shall be used to fill the shortage in Master trust fund. It was submitted that proposed employee costs are in accordance with MYT regulations only. The Average cost of power (national) is Rs 4.71/ unit (Rs 3.23 /unit in KSEB) and Average. cost of supply (national) is Rs 7.44/ unit (Rs 6.59/unit in KSEB). The Average operational cost (national) is Rs 2.73/ unit (3.36/ unit in KSEB @ bundled). The per consumer employee cost is one of the lowest in Kerala. Being predominantly a domestic state the employee cost per sales volume is irrelevant in Kerala. KSEB Ltd has not claimed ROE @ 5.5 % on the NFA. The increase in tariff proposed is 14.6 %. But from the date of last tariff revision (8.7.2019) the annualised increase is less than 5%. The proposed annualised increase in tariff during CP is only 3.8 %, which is less than the rate of inflation. KSEB Ltd has to increase sales volume to reduce Average cost. CIP should be channelised more on reducing interruptions and providing quality power to raise sale volume. Tariff category rationalization prospects are to be explored. Existence of KSEB Ltd is very important for the development and growth of the State. The Association requested the Commission to approve the proposals of KSEB Ltd with riders for fine tuning.

Sales forecast

- 2.270 KSEB Officers Association** submitted that the sales forecast of KSEB Ltd seems to be less than the requirement. The Association submitted that the factors like increase in consumption due to e- cooking, e – vehicle, areas like data centre, silver line etc has not seen factored properly.

- 2.271 E Babu Rajendran, Convener, Friends of Electricity Employees and Consumers (FEEC)** submitted that KSEB Ltd will have to take up the Go Electric campaign of State Government.
- 2.272 InSDES** submitted that KSEB Ltd projected the annual energy requirement of the State to increase around 6000 MU during the Control Period. The projected addition from internal generation is much less leading to significant power and energy deficit in the later part of Period. This situation will become accelerated with the expiry of ongoing medium-term contract of 270 MW. KSEB Ltd suggested to meet this through short term basis at a rate of Rs 4.00 per unit. InSDES suggested that the Commission may direct KSEB Ltd for entering the long term PPA in view of the anticipated deficit in the later year of the Control Period. **Institute for Sustainable Development and Energy Studies (InSDES)** pointed out that the proposed sales of KSEB Ltd does not reflect the probable increase in E -vehicle and E - cooking.
- 2.273 The HT & EHT Association** submitted that as per projections of KSEB Ltd, sales of EHT category have reduced from 1243 MU in FY 2011-12 to 859 MU in FY 2019-20. The reduction in sales over the last decade is because of the unviable tariffs of KSEB Ltd, which is forcing the consumers to opt for Open Access, in order to ensure their viability. The reduction in consumption in the EHT Consumer category will further impact KSEB Ltd adversely as these consumers provide base load for the Licensee. KSEB Ltd should take more steps to encourage Industrial Consumption in HT and EHT Categories.

The Association submitted that it is not submitting any specific comments on the sales projected by KSEB Ltd, but have requested the Commission to validate the same. Certain issues were pointed out as follows:

- a. *KSEB Ltd has assumed 19% CUF for the solar installations. The Commission may kindly verify the veracity of such assumption based on the CUF realised by existing solar roof-top installations.*
- b. *KSEB Ltd has assumed very high growth in such solar prosumer installations and solar energy addition is projected to increase from 194 MU in FY 2022- 23 (which is also projected) to 1633 MU in FY 2026-27. The Commission may verify whether such high growth rate assumptions are realistic, as this assumption directly affects the sales projections for KSEB LTD, and hence, the revenue and revenue gap, and hence, the tariff increase.*

Energy deficit

- 2.274 KSEBOA** submitted that KSEB Ltd is expecting a significant power deficit on round the year basis in the later part of the Control Period. Total MW addition is only 314.4 MW which is only 14% of the present capacity. Total MU addition is only 959.582MU which is only 3.8% of the present requirement or 13% of the present generation. KSEB Ltd has suggested that the deficit will be met on a short-

term basis at a rate of Rs 4 00 per unit. This assertion is without sound basis. The average price in the Indian Energy Exchange (for the September 2021 to March 2022 period was Rs 4 .95 per unit. The average price during evening hours is Rs 6. 37 per unit for the same period and that of morning hours was Rs 6.14 per unit. The short-term market prices are higher than these rates. It was noticed that in many time blocks the price is hitting the ceiling price of Rs 20 00 per unit in IEX. The average rates in power exchanges as well as in the short-term markets are already much above the price of most of the existing power purchase contracts of KSEB Ltd.

InSDES submitted that KSEB Ltd is expecting a significant power deficit on round the year basis in the later part of the control period. KSEB Ltd has suggested that the deficit will be met on a short-term basis at a rate of Rs 4.00 per unit. This assumption is without sound basis. The power market in the country is providing strong signals of an impending All India power deficit scenario, with the demand coming back after two consecutive years of Covid related down side. The average rates in power exchanges as well as in the short-term markets are already much above the price of most of the existing power purchase contracts of KSEB Ltd. The increasing trend is likely to continue. Slight relief is the recent direction from CERC to seal the market price to Rs.12/kWH.

It was requested that KSERC may direct KSEB Ltd to initiate early action to contract power on a longer term in view of the anticipated deficit in the later part of the control period

Average cost of supply

2.275 E Babu Rajendran, Convener, Friends of Electricity Employees and Consumers (FEEC) submitted that as per the ARR the transmission- distribution loss will be reduced from 11.28% to 10.08 % in this Control Period. However, the transmission and distribution losses have reached 10.32 % in the 20-21 itself. The transmission and distribution loss are estimated at 9. 5% in the budget estimate of KSEB Ltd for FY 2022-23. Therefore, the transmission and distribution loss in 22-23 should be taken as 9.5 %. The demand for electricity should be re-determined by 0.40% reduction in the subsequent years during this Control Period. This would result in a reduction of 550 million units in the first year and 780 million units in the last year. Accordingly, the average cost of supply (ACoS) will be reduced by 9 to 12 paise. Further, urgent steps need to be taken to reduce expenditure and increase in sales to keep ACoS reasonable.

2.276 InSDES submitted that in the ARR proposed by KSEB Ltd, increase in ARR, sales volume and ACoS during the Control Period are 28.7%,18.9% and 8.2% respectively. KSEB Ltd should endeavour to contain the ACoS by increasing the sales volume by promoting Go Electric campaigns in EV and E-cooking.

Opinion of the Commission

2.277 The Commission noted the suggestions and the same may appropriately be considered while determining the tariff of the consumers.

Power purchase

- 2.278 KSEBEA** submitted that KSEB Ltd should exit from expensive and long-term PPAs and move towards short-term power procurement contracts (DAM & RTM). It was also submitted that the Power Purchase cost is the major contributor in ARR and has to be mitigated by increasing internal Hydro Generation, introducing Pumped storage scheme, and promoting Small hydro projects.
- 2.279 Shri.C.P. George, DYCE, KSEB Ltd (Rtd)** submitted that KSEB Ltd shall exit out of the DBFOO contracts if they are not viable.
- 2.280 Shri. B. Radhakrishnan, Steel Manufactures Association** stated that Lopsided Long Term Power Purchase Agreements shall be re-examined by KSEB Limited.
- 2.281 The HT &EHT Association** submitted that the fixed charges of different generators should be taken at the same level as the latest available actual fixed charges, without any escalation. If there is any variation it can be claimed in the truing up process. Further, the Association requested that the costs related to installation of ECS should be considered in the power purchase cost only when they are actually incurred and not on estimation basis, and may be recovered through the FSA mechanism for Variable Cost and True Up for Fixed Cost. The same principle to be adopted for cost related to fly ash utilisation also. The Association submitted that the energy charges also to be taken at the same level as the latest available actual energy charges, without any escalation.

The HT & EHT Association therefore submitted that, by not considering the in-built escalation factored by KSEB Ltd and not considering the estimated expenses on account of ECS and fly-ash, the cost of power purchase from CGS Stations reduces to Rs. 4069 crores for FY 2022-23 and Rs. 3999 Crore for FY 2026-27, as compared to the cost of Rs. 4443.55 Crore for FY 2022- 23 increasing to Rs. 5115.10 Crore for FY 2026-27, as projected by KSEB Ltd. KSEB Ltd's projections are higher by Rs. 4297 Crore over the Control Period as a whole, on this one aspect alone.

Power Purchase from thermal IPP'S through long-term contracts

The HT & EHT Association submitted that 2% reduction in Fixed Charges for each year of the Control Period may be considered as done by the Commission in the previous MYT Order. Here also, the additional cost considered towards installation of ECS may be considered as and when incurred and also that the energy charges of different generators should be taken at the same level as the latest available actual energy charges, without any escalation.

Power Purchase from thermal IPP'S through DBFOO contracts

Like in other cases, the HT & EHT Association requested not to consider the cost due to ECS and fly ash in the fixed charges. The charges due to variation in transmission losses have to be borne by KSEB Ltd, and have been considered

as projected by KSEB Ltd. The association submitted that the Commission shall have to verify this.

In case of the variable charge also, costs against ECS may not be considered now. The Association also opined that the charges due to variation in transmission losses have to be borne by KSEB Ltd and requested for verification of computation of KSEB Ltd. Further, as per Orders of the Commission, the rates for Jindal II, Jhabua II and JITPL have been limited to BALCO tariffs.

Power Purchase through Medium-term contracts

The HT & EHT Association has considered the power purchase through medium term contracts as projected by KSEB Ltd.

Power Purchase from Renewable Energy Sources

The HT & EHT Association submitted that these estimates of KSEB Ltd regarding purchase of RE appear reasonable and requested the Commission to verify the same based on recently discovered and adopted tariffs for similar projects.

Surplus Energy Sales by KSEB Ltd

The HT & EHT Association submitted that the energy requirement to be considered must be lower than that estimated by KSEB Ltd and hence the quantum of surplus has to be higher and the deficit to be lower. The Association submitted that the small deficits shall also be procured from the Power Exchanges. The Association proposed a conservative rate of Rs 450/kWh for purchase of short-term power.

Summary of power purchase

The total generation and power purchase costs estimated by the HT & EHT Association is lower and range between Rs. 8500 Crore to Rs. 9800 Crore, in comparison to KSEB Ltd's projection of cost ranging from Rs. 10,700 Crore to Rs. 13100 Crore over the Control Period. In terms of per unit cost, the Association has computed an average rate ranging from ~ Rs. 3.04/kWh, as compared to KSEB Ltd's projection ranging from Rs. 3.58/kWh to Rs. 3.99/kWh.

The HT & EHT Association requested to prudently evaluate the power purchase expenses projected by KSEB Ltd, based on the analysis submitted by the Association.

Opinion of the Commission

2.282 The Commission noted the suggestions and the same may appropriately be considered while determining the tariff of the consumers.

ARR & ERC -O&M expenses

2.283 InSDES submitted that the Commission is yet to dispose the truing up petition of KSEB Ltd for the FY 2018-19 based on which the O & M norms of KSEB Ltd is to be finalised. Further, employee strength is also to be finalised. Hence InSDES requested for an early disposal of these petitions.

2.284 KSEB Officers Association submitted that the O& M expenses proposed do not reflect the actual expenditure and decision on the petition submitted by KSEB Ltd on the employee cost is to be taken prior to finalising the O& M cost. The association submitted that the Operation and Maintenance Cost of SBU G varies from Rs 193.19 crores to Rs 308.02 crores. One of the problems noticed is that the base value taken by the Commission in the Tariff Regulations, 2021 is 135.51 crores. The association further submitted that under recovery of O&M is 45%. Hence, it was requested that the O & M norms need to be re-determined in order to overcome this. It was also pointed out that under O & M expenses of SBU – T an error has happened while determining the Transformer MVA for the year 2018-19. The actual MVA was 16645.9 but it was taken as 17378.8. When it comes to actual, 0.684 Lakh/ MVA has to be changed to 0.71 Lakh/MVA. This has to be addressed. It was pointed out that the O&M Expenses as per the norms are below the actual and may lead to under recovery of cost. Hence, it was requested to redetermine the O&M norms to recover the genuine O&M Cost. KSEB OA also submitted that 33KV System Construction including 33 KV new Substation and lines, augmentation works in 33 KV system etc are carried out by SBU T under RDSS Works. The O&M Expense of assets formed in SBU T under RDSS are not considered properly. The Commission may kindly provide the provision to account the same.

SBU- D & GFA Impact on ARR & ERC

KSEB OA submitted that the loss of potential grant in RDSS will have adverse impact on tariff due to poor project proposal plan for capitalisation.

It was suggested that normal development work shall be included in RDSS as the network development/strengthening component offers a grant of 60% from the Central Government. But the highly incentivized network development part (with a grant component of 60 %) was given very low priority by KSEB Ltd resulting in the following poor outcomes. The loss in grant due to deviation in project proportion alone is in the tune of Rs 1748 Crore. As the required network strengthening is loaded under the proposed Dyuthi 2 scheme which will be entirely passed through in ARR resulting in higher tariff to consumers. Due to skewed capitalisation of works under network strengthening in RDSS, around Rs 2811 crore in a single year (2024-25) rather than capitalising uniformly over years will adversely impact retail tariff.

Interest on Loan Capital

2.285 HT & EHT Association has considered the allowable interest on loan based on GFA addition considered by the Association based on the normative debt; equity ratio of 70:30. According to the Association, KSEB Ltd has claimed excess interest expenses of ₹736 Crores than computed by the Association.

Aggregate Revenue Requirement

2.286 The Association further submitted that as per data submitted by KSEB Ltd for determination of APPC for FY 2020-21, the generation cost for FY 2020-21 was Rs. 0.92/kWh, whereas the Association calculated the unit cost of generation as Rs 1.56 per unit for the FY 2016-27 based on the proposed ARR. Such a high increase in tariff of primarily hydro based generation should not be allowed.

According to the Association, consumers are not benefitted by all the huge investment proposed by KSEB LTD in SBU-G, as the generation quantum is miniscule compared to the investments being made, thereby resulting in a 70% increase in the generation tariff in 6 years.

HT & EHT Association submitted that SBU – G has claimed an excess ARR of Rs. 2101 Crore than that computed by the Association, based on prudent norms, over the Control Period. The effective generation tariff computed by the Association for SBU-G works out to around 69 paise/kWh for each year of the Control Period.

SBU-T

HT & EHT Association submitted that KSEB Ltd has considered the norms in Rs. Lakh/MVA higher than that specified in the Tariff Regulations, 2021. The Association stated that the O&M expenses for the Control Period are largely dependent on the addition to GFA approved. The Association calculated the average addition to GFA over the Control Period based on the average addition to GFA as claimed by KSEB Ltd for the 4-year period from FY 2017-18 to FY 2020-21, which works out to Rs. 427 Crore.

The Association claimed that they computed the revised allowable O&M expenses for SBU-T (including O&M of SLDC), in accordance with the norms specified in the KSERC MYT Regulations, 2021, and observed that the KSEB Ltd has claimed higher O&M expenses of Rs. 414 Crore than the allowable.

Depreciation

2.287 The HT & EHT Association submitted that KSEB Ltd has considered GFA addition which are yet to be approved by the Commission for computation of depreciation.

Comments of KSEB Ltd

2.288 It was submitted that depreciation has been estimated the as per the provisions in the Tariff Regulations, 2021 after considering the GFA addition based on the

capital investment proposed for the control period. It was further submitted that 2018-19 and year 2019-20 are affected by floods and FY 2020-21 was worst hit by Covid -19 pandemic and thus the investment during these years may be of lower side.

Opinion of the Commission

2.289 The Commission noted the comments of the HT&EHT Association and other stakeholders with regard to depreciation claimed in the petition for the MYT Period 2022-23 to 2026-27 for its three SBUs. The Commission also noted that KSEB Ltd claimed the depreciation for its SBU G, SBU T and SBU D for the GFA addition during the MYT period based on their huge capital investment plan. However, the Commission after a preliminary appraisal decided to consider a part of the capital investment plan proposed for the MYT period only for ARR and tariff determination. The GFA addition provisionally considered by the Commission is shown in Chapter III of this Order.

Interest Expense

2.290 The HT &EHT Association has computed the IoL considering the rate of interest, and GFA addition during the year as projected by the Association, as Rs. 816.32 Crore. Thus, according to the Association, KSEB Ltd has claimed excess amount under IoLoF Rs. 2058 Crore.

Interest on Working Capital (IoWC)

2.291 The HT & EHT Association submitted that the Commission vide Tariff Regulation, 2021 specified the applicable interest rate as 2% higher than the "External Benchmark-linked Lending Rate (EBLR) declared by SBI as on 1 April of the year. It was submitted that the EBLR has not changed. It was submitted that the Interest on Working Capital claimed by KSEB Ltd for its three SBUs are much higher than the norms specified in the Tariff Regulations 2021.

Opinion of the Commission

2.292 Commission noted the suggestion. Commission shall approve the Interest on Working Capital strictly as per the provisions of the Tariff Regulation 2021

ARR

2.293 The HT & EHT Association submitted that the ARR proposed by KSEB Ltd is exorbitant and KSEB Ltd has projected such values only to get approval for higher tariffs. The difference between ARR claimed by KSEB Ltd (SBU-T and SLDC combined) and ARR computed by the Association is Rs. 4507 Crore for SBU-T and Rs. 43 Crore for SLDC.

Transmission Losses

The HT & EHT Association submitted that KSEB Ltd has projected Transmission Losses ranging from 3.4% in FY 2022-23 to 3% in FY 2026-27 whereas the actual Transmission Losses in FY 2020-21 was 2.82%. KSEB Ltd has not provided any

basis or justification for claiming higher than actual Transmission losses. The Transmission Losses has to be lower while considering the investments made by the KSEB Ltd. The Association submitted that it considered the Transmission Losses for FY 2022-23 as 2.82%, and reducing by 0.1% annually to 2.42% in FY 2024-25 for calculation purpose and requested the Commission to approve the Transmission Losses for the Control Period after due prudence check.

Transmission & SLDC Charges

The HT & EHT Association submitted that KSEB Ltd has proposed more than double the prevailing Transmission Charges and hence to be rejected. The association has proposed ₹ 0.38/kWh as the transmission charges.

SBU-D

The HT & EHT Association submitted that there is no logical rationale for the asset addition considered by KSEB Ltd over the Control Period for computation of normative O&M expenses. KSEB Ltd (SBU-D) has claimed higher Employee and A&G expenses of Rs. 272 Crore than allowable as per the Regulations over the Control Period. Further, the employee expenses allowed as per the KSERC MYT Regulations, 2021 are themselves very, very high.

The Association submitted that the O&M expenses proposed by SBU-D are exorbitant and KSEB Ltd has projected such values only to get approval for higher tariffs.

Interest Expenses

The HT & EHT Association computed IoL as ₹1953.68 Crore and submitted that KSEB Ltd has claimed excess amount of Rs. 1214 Crore. The Association submitted that KSEB Ltd has projected such values only to get approval for higher tariffs.

Interest on Security Deposits

HT & EHT Association submitted that KSEB Ltd has increased the amount of security deposit despite the proposed installation of smart pre-payment meters. The Association also submitted that the Supply Code Regulations specify that the interest rate shall be equal to the RBI Bank Rate prevalent as on April 1-of the year. The RBI Bank rate is 4.25% and has been at the same level since May 22, 2021 and hence the same is applicable for calculating interest on security deposit.

The Association further submitted that the KSEB Ltd has claimed excess interest on SD amounting to ₹146 Crores over the Control Period.

Carrying Cost on Trued up Revenue Gaps

The HT & EHT Association expressed its view that carrying cost will have to be allowed on the amount of accumulated Revenue Gap deferred for recovery. The Association suggested that the recovery of revenue gap should not be included in ARR, but should be allowed as additional tariff in paise per unit which shall be

amortised directly against the approved revenue gap. Further, amortisation of Rs 3100 crore was approved in the previous Control Period from 2018-19 to 2021-22. However, as per the present petition this amortised amount is not deducted from the approved revenue gap. Instead, in all the years, KSEB Ltd is showing a revenue deficit and no amount could be amortised which means that the tariff revision given then was eaten away by increase in expenses. According to the Association, there are apparent deficiencies in including the amortisation of revenue gap in the ARR while determining the tariff as follows:

a. By including amortisation in the ARR, it will artificially increase the ARR. Since tariff is determined based on the revenue gap in the ARR, tariff will be high.

b. When actuals come, due to increase in expenses of other items, there will be revenue gap again and the amortisation will not materialise. This will result in a situation where consumers continue to pay carrying for every year on higher revenue gap.

c. If amortisation is allowed on a per unit basis, the amount collected can be accounted against the revenue gap itself and it will definitely reduce the revenue gap and hence the burden of carrying cost to consumers

d. Similar approach has been successfully implemented in Maharashtra for several Distribution Licensees on several occasions.

Comments of KSEB Ltd

2.295 KSEB Ltd submitted that they have sought for the carrying cost based on the regulations and enabling provisions as per the judgments of Honourable APTEL and the delay in submission of truing up petitions has no relevance on the carrying cost.

Non-Tariff Income

The HT & EHT Association submitted that KSEB Ltd has under-projected the NTI by Rs. 298 Crore over the Control Period.

T&D Losses and Energy Balance for the Control Period

2.296 HT&EHT Association submitted that considering the significant investments in smart pre-paid meters and distribution infrastructure improvement, there will certainly be a reduction in the distribution losses over the Control Period. However, the starting point for the Distribution Losses has been considered incorrectly by KSEB Ltd. KSEB Ltd has considered the overall T&D loss for FY 2022-23 as 11.28%, whereas the actual overall T&D losses reported by KSEB Ltd for FY 2020-21 itself in the FSA Petitions are 11.10%.

The Association further submitted that; the actual Distribution Losses in FY 2020-21 have been reported as 7.72% in the Audited Accounts of KSEB Ltd for FY 2020-21. Hence, the Association has proposed the Distribution Loss reduction trajectory from this loss level.

The revised Energy Balance and Power Purchase requirement computed by the Association, by considering the overall sales at the same level as projected by KSEB Ltd.

Shri.C.P. George, DYCE, KSEB Ltd (Rtd) suggested that norms shall be made prudent to increase the efficiency of KSEB Ltd.

Master Trust

2.297 HT &EHT Association submitted that KSEB Ltd had claimed ₹2039.50 Crore towards the principal repayment of Master Trust bond for all SBUs. The Association is of the view that the obligation to the principal repayment of the Master Trust has to be met by the State Government, as envisaged under original transfer scheme.

The Control Period of Tariff Regulations, 2021 commences from 01.04.2022 and hence, bonds issued to Master Trust from 01-04-2022 need only be covered under the provision. The reason put forward by the Association are (1) The payment issue of existing bonds is already addressed in the Tariff regulations 2014 & 2018 and (2) Repayment of bonds will be through additional cash flow from the increase in RoE resulted due to revaluation of assets. The Association submitted that the Commission has already addressed these issues in the Order dated 14.08.2014. It is submitted that the Government and consumers have already been paying for funds for Master Trust. The Association further requested before the Commission to disallow the principal repayment of Master Trust Bonds claimed by KSEB Ltd in the ARR and Tariff for the Control Period. The Association also submitted that additional contribution to Master Trust Bond to meet unfunded liabilities towards Pension liability, gratuity liability, leave liability of pensioners and personnel transferred to KSEB Ltd.

The HT & EHT Association submitted that as per the Tariff Regulations 2021, KSEB Ltd has to file a petition for approval of contribution to Master Trust, with complete details after obtaining approval of KSEB Ltd and the State Government. The Regulations allow recovery of such expenses incurred by KSEB Ltd and not any provisional amounts. The Association requested to disallow the claim and to advise the State Government to take care of this claim, in order to avoid undue burden on the consumers.

2.298 KSEB Seniors Forum submitted that KSEB Ltd is yet to finalize a concrete proposal for the deficit in pension Master Trust and suggested that the Commission to give firm directions to KSEB Ltd in this matter.

2.299 Shri James Vadakkan (Managing Trustee, Centre for Consumer Education Pala), submitted that KSEB Ltd is claiming interest on the bond issued by KSEB Ltd of Rs 8144 Crores along with principal repayment in the present context period. As per the latest actuarial valuation report as on 31.03.2021, the total pension liabilities of the personnel transferred to the KSEB Ltd as on 31.03.2021 is estimated are Rs 23,121.47 crore.

Regulation 30(3) of Kerala State Regulatory Commission (Terms & Conditions for Determination of Tariff) Regulations, 2021 mandates KSEB Ltd to propose provisional amount in the MYT petition for the control period from 2022-23 to 2026-27. KSEB Ltd, in line with the Tariff Regulations, is seeking provisional approval of Rs 400 crore annually. He pointed out that there are studies that indicate the employee to bear the cost of pension either through reduced wages or through contributions. KSEB Ltd is to file separate petition after getting approval for State Government in this regard.

KSEB Officers Association submitted that KSEB Ltd has only considered an adhoc amount in the petition. The Association requested the Commission to direct KSEB Ltd to find out the actual unfunded liability and get it approved by the Board of Directors and Government and submit before the Commission.

General Secretary, KSE Board Pensioners' Association submitted that as per the tripartite agreement, on 1st August 2014, with the GOK and recognized organizations of employees of KSEB Ltd a trust named Master Trust was constituted under provisions of Indian Trust Act 1882. The expenditure on account of pension, terminal benefit, Dearness Relief due to the employees as on the date of formation of KSEB Ltd (31-10-2013) coming under the statutory Pension Scheme and the pension and DR to the pensioners of the previous KSEB Ltd were to be met from the Master Trust. The obligations from the part of GOK and KSEB Ltd for raising funds for the Master Trust to meet the pension and other dues to retired employees envisaged in the tripartite agreement and the Act are not yet fulfilled. As a result, the pension and other benefits to retired employees are being paid from the revenue of KSEB Ltd. In the order approving the ARR and ERC of KSEB Ltd for the years 2018 to 2022, under Chapter 7, Directives, in para (5) the Commission has given four directions to KSEB Ltd regarding this matter. These have not been complied with till date and K.S.E. Board Pensioner's Association requested the Commission to direct KSEB Ltd to comply with the provisions of the Tripartite Agreement and make the master trust fully functional.

InSDES submitted that the actuarial valuation amounts up to 2015 is ₹12419 Crores, later it was revised to ₹ 23121.47 Crores with an increase of ₹ 10702.47 Crores. The provision for the Control Period is only ₹ 400 Crores per annum, which is quite inadequate to cover the liability. The difference between actuarial amounts arrived in 2015 and 2021 is mainly due to the lower discounting factor taken for the calculations in 2021, compared to 2015. The relevance of this is to be examined as the financing arrangements based on the actuarial valuation in 2015 has already been made. The adequacy of the provision of Rs 400 crore per annum given in the ARR shall be examined considering the above details. InSDES proposed that the amount collected through the regulatory charge can be utilised for bridging the dues payable by KSEB Ltd to the pension master trust. KSEB Ltd is yet to finalize a concrete proposal for meeting the burgeoning deficit in pension master trust. InSDES, requested the Commission to issue direction with firm timelines to KSEB Ltd in this regard.

E Babu Rajendran, Convener, Friends of Electricity Employees and Consumers (FEEC) submitted that during the period from 01-04-2017 to 31-03-2021 i.e since the Master Trust's inception, about Rs.9781 crore is pending, which is mainly due to the non-repayment of the bond, interest, non-receipt of the fund from the Government and the additional amount that has to be received as per the Order of the Commission. It was found that only Rs.6014 crores have been paid for pension and the balance amount of Rs.3767 crores with a penalty of 24 % have to be paid by KSEB Ltd on the Master trust. FEEC also expressed concern on the inadequacy of the amount claimed.

The capital and interest of the bond comes to around Rs.510 Crores which the KSEB Ltd has to pay additionally to the Master Trust. He stated that the amount allotted in the ARR is Rs.400 Crores which need to be increased to Rs.500 Crores.

The bonds on Government share of Rs 3000 Cr may be for 10years at the rate of 6.84 %. Government repayments on existing bonds will end at 2026-27. The repayment of new bonds should begin after that.

FEEC therefore requested that the Commission may direct KSEB Ltd to obtain approval to keep Rs.500 Crores for next 10 years from the amount that has to be paid to the Government as electricity duty.

Comments of KSEB Ltd

2.300 KSEB Ltd submitted that as per Regulation 34 the amounts required for the payment of interest on the bonds issued to the Master Trust and for the principal repayment of such bonds shall be reckoned for computation of Aggregate Revenue Requirement and for truing up of accounts. It was submitted that the claim in the petition for approval of ARR is strictly in line with the Tariff Regulation, 2021 and therefore the arguments of the objector may be rejected summarily.

Opinion of the Commission

2.301 Commission noted the suggestion. The matter regarding Master Trust has been deliberated in detail in the concerned chapters of SBU-G, SBU-T and SBU-D of this Order

Rate of Interest on Loan

2.302 **HT & EHT Association** submitted no calculations for actual interest rate have been provided by KSEB Ltd in the Petition. Hence the Association submitted that the Commission may approve interest on loan after verifying the actual interest rate on loans obtained by KSEB Ltd based on documentary evidence, and ensuring that no penal interest has been considered by KSEB Ltd while computing the average interest rate.

Comments of KSEB Ltd

2.303 KSEB Ltd submitted that the weighted average interest rate for the year 2020-21 has been considered in the MYT petition from 2022-23 to 2026-27 as the latest available audited accounts was for the year 2020-21.

Opinion of the Commission

2.304 Commission has noted the comments and interest shall be allowed only as per the provisions of the Tariff Regulations 2021.

Return on Equity

2.305 HT & EHT Association submitted that, the equity of Rs 3499 Crore and the RoE of Rs. 489.86 Crore claimed by KSEB Ltd is incorrect. The Consultant appointed by the Commission had suggested a lower value of ₹283.91 Crores or at the most ₹1553 Crore. The Association further submitted that, Hon'ble APTEL in its Judgment specifically considered the provisions of the KSERC Tariff Regulations, 2014 and the Second Transfer Scheme and interpreted that the Equity Base should necessarily be considered as advised by the Consultant appointed by the Commission. Association further submitted that the Hon'ble APTEL has directed the Hon'ble KSERC to allow 14% rate of return on the equity amount recommended by the Consultant.

Comments of KSEB Ltd

2.306 It is submitted that the argument is squarely against the relevant provision contained in the Tariff Regulation, 2021 for allowing RoE during the control period from 2022-23 to 2026-27. Regulation 34 (ii) explicitly allows RoE on the equity notified by the Government of Kerala u/s 131 of the Electricity Act, 2003. It was further submitted that the re-vested Balance sheet of KSEBL in accordance with the statutory Transfer scheme contains an amount of Rs.3499 Cr as Government equity in KSEBL. Further, it has also been ordered by the Government of Kerala that the additional equity contribution over the existing equity of Rs. 1553 Cr has been through cash infusion and all procedural aspects like issuance of share certificate etc were duly complied with and ascertained that they are eligible for RoE as specified in the Tariff Regulations 2021.

Opinion of the Commission

2.307 The Commission in the Tariff Regulations 2021 has clearly specified the methodology to be adopted for computation of RoE. As per Regulation 34 of the Tariff Regulations 2021, the RoE eligible for KSEB Ltd shall be based on the re-vesting procedures.

Capital Expenditure

2.308 Commission noted that though it had decided to apprise the Capex of KSEB Ltd separately through public consultation process including public hearings many

stake have offered their comments on the capital investment plan of KSEB Ltd for the control period from 2022-23 to 2026-27.

The Commission clarifies that the Commission will be conducting the hearing on the capital expenditure proposed by KSEB Ltd for SBU G, SBU-T and SBU-D and the matter will be appraised separately and the Commission may look into the suggestions at the time of appraising the Capital Investment of KSEB Ltd

Chapter-3

Preliminary appraisal of the Capital Investment proposed by KSEB Ltd for the MYT period from 2022-23 to 2026-27

- 3.1 KSEB Ltd, along with the petition for approval of ARR, ERC and Tariff petition, has also filed the 'Capital Investment Plan' for their Strategic Business Units (SBU's) Generation, Transmission and Distribution, and for the assets put in use in each of the above SBUs, during the control period for approving the interest on capital liabilities, depreciation and O&M expenses of the SBUs. The summary of the total GFA addition claimed by the KSEB Ltd for the five-year MYT period from 2022-23 to 2026-27 is given below.

Table 3.1

KSEB Ltd petition- GFA addition proposed for the MYT period from 2022-23 to 2016-27

Functional area	2022-23	2023-24	2024-25	2025-26	2026-27	Total
	(Rs. Cr)	(Rs. Cr)	(Rs. Cr)	(Rs. Cr)	(Rs. Cr)	(Rs. Cr)
SBU-G	1153.86	729.20	318.83	883.47	1443.28	4528.63
SBU-T	1605.52	2037.04	1779.72	1721.149	2067.18	9210.61
SBU-D	2351.83	4323.53	7120.60	1522.04	1415.03	16733.03
Total	5111.21	7089.77	9219.15	4126.65	4925.49	30472.27

- 3.2 GFA addition proposed as above includes the asset addition of new capital works proposed during the MYT period from 2022-23 to 2026-27 and also the asset addition of ongoing projects which started during the previous MYT period, but expected to commission during the next control period from 2022-23 to 2026-27.
- 3.3 The asset addition of new projects proposed during the MYT period from 2022-23 to 2026-27 is given below.

Table 3.2

KSEB petition- GFA addition of New projects

Functional area	2022-23	2023-24	2024-25	2025-26	2026-27	Total
	(Rs. Cr)	(Rs. Cr)	(Rs. Cr)	(Rs. Cr)	(Rs. Cr)	(Rs. Cr)
SBU-G	94.13	301.53	229.01	601.32	1443.28	2669.26
SBU-T	430.37	1271.5	1562.02	1156.96	2067.18	6488.03
SBU-D	2351.83	4323.53	7120.60	1522.04	1415.03	16733.03
Total	2876.33	5896.56	8911.63	3280.32	4925.49	25890.32

- 3.4 The asset addition of ongoing projects which started during previous MYT period is given below.

Table 3.3
KSEB petition- GFA addition of ongoing projects

Functional area	2022-23	2023-24	2024-25	2025-26	2026-27	Total
	(Rs. Cr)	(Rs. Cr)	(Rs. Cr)	(Rs. Cr)	(Rs. Cr)	(Rs. Cr)
SBU-G	1059.73	427.67	89.82	282.15	0.00	1859.37
SBU-T	1175.15	765.54	217.7	564.19	0	2722.58
SBU-D						0.00
Total	2234.88	1193.21	307.52	846.34	0.00	4581.95

- 3.5 The summary of the asset addition proposed to be funded through consumer contribution and grants during the said period from 2022-23 to 2026-27 is given below.

Table 3.4
KSEB petition- GFA addition funded through consumer contribution and grants

Functional area	2022-23	2023-24	2024-25	2025-26	2026-27	Total
	(Rs. Cr)	(Rs. Cr)	(Rs. Cr)	(Rs. Cr)	(Rs. Cr)	(Rs. Cr)
SBU-G						
SBU-T	160.16	402.83	236.78	3.4	60.91	864.08
SBU-D	1649.96	3645.00	5252.65	200.00	200.00	10947.61
Total	1810.12	4047.83	5489.43	203.40	260.91	11811.69

- 3.6 The summary of the asset addition proposed to be executed by KSEB Ltd through its own fund is given below.

Table 3.5
KSEB petition- GFA addition by KSEB Ltd through its own fund

Functional area	KSEB Ltd					Total
	2022-23	2023-24	2024-25	2025-26	2026-27	
	(Rs. Cr)	(Rs. Cr)	(Rs. Cr)	(Rs. Cr)	(Rs. Cr)	(Rs. Cr)
SBU-G	1153.86	729.20	318.83	883.47	1443.28	4528.63
SBU-T	1445.36	1634.21	1542.94	1717.75	2006.27	8346.53
SBU-D	701.87	678.53	1867.95	1322.04	1215.03	5785.42
Total	3301.09	3041.94	3729.72	3923.25	4664.58	18660.58

- 3.7 The Commission has conducted a preliminary examination of the details submitted by KSEB Ltd and noted that, the total Gross Fixed Assets of KSEB Ltd as on 31.03.2021 is only about Rs.24541.64 crore excluding the cost of re-valued assets. As against the same, the asset addition proposed by KSEB Ltd in the next MYT period from 2022-23 to 2026-27 is Rs 30472.27 crore. The GFA addition proposed is 124% higher than the GFA addition of KSEB / KSEB Ltd since its existence in the year 1957 till 31.03.2018.

3.8 Considering the huge quantum of the capital investment proposed by KSEB Ltd and to appraise its impact on electricity tariff, the Commission has decided to appraise the proposal of the capital investment of KSEB Ltd separately, through public consultation including public hearing. However, for the limited purpose of estimating the interest liabilities, depreciation and O&M expenses of the important assets proposed/likely added during the MYT period 2022-23 to 2026-27, the Commission provisionally estimate the likely asset addition during the next MYT period as follows.

GFA addition of SBU-Generation

3.9 The summary of the GFA addition of SBU-G claimed by KSEB Ltd. is given below.

Table 3.6
KSEBL petition- summary of asset addition of SBU-G for the MYT period 2022-23 to 2026-27

GFA Addition (Rs. Cr) of New Proposals						
Particulars	2022-23	2023-24	2024-25	2025-26	2026-27	TOTAL
	(Rs. Cr)	(Rs. Cr)	(Rs. Cr)	(Rs. Cr)	(Rs. Cr)	(Rs. Cr)
NEW HYDEL PROJECTS	0.00	0.00	0.00	408.00	1279.73	1687.73
NEW SOLAR PROJECTS	13.04	22.75	8.25			44.04
NEW RENOVATION/REPLACEMENT WORK (MAJOR WORK -5 Cr AND ABOVE)	19.31	105.70	153.35	134.50	97.50	510.36
NEW RENOVATION/REPLACEMENT WORK (LESS THAN 5 Cr)	43.08	46.03	44.86	26.22	33.45	193.63
ADVANCED ENERGY STORAGE TECHNOLOGY		105.00	0.00	0.00	0.00	105.00
DAM REHABILITATION	18.70	22.05	22.55	32.60	32.60	128.50
TOTAL Rs.Cr	94.13	301.53	229.01	601.32	1443.28	2669.26
GFA Addition (Rs. Cr) of Ongoing Project						
	2022-23	2023-24	2024-25	2025-26	2026-27	TOTAL
Ongoing Project	1059.73	427.67	89.82	282.15		
Total GFA addition (Rs. Cr.)	1153.86	729.20	318.83	883.47	1443.28	4528.63

New Hydel Projects

3.10 KSEB Ltd has proposed 14 new hydel projects during the MYT period from 2022-23 to 2026-27, as detailed below.

Table-3.7
KSEBL petition- Capital outlay of new hydel projects

No	Name of Scheme	Commencement	Completion	Project Cost	Capacity		Cost/ MW
				(Rs Cr)	MW	MU	(Rs. Cr/ MW)
A	NEW HYDEL PROJECTS						
1	Upper Sengulam	2022-23	2025-26	316.00	24.00	53.22	13.17

No	Name of Scheme	Commencement	Completion	Project Cost	Capacity		Cost/ MW
				(Rs Cr)	MW	MU	(Rs. Cr/ MW)
2	Peechad	2022-23	2026-27	27.64	3.00	7.74	9.21
3	Western Kallar	2022-23	2026-27	51.24	5.00	17.40	10.25
4	Ladrum	2022-23	2026-27	48.81	3.50	12.13	13.95
5	Maramala SHEP	2022-23	2026-27	74.28	7.00	23.02	10.61
6	Pasukkadavu SHEP	2022-23	2026-27	51.00	4.00	10.34	12.75
7	Valanthode SHEP	2022-23	2026-27	69.11	7.50	17.36	9.21
8	Marippuzha SHEP	2022-23	2026-27	71.95	6.00	14.84	11.99
9	Chembukadavu III SHEP	2022-23	2026-27	64.11	7.50	16.65	8.55
10	Chathankottunada SHEP - Stage I	2022-23	2026-27	71.59	5.00	12.06	14.32
11	Olikkal SHEP	2022-23	2025-26	46.00	5.00	10.26	9.20
12	Poovaramthodu SHEP	2022-23	2025-26	46.00	3.00	5.88	15.33
13	Mankulam HE Project	2022-23	2026-27	750.00	40.00	102.85	18.75
14	Idukki (golden Jubilee) Extension Scheme	2023-24	2028-29	3062.08	800.00	1301.00	3.83
	Total			4749.81	920.50	1604.75	

- 3.11 On preliminary examination of the new hydel projects proposed by KSEB Ltd as above, the Commission noted the following.
- (1) Idukki (golden jubilee) Extension Scheme (800MW) with the total project cost of Rs 3062.08 crore is the major hydel project proposed by KSEB Ltd in the MYT period from 2022-23 to 2026-27. However, KSEB Ltd yet to submit the DPR, cost benefit analysis and other relevant details for appraising the project as per the Annexure-4 of the Tariff Regulations 2021.
 - (2) Out of the balance 13 projects, 10 projects are scheduled for declaring COD in the year 2026-27, i.e., in the last year of the MYT period. But as per the past experience and track record, there is remote chances for completion of the projects as scheduled. **Hence the Commission has not considered the asset addition of these project during the MYT period from 2022-23 to 2026-27.**
 - (3) Out of the balance three small hydel projects scheduled for declaring COD in the year 2025-26, the land acquisition of the Upper Sengulam SHP (24 MW) is yet to be completed. Hence there is remote chance to complete the project as scheduled **and therefore the asset addition of Upper Sengulam also not considered in the MYT period from 2022-23 to 2026-27.**
 - (4) The other two SHPs, Olikkal SHP (5MW) and Poovaramthodu SHP (3MW) are scheduled for declaring COD in the year 2025-26. Though there is very rare chance for COD of the project as scheduled by KSEB Ltd in the year 2025-26, **however the Commission has considered the COD of the project in the year 2026-27.**

The Commission further noted that, the capital cost of the Olikkal SHP is Rs.9.20 crore /MW and that of Poovaramthodu SHP is Rs.15.33 crore/MW. However, as per the Regulations 53 of the KSERC (Renewable Energy & Net Metering) Regulations, 2020, the normative capital cost of SHP having project size below 5 MW is Rs 7.79 crore per MW. For the regulatory purpose including tariff determination, the Commission can consider the capital cost at Rs 7.79 crore per MW only at this stage for assessing the GFA addition provisionally for the control period for GFA addition. KSEB Ltd may met the balance cost by availing subsidy/ CFA from MNRE, Gol or State Government. However, KSEB Ltd is permitted to file a proper petition after declaring COD of the project, complete details of the project including original cost, cost of completion, time overrun, cost overrun etc. The Commission may take appropriate decision on such petition through public consultation including public hearings.

- (5) Accordingly, the Commission considered the GFA addition of New projects as below.

Table 3.8
GFA addition of New hydel projects provisionally considered for ARR

No	Name of Scheme	Commencement	Completion	KSEBL petition			KSERC-GFA addition-provisional		
				Project Cost	Capacity		Cost/ MW	2026-27	
				(Rs Cr)	MW	MU	(Rs. Cr/ MW)	(Rs.Cr)	
A	NEW HYDEL PROJECTS								
1	Upper Sengulam	2022-23	2025-26	316.00	24.00	53.22	13.17	0.00	
2	Peechad	2022-23	2026-27	27.64	3.00	7.74	9.21	0.00	
3	Western Kallar	2022-23	2026-27	51.24	5.00	17.40	10.25	0.00	
4	Ladrum	2022-23	2026-27	48.81	3.50	12.13	13.95	0.00	
5	Maramala SHEP	2022-23	2026-27	74.28	7.00	23.02	10.61	0.00	
6	Pasukkadavu SHEP	2022-23	2026-27	51.00	4.00	10.34	12.75	0.00	
7	Valanthode SHEP	2022-23	2026-27	69.11	7.50	17.36	9.21	0.00	
8	Marippuzha SHEP	2022-23	2026-27	71.95	6.00	14.84	11.99	0.00	
9	Chembukadavu III SHEP	2022-23	2026-27	64.11	7.50	16.65	8.55	0.00	
10	Chathankottunada SHEP - Stage I	2022-23	2026-27	71.59	5.00	12.06	14.32	0.00	
11	Olikkal SHEP	2022-23	2025-26	46.00	5.00	10.26	9.20	38.95	
12	Poovaramthodu SHEP	2022-23	2025-26	46.00	3.00	5.88	15.33	23.37	
13	Mankulam HE Project	2022-23	2026-27	750.00	40.00	102.85	18.75	0.00	
14	Idukki (golden Jubilee) Extension Scheme	2023-24	2028-29	3062.08	800.00	1301.00	3.83	0.00	
	Total			4749.81	920.50	1604.75		62.32	

New Solar projects

3.12 KSEB Ltd has proposed the following four new solar projects during the MYT period from 2022-23 to 2026-27.

Table 3.9
KSEB Petition- New solar project

No	Name of Scheme	Commencement	Completion	Project Cost		Capacity	
				(Rs Cr)	Cost/MW (Rs. Cr/MW)	MW	MU
B	NEW SOLAR PROJECTS						
1	Ground mounted solar project at Ettumanoor	2022-23	2022-23	6.69	6.69	1.00	1.31
2	Ground mounted solar project at Nenmara	2022-23	2022-23	6.35	4.23	1.50	1.8
3	PM KUSUM - Component C (5 MW ground & 0.99 MW Roof)	2022-23	2023-24	22.75	3.80	5.99	7.87
4	Soura Kerala Model	2022-23	2024-25	8.25	2.75	3.00	4.99
	Total			44.04	3.83	11.49	15.97

3.13 The capital cost of the new solar projects ranges from Rs 2.75 crore/MW to Rs.6.69 crore per MW. The average cost of installation of the solar projects is Rs 3.83/MW. The normative capital cost of Solar projects specified in the RE Regulations 2020 is Rs 4.00 crore per MW only. Since average project cost of Solar project, Rs.3.83 crore per MW is less than the normative capital cost of Rs 4.00 crore per MW, **the Commission decided to consider provisionally the capital cost of New Solar projects as proposed by KSEB Ltd.**

New Renovation/ replacement work

3.14 KSEB Ltd proposed the following schemes with a capital outlay of Rs 5.00 crore under this head. The details are given below.

Table 3.10
New renovation and replacement work

No	Name of Scheme	Commencement	Completion	Project Cost	2022-23	2023-24	2024-25	2025-26	2026-27
				(Rs Cr)	(Rs. Cr)	(Rs Cr)	(Rs Cr)	(Rs Cr)	(Rs Cr)
C	NEW RENOVATION/REPLACEMENT WORK (MAJOR WORK -5 Cr AND ABOVE)								
1	Rectification/Replacement of Penstock, butterfly valves and allied works at Sengulam HEP	2023-24	2024-25	97.00			97.000		
2	Sabarigiri HEP stator winding replacement for Generators	2022-23	2025-26	110.50				110.500	
3	Sabarigiri HEP Shaft replacement	2022-23	2023-24	16.00		16.00			
4	Sabarigiri U#4 revamping	2022-23	2022-23	5.00	5.00				
5	Sabarigiri renovation of control system and runners	2025-26	2026-27	57.50					57.50

No	Name of Scheme	Commencement	Completion	Project Cost	2022-23	2023-24	2024-25	2025-26	2026-27
				(Rs Cr)	(Rs. Cr)	(Rs Cr)	(Rs Cr)	(Rs Cr)	(Rs Cr)
6	Moozhiyar Additional Power House - preliminary study and preliminary work	2022-23	2026-27	5.00					5.00
7	110kV feeder bay & Transformer replacement at sabarigiri Power House	2025-26	2025-26	9.00				9.00	
8	Design, Engineering , supply , Erection and Commissioning of 2 Nos of new Pressure Release Valve (PRVs) at Panniar HEP	2022-23	2022-23	8.81	8.81				
9	Renovation of Governor system at KAKKAD Power Station	2023-24	2023-24	6.00		6.00			
10	KDPP LNG Conversion - Preliminary study and preliminary works	2022-23	2026-27	5.00					5.00
11	110/220 kV GIS Switching station at KHEP	2026-27	2027-28	40.00					
12	Refurbishment of MIV of first stage machines at Idukki HEP	2022-23	2023-24	6.00		6.00			
13	Revamping of KSEBLcolony Moolamattomby providing new housing complex with modern amenities Phase I & II	2022-23	2023-24	10.53		10.53			
14	RLA Study of IInd stage machines at Idukki Power Station	2022-23	2022-23	5.50	5.50				
15	Purchase of spare runner for Stage I Idukki HEP	2023-24	2023-24	14.00		14.00			
16	Purchase of new 6no.s of transformers at Idukki HEP	2025-26	2026-27	30.00					30.00
18	Updation of Auto sequenser and implementation of SCADA system including SAS at LP	2022-23	2024-25	5.00			5.00		
19	Renovation of Governor system at LP	2022-23	2024-25	9.00			9.00		
20	Generator Transformer purchase at Sholayar Power House	2022-23	2024-25	7.50			7.50		
21	Replacment of Butterfly valves (4 nos) at Porigalkuthu Power House	2022-23	2025-26	6.00				6.00	
22	Penstock renovation at Porigalkuthu Power House	2025-26	2025-26	9.00				9.00	
23	Pallivasal Hydro Electric project Penstock replacement	2022-23	2023-24	47.67		47.67			
24	Construction of new wind farm at Kanjikode /Stage 1	2023-24	2024-25	34.85			34.85		
25	KTR strengthening of Canal work	2023-24	2023-24	5.50		5.50			
	Totl			550.36	19.31	105.70	153.35	134.50	97.50

3.15 The Commission noted the proposal of KSEB Ltd. The Commission may approve the scheme only after detailed appraisal of the projects as per the provisions of the Tariff Regulation, 2021.

However, for the purposes of estimating the revenue requirement of the licensee, the Commission may provisionally consider 80% of the total GFA addition proposed by KSEB Ltd in the MYT period from 2022-23 to 2026-27 as GFA addition under this head.

Accordingly, the GFA addition of renovation and modernisation works provisionally considered for tariff determination is given below.

Table 3.11
GFA addition of New renovation and replacement work (Schemes with capital cost more than 5.00 crore)

	KSEBL petition (Rs. Cr)						KSERC provisional approval (Rs.Cr)					
	2022-23	2023-24	2024-25	2025-26	2026-27	Total	2022-23	2023-24	2024-25	2025-26	2026-27	Total
New renovation / replacement work (Major work - Rs 5.00 crore and above)	19.31	105.70	153.35	134.50	97.50	510.36	15.45	84.56	122.68	107.60	78.00	408.29

New Renovation/ Replacement work less than Rs 5.00 crore

3.16 KSEB Ltd has proposed a total outlay of Rs.193.63 crore for capital nature of works under renovation/ replacement under various schemes of (about 470 schemes) etc having scheme cost less than Rs.5.00 crore. Since these schemes/ works are essential works, **the Commission provisionally consider the proposal as part of GFA addition for tariff determination.** The details are given below.

Table 3.12
GFA addition of New renovation and replacement work (with capital cost less than 5 crore)

	KSEBL petition (Rs. Cr)						KSERC provisional approval (Rs. Cr)					
	2022-23	2023-24	2024-25	2025-26	2026-27	Total	2022-23	2023-24	2024-25	2025-26	2026-27	Total
New renovation / replacement work (less than Rs 5.00 crore)	57.01	40.96	35.40	30.36	29.91	193.63	57.01	40.96	35.40	30.36	29.91	193.63

Advance Energy Storage Technology

3.17 KSEB Ltd submitted that, a wide array of storage technologies has been developed so that the grid can meet everyday energy needs. Energy storage systems provide a wide array of technological approaches for managing the power supply in order to create a more resilient energy infrastructure and bring cost savings to utilities and consumers. The Advanced energy storage technology have divided them into five main categories such as Batteries, Thermal, Mechanical Storage, Hydrogen and Pumped Storage. The total capital outlay proposed by KSEB Ltd under this head is given below.

Table 3.13
Capital outlay of Advanced Storage Technology

No	Name of Scheme	Commencement	Completion	Project Cost	Capacity	
				(Rs Cr)	MW	MWH
E	ADVANCED ENERGY STORAGE TECHNOLOGY					
	Grid Scale Battery Storage System (BSES)	2022-23	2023-24	105.00	10	50

- 3.18 The Commission noted the proposal of KSEB Ltd. KSEB Ltd is yet to submit the DPR of the project and its cost benefit analysis. Further, Kerala is having number of large storage hydro projects, the requirements of such battery storage schemes have to be appraised before the Commission in detail and to get approval before proceeding into the project. With this observation, ***the Commission not consider the investment proposal of 'advance energy storage technology at this stage'.***

Dam Rehabilitation

- 3.19 KSEB Ltd submitted that the objective of Dam rehabilitation work is to improve the safety, Operational performance and life extension of Dam. KSEB Ltd is executing work under DRIP project which is a Government of India project, with financial assistance from the World Bank. KSEB Ltd classified the "The Dam safety" works under the following five parts.

- (1) **Structural Rehabilitation Works** – It includes the strengthening of Dam, replacement of valves, etc. at various dam site
- (2) **Non-Structural Measures** – it includes implementation of Integrated Reservoir Operation, Installation of Early Warning System, Integrated Reservoir Operation, Installation of Automatic Weather Station etc. at various dam site.
- (3) **Basic Facilities Enhancement** – It includes procurement of survey equipment, construction of Access Road etc.
- (4) **Instrumentation, SCADA, Surveillance system** – It includes procurement of Installation of Accelerographs, Installation of Inflow forecasting & Early warning system etc.
- (5) **Others** - It includes Hydrographic Study, Geophysical Investigation, Site specific seismic parameter estimation, Geological studies, other investigations etc.

The total capital outlay of Dam rehabilitation works is given below.

Table 3.14
Capital outlay of Dam Safety works

No	Name of Scheme	Commencement	Completion	Project Cost
				(Rs Cr)
F	DAM REHABILITATION			
	Dam Safety work	2022-23	2026-27	128.50

- 3.20 The Commission noted the proposal of KSEB Ltd, and noted that the proposed works are for strengthening of the dam and allied works required for smooth operation of the dam. Hence, ***the Commission provisionally consider the scheme and cost proposed by KSEB Ltd under Dam Rehabilitation work for the purpose of determination of ARR.***

Asset addition of ongoing Schemes

- 3.21 The details of the ongoing schemes, which commenced in the previous MYT period and its capital outlay is detailed below.

Table 3.15
Details of ongoing projects started commencement in the previous MYT periods

No	Name of Scheme	Completion-	Total Project Cost	Capacity	
			(Rs Cr)	MW	MU
G	ON GOING HYDEL PROJECTS				
1	Boothathenkettu	2022-23	244.24	24.00	83.50
2	Porigalkuthu SHEP	2021-22	159.19	24.00	45.02
3	Thottiyar HES	2022-23	234.97	40.00	99.00
4	Sengulam Aug. Scheme	2025-26	142.53		85.00
5	Pallivasal Ext Scheme	2022-23	559.03	60.00	153.90
	ON GOING HYDEL PROJECTS (PROPOSED DURING MYT 18 CONTROL PERIOD)				
6	Chinnar	2023-24	210.70	24.00	76.45
7	Peruvannamoozhi	2023-24	114.22	6.00	24.70
8	Pazhassi Sagar	2023-24	102.75	7.50	25.16
9	Anakkayam	2025-26	139.62	7.50	22.83
	Sub Total				
H	ON GOING SOLAR PROJECTS				
1	Agali	2020-21	5.37		
2	Brahamapuram	2022-23	21.49	4.00	5.61
3	Kanjikkode	2021-22	16.11	3.00	4.20
I	ON GOING R&M PROJECTS				
1	Kuttiyadi RMU	2024-25	89.82	7.50	272.80

- 3.22 The Commission has decided that, considering the huge delay of more than 15 years, the asset addition of Pallivasal Extension Scheme shall be appraised separately, duly considering the cost of completion, time overrun, cost overrun and other relevant factors. For appraising the same, KSEB Ltd shall file a separate petition with all relevant details including original project cost, original schedule of completion, cost of completion, time overrun, cost overrun, the increase in capital cost due to time and cost overrun etc. Till such time, ***the Commission shall not consider the GFA addition of Pallivasal Ext Scheme (60MW).***

3.23 As per the Regulation 53 of the KSERC (Renewable Energy and Net metering) Regulations, 2020 (herein after referred as RE Regulations, 2020), the normative capital cost of SHP having capacity less than 5 MW is Rs.7.79 crore per MW and the same for SHP having capacity 5MW to 25MW is Rs 7.07 crore per MW. The Commission noted that, some of the small hydel projects, the actual cost per MW is much higher than the norms specified in the RE Regulations, 2020. **Hence Commission decided to limit the capital cost of such projects at the normative capital cost specified by the Commission.**

Further the normative capital cost of solar projects specified in the RE Regulations, 2020 is Rs 4.00 crore per MW as against Rs 5.37 crore per MW claimed by KSEB Ltd. **The Commission decided to limit the capital cost of Solar project also at the norms specified by the Commission in the RE Regulations, 2020.**

3.24 Accordingly, the Commission provisionally estimated the asset addition of ongoing projects for the purposes of ARR is given below.

Table 3.16
Ongoing projects- GFA addition provisionally considered for estimating ARR

No	Name of Scheme	KSEB Ltd petition					KSERC- Asset addition of ongoing projects					Total
		Target year of completion	Total Project Cost	Cost per MW	Capacity		2022-23	2023-24	2024-25	2025-26	2026-27	
			(Rs Cr)	(Rs/MW)	MW	MU	(Rs. Cr)	(Rs. Cr)	(Rs. Cr)	(Rs. Cr)	(Rs. Cr)	
G	ON GOING HYDEL PROJECTS											
1	Boothathenkettu	2022-23	244.24	10.18	24.00	83.50	169.68					169.68
2	Porigalkuthu SHEP	2021-22	159.19	6.63	24.00	45.02	159.19					159.19
3	Thottiyar HES	2022-23	234.97	5.87	40.00	99.00	234.97					234.97
4	Sengulam Aug. Scheme	2025-26	142.53			85.00				142.53		142.53
5	Pallivasal Ext Scheme	2022-23	559.03	9.32	60.00	153.90						0.00
												0.00
	ON GOING HYDEL PROJECTS (PROPOSED DURING MYT 18 CONTROL PERIOD)											0.00
6	Chinnar	2023-24	210.70	8.78	24.00	76.45		169.68				169.68
7	Peruvannamoozhi	2023-24	114.22	19.04	6.00	24.70		42.42				42.42
8	Pazhassi Sagar	2023-24	102.75	13.70	7.50	25.16		53.03				53.03
9	Anakkayam	2025-26	139.62	18.62	7.50	22.83		53.03				53.03
	Sub Total											0.00
H	ON GOING SOLAR PROJECTS											0.00
1	Agali	2020-21	5.37	5.37	1.00		4.00					4.00
2	Brahamapuram	2022-23	21.49	5.37	4.00	5.61	16.00					16.00
3	Kanjikkode	2021-22	16.11	5.37	3.00	4.20	12.00					12.00
I	ON GOING R&M PROJECTS											0.00
1	Kuttiyadi RMU	2024-25	89.82		7.50	272.80			89.82			89.82
	Total						595.84	318.15	89.82	142.53	0.00	1146.34

Summary of the asset addition of SBU-G

3.25 The summary of the asset addition of SBU-G during the MYT period 2022-23 to 2026-27 provisionally considered by the Commission for the purposes of ARR is given below.

Table 3.17

Summary of the GFA addition of SBU-G provisionally considered for estimating ARR in the MYT period 2022-23 to 2026-27

Sl No	Particulars	KSEBL Petition						KSERC provisional approval					
		2022-23	2023-24	2024-25	2025-26	2026-27	Total	2022-23	2023-24	2024-25	2025-26	2026-27	Total
		(Rs .Cr)	(Rs .Cr)	(Rs .Cr)	(Rs .Cr)	(Rs .Cr)	(Rs .Cr)	(Rs .Cr)	(Rs .Cr)	(Rs .Cr)	(Rs .Cr)	(Rs .Cr)	(Rs .Cr)
I.	New Projects proposed during the MYT period												
	New Hydel projects	0.00	0.00	0.00	408.00	1279.73	1687.73	0.00	0.00	0.00	0.00	62.32	62.32
	New Solar projects	13.04	22.75	8.25			44.04	13.04	22.75	8.25	0.00	0.00	44.04
	New renovation / replacement work (Major work - Rs 5.00 crore and	19.31	105.70	153.35	134.50	97.50	510.36	15.45	84.56	122.68	107.60	78.00	408.29
	replacement work (less than Rs 5.00	43.08	46.03	44.86	26.22	33.45	193.63	43.08	46.03	44.86	26.22	33.45	193.63
	Advanced energy storage technology		105.00	0.00	0.00	0.00	105.00	0.00	0.00	0.00	0.00	0.00	0.00
	Dam Rehabilitation	18.70	22.05	22.55	32.60	32.60	128.50	18.70	22.05	22.55	32.60	32.60	128.50
	TOTAL Rs.Cr	94.13	301.53	229.01	601.32	1443.28	2669.26	90.27	175.39	198.34	166.42	206.37	836.78
II	Ongoing projects expected to commission during the MYT period 2022-23 to 2026-27												
	GFA addition	1059.73	427.67	89.82	282.15	0.00	1859.37	595.84	318.15	89.82	142.53	0.00	1146.34
III	Grant Total GFA addition = (I)+ (II)	1153.86	729.20	318.83	883.47	1443.28	4528.63	686.11	493.54	288.16	308.95	206.37	1983.12

3.26 The year wise summary of the asset addition in SBU-G for the MYT period from 2022-23 to 2026-7 is given below.

Table 3.18

Summary of the GFA Addition approved for the MYT period 2022-23 to 2026-27

Year	KSEB Petition	KSERC Approval
	(Rs. Cr)	(Rs. Cr)
2022-23	1153.86	686.11
2023-24	729.20	493.54
2024-25	318.83	288.16
2025-26	883.47	308.95
2026-27	1443.28	206.37
Total	4528.63	1983.12

3.27 KSEB Ltd has not claimed any consumer contribution, grants etc. for the asset addition in SBU-G during the MYT period. KSEB Ltd also not submitted the value of the land in the asset addition separately. Hence for the purpose of estimating the depreciable asset for estimating depreciation, the value of land is taken as 2.8% of the total GFA addition based on past data. Thus, the depreciable asset of SBU-G approved for the purpose of estimating ARR is given below.

Table 3.19
Depreciable asset addition of SBU-G for the MYT period

Year	GFA addition approved	Value of land (2.8% of the GFA)	Depreciable asset at the end of the year
	(Rs. Cr)	(Rs. Cr)	(Rs. Cr)
2022-23	686.11	19.21	666.90
2023-24	493.54	13.82	479.72
2024-25	288.16	8.07	280.09
2025-26	308.95	8.65	300.29
2026-27	206.37	5.78	200.59
Total	1983.12	55.53	1927.59

GFA addition of SBU-T during the MYT period 2022-23 to 2026-27

3.28 The total capital outlay of the capital projects proposed in SBU-T of KSEB Ltd is Rs.8555.53 crore, out of which Rs.6556.08 crore for new projects and Rs 1999.45 crore is for the ongoing projects which started commencement during the previous control period. The summary of the GFA addition of SBU-T is given below.

Table 3.20
KSEB Ltd petition- Capital outlay of SBU-T for the MYT period 2022-23 to 2026-27

	Capital outlay (Rs. Cr.)					Total
	2022-23	2023-24	2024-25	2025-26	2026-27	(Rs. Cr)
New projects						
Works less than 10Cr	241.53	191.65	154.75	109.77	15.11	712.82
Normal works	400.34	747.49	473.58	238.97	191.63	2052.01
RDSS Works	266.93	417.77	377.97			1062.66
Transgrid works	353.76	622.18	663.32	681.74	303.83	2624.84
SLDC works (>10 Cr)	27.00	40.00	0.00	0.00	0.00	67.00
SLDC works (<10 Cr)	14.58	8.30	3.60	3.13	7.15	36.75
Total	1304.14	2027.39	1673.21	1033.60	517.73	6556.08
Old Projects						
Normal works	587.96	123.74	4.00	0.00	0.00	715.70
Transgrid works	698.00	360.14	131.05	77.00	0.00	1266.19
SLDC works	11.83	5.73	0.00	0.00	0.00	17.56
Total	1297.79	489.61	135.05	77.00	0.00	1999.45
Grand Total (Old+ New)	2601.93	2517.00	1808.26	1110.60	517.73	8555.53

3.29 The total GFA addition of SBU-T for the period 2022-23 to 2026-27 is given below.

Table 3.21
KSEB Ltd Petition - GFA addition of SBU-T during the MYT period 2022-23 to 2026-27

		GFA Addition (Rs. Cr.)					Total
New Works							
		2022-23	2023-24	2024-25	2025-26	2026-27	
1	Works less than 10Cr	131.14	187.97	181.46	186.90	25.34	712.81
2	Normal works	32.30	457.70	857.22	375.95	311.84	2035.01
3	RDSS Works	266.93	417.77	377.97			1062.66
3	Transgrid works	0.00	125.20	145.37	594.11	1709.12	2573.80
4	SLDC works (>10 Cr)	0.00	67.00	0.00	0.00	0.00	67.00
5	SLDC works (<10 Cr)	0.00	15.87	0.00	0.00	20.88	36.75
	Total	430.37	1271.50	1562.02	1156.96	2067.18	6488.03
Old projects							
1	Normal works	482.86	268.64	27.70	0.00	0.00	779.20
2	Transgrid works	692.29	479.34	190.00	564.19	0.00	1925.82
3	SLDC Works	0.00	17.56	0.00	0.00	0.00	17.56
	Total	1175.15	765.54	217.70	564.19	0.00	2722.58
	Grand Total (Old + New)	1605.52	2037.04	1779.72	1721.15	2067.18	9210.61

3.30 The Commission noted that, out of the total GFA addition of Rs.5774.00 Crore proposed in the previous control period, Rs 2755.02 crore (excluding SLDC works) (48 % of the total GFA proposed in previous MYT period) are proposed to be added during the current MYT period.

3.31 The Commission noted that, capital investment proposed by KSEB Ltd in the SBU-T is excessively high. The Commission cannot approve such huge investments without proper scrutiny and assessing the need for such investments as per the provisions of the Tariff Regulations, 2021.

3.32 The Commission after examining the details, decided to consider provisionally the GFA addition of SBU-T as follows.

(1) **Old projects, which started construction during the previous MYT period.**

The Commission decided to consider the GFA addition of old projects amounting to Rs 2722.58 crore which started construction in the previous MYT period, as proposed by KSEB Ltd.

The Commission hereby clarify that, at the time of Truing up, the cost of completion of each project including 'time overrun and cost overrun' will only be approved as GFA addition of ongoing projects after detailed examination and prudence check.

(2) **RDSS schemes in Transmission.**

Out of the GFA addition of Rs 6488.03 crore of new Transmission projects proposed in the in the current MYT period from 2022-23 to 2026-

27, Rs 1062.66 crore is proposed under 'Revamped Distribution Sector Scheme (RDSS scheme) funded by the Government of India. Upto 60% of the project cost is funded by the Central Government under this scheme. Since the RDSS is aided upto 60% by Central Government, the Commission decided to grant provisional approval to proceed with the projects proposed under RDSS scheme.

(3) **Small Transmission works with scheme cost less than Rs 10.00 crore per scheme.**

KSEB Ltd proposed Rs 712.00 crore for small capital works under transmission with scheme cost less than Rs 10.00 crore. KSEB Ltd had identified and proposed more than 200 works under this head. KSEB Ltd usually execute less than 70% of such works only in normal course. Hence, the Commission, provisionally consider 50% of the scheme under this head for ARR purposes.

(4) **Transmission works with scheme cost more than Rs 10.00 crore per scheme.**

KSEB Ltd has proposed Rs 2052.01 crore worth projects under Normal works in the MYT period from 2022-23 to 2026-27. The Commission has examined the achievements of such works in the previous MYT period from 2018-19 to 2021-22 and noted that, during the previous period KSEB Ltd has proposed GFA addition of Rs 1126.07 crore under this head, but could achieve only Rs346.87 crore (30.80% of the GFA proposal) during that period.

Considering these aspects in detail, the Commission has provisionally considered only 40% of the GFA addition proposed under this head for ARR purposes in the MYT period from 2022-23 to 2026-27.

(5) **Transgrid schemes.**

KSEB Ltd has proposed GFA addition of Rs 2573.80 crore towards new Transgrid projects in the MYT period from 2022-23 to 2026-27. During the previous MYT period, KSEB Ltd has proposed GFA addition of Rs 2697.37 crore under this category, but could achieve only Rs 771.55 Crore (28.60% of the scheme proposed) and the balance work is carried forward to the MYT period from 2022-23 to 2026-27. KSEB Ltd has proposed to carry out the balance works spill over from previous MYT period amounting to Rs 1925.00 crore along with the new Transgrid projects amounting to Rs 2573.80 crore.

Considering the progress of the KSEB Ltd in the implementation of Transgrid projects, the Commission provisionally considered 40% of the Transgrid projects proposed in the MYT period 2022-23 to 2026-27 along with the spill over projects from the previous control period amounting to Rs 1925.82 crore.

(6) **SLDC works.**

KSEB Ltd has proposed projects worth Rs 103.75 crore towards SLDC works. The investment proposed is for upgradation of SCADA and related works. The Commission after examining the details, hereby approve the Scheme proposed by KSEB Ltd.

3.33 The summary of the GFA addition of SBU-T for the MYT period from 2022-23 to 2026-27 is detailed below.

Table 3-22

Summary of the GFA addition of SBU-T during the MYT period from 2022-23 to 2026-27

New Works	KSEB Petition (Rs. Cr)						KSERC provisional for ARR (Rs.Cr)					
	2022-23	2023-24	2024-25	2025-26	2026-27	Total	2022-23	2023-24	2024-25	2025-26	2026-27	Total
1 Works less than 10Cr	131.14	187.97	181.46	186.90	25.34	712.81	65.57	93.985	90.73	93.45	12.67	356.41
2 Normal works	32.30	457.70	857.22	375.95	311.84	2035.01	12.92	183.08	342.888	150.38	124.74	814
3 RDSS Works	266.93	417.77	377.97			1062.66	266.93	417.77	377.97	0.00	0.00	1062.66
3 Transgrid works	0.00	125.20	145.37	594.11	1709.12	2573.80	0	50.08	58.148	237.644	683.65	1029.5
4 SLDC works (>10 Cr)	0.00	67.00	0.00	0.00	0.00	67.00	0.00	67.00	0.00	0.00	0.00	67.00
5 SLDC works (<10 Cr)	0.00	15.87	0.00	0.00	20.88	36.75	0.00	15.87	0.00	0.00	20.88	36.75
Total	430.37	1271.50	1562.02	1156.96	2067.18	6488.03	345.42	827.785	869.736	481.474	841.93	3366.3
Old projects												
1 Normal works	482.86	268.64	27.70	0.00	0.00	779.20	482.86	268.64	27.70	0.00	0.00	779.20
2 Transgrid works	692.29	479.34	190.00	564.19	0.00	1925.82	692.29	479.34	190.00	564.19	0.00	1925.82
3 SLDC Works	0.00	17.56	0.00	0.00	0.00	17.56	0.00	17.56	0.00	0.00	0.00	17.56
Total	1175.15	765.54	217.70	564.19	0.00	2722.58	1175.15	765.54	217.70	564.19	0.00	2722.58
Grand Total (Old + New)	1605.52	2037.04	1779.72	1721.15	2067.18	9210.61	1520.57	1593.33	1087.44	1045.66	841.93	6088.92

3.34 KSEB Ltd expected to avail grant from Central Government upto Rs 953,65 crore for Transmission projects during the MYT period , as detailed below.

Table 3.23

Subsidies and grants expected from Central Government for Transmission projects

New Works	KSEB Petition (Rs. Cr)						KSERC provisional for ARR (Rs.Cr)					
	2022-23	2023-24	2024-25	2025-26	2026-27	Total	2022-23	2023-24	2024-25	2025-26	2026-27	Total
1 Works less than 10Cr	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2 Normal works	0.00	0.00	0.00	23.40	0.00	23.40	0.00	0.00	0.00	23.40	0.00	23.40
3 RDSS Works	160.16	250.66	226.78	0.00	0.00	637.60	160.16	250.66	226.78	0.00	0.00	637.60
3 Transgrid works	0.00	0.00	0.00	0.00	203.08	203.08	0.00	0.00	0.00	0.00	203.08	203.08
4 SLDC works (>10 Cr)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
5 SLDC works (<10 Cr)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total	160.16	250.66	226.78	23.40	203.08	864.08	160.16	250.66	226.78	23.40	203.08	864.08
Old projects												
1 Normal works	0.00	73.77	0.00	0.00	0.00	73.77	0.00	73.77	0.00	0.00	0.00	73.77
2 Transgrid works	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
3 SLDC Works	0.00	15.80	0.00	0.00	0.00	15.80	0.00	15.80	0.00	0.00	0.00	15.80
Total	0.00	89.57	0.00	0.00	0.00	89.57	0.00	89.57	0.00	0.00	0.00	89.57
Grand Total (Old + New)	160.16	340.23	226.78	23.40	203.08	953.65	160.16	340.23	226.78	23.40	203.08	953.65

3.35 The Commission noted that, out of the total grant of Rs 953.65 crore, Rs 637.60 crore is towards RDSS works. The Commission is of the view that, KSEB Ltd shall give high priority for the Centrally Aided projects with grants. Hence the Commission has considered the 'subsidy/ grants' expected from Central Government in full while provisionally assessing the GFA addition for estimating the ARR.

3.36 Accordingly, the GFA addition provisionally considered for estimating the interest on loan and depreciation is given below.

Table 3.24
GFA addition of SBU-T provisionally considered for estimating ARR

	KSEB Petition (Rs. Cr)						KSERC provisional for ARR (Rs.Cr)					
	2022-23	2023-24	2024-25	2025-26	2026-27	Total	2022-23	2023-24	2024-25	2025-26	2026-27	Total
1 Gross GFA addition	1605.52	2037.04	1779.72	1721.15	2067.18	9210.61	1520.57	1593.33	1087.44	1045.66	841.93	6088.92
2 Subsidy/ grants expected	160.16	340.23	226.78	23.40	203.08	953.65	160.16	340.23	226.78	23.40	203.08	953.65
3 Net GFA addition eligible for loan and depreciation	1445.36	1696.81	1552.94	1697.75	1864.10	8256.96	1360.41	1253.10	860.66	1022.26	638.85	5135.27

3.37 KSEB Ltd has not submitted the value of land along with GFA addition. Hence, based on the past data, the Commission has assumed the value of land as 2.80% of the Asset addition. Based on the above, the GFA addition eligible for loan and depreciation during the MYT period is given below.

Table 3.25
GFA addition provisionally considered for loan and depreciation

Year	GFA addition approved	Consumer contribution & grants	Net GFA eligible for loan	Value of land (2.8% of the GFA)	Depreciable asset at the end of the year
	(Rs. Cr)	(Rs.Cr)	(Rs.Cr)	(Rs. Cr)	(Rs. Cr)
2022-23	1520.57	160.16	1360.41	38.09	1322.32
2023-24	1593.33	226.78	1366.55	38.26	1328.28
2024-25	1087.44	226.78	860.66	24.10	836.56
2025-26	1045.66	23.40	1022.26	28.62	993.64
2026-27	841.93	203.08	638.85	17.89	620.97
Total	6088.93	840.20	5248.73	146.96	5101.76

GFA addition of SBU-Distribution

3.38 KSEB Ltd proposed the massive capital investment of Rs 16733.03 crore in the MYT period from 2022-23 to 2026-27. The details are given below.

Table 3.26
KSEBL petition- Capital investment plan of SBU-D

No	Particulars	2022-23	2023-24	2024-25	2025-26	2026-27	Total
		(Rs.Cr)	(Rs.Cr)	(Rs.Cr)	(Rs.Cr)	(Rs.Cr)	(Rs.Cr)
A	Dyuthi 2.0						
I	Normal development works	574.20	527.11	599.07	1191.54	1124.18	4016.10
II	Faulty meter replacement	30.00	30.00	30.00	30.00	30.00	150.00
III	Total electrification	20.00	20.00	20.00	20.00	20.00	100.00

No	Particulars	2022-23	2023-24	2024-25	2025-26	2026-27	Total
		(Rs.Cr)	(Rs.Cr)	(Rs.Cr)	(Rs.Cr)	(Rs.Cr)	(Rs.Cr)
IV	Provision for implementing LT spacers as part of reliability	10.00	10.00	10.00	10.00	10.00	50.00
	Subtotal(I+II+III+IV)	634.20	587.11	659.07	1251.54	1184.18	4316.10
B	Central aided Project-RDSS						
I	Distribution infrastructure works	918.52	709.90	380.34			2008.76
	System strengthening	594.43	406.69	238.47			1239.58
	Modernization	324.09	303.21	141.87			769.18
II	IT/OT works	62.10	82.80	62.10			207.00
III	SCADA	148.80	238.13	208.39			595.32
IV	Prepaid metering	1429.00	3425.00	3346.00			8200.00
V	Part-B- RDSS	10.00	20.00	20.00			50.00
	Subtotal(I+II+III+IV+V)	2568.42	4475.83	4016.83			11061.08
C	Other Funded Works- Contribution, MLA Fund etc	200.00	200.00	200.00	200.00	200.00	1000.00
D	IT projects under Board fund	38.20	38.09	27.28	22.10	21.70	147.37
E	Safety	25.00	50.00	50.00	50.00	6.35	181.35
F	Electric Vehicle Charging stations	27.13					27.13
	Total Distribution capital outlay	3492.95	5351.03	4953.18	1523.64	1412.23	16733.03

3.39 KSEB Ltd submitted that, the objectives behind the massive capital investment are the following.

- (1) Enhance the reliability & quality of power supplied – ensure uninterrupted supply.
- (2) Improve energy efficiency & reduce system losses.
- (3) Ensure standard, resilient and safe installations.
- (4) Ensure that the State remains totally electrified during the plan period.
- (5) Ensure hassle free integration of renewables (green energy).
- (6) Ensure a revamped, smart, technologically equipped and adaptable network.
- (7) Facilitate the growth of electric mobility.
- (8) Ensure geo-mapping of all network assets

3.40 Out of the above, Rs 4316.10 crore is proposed under Dhyuthi 2.0 scheme, and Rs 11061.08 crore proposed under 'Revamped Distribution Sector Scheme (RDSS) during the MYT period. In addition to the above, Rs 1000.00 crore are

funded work through consumer contributions, MLA funds etc. The details are summarised below.

- (1) Dyuthi 2.0 amounting to Rs. 4316.10 Cr
- (2) GoI assisted Revamped Distribution Sector Scheme (RDSS) amounting to Rs. 11061.08 Cr.
- (3) IT plan under own fund amounting to Rs. 147.37 Cr
- (4) Safety Plan amounting to Rs. 181.35 Cr
- (5) Works funded through consumer contribution grants etc amounting to Rs. 1000 Cr.
- (6) E-mobility amounting to Rs. 27.13 Cr

3.41 KSEB Ltd further submitted that, RDSS project is only in the preliminary stage. The major investment under RDSS proposal is for implementing the pre-paid metering system at a total cost of Rs 8200.00 crore. KSEB Ltd further submitted that, since the pattern of funding of pre-paid metering is yet to be finalised, the licensee has not included the implementation of the pre-paid metering under the asset addition of the MYT period of 2022-23 to 2026-27. KSEB Ltd therefore requested that, KSEB Ltd may be permitted to approach the Commission for the approval of the pre-paid metering after getting the approval of the Government of India.

3.42 Regarding the pre-paid metering KSEB Ltd further submitted that, the grant for pre-paid metering expected is 15% of the project cost of Rs 8200.00 crore only. Hence KSEB Ltd proposed the following for the implementation of the pre-paid metering system under RDSS.

- (1) Installation and commissioning of meters and cost recoveries in equated monthly instalments by PPP or implementation partner (or service provider) with no upfront payment by DISCOM.
- (2) Some initial payment shall be made to the service provider upon installation and commissioning of the meters, with the rest of the payments made on equated monthly / quarterly instalments over the operational period.

3.43 Regarding the implementation of the pre-paid metering, the Commission has noted the following.

- (1) During the period from 2014-15 to 2017-18, KSEB Ltd has installed 32 lakhs new meters into the system.
- (2) Further, during the period from 2018-19 to 2021-22, KSEB Ltd has installed another 24 lakhs meters into the system.
- (3) KSEB Ltd has earmarked Rs 150 crore for the replacement of the faulty meters during the current MYT period. This amount is sufficient to install more than 30 lakhs meters at an average cost of Rs 500.00 per meter.
- (4) 15% of the cost of the prepaid meter is funded through RDSS scheme. Balance has to be passed on to the consumers through meter rent/collecting meter cost up front.

- (5) More than 50% of the total consumers having monthly consumption upto 100 units per month and their average monthly bill amount is about Rs less than Rs 400.00 per month only. The impact on such consumers on the meter rent of the pre-paid metering has to be evaluate in detail before submitting proposal before the Commission.

3.44 Considering all these aspects, and also duly considering the request of the KSEB Ltd, the Commission decided to not to go into the details of the pre-paid metering system proposed by KSEB Ltd at this stage. Hence, the Commission hereby direct KSEB Ltd that, the licensee may after finalising the scheme of implementation of the pre-paid metering under RDSS, submit a petition before the Commission with all relevant details including its impact on the consumers, for getting approval of the scheme.

3.45 The GFA addition proposed by KSEB Ltd excluding the smart prepaid metering system is given below.

Table 3.27
KSEBL petition- GFA Addition excluding smart prepaid metering during 2022-27 (Rs. Cr.)

No	Particulars	2022-23	2023-24	2024-25	2025-26	2026-27	Total
A	Dhyuthi 2.0						
	Normal development works	574.20	527.11	599.07	1191.54	1124.18	4016.10
	Faulty meter replacement	30.00	30.00	30.00	30.00	30.00	150.00
	Total electrification	20.00	20.00	20.00	20.00	20.00	100.00
	Provision for implementing LT spacers as part of safety	10.00	10.00	10.00	10.00	10.00	50.00
	Sub Total	634.20	587.11	659.07	1251.54	1184.18	4316.10
B	Central aided Project-RDSS						
I	Distribution infrastructure works						
	System strengthening			1239.58			1239.58
	Modernisation			769.18			769.18
II	IT/OT works			207.00			207.00
III	SCADA			595.32			595.32
	Sub Total	0.00	0.00	2811.08	0.00	0.00	2811.08
C	Other Funded Works- Contribution, MLA Fund	200.00	200.00	200.00	200.00	200.00	1000.00
D	IT projects under Board fund	26.50	41.42	34.45	20.50	24.50	147.37
E	Safety	25.00	50.00	50.00	50.00	6.35	181.35
F	Electric Vehicle Charging stations	27.13					27.13
	Total	912.83	878.53	3754.60	1522.04	1415.03	8483.03

3.46 As detailed above, the total GFA addition proposed by KSEB Ltd excluding pre-paid metering system is Rs 8483.03 crore. Out of the above Rs 4316.10 crore is for schemes identified under Dhyuthi 2.0 schemes, Rs 2811.08 crore for schemes identified under RDSS schemes, and Rs 1000.00 crore for funded works including works executed with consumer contribution and grants.

3.47 Before the preliminary appraisal of the GFA addition of SBU-D, the Commission also examined the progress of the implementation of the capital works of SBU-D during the previous MYT period from 2018-19 to 2021-22, and noted the following.

- (1) The total GFA addition proposed by KSEB Ltd during the previous MYT period from 2018-19 to 2021-22 was Rs 6079.98 crore, which includes Rs 4036.30 crore proposed under Dhyuthi scheme.
- (2) The actual progress of achievement of the GFA addition reported in the previous MYT period is only Rs 2960.41 crore. The actual achievement is only 48.70% of the GFA proposed in the previous MYT period.

Dhyuthi Scheme

3.48 The year wise GFA addition of Dhyuthi 2.0 scheme proposed by KSEB Ltd is given below.

Table 3.28
KSEBL petition- year wise GFA addition under Dhyuthi scheme

Year	KSEB Ltd				Remarks
	Noramal	Faulty meter	Total electrification & LT spacers	Total	
	(Rs.Cr)	(Rs.Cr)	(Rs.Cr)	(Rs.Cr)	
2022-23	574.20	30.00	30.00	634.20	Avg of 2022-23 tp 2024-25 = Rs 626.79 crore
2023-24	527.11	30.00	30.00	587.11	
2024-25	599.07	30.00	30.00	659.07	
2025-26	1191.54	30.00	30.00	1251.54	Avg of 2025-26 to 2026-27 - Rs 1217.86 crore
2026-27	1124.18	30.00	30.00	1184.18	
Total	4016.10	150.00	150.00	4316.10	

The Commission noted that, the average of the annual GFA of the schemes under Dhyuthi 2.0 during the period from 2022-23 to 2024-25 is Rs 626.79 crore whereas the average of the GFA for the remaining two years from 2025-26 to 2026-27 is Rs 1217.86 crore, i.e., 94% higher than the previous three year average proposal. This is totally unrealistic.

The Commission also noted that, during the previous MYT period, the overall progress of Dhyuthi scheme is only about 48% of the proposal of KSEB Ltd.

Further, the Commission also decided to provisionally consider the proposal of Rs 150.00 crore for the replacement of the faulty meters, since KSEB Ltd is yet to finalise the implementation of the smart pre-paid meters.

The Commission also decided to consider provisionally Rs 100.00 crore earmarked in the MYT period from 2022-23 to 2026-27 for the total electrification works and Rs 50.00 crore for safety works.

Based on the above consideration, the year wise GFA addition provisionally considered by the Commission for ARR purposes is given below.

Table 3.29
Year wise GFA addition provisionally considered under Dhyuthi scheme

Year	KSEB Ltd				KSERC			
	Noramal works	Faulty meter	Total electrification & LT spacers	Total	Noramal	Faulty meter	Total electrification & LT spacers	Total
	(Rs.Cr)	(Rs.Cr)	(Rs.Cr)	(Rs.Cr)	(Rs.Cr)	(Rs.Cr)	(Rs.Cr)	(Rs.Cr)
2022-23	574.20	30.00	30.00	634.20	344.52	30.00	30.00	404.52
2023-24	527.11	30.00	30.00	587.11	316.27	30.00	30.00	376.27
2024-25	599.07	30.00	30.00	659.07	359.44	30.00	30.00	419.44
2025-26	1191.54	30.00	30.00	1251.54	428.95	30.00	30.00	488.95
2026-27	1124.18	30.00	30.00	1184.18	404.70	30.00	30.00	464.70
Total	4016.10	150.00	150.00	4316.10	1853.89	150.00	150.00	2153.89

As above, the Commission has provisionally considered about 50% of the GFA addition in Dhyuthi 2.0 Schemes proposed during the MYT period from 2022-23 to 2026-27.

3.49 RDSS works.

KSEB Ltd has proposed to implement Rs 2811.08 crore worth projects under RDSS scheme. Since 60% of the cost of the project is funded through grant from the Central Government, the Commission provisionally consider the entire proposal under RDSS for the ARR purposes. However, the Commission may grant final approval for the Schemes identified under RDSS only after detailed appraisal, since there is large number of duplications of works among Dhyuthi and RDSS.

3.50 Other funded works.

The Commission also provisionally consider the entire schemes proposed by KSEB Ltd to implement through availing fund from consumers, MLA fund etc amounts to Rs 1000.00 crore.

3.51 Other works.

The Commission provisionally consider the other works including IT projects with KSEB fund amounts to Rs 147.37 crore and safety related works of Rs 181.35 works. KSEB Ltd also proposed Rs 27.13 crore towards EV charging stations.

3.52 Based on the above, the GFA addition of SBU-D provisionally considered by the Commission for ARR purposes is given below.

Table 3.30
Summary of the GFA addition of SBU-D provisionally considered for ARR

No	Particulars	KSEB Ltd						KSERC					
		2022-23	2023-24	2024-25	2025-26	2026-27	Total	2022-23	2023-24	2024-25	2025-26	2026-27	Total
		(Rs.Cr)	(Rs.Cr)	(Rs.Cr)	(Rs.Cr)	(Rs.Cr)	(Rs.Cr)	(Rs.Cr)	(Rs.Cr)	(Rs.Cr)	(Rs.Cr)	(Rs.Cr)	(Rs.Cr)
A	Dhyuthi 2.0												
	Normal development works	574.20	527.11	599.07	1191.54	1124.18	4016.10	344.52	316.27	359.44	428.95	404.70	1853.89
	Faulty meter replacement	30.00	30.00	30.00	30.00	30.00	150.00	30.00	30.00	30.00	30.00	30.00	150.00
	Total electrification	20.00	20.00	20.00	20.00	20.00	100.00	20.00	20.00	20.00	20.00	20.00	100.00
	Provision for implementing LT spacers as part of safety	10.00	10.00	10.00	10.00	10.00	50.00	10.00	10.00	10.00	10.00	10.00	50.00
	Sub Total	634.20	587.11	659.07	1251.54	1184.18	4316.10	404.52	376.27	419.44	488.95	464.70	2153.89
B	Central aided Project-RDSS												
	I Distribution infrastructure works												
	System strengthening			1239.58			1239.58			1239.58			1239.58
	Modernisation			769.18			769.18			769.18			769.18
	II IT/OT works			207.00			207.00			207.00			207.00
	III SCADA			595.32			595.32			595.32			595.32
	Sub Total	0.00	0.00	2811.08	0.00	0.00	2811.08	0.00	0.00	2811.08	0.00	0.00	2811.08
C	Other Funded Works- Contribution, MLA Fund	200.00	200.00	200.00	200.00	200.00	1000.00	200.00	200.00	200.00	200.00	200.00	1000.00
D	IT projects under Board fund	26.50	41.42	34.45	20.50	24.50	147.37	26.50	41.42	34.45	20.50	24.50	147.37
E	Safety	25.00	50.00	50.00	50.00	6.35	181.35	25.00	50.00	50.00	50.00	6.35	181.35
F	Electric Vehicle Charging stations	27.13					27.13	27.13	0.00	0.00	0.00	0.00	27.13
	Total	912.83	878.53	3754.60	1522.04	1415.03	8483.03	683.15	667.68	3514.97	759.45	695.55	6320.81

Government grants, consumer contributions etc available to SBU-D

3.53 The summary of the grants, funds and other contributions available for the proposed projects under Distribution is given below.

Table 3.31
KSEB L petition- Government grants, consumer contribution etc expected

No.	Particulars	2022-23	2023-24	2024-25	2025-26	2026-27	Total
	Government grant and contributions						
I	Central aided Project-RDSS @ 60 %						
	Distribution infrastructure works						
	System strengthening			743.75			743.75
	Modernization			461.51			461.51
	IT/OT works			124.20			124.20
	SCADA			357.19			357.19
II	Other Funded Works	200.00	200.00	200.00	200.00	200.00	1000.00
III	Electric Vehicle Charging stations	10.96					10.96
	Sub Total Grant	210.96	200.00	1886.65	200.00	200.00	2697.61

3.54 The Commission is of the considered view that, the distribution works proposed to be executed through Government grants, consumer contributions, MLA funds etc shall give high priority. The Commission also provisionally considered

the entire funded scheme for the purposes of ARR as detailed in Table 3.27 above. Hence the Commission provisionally considers the entire amount of Rs 2697.61 crore available for SBU-D for the purposes of ARR. The details are given below.

Table 3.32
Government grants, consumer contribution etc provisionally considered for SBU-D

No	Particulars	KSEB Ltd						KSERC					
		2022-23	2023-24	2024-25	2025-26	2026-27	Total	2022-23	2023-24	2024-25	2025-26	2026-27	Total
		(Rs.Cr)	(Rs.Cr)	(Rs.Cr)	(Rs.Cr)	(Rs.Cr)	(Rs.Cr)	(Rs.Cr)	(Rs.Cr)	(Rs.Cr)	(Rs.Cr)	(Rs.Cr)	(Rs.Cr)
	Government grant and contributions												
I	Central aided Project-RDSS @ 60 %												
	Distribution infrastructure works												
	System strengthening			743.75			743.75			743.75			743.75
	Modernization			461.51			461.51			461.51			461.51
	IT/OT works			124.20			124.20			124.20			124.20
	SCADA			357.19			357.19			357.19			357.19
II	Other Funded Works	200.00	200.00	200.00	200.00	200.00	1000.00	200.00	200.00	200.00	200.00	200.00	1000.00
III	Electric Vehicle Charging stations	10.96					10.96	10.96					10.96
	Sub Total Grant	210.96	200.00	1886.65	200.00	200.00	2697.61	210.96	200.00	1886.65	200.00	200.00	2697.61

3.55 Based on the above, the summary of the GFA addition of SBU-D provisionally considered for estimating the ARR is given below.

Table 3.33
Summary of the net GFA addition provisionally considered for estimating the ARR

Sl No	Particulars	KSEB Petition						KSERC provisional for estimating ARR					
		2022-23	2023-24	2024-25	2025-26	2026-27	Total	2022-23	2023-24	2024-25	2025-26	2026-27	Total
		(Rs.Cr)	(Rs.Cr)	(Rs.Cr)	(Rs.Cr)	(Rs.Cr)	(Rs.Cr)	(Rs.Cr)	(Rs.Cr)	(Rs.Cr)	(Rs.Cr)	(Rs.Cr)	(Rs.Cr)
1	Gross GFA addition	912.83	878.53	3754.60	1522.04	1415.03	8483.03	683.15	667.68	3514.97	759.45	695.55	6320.81
2	Government grants/ consumer contribution etc	210.96	200.00	1886.65	200.00	200.00	2697.61	210.96	200.00	1886.65	200.00	200.00	2697.61
3	Net GFA addition eligible for loan and depreciation	701.87	678.53	1867.95	1322.04	1215.03	5785.42	472.19	467.68	1628.32	559.45	495.55	3623.20

Summary of the GFA addition of KSEB Ltd provisionally considered for estimating ARR

3.56 As discussed in the preceding paragraphs, the summary of the GFA addition provisionally considered for estimating ARR is given below.

Table 3.34
Summary of the GFA addition provisionally considered for estimating ARR

Functional area	KSEB Ltd petition						KSERC- provisional for estimating ARR					
	2022-23	2023-24	2024-25	2025-26	2026-27	Total	2022-23	2023-24	2024-25	2025-26	2026-27	Total
	(Rs. Cr)	(Rs. Cr)	(Rs. Cr)	(Rs. Cr)	(Rs. Cr)	(Rs. Cr)	(Rs. Cr)	(Rs. Cr)	(Rs. Cr)	(Rs. Cr)	(Rs. Cr)	(Rs. Cr)
I. Gross GFA addition												
SBU-G	1153.86	729.20	318.83	883.47	1443.28	4528.63	686.11	493.54	288.16	308.95	206.37	1983.12
SBU-T	1605.52	2037.04	1779.72	1721.15	2067.18	9210.61	1520.57	1593.33	1087.44	1045.66	841.93	6088.93
SBU-D (exclu. Prepaid meter)	912.83	878.53	3754.60	1522.04	1415.03	8483.03	683.15	667.68	3514.97	759.45	695.55	6320.81
Total	3672.21	3644.77	5853.15	4126.65	4925.49	22222.26	2889.83	2754.55	4890.56	2114.06	1743.86	14392.86
II. Consumer contribution, Government grants etc												
SBU-G												
SBU-T	160.16	340.23	226.78	23.40	203.08	953.65	160.16	340.23	226.78	23.40	203.08	953.65
SBU-D (exclu. Prepaid meter)	210.96	200.00	1886.65	200.00	200.00	2697.61	210.96	200.00	1886.65	200.00	200.00	2697.61
Total	371.12	540.23	2113.43	223.40	403.08	3651.26	371.12	540.23	2113.43	223.40	403.08	3651.26
III. Net GFA addition for estimating interest on loan depreciation etc												
SBU-G	1153.86	729.20	318.83	883.47	1443.28	4528.63	686.11	493.54	288.16	308.95	206.37	1983.12
SBU-T	1445.36	1696.81	1552.94	1697.75	1864.10	8256.96	1360.41	1253.10	860.66	1022.26	638.85	5135.28
SBU-D (exclu. Prepaid meter)	701.87	678.53	1867.95	1322.04	1215.03	5785.42	472.19	467.68	1628.32	559.45	495.55	3623.20
Total	3301.09	3104.54	3739.72	3903.25	4522.41	18571.00	2518.71	2214.32	2777.13	1890.66	1340.78	10741.60

3.57 As above, the Commission has considered a provisional GFA addition of KSEB Ltd for its three SBUs, at Rs 14392.86 crore for the purposes of estimating the ARR for the MYT period from 2022-23 to 2026-27. Further, the Commission has considered a Net GFA of Rs 10741.60 crore excluding the works funded through Government grants and contributions for estimating the ARR for the MYT period from 2022-23 to 2026-27.

3.58 The Commission hereby clarify that, the GFA addition provisionally considered as discussed in the preceding paragraphs is only for estimating the ARR for SBU-G, SBU-T and SBU-D of KSEB Ltd during the MYT period from 2022-23 to 2026-27. Considering the huge capital investments proposed by KSEB Ltd, the Commission may approve the capital investments separately through public consultation process including public hearing. The Commission may issue a public notice on the same for the information of all stakeholders separately. The GFA out of the capital investment so approved only finally considered while truing up of accounts of KSEB Ltd in each year of the control period.

Chapter-4

ARR&ERC of SBU-G

Introduction:

- 4.1 KSEB Ltd, along with the petition for approval for ARR& ERC for the MYT period from 2022-23 to 2026-27 has filed the ARR and net transfer price of SBU-G as per the provisions of the KSEERC (Terms and Conditions for Determination of Tariff) Regulations, 2021.
- 4.2 As on 30.11.2021, the total installed capacity of the generating stations owned by SBU-G is 2259.47 MW. The details are given below.

Table 4.1

KSEBL petition- Source wise installed capacity of SBU-G as on 30-11-2021

Source	Installed Capacity (MW)
Hydel	2066.76
Thermal	159.96
Wind	2.03
Solar	30.72
Total (Generation)	2259.47

- 4.3 The following sections deals with the analysis and decision on each of the items included in the ARR.

Capital investment plan of SBU-G for the Control period:

- 4.4 KSEB Ltd, along with the petition for approval of ARR, ERC and Tariff petition, has also filed the 'Capital Investment Plan' for the Strategic Business Units of Generation, Transmission and Distribution.
- 4.5 A preliminary appraisal of the capital investment proposed by SBU-G of KSEB Ltd for the MYT period from 2022-23 to 2026-27, the GFA addition proposed by KSEB Ltd and the GFA addition provisionally considered by the Commission for estimating the various components of ARR including interest on loan availed for capital investments, depreciation, R&M expenses are given in detail. The summary is given below.

Table 4.2
Summary of the GFA addition of SBU-G provisionally considered for estimating ARR
in the MYT period 2022-23 to 2026-27

Sl No	Particulars	KSEBL Petition						KSERC provisional approval					
		2022-23	2023-24	2024-25	2025-26	2026-27	Total	2022-23	2023-24	2024-25	2025-26	2026-27	Total
		(Rs .Cr)	(Rs .Cr)	(Rs .Cr)	(Rs .Cr)	(Rs .Cr)	(Rs .Cr)	(Rs .Cr)	(Rs .Cr)	(Rs .Cr)	(Rs .Cr)	(Rs .Cr)	(Rs .Cr)
I.	New Projects proposed during the MYT period												
	New Hydel projects	0.00	0.00	0.00	408.00	1279.73	1687.73	0.00	0.00	0.00	0.00	62.32	62.32
	New Solar projects	13.04	22.75	8.25			44.04	13.04	22.75	8.25	0.00	0.00	44.04
	New renovation / replacement work (Major work - Rs 5.00 crore and replacement work (less than Rs 5.00	19.31	105.70	153.35	134.50	97.50	510.36	15.45	84.56	122.68	107.60	78.00	408.29
	Advanced energy storage technology	43.08	46.03	44.86	26.22	33.45	193.63	43.08	46.03	44.86	26.22	33.45	193.63
	Dam Rehabilitation	18.70	22.05	22.55	32.60	32.60	128.50	18.70	22.05	22.55	32.60	32.60	128.50
	TOTAL Rs.Cr	94.13	301.53	229.01	601.32	1443.28	2669.26	90.27	175.39	198.34	166.42	206.37	836.78
II.	Ongoing projects expected to commission during the MYT period 2022-23 to 2026-27												
	GFA addition	1059.73	427.67	89.82	282.15	0.00	1859.37	595.84	318.15	89.82	142.53	0.00	1146.34
	Grant Total GFA addition = (I)+(II)	1153.86	729.20	318.83	883.47	1443.28	4528.63	686.11	493.54	288.16	308.95	206.37	1983.12
III.													

Estimation of Generation for the control period:

(i) Hydro generation

4.6 The summary of the hydro generation estimated by the KSEB Ltd during the control period is given below.

Table 4.3
Summary of the hydro generation estimated by KSEB Ltd

Financial Year	Gross Hydel available (MU)	Aux. Consumption (MU)	Net Hydel Available(MU)
2022-23	7057.26	84.54	6972.72
2023-24	7163.06	85.84	7077.22
2024-25	7474.51	89.44	7385.07
2025-26	7443.65	88.39	7355.26
2026-27	7573.27	89.25	7484.02

4.7 KSEB Ltd also submitted the station wise annual generation during the MYT period from 2022-23 to 2026-27, and the details are given below.

Table 4.4
Station wise hydro generation

Sl No	Hydro Station	2022-23	2023-24	2024-25	2025-26	2026-27
		(MU)	(MU)	(MU)	(MU)	(MU)
1	Idukki	2478.65	2477.00	2468.55	2358.45	2407.17
2	Sabarigiri	1397.74	1543.28	1551.15	1509.18	1531.52
3	Idamalayar	379.07	335.47	302.46	286.59	290.48
4	Sholayar	250.73	232.84	237.57	229.36	237.57
5	Pallivasal	146.29	136.63	137.57	144.55	142.75

Sl No	Hydro Station	2022-23	2023-24	2024-25	2025-26	2026-27
		(MU)	(MU)	(MU)	(MU)	(MU)
6	Kuttiady	639.30	628.19	607.72	601.34	613.66
7	Panniar	141.61	160.94	159.45	168.70	165.60
8	Poringal	144.13	141.18	155.48	155.48	155.48
9	PLBE	102.94	105.34	105.34	105.34	105.34
10	Sengulam	127.09	22.77	133.28	155.68	134.11
11	Neriamangalam+NES	283.18	200.23	298.23	283.76	251.23
12	Lower Periyar	319.10	379.86	409.72	461.72	344.43
13	Kakkad	179.40	161.89	185.34	185.34	205.34
14	Kallada	32.30	32.30	32.30	32.30	32.30
15	Peppara	5.98	5.98	5.98	5.98	5.98
16	Madupetty	2.77	3.15	3.02	1.90	1.90
17	Chembukadav	8.07	8.07	8.07	8.07	8.07
18	Malampuzha	3.04	3.04	3.04	3.04	3.04
19	Urumi	14.34	14.34	14.34	14.34	14.34
20	Malankara	29.08	27.83	28.29	29.32	29.32
21	Lower Meenmutty	4.59	4.59	4.59	4.59	4.59
22	Ktdy. tail race	5.96	5.96	5.96	5.96	5.96
23	Poozhithode	7.13	7.13	7.13	7.13	7.13
24	Ranni-Perunadu	6.03	6.03	6.03	6.03	6.03
25	Peechi	2.62	2.62	2.62	2.62	2.62
26	Vilangad	15.94	15.94	15.94	15.94	15.94
27	Chimini	5.20	5.98	5.20	5.20	5.20
28	Adiyanpara	2.85	2.85	2.85	2.85	2.85
29	Vellathuval	5.87	3.15	7.09	4.10	6.10
30	Barapole	18.96	18.96	18.96	18.96	18.96
31	Perunthenaruvi	9.08	9.08	9.08	9.08	9.08
32	Kakkayam SHEP	9.16	9.16	9.16	9.16	9.16
33	Chathankottunada II	12.29	14.76	14.76	14.76	14.76
34	Upper Kallar	4.28	5.14	5.14	5.14	5.14
35	Porigalkuthu SHEP	44.91	45.02	45.02	45.02	45.02
36	Boothathenkettu	41.74	83.50	83.50	83.50	83.50
37	Thottiyar HES	99.00	99.00	99.00	99.00	99.00
38	Pallivasal Ext Scheme	76.89	153.90	153.90	153.90	153.90
39	Chinnar		38.23	76.45	76.45	76.45
40	Peruvannamoozhi		5.87	24.70	24.70	24.70
41	Pazhassi Sagar		5.88	25.16	25.16	25.16
42	Olikkal SHEP			3.42	10.26	10.26
43	Poovaramthodu SHEP			1.96	5.88	5.88
44	Anakkayam				7.61	22.85
45	Upper Sengulam				17.74	53.22
46	Sengulam Aug. Scheme				42.48	84.96
47	Peechad					2.58
48	Western Kallar					5.80
49	Ladrum					4.04
50	Maramala SHEP					7.68
51	Pasukkadavu SHEP					3.44
52	Valanthode SHEP					5.78

Sl No	Hydro Station	2022-23	2023-24	2024-25	2025-26	2026-27
		(MU)	(MU)	(MU)	(MU)	(MU)
53	Marippuzha SHEP					4.94
54	Chembukadavu III SHEP					5.55
55	Chathankottunada SHEP - Stage I					4.02
56	Mankulam HEP					51.42
57	Total	7057.26	7163.06	7474.51	7443.65	7573.27
58	Aux consumption (as per nors)	84.54	85.85	89.44	88.39	89.26
59	Net Hydro Generation	6972.72	7077.22	7385.07	7355.26	7484.02

4.8 KSEB Ltd submitted that, the energy availability from the existing hydro station is estimated based on the following.

- (1) Past 20-year average inflow is taken as the base for estimating hydro availability.
- (2) Buffer storage as on 1st June every year at 600MU to meet the contingencies if any due to delay /weak monsoon in the month of June.
- (3) During monsoon months, the runoff the river plants and small hydro plants are operated continuously to avoid spillage of water.
- (4) The scheduling of power from storage plants such as Idukki, Sabarigiri, Idamalayar etc is limited to peak hours during summer months.
- (5) The annual maintenance of the run-off the river plants and SHPs are scheduled in the summer months so that all units will be available for generation during monsoon months.

4.9 KSEB Ltd has estimated the auxiliary consumption as per the Regulations 41(2) of the Tariff Regulations, 2021, which ranges from 0.70% to 1.30%.

Comments of the Stake holders

4.10 The HT & EHT Association and others did not comment on the estimation of hydro availability by KSEB Ltd. The Association adopted the hydro estimation as it is for estimating the ARR by them.

Analysis and decision of the Commission

4.11 The Commission has examined the hydro availability estimated by KSEB Ltd as above. KSEB Ltd has used the 20-year historical inflow details for projecting the generation for the control period. The Commission also agrees with the methodology followed by the KSEB Ltd for estimating the hydro availability of existing hydro stations as on 01.04.2022.

4.12 However, the Commission while appraising the Capital Investment noted that Commercial Operation of the some of the new hydel plants proposed by KSEB Ltd may not be completed as projected. The details are given below.

Table 4.5
Energy availability from Ongoing and New stations expected to achieve COD during the MYT period from 2022-23 to 2026-27

Sl.No	Name of the Project	KSEB Ltd					KSERC estimation				
		2022-23	2023-24	2024-25	2025-26	2026-27	2022-23	2023-24	2024-25	2025-26	2026-27
1	Boothathenkettu	83.5					83.5				
2	Thottiyar HES	99					99				
3	Sengulam Aug. Scheme				85					85	
4	Pallivasal Ext Scheme	153.9					153.9				
5	Chinnar		76.45					76.45			
6	Peruvannamoozhi		24.7					24.7			
7	Pazhassi Sagar		25.16					25.16			
8	Anakkayam				22.83					22.83	
9	Kuttiyadi (7.5 MW upgradation)			61.17					61.17		
10	Upper Sengulam				53.22					53.22	
11	Peechad					7.74					
12	Western Kallar					17.4					
13	Ladrum					12.13					
14	Maramala SHEP					23.02					
15	Pasukkadavu SHEP					10.34					
16	Valanthode SHEP					17.36					
17	Marippuzha SHEP					14.84					
18	Chembukadavu III SHEP					16.65					
19	Chathankottunada SHEP - Stage I					12.06					
20	Olikkal SHEP			10.26							10.26
21	Poovaramthodu SHEP			5.88							5.88
22	Mankulam HEP					102.85					
23	Total	336.4	126.31	77.31	161.05	234.39	336.4	126.31	61.17	161.05	16.14

4.13 Based on the above, the station wise gross hydro generation anticipated for the MYT period is given in the Table 4.6 below.

4.14 The Commission also noted that, KSEB Ltd has estimated the auxiliary consumption of the hydel plants based on the norms. However, the Commission while approving the Truing Up of accounts of KSEB Ltd for the years 2018-19 to 2020-21, noticed that, the actual auxiliary consumption of hydro stations reported is much less than the auxiliary consumption as per norms. KSEB Ltd during the deliberations on the subject matter clarified that, the auxiliary consumption shown in the petition relates only to the equipments at the generating point and does not include the auxiliary consumption of the step up transformers and other associated equipments and lines in the switch yard. They further clarified that, there is no metering system at the point of evacuation and hence the auxiliary consumption shown in the petition is limited to the consumption by the equipments at the generating point only and the consumption by the remaining equipments beyond generating point till the point of evacuation at present is reflected as distribution loss. The Commission after examining the entire aspects, observed that, this is not an ideal situation and cannot be accepted in future. **The Commission directed KSEB Ltd that it shall take immediate steps to provide metering arrangements at evacuation point of each generating station of KSEB Ltd. KSEB Ltd shall comply with the above direction and report the compliance before the Commission.**

4.15 With these observation and direction, the Commission hereby approves the station wise hydel generation for the MYT period from 2022-23 to 2026-27 as follows.

Table 4.6

Station wise hydro generation approved for the MYT period from 2022-23 to 2026-27

Sl No	Hydro Station	KSEB Ltd					KSERC				
		2022-23 (MU)	2023-24 (MU)	2024-25 (MU)	2025-26 (MU)	2026-27 (MU)	2022-23 (MU)	2023-24 (MU)	2024-25 (MU)	2025-26 (MU)	2026-27 (MU)
1	Idukkki	2478.65	2477.00	2468.55	2358.45	2407.17	2478.65	2477.00	2468.55	2358.45	2407.17
2	Sabarigiri	1397.74	1543.28	1551.15	1509.18	1531.52	1397.74	1543.28	1551.15	1509.18	1531.52
3	Idamalayar	379.07	335.47	302.46	286.59	290.48	379.07	335.47	302.46	286.59	290.48
4	Sholayar	250.73	232.84	237.57	229.36	237.57	250.73	232.84	237.57	229.36	237.57
5	Pallivasal	146.29	136.63	137.57	144.55	142.75	146.29	136.63	137.57	144.55	142.75
6	Kuttiady	639.30	628.19	607.72	601.34	613.66	639.30	628.19	607.72	601.34	613.66
7	Panniar	141.61	160.94	159.45	168.70	165.60	141.61	160.94	159.45	168.70	165.60
8	Poringal	144.13	141.18	155.48	155.48	155.48	144.13	141.18	155.48	155.48	155.48
9	PLBE	102.94	105.34	105.34	105.34	105.34	102.94	105.34	105.34	105.34	105.34
10	Sengulam	127.09	22.77	133.28	155.68	134.11	127.09	22.77	133.28	155.68	134.11
11	Neriamangalam+NES	283.18	200.23	298.23	283.76	251.23	283.18	200.23	298.23	283.76	251.23
12	Lower Periyar	319.10	379.86	409.72	461.72	344.43	319.10	379.86	409.72	461.72	344.43
13	Kakkad	179.40	161.89	185.34	185.34	205.34	179.40	161.89	185.34	185.34	205.34
14	Kallada	32.30	32.30	32.30	32.30	32.30	32.30	32.30	32.30	32.30	32.30
15	Peppara	5.98	5.98	5.98	5.98	5.98	5.98	5.98	5.98	5.98	5.98
16	Madupetty	2.77	3.15	3.02	1.90	1.90	2.77	3.15	3.02	1.90	1.90
17	Chembukadav	8.07	8.07	8.07	8.07	8.07	8.07	8.07	8.07	8.07	8.07
18	Malampuzha	3.04	3.04	3.04	3.04	3.04	3.04	3.04	3.04	3.04	3.04
19	Urumi	14.34	14.34	14.34	14.34	14.34	14.34	14.34	14.34	14.34	14.34
20	Malankara	29.08	27.83	28.29	29.32	29.32	29.08	27.83	28.29	29.32	29.32
21	Lower Meenmutty	4.59	4.59	4.59	4.59	4.59	4.59	4.59	4.59	4.59	4.59
22	Ktdy. tail race	5.96	5.96	5.96	5.96	5.96	5.96	5.96	5.96	5.96	5.96
23	Poozhithode	7.13	7.13	7.13	7.13	7.13	7.13	7.13	7.13	7.13	7.13
24	Ranni-Perunadu	6.03	6.03	6.03	6.03	6.03	6.03	6.03	6.03	6.03	6.03
25	Peechi	2.62	2.62	2.62	2.62	2.62	2.62	2.62	2.62	2.62	2.62
26	Vilangad	15.94	15.94	15.94	15.94	15.94	15.94	15.94	15.94	15.94	15.94
27	Chimini	5.20	5.98	5.20	5.20	5.20	5.20	5.98	5.20	5.20	5.20
28	Adiyanpara	2.85	2.85	2.85	2.85	2.85	2.85	2.85	2.85	2.85	2.85
29	Vellathuval	5.87	3.15	7.09	4.10	6.10	5.87	3.15	7.09	4.10	6.10
30	Barapole	18.96	18.96	18.96	18.96	18.96	18.96	18.96	18.96	18.96	18.96
31	Perunthenaruvi	9.08	9.08	9.08	9.08	9.08	9.08	9.08	9.08	9.08	9.08
32	Kakkayam SHEP	9.16	9.16	9.16	9.16	9.16	9.16	9.16	9.16	9.16	9.16
33	Chathankottunada II	12.29	14.76	14.76	14.76	14.76	12.29	14.76	14.76	14.76	14.76
34	Upper Kallar	4.28	5.14	5.14	5.14	5.14	4.28	5.14	5.14	5.14	5.14
35	Porigalkuthu SHEP	44.91	45.02	45.02	45.02	45.02	44.91	45.02	45.02	45.02	45.02
36	Boothathenkettu	41.74	83.50	83.50	83.50	83.50	41.74	83.50	83.50	83.50	83.50
37	Thottiyar HES	99.00	99.00	99.00	99.00	99.00	99.00	99.00	99.00	99.00	99.00
38	Pallivasal Ext Scheme	76.89	153.90	153.90	153.90	153.90	76.89	153.90	153.90	153.90	153.90
39	Chinnar		38.23	76.45	76.45	76.45	0.00	38.23	76.45	76.45	76.45
40	Peruvannamoozhi		5.87	24.70	24.70	24.70	0.00	5.87	24.70	24.70	24.70
41	Pazhassi Sagar		5.88	25.16	25.16	25.16	0.00	5.88	25.16	25.16	25.16
42	Olikkal SHEP			3.42	10.26	10.26					10.26
43	Poovaramthodu SHEP			1.96	5.88	5.88					5.88
44	Anakkayam				7.61	22.85					
45	Upper Sengulam				17.74	53.22					
46	Sengulam Aug. Scheme				42.48	84.96					84.96
47	Peechad					2.58					
48	Western Kallar					5.80					
49	Ladrum					4.04					
50	Maramala SHEP					7.68					
51	Pasukkadavu SHEP					3.44					
52	Valanthode SHEP					5.78					
53	Marippuzha SHEP					4.94					
54	Chembukadavu III SHEP					5.55					
55	Chathankottunada SHEP - Stage I					4.02					
56	Mankulam HEP					51.42					
57	Total	7057.26	7163.06	7474.51	7443.65	7573.27	7057.26	7163.06	7469.13	7359.68	7401.95
58	Aux consumption (as per nors)	84.54	85.85	89.44	88.39	89.26	84.54	85.85	89.38	87.40	87.24
59	Net Hydro Generation	6972.72	7077.22	7385.07	7355.26	7484.02	6972.72	7077.22	7379.75	7272.29	7314.72

4.16 The summary of the hydro generation for the MYT period from 2022-23 to 2026-27 is given below.

Table 4.7
Summary of the hydro generation for the MYT period 2022-23 to 2026-27

Financial Year	KSEB Ltd			KSERC		
	Gross Hydel available (MU)	Aux. Consumption (MU)	Net Hydel Available(MU)	Gross Hydel available (MU)	Aux. Consumption (MU)	Net Hydel Available(MU)
2022-23	7057.26	84.54	6972.72	7057.26	84.54	6972.72
2023-24	7163.06	85.84	7077.22	7163.06	85.85	7077.22
2024-25	7474.51	89.44	7385.07	7469.13	89.38	7379.75
2025-26	7443.65	88.39	7355.26	7359.68	87.40	7272.29
2026-27	7573.27	89.25	7484.02	7401.95	87.24	7314.72

4.17 The month wise net hydro availability estimated for the MYT period from 2022-23 to 2026-27 is given below.

Table 4.8
Month wise hydro generation approved for the MYT period 2022-23 to 2026-27

Year	2022-23	2023-24	2024-25	2025-26	2026-27
	(MU)	(MU)	(MU)	(MU)	(MU)
Apr	757.49	725.37	753.38	715.02	735.67
May	754.33	732.96	761.42	709.89	737.99
Jun	495.75	531.92	555.06	533.71	553.60
Jul	531.68	581.27	609.25	588.17	559.02
Aug	558.97	606.33	661.69	638.56	608.42
Sep	489.63	535.17	580.05	568.58	579.50
Oct	553.03	557.78	578.97	596.21	584.45
Nov	469.97	471.14	526.24	551.93	551.18
Dec	509.58	506.57	517.02	528.08	532.59
Jan	539.99	548.43	585.30	567.91	575.07
Feb	570.02	531.63	535.13	544.17	556.07
Mar	742.29	748.65	716.27	730.05	741.15
Total	6972.72	7077.22	7379.75	7272.29	7314.72

Energy availability of Thermal Stations

4.18 Due to high variable cost, KSEB Ltd has not proposed to schedule power from its thermal stations BDPP and KDPP during the MYT period 2022-23 to 2026-27. KSEB Ltd further submitted that, KSEB Ltd may be permitted to schedule power from these stations and the actual cost may be claimed at the time of Truing up of the respective years.

Analysis and Decision of the Commission

4.19 The Commission noted the submission of KSEB Ltd and decided not to approve the schedule from BDPP and KDPP during the MYT period from 2022-23 to 2026-27. The Commission may approve the actual schedule, if any from these stations during contingencies after prudence check during the Truing up of relevant years. ***The Commission hereby directs that KSEB Ltd shall strictly follow merit order despatch while scheduling power from BDPP and KDPP.***

Energy generation from KSEB Ltd's own Solar Projects

4.20 KSEB Ltd submitted that, as on 30.11.2021, the KSEB Ltd has an installed capacity of 30.72 MW with an annual generation of about 51.13 MU. Further, KSEB Ltd has targeted to add 11.49 MW more solar projects in the future. Year wise details of the solar generation estimated from its own stations is given below.

Table 4.9
KSEB petition- Year wise details of Solar generation (net)

Particulars	2022-23	2023-24	2024-25	2025-26	2026-27
	(MU)	(MU)	(MU)	(MU)	(MU)
Solar - Existing Projects	51.67	51.67	51.67	51.67	51.54
Agali Solar	1.66	1.66	1.66	1.66	1.66
Brahamapuram solar	2.80	5.61	5.60	5.61	5.59
Kanjikkode Solar	2.10	4.20	4.20	4.20	4.19
Solar Project at Ettumanoor	0.66	1.31	1.31	1.32	1.32
Solar Project at Nenmara	0.90	1.80	1.80	1.79	1.79
Soura Kerala Model	0.83	2.49	4.14	4.92	4.91
PM KUSUM Component C		3.94	7.87	7.87	7.85
Solar total	60.63	72.69	78.27	79.05	78.85
Less Aux. consumption (0.25%)	0.15	0.18	0.20	0.20	0.20
Net Solar generation	60.47	72.50	78.07	78.85	78.65

4.21 Month wise addition of solar generation during the MYT period from 2022-23 to 2026-27 is given below.

Table-4.10

KSEBL petition- Month wise details of solar generation during the MYT period (Net) MU

Year	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Total
2022-23	4.43	4.43	4.43	4.43	4.43	4.43	5.65	5.65	5.65	5.65	5.65	5.65	60.47
2023-24	5.65	5.65	5.65	5.65	5.65	5.65	6.44	6.44	6.44	6.44	6.44	6.44	72.50
2024-25	6.44	6.44	6.44	6.44	6.44	6.44	6.58	6.58	6.57	6.57	6.57	6.57	78.07
2025-26	6.57	6.57	6.57	6.57	6.57	6.57	6.57	6.57	6.57	6.57	6.57	6.57	78.85
2026-27	6.57	6.57	6.57	6.57	6.57	6.57	6.57	6.57	6.57	6.57	6.57	6.57	78.85

Analysis and Decision of the Commission

4.22 The Commission has examined in detail the Solar generation estimated by KSEB Ltd for the MYT period from 2022-23 to 2026-27. As detailed under Chapter-3, the Commission has provisionally considered all the own Solar Projects proposed by KSEB Ltd during the MYT period from 2022-23 to 2026-27. ***The Commission after examining the details, hereby approves the solar generation proposed by KSEB Ltd during the MYT period from 2022-23 to 2026-27.***

Energy generation from KSEB own Wind projects

4.23 KSEB Ltd submitted that, the total wind energy capacity of KSEB Ltd as on date is 2.025 MW at Kanjikode, Palakkad, and KSEB Ltd is expected to generate 1.14MU from this project during the year 2022-23.

KSEB Ltd further submitted that, they proposed to carryout RMU at Kanjikode, Palakkad to enhance the capacity from 2.025MW to 6MW. The expected generation is 12.614MU.

The year wise details of the generation from the Wind plants at Kanjikode during the MYT period from 2022-23 to 2026-27 is given below.

Table 4.11

KSEBL petition- Annual generation from wind project

Year	Generation (MU)
2022-23	1.14
2023-24	0.00
2024-25	6.31
2025-26	12.60
2026-27	12.60

Analysis and Decision of the Commission

4.24 The Commission has examined in detail the electricity generation from the wind power plants owned by KSEB Ltd. At present, KSEB Ltd had installed 2.025MW wind power plant at Kanjikode, Palakkad and the annual generation from the plant is 1.14 MU for the year 2022-23.

4.25 KSEB Ltd further submitted that, they planned to carry out RMU at Kanjikode, wind farm to enhance the capacity of the plant from 2.025 MW to 6 MW, thereby the annual generation, the annual generation expected for 2025-26 is 6.30MU and the annual generation expected from 2026-27 is 12.60 MU.

4.26 The Commission noted the increase in wind capacity and annual generation from KSEB Ltd owned wind plants through RMU works. However, KSEB Ltd in the Capital investment plan or through separate petition is yet to seek investment approval for the RMU work for the existing wind plants at Kanjikode, Palakkad. Even without requesting for the approval for the capital investment for RMU of the wind plants, the Commission is not in a position to approve the wind generation expected from the enhanced capacity of 6MW through RMU work. Considering these aspects in detail, the Commission has not considered the energy availability from its wind plants from the year 2023-24 onwards. The details of the wind generation approved for the MYT period from 2022-23 to 2026-27 is given below.

Table 4.12
KSEBL own Wind generation – claimed and approved

Year	Wind generation in MU	
	KSEBL petition	KSERC approval
2022-23	1.14	1.14
2023-24	0.00	0.00
2024-25	6.31	0.00
2025-26	12.60	0.00
2026-27	12.60	0.00

4.27 Summary of the internal generation claimed and approved for the MYT period from 2022-23 to 2026-27 is detailed below.

Table 4.13
Summary of the internal generation- claimed and approved

Year	KSEBL petition				KSERC Approval			
	Hydro (net)	Solar (net)	Wind	Total	Hydro (net)	Solar (net)	Wind	Total
	(MU)	(MU)	(MU)	(MU)	(MU)	(MU)	(MU)	(MU)
2022-23	6972.72	60.47	1.14	7034.33	6972.72	60.47	1.14	7034.33
2023-24	7077.22	72.50	0.00	7149.72	7077.22	72.50	0.00	7149.72
2024-25	7385.07	78.07	6.31	7469.45	7379.75	78.07	0.00	7457.83
2025-26	7355.26	78.85	12.60	7446.71	7272.29	78.85	0.00	7351.13
2026-27	7484.02	78.65	12.60	7575.27	7314.72	78.65	0.00	7393.37

O&M expenses

- 4.28 SBU-G in their petition has sought O&M expenses for the existing generating stations as per the provisions of the Regulation 45(1)(a) of the KSERC (Terms and Conditions for Determination of Tariff) Regulations, 2021. The O&M expenses sought for existing stations of SBU-G given below:

Table: 4.14

KSEBL petition- O&M expenses claimed for existing stations of SBU-G

Item	2022-23	2023-24	2024-25	2025-26	2026-27
O&M Expenses (Rs Cr)	163.12	170.38	177.97	185.9	194.98

- 4.29 KSEB Ltd further submitted that, the Tariff Regulations, 2021, allow O&M expenses for new generating stations at four percent (4%) of the original project cost (excluding cost of rehabilitation and resettlement works) in the first year of operation and for the subsequent years allow an annual increase of 4.54% (considering inflation) on the base year O&M cost. The O&M expenses for new hydel plants with capacity more than 25 MW is estimated as per the above provisions of the Tariff Regulations, 2021.
- 4.30 O&M expenses of Small Hydel Plants, Solar projects and Wind projects owned by the KSEB Ltd is estimated as per the norms specified in the provisions of the KSERC (Renewable energy and Net metering) Regulation 2020.
- 4.31 KSEB Ltd further submitted that, the Perunthenaruvi SHEP was commissioned on 24.10.2017 but as per the account, the same is capitalised only on 2018-19, hence the same is not considered in the KSERC (Terms and Conditions for determination of Tariff) Regulations, 2021 for finalising the operation and maintenance cost of existing station of KSEB Ltd under SBU G. Hence the same may be considered as new project with O&M expense, as per KSERC (Renewable energy and Net metering) Regulation 2020. Similarly in the case of Banasurasagar floating solar commissioned during 2018-19 and the O&M cost during FY 2020- 21 becomes Rs.0.04 Cr. The list of new generating stations and units expected to be commissioned during the control period and their O&M expenses sought by KSEB Ltd is given below:

Table: 4.15

KSEBL petition - Proposed O&M expenses for new stations (Rs. Cr)

Sl.No	Project Name	Date of Commission	Capacity MW	Project cost	2022-23	2023-24	2024-25	2025-26	2026-27
1	Chathankottunada II	21.06.2021	6.00	68.30	1.66	1.76	1.86	1.97	2.08
2	Upper Kallar	30.09.2021	2.00	31.28	0.77	0.81	0.86	0.91	0.96
3	Boothathenkettu	2022-23	24.00	244.24	3.33	7.04	7.44	7.86	8.31
4	Porigalkuthu SHEP	2021-22	24.00	159.19	6.66	7.04	7.44	7.86	8.31
5	Thottiyar HES	2022-23	40.00	234.97	4.70	9.82	10.26	10.72	11.20
6	Pallivasal Ext Scheme	2022-23	60.00	559.03	11.18	23.37	24.42	25.52	26.67
7	Chinnar	2023-24	24.00	210.70		3.52	7.44	7.86	8.31
8	Peruvannamoozhi	2023-24	6.00	114.22		0.88	1.86	1.97	2.08
9	Pazhassi Sagar	2023-24	7.50	102.75		1.10	2.32	2.46	2.60
10	Anakkayam	2025-26	7.50	139.62				1.23	2.60
11	Perunthenaruvi	23.10.2017	3.60	42.27	0.01	0.01	0.01	0.01	0.01
12	Upper Sengulam	2025-26	24.00	316.00				3.93	8.31
13	Peechad	2026-27	3.00	27.64					0.72
14	Western Kallar	2026-27	5.00	51.24					1.20
15	Ladrum	2026-27	3.50	48.81					0.84
16	Maramala SHEP	2026-27	7.00	74.28					1.21
17	Pasukkadavu SHEP	2026-27	4.00	51.00					0.96
18	Valanthode SHEP	2026-27	7.50	69.11					1.30
19	Marippuzha SHEP	2026-27	6.00	71.95					1.04
20	Chembukadavu III SHEP	2026-27	7.50	64.11					1.30
21	Chathankottunada SHEP - Stage I	2026-27	5.00	71.59					1.20
22	Olikkal SHEP	2025-26	5.00	46.00				1.13	2.39
23	Poovaramthodu SHEP	2025-26	3.00	46.00				0.68	1.44
24	Mankulam HE Project	2026-27	40.00	750.00					15.00
25	Banasurasagar Floating solar	31.03.2019	0.50	8.44	0.04	0.04	0.04	0.04	0.04
26	Soura Scheme	30.11.2021	10.25	27.23	0.77	0.81	0.86	0.91	0.96
27	Soura Solar	2020-21	2.13		0.16	0.17	0.18	0.19	0.20
28	Solar Project	2018-19	3.32		0.25	0.26	0.28	0.29	0.31
29	Solar Project commissioned FY 2019-20 (Including Kottiyam)	24.1.2020	0.65		0.05	0.05	0.05	0.05	0.06
30	Agali	30.10.2021	1.00	5.37	0.07	0.07	0.08	0.08	0.09
31	Brahamapuram	2022-23	4.00	21.49	0.14	0.30	0.32	0.34	0.35
32	Kanjikkode	2021-22	3.00	16.11	0.21	0.22	0.24	0.25	0.27
33	Ground mounted solar project at Ettumanoor	2022-23	1.00	6.69	0.04	0.07	0.08	0.08	0.09

Sl.No	Project Name	Date of Commission	Capacity MW	Project cost	2022-23	2023-24	2024-25	2025-26	2026-27
34	Ground mounted solar project at Nenmara	2022-23	1.50	6.35	0.05	0.11	0.12	0.13	0.13
35	PM KUSUM - Component C(5 MW ground & 0.99 MW Roof)	2023-24	5.99	22.75		0.22	0.47	0.50	0.53
36	Soura Kerala Model	2024-25	3.00	8.25			0.12	0.25	0.27
37	Construction of new wind farm at Kanjikode /Stage 1	2024-25	4.00	34.85			0.21	0.45	0.47
38	Kuttiyadi 7.5 MW Upgradation	2024-25	7.50	89.82			0.02	0.04	0.04
	TOTAL				30.07	57.67	66.96	77.71	113.84

4.32 The total O&M expenses as per norms for the control period 2022-23 to 2026-27 for SBU-G as per the petition is as shown below:

Table : 4.16

KSEBL petition- total Operation & Maintenance Cost of SBU-G

Item	2022-23	2023-24	2024-25	2025-26	2026-27
	(Rs. Cr)	(Rs. Cr)	(Rs. Cr)	(Rs. Cr)	(Rs. Cr)
Existing stations	163.12	170.38	177.97	185.9	194.98
New Stations	30.07	57.67	66.96	77.71	113.84
Total	193.19	228.05	244.93	263.61	308.82

4.33 KSEB Ltd further requested before the Commission to finalise the norms for the control period after considering the petition OP No. 63/2021 in the matter of re-determination of allowable employee strength since 31.03.2009.

Comments of the Stakeholders

4.34 HT& EHT Association submitted that, O&M cost may be allowed strictly as per norms only. The O&M cost estimated by the Association is less by Rs.6.27 crore to Rs.206.57 crore respectively from 2022-23 to 2026-27.

Provisions in the Regulations

4.35 Relevant Provisions in the KSERC (Terms and Conditions of Tariff) Regulations, 2021 are given below:

“45. Operation and Maintenance expenses of Generators. –

(1) Existing generating stations of the generation business of KSEB Limited, shall be allowed to recover operation and maintenance expenses for

each financial year of the Control Period, as per the norms specified in Annexure 7 to these Regulations:

Provided that in the case of one time maintenance of special nature, not in the form of routine repair and maintenance, if any, is required and is undertaken for the generating stations/ unit, expenses for such maintenance may be allowed by the Commission after prudence check considering the details and justification furnished by the Generating business/ company for incurring such an expenditure to the satisfaction of the Commission.

- (2) *The generation business of KSEB Limited shall based on a petition filed by the generator/ generating station and subject to prudence check by the Commission, be allowed to recover, in addition to the above specified normative operation and maintenance expenses, the annual pension contribution payable by KSEB Limited to the Master Trust, based on actuarial valuation in respect of the personnel allocated to the generation business of KSEB Limited. KSEB Limited shall ensure that such amounts are deposited in a separate account of the Master Trust, shall not be utilized for working capital or on other such expenditure and proof of depositing such allocated amounts into the separate account shall be filed with the Commission within 90 days of the date of such Order.*
- (3) *In the case of new generating stations, the generating company shall be allowed to recover during the Control Period, the operation and maintenance expenses as specified hereunder, -*
- (i) *the operation and maintenance expenses in the first year of operation shall be four percent of the original project cost (excluding cost of rehabilitation and resettlement works); and*
 - (ii) *the operation and maintenance expenses for each subsequent financial year of the Control Period shall be determined using the escalation rate arrived at in Annexure 7, on the operation and maintenance expenses for the first year.”*

As per the Table-3 of the Annexure-7 of the Tariff Regulations, 2021, the O&M cost allowable to SBU-G for the MYT period from 2022-23 to 2026-27 is given below.

Table 4.17
KSEB petition -O&M cost of existing stations of SBU-G

	O&M cost of SBU-G (Provisional) (Rs. Cr)				
Year	2022-23	2023-24	2024-25	2025-26	2026-27
SBU-G	163.12	170.38	177.97	185.9	194.18

Analysis and Decisions of the Commission

- 4.36 The Commission as examined in detail the O&M cost of SBU-G claimed by KSEB Ltd for the MYT period 2022-23 to 2026-27. The Commission, vide the Tariff Regulations has specified the O&M cost of SBU-G of existing stations and also the methodology to be adopted for claiming the O&M cost of new stations added during the control period.
- 4.37 The O&M cost of existing stations is specified under Table-3 of Annexure-7 of Tariff Regulations, 2021 is, which is given under Table 4.17 above,
- 4.38 As per the Regulation 45(3) of the Tariff Regulations, 2021, the O&M cost of new generating stations for the first year of operation shall be 4% of the original project cost excluding cost of rehabilitation and resettlement. The O&M cost allowable for the subsequent financial years of the control is determined by escalating the O&M cost for the first year using the approved escalation rate of 4.454% specified under Table-1 of Annexure -7 of the Tariff Regulations, 2021.

O&M cost approved for existing stations of SBU-G

- 4.39 Accordingly, as per the provisions of the Tariff Regulations, 2021, the O&M cost of existing stations of SBU-G approved for the MYT period is given below.

Table 4.18
O&M cost approved for existing stations of SBU-G

	O&M cost of SBU-G (Provisional) (Rs. Cr)				
Year	2022-23	2023-24	2024-25	2025-26	2026-27
SBU-G	163.12	170.38	177.97	185.9	194.18

O&M cost allowable for new stations of SBU-G

- 4.40 The details of the new generating stations of SBU-G considered by KSEB Ltd for claiming O&M cost is detailed under Table 4.15 above.
- 4.41 KSEB Ltd targeted to declare COD of 24 hydel plants with a total capacity of 325.10 MW during the MYT period 2022-23 to 2026-27. Out of it 21 projects except 'Thottiyar (40 MW) expected to achieve COD in the year 2022-23 and Pallivasal (60 MW) expected to achieve COD in the year 2022-23, and Mankulam (40 MW) expected to achieve COD in the year 2026-27' are Small Hydro Projects having capacity less the 25 MW.
- 4.42 While appraising the GFA addition for provisional consideration for estimating the ARR, the Commission decided that, considering the huge delay of more than 15 years, the asset addition of Pallivasal Extension Scheme shall be appraised separately, duly considering the cost of completion, time overrun,

cost overrun and other relevant factors. For appraising the same, KSEB Ltd shall file a separate petition with all relevant details including original project cost, original schedule of completion, cost of completion, time overrun, cost overrun, the increase in capital cost due to time and cost overrun etc. Till such time, the Commission shall not consider the GFA addition of Pallivasal Ext Scheme (60 MW). Hence, the Commission decided not to allow the O&M cost of Pallivasal till the Commission approve the GFA addition of this project. GFA addition and O&M cost of Pallivasal project may be allowed separately from the date of COD, after approving the total capital cost that can be allowed through tariff.

KSEB Ltd proposed to declare COD of the Mankulam 40 MW project in the last year of control period 2026-27. Duly considering the delays in executing the hydel projects, the Commission does not expect to achieve COD of this project as claimed by KSEB Ltd and the COD of the same may be spilled over to the next control period. Hence the Commission has decided to not to allow O&M cost for this project during this MYT period.

The Commission has decided to allow the O&M cost for Thottiyar (40MW) project from the FY 2022-23 provisionally as claimed by KSEB Ltd. However, KSEB Ltd shall within 3 months from the date of COD, file a separate petition with all complete details of the actual cost of completion along with the time and cost overruns for the approval of the Commission.

4.43 As stated earlier, out of the 24 hydel projects, 21 projects are small hydel projects (SHPs) having capacity less than 25 MW. As detailed under Table 3.8 of the Chapter-3, the Commission does not expect to achieve COD of the most of the new hydel projects which scheduled to achieve COD in the year 2026-27. ***The Commission provisionally allow O&M cost for new SHPs which considered for GFA addition as discussed in detail in Chapter-3 of this order.***

4.44 The norms of operation of the RE projects are specified separately in the KSERC (Renewable Energy & Net Metering) Regulations, 2020 (herein after referred as RE Regulations, 2020). The O&M cost of SHPs specified in the RE Regulations, 2020 is extracted below.

“Regulation 53(4) Operation and Maintenance Expenses, -

(i) Normative O&M expenses for the first year of the Control period shall be as given below.

Project Size	O&M Expenses for the first year of the control period (Rs. Lakh/MW) (2019-20)
Below 5 MW	32.41
5 MW to 25 MW	23.47

Normative O&M expenses of the first year of the control period as above shall be escalated at the rate of 5.72% per annum for the tariff period for the purposes of tariff determination.”

- 4.45 KSEB Ltd proposed to declare COD of the following Solar projects during the MYT period from 2022-23 to 2026-27.

Table 4.19

KSEB petition- New Solar Projects commissioned during the MYT claimed for O&M expenses

Project Name	COD	Capacity MW
Banasurasagar Floating solar	31.03.2019	0.50
Soura Scheme	30.11.2021	10.25
Soura Solar	2020-21	2.13
Solar Project	2018-19	3.32
Solar Project commissioned FY 2019-20	24.1.2020	0.65
Agali	30.10.2021	1.00
Brahamapuram	2022-23	4.00
Kanjikkode	2021-22	3.00
Ground mounted solar project at Ettumanoor	2022-23	1.00
Ground mounted solar project at Nenmara	2022-23	1.50
PM KUSUM -Component C	2023-24	5.99
Soura Kerala Model	2024-25	3.00
Total		36.34

- 4.46 As per the Regulation 54(4) of the RE Regulations, 2020, the O&M cost for Solar project is Rs 6.00 lakh/MW for the year 2019-20, and the same for the subsequent years of the control period is arrived by escalating the base year O&M cost by 5.72% annually. The relevant Regulations is extracted below.

“54 (4). Operation and Maintenance Expenses,-The Commission shall determine O&M expenses based on prevailing market trends for Solar PV project, and allowing an escalation rate of 5.72% over the previous year.

Provided that, normative O & M rates for the first year of the control period specified in this Regulation is taken as Rs 6.00 lakh/MW.”

- 4.47 KSEB Ltd has claimed O&M cost for a new wind farm at Kanjikkode with a capacity of 4 MW. As per the details filed before the Commission, KSEB Ltd is yet to seek investment approval with DPR and other necessary details as per the provisions of the Tariff Regulations, 2021. **Hence the Commission decided to not to allow O&M cost for wind projects during the current MYT period 2022-23 to 2026-27.**
- 4.48 KSEB Ltd has also claimed O&M cost for Kuttiyadi 7.5 MW upgradation. However, KSEB Ltd is yet to seek investment approval of the scheme. Hence,

for this project also, ***the Commission decided to not to allow O&M cost during the MYT period 2022-23 to 2026-27.***

- 4.49 As discussed in the preceding paragraphs, the normative O&M cost allowable for RE projects during the MYT period is given in the Table below.

Table 4.20
Normative O&M cost allowable as per RE Regulations, 2020 for RE projects

Particulars	Base level O&M cost for 2019-20	2022-23	2023-24	2024-25	2025-26	2026-27
SHPs	(Rs. Lakh/MW)	(Rs. Lakh/MW)				
(i) Capacity below 5 MW	32.41	38.30	40.49	42.80	45.25	47.84
(ii) Capacity above 5 MW to 25 MW	23.47	27.73	29.32	31.00	32.77	34.64
Solar projects	6.00	7.09	7.50	7.92	8.38	8.86

- 4.50 Based on the norms specified in the RE Regulations, 2020 as above, the O&M cost allowable for SHPS for the control period is given in the Table below.

Table 4.21
O&M cost approved for New projects

Sl.No	Project Name	Expected date of COD	Capacity MW	Project cost (RS. Cr)	2022-23	2023-24	2024-25	2025-26	2026-27
1	Chathankottunada II	21.06.2021	6.00		1.66	1.76	1.86	1.97	2.08
2	Upper Kallar	30.09.2021	2.00		0.77	0.81	0.86	0.91	0.96
3	Boothathenkettu	2022-23	24.00		6.66	7.04	7.44	7.86	8.31
4	Porigalkuthu SHEP	2021-22	24.00		6.66	7.04	7.44	7.86	8.31
5	Thottiyar HES	2022-23	40.00	234.97	9.40	9.83	10.27	10.74	11.23
6	Pallivasal Ext Scheme	2022-23	60.00	559.03					
7	Chinnar	2023-24	24.00			3.52	7.44	7.86	8.31
8	Peruvannamoozhi	2023-24	6.00			0.88	1.86	1.97	2.08
9	Pazhassi Sagar	2023-24	7.50			1.10	2.20	2.20	2.20
10	Perunthenaruvi	23.10.2017	3.60		1.38	1.46	1.54	1.63	1.72
22	Olikkal SHEP	2025-26	5.00					1.13	2.39
23	Poovaramthodu SHEP	2025-26	3.00					0.68	1.44
11	Anakkayam	2025-26	7.50						
12	Upper Sengulam	2025-26	24.00						
13	Peechad	2026-27	3.00						
14	Western Kallar	2026-27	5.00						
15	Ladrum	2026-27	3.50						
16	Maramala SHEP	2026-27	7.00						
17	Pasukkadavu SHEP	2026-27	4.00						
18	Valanthode SHEP	2026-27	7.50						

Sl.No	Project Name	Expected date of COD	Capacity MW	Project cost (RS. Cr)	2022-23	2023-24	2024-25	2025-26	2026-27
19	Marippuzha SHEP	2026-27	6.00						
20	Chembukadavu III SHEP	2026-27	7.50						
21	Chathankottunada SHEP - Stage I	2026-27	5.00						
24	Mankulam HE Project	2026-27	40.00						
25	Banasurasagar Floating solar	31.03.2019	0.50		0.04	0.04	0.04	0.04	0.04
26	Soura Scheme	30.11.2021	10.25		0.73	0.77	0.81	0.86	0.91
27	Soura Solar	2020-21	2.13		0.15	0.16	0.17	0.18	0.19
28	Solar Project	2018-19	3.32		0.24	0.25	0.26	0.28	0.29
29	Solar Project commissioned FY 2019-20 (Including Kottiyam)	24.1.2020	0.65		0.05	0.05	0.05	0.05	0.06
30	Agali	30.10.2021	1.00		0.07	0.07	0.08	0.08	0.09
31	Brahamapuram	2022-23	4.00		0.14	0.30	0.32	0.34	0.35
32	Kanjikkode	2021-22	3.00		0.21	0.22	0.24	0.25	0.27
33	Ground mounted solar project at Ettumanoor	2022-23	1.00		0.04	0.07	0.08	0.08	0.09
34	Ground mounted solar project at Nenmara	2022-23	1.50		0.05	0.11	0.12	0.13	0.13
35	PM KUSUM -Component C(5 MW ground & 0.99 MW Roof)	2023-24	5.99			0.22	0.47	0.50	0.53
36	Soura Kerala Model	2024-25	3.00				0.12	0.25	0.27
37	Construction of new wind farm at Kanjikkode /Stage 1	2024-25	4.00						
38	Kuttiyadi 7.5 MW Upgradation	2024-25	7.50						
	TOTAL				28.23	35.70	43.66	47.85	52.25

4.51 Summary of the O&M cost of SBU-G claimed and approved is given below.

Table 4.22

Summary of the O&M cost approved for SBU-G for the MYT period 2022-23 to 2026-27

Particulars	KSEBL Petition					KSERC Approval				
	2022-23	2023-24	2024-25	2025-26	2026-27	2022-23	2023-24	2024-25	2025-26	2026-27
	(Rs.Cr)	(Rs.Cr)	(Rs.Cr)	(Rs.Cr)	(Rs.Cr)	(Rs.Cr)	(Rs.Cr)	(Rs.Cr)	(Rs.Cr)	(Rs.Cr)
Existing stations	163.12	170.38	177.97	185.9	194.98	163.12	170.38	177.97	185.9	194.98
New Stations	30.07	57.67	66.96	77.71	113.84	28.23	35.70	43.66	47.85	52.25
Total	193.19	228.05	244.93	263.61	308.82	191.35	206.08	221.63	233.75	247.23

4.52 The Commission noted that, the O&M expenses as approved above based on the norms specified in the Tariff Regulations 2021 is inclusive of the 'Employee Expenses, A&G expenses and R&M expenses' for the MYT period from 2022-23 to 2026-27. The Commission noted that, each of the components of O&M

expenses such as 'Employee Expenses, A&G expenses and R&M expenses' are separate expenses and controllable parameter. Further, KSEB Ltd is also accounting each item separately in their audited accounts. Hence, the Commission has decided to approve each item of the O&M expenses separately in the ratio of these expenses approved in the Truing up of accounts for the year 2020-21. Such an effort facilitates identification of areas of cost reduction, inefficiency, lack of prudent cost control etc which will enable the utility to effect appropriate corrective action. Hence the Commission decided to apportion the O&M expenses admissible as per norms among the three components of O&M expenses viz-a-viz employee expenses, A&G expense and R&M expenses in the ratio of these expenses in approved True up O&M expenses of SBU-G for the year 2020-21.

Table 4.23

KSERC Approval- Components wise O&M expenses approved for the MYT period 2022-23 to 2026-27

Particulars	Ratio of the components of O&M expenses	KSERC Approval				
		2022-23	2023-24	2024-25	2025-26	2026-27
	(%)	(Rs. Cr)	(Rs. Cr)	(Rs. Cr)	(Rs. Cr)	(Rs. Cr)
Employee expense	77.03%	147.39	158.74	170.72	180.06	190.44
A&G expenses	4.32%	8.27	8.90	9.57	10.10	10.68
R&M expenses	18.65%	35.69	38.43	41.33	43.59	46.11
Total	100.00%	191.35	206.08	221.63	233.75	247.23

Pay revision expenses

4.53 KSEB Ltd submitted that, Regulation 14 (3) provides for admission of expenses relating to pay revision during the control period after due prudence check. KSEB Ltd in their petition has submitted that the pay revision of Officers/workmen is due from July / August 2023. The additional liability is estimated at 10% of Basic pay and DA. Accordingly, the provision estimated to discharge liability as per the petition is furnished below:

Table : 4.24

Pay Revision expenses estimated by KSEB Ltd

Pay Revision Expenses (Cr)				
Particulars	2023-24	2024-25	2025-26	2026-27
Basic + DA	3345.35	3623.3	3920.6	4269.1
10% of above	334.53	362.32	392.06	426.91
Provision for Pay Revision	223.02	362.32	392.06	426.91

4.54 SBU wise details of the pay revision expenses estimated by KSEB Ltd is given below.

Table 4.25
SBU wise details of the pay revision expenses estimated by KSEB Ltd

Business Unit	Employee cost ratio	SBU wise Pay revision expenses (Rs.Cr)				
		2022-23	2023-24	2024-25	2025-26	2026-27
SBU G	5.40		12.04	19.56	21.17	23.05
SBU T	11.25		25.08	40.75	44.09	48.01
SBU D	83.35		185.90	302.02	326.80	355.85
Total	100.00	NA	223.02	362.32	392.06	426.91

KSEB Ltd further submitted that, they had not included the above provision in their ARR and requested that these expenses be allowed as and when it materializes during the truing up process.

Analysis and Decision of the Commission

4.55 Regulation 14(3) of the Tariff Regulations 2021 provide as follows.

“14(3) Expenses relating to pay revision, if any, during the Control Period, of the Generation business/ company or Transmission business/ licensee or distribution business/ licensee, will be considered for pass through after due prudence check.”

4.56 As discussed under paragraphs 4(53) and 4(54) above, KSEB Ltd has estimated the additional liability towards pay revision with effect from July/August 2023 onwards. However, as per the details submitted before the Commission, KSEB Ltd yet to take any steps towards revision of pay and allowances to its employees. Hence it is too premature to claim provision of pay revision at this stage. However, the Commission may allow the ‘revision of pay and allowances implemented during the MYT period’ as per the provisions of the Tariff Regulations, 2021, after prudence check.

With the above observation, ***the Commission decided not to provide any provision towards revision of pay and allowances to its employees during the MYT period 2022-23 to 2026-27, in the MYT Order.***

Depreciation

4.57 In the petition, KSEB Ltd stated that depreciation on the fixed assets of SBU-G has been calculated at the net average rate of depreciation approved by the Commission vide the Tariff Regulations, 2021. KSEB Ltd has also included

depreciation for SBU-G considering the asset additions planned for the control period. The details given in the petition is as shown below:

Table 4.26

KSEB petition- Depreciation claimed for the control period

	Particulars	2020-	2021-	2022-	2023-	2024-	2025-	2026-
		21	22	23	24	25	26	27
		SBU-G	SBU-G	SBU-G	SBU-G	SBU-G	SBU-G	SBU-G
1	Opening GFA as on 1-4-2017 (As per TU Order 2017-18 (OA 9/2020 Dt 25.06.2021)	4658.32						
2	Total asset addition approved As per order dt 25.06.2021 for 2017-18	71.42						
3=(1+2)	Approved GFA as on 31.03.2018	4729.74						
4	GFA addition claimed for depreciation as per submission dt 30.07.2021 (2018-19)	103.86						
5	Asset addition for 2019-20 as per TU petition	116.27						
6=(3+4+5)	GFA at the beginning of the year considered for depreciation	4949.87	5028.07	5394.67	6548.53	7277.73	7596.56	8480.03
7	Assets >13 years old (for the control period)	3064.26	3132.03	3132.03	3401.75	3695.14	3806.87	3633.02
8	Fully depreciated Assets -Beyond 30 years	258.2	269.87	352.37	367.83	384	400.36	404.34
9	Add: Fully depreciated Contribution & grants							
10=(7-8+9)	Depreciable Assets having life 13-30 yrs	2806.06	2862.16	2779.66	3033.92	3311.14	3406.51	3228.68
11=(10*2.80%)	Value of land (Average 2.8% of GFA)	78.57	80.14	77.83	84.95	92.71	95.38	90.4
12	Grants and contributions prior to 13 years							
13=(10-11-12)	Assets having life 12-30 yrs eligible for depreciation	2727.49	2782.02	2701.83	2948.97	3218.43	3311.13	3138.28
14=(13*1.42%)	Depreciation for Assets 12-30 years (@1.42%)	38.73	39.5	38.37	41.88	45.7	47.02	44.56
15=(6-7)	Assets < 12 years old (1-4-2008 to 31-3-2020)	1885.61	1896.04	2262.64	3146.78	3582.59	3789.69	4847.01
16=(15*2.80%)	Value of land (Average 2.8% of GFA)	52.8	53.09	63.35	88.11	100.31	106.11	135.72

	Particulars	2020-21	2021-22	2022-23	2023-24	2024-25	2025-26	2026-27
		SBU-G	SBU-G	SBU-G	SBU-G	SBU-G	SBU-G	SBU-G
17	Grants and contributions (less than 13 yrs old)	116.91	116.91	116.91	116.91	116.91	116.91	116.91
18=(15-16-17)	Opening balance of Assets < 13 years old	1715.9	1726.04	2082.38	2941.76	3365.37	3566.67	4594.38
19	Asset addition during the year	78.2	366.6	1153.86	729.2	318.83	883.47	1443.28
20	Contribution & grants received during the year	0	0	0	0	0	0	0
21= (19*2.80%)	Land value @ 2.80% on GFA addition	2.19	10.26	32.31	20.42	8.93	24.74	40.41
22=(18+19-20-21)	Closing balance of Assets <13 years Old	1791.91	2082.38	3203.93	3650.54	3675.27	4425.4	5997.25
23=(18+22)/2	Average Value of Assets <13 Years old	1753.91	1904.21	2643.15	3296.15	3520.32	3996.04	5295.82
24=(23*5.14%)	Depreciation for assets <13 years (@5.14%)	90.15	97.88	135.86	169.42	180.94	205.4	272.21
25=(14+24)	Total Depreciation for the year	128.88	137.38	174.22	211.3	226.65	252.41	316.77

Comments of the Stakeholders

4.58 HT& EHT Association submitted that, KSEB Ltd had claimed depreciation on the assets which is yet to be approved by the Commission. According to the Association, the total depreciation allowable is Rs 641.58 crore against Rs 1181.35 crore claimed by KSEB Ltd.

Provisions in the Regulations

4.59 Provisions regarding depreciation is given below:

“27. Depreciation. –

- (1) *Depreciation shall be calculated on the original capital cost of the asset as approved by the Commission:*

Provided that, no depreciation shall be allowed on the increase in value of the assets, on account of revaluation of assets:

Provided further that the depreciation shall not be allowed on the assets created through consumer contribution, deposit works, capital subsidies and grants.

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

- (i) *depreciation shall be allowed upto a maximum of 90% of the approved capital cost of asset.*
- (ii) *depreciation shall be computed annually based on the straight line method at the rates specified in Annexure 1 to these Regulations for the first thirteen financial years from the date of Commercial operation;*
- (iii) *the remaining depreciable value as on the thirty first day of March of the financial year ending after a period of thirteen financial years from the date of Commercial operation shall be spread over the balance useful life of the assets;*
- (iv) *the generating business/ company or transmission business/ licensee or distribution business/ licensee, shall file 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;*
- (v) *No depreciation shall be allowed for assets created through consumer contribution, deposit works, capital subsidies and grants;*
- (vi) *the salvage value of the fully depreciated asset shall be ten per cent of the allowable capital cost as approved by the Commission;*

Provided that the salvage value of Information Technology equipment and computer software shall be considered at zero percent of the allowable capital cost.

- (3) *Land, other than the land held under lease and the land for reservoir in the case of hydel generating station, shall not be a depreciable asset and its cost shall be excluded from the capital cost while computing the depreciable value of the assets.*
- (4) *In case the land is held on lease, the lease premium paid will be eligible for depreciation over the lease period.*
- (5) *Depreciation against assets relating to environmental protection shall be allowed on a case-to-case basis at the time of fixation of tariff, subject to the condition that the environmental standards as prescribed have been complied with during the previous tariff period.*
- (6) *In the case of existing assets, the balance depreciable value of the asset as on the first day of April, 2022, shall be worked out by deducting the cumulative depreciation approved by the Commission upto the thirty first day of March, 2022, from the gross depreciable value of the assets.*
- (7) *Depreciation shall be chargeable from the first financial year of Commercial operation:*

Provided that in case the COD of the asset is declared during the course of the financial year, depreciation shall be charged on a daily pro-rata basis:

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

- (8) *In case a single tariff needs to be determined for all the units of a Generating Station, the depreciation shall be computed from the effective date of commercial operation of each of the units, taking into consideration the depreciation of individual generating units thereof.*

Analysis and decision of the Commission

- 4.60 The Commission has examined the details submitted by KSEB Ltd in detail. However, as detailed in Table -3.18 of Chapter-3, the GFA addition of SBU-G approved by the Commission is much less than the same claimed by KSEB Ltd.
- 4.61 The Regulation 27 of the Tariff Regulations 2021 provides for the methodology and the Annexure-1 of the Tariff Regulations, 2021 specifies the rate to be adopted for approving the depreciation.
- 4.62 The Tariff Regulations, 2021 provides for accelerated depreciation for the assets for the first thirteen years from the date of COD. The remaining depreciable value after completion of thirteen years from the COD shall be spread over the balance useful life of the assets. Further, as per the provisions of the Tariff Regulations, 2021, land is a non-depreciable asset. Based on the past practice and to ensure consistency in accounting policy, wherever the value of land is not provided, it is taken as taken as 2.80% of the total GFA of KSEB Ltd.
- 4.63 The Commission, duly considering the mix of various assets of KSEB Ltd with different useful life, the Commission has been adopting the e average rate of depreciation of assets having life less than 12 year @5.14% and the average depreciation rate of assets having life more than 12 years and up to 30 years is taken as 1.42%. All assets aged more than 30 years old is taken as fully depreciated assets and no further depreciation is provided.
- 4.64 As per the order of the Commission dated 24.06.2022 in the matter of Truing up of accounts of KSEB Ltd for the year 2020-21, the total depreciable asset as on 01.04.2021 is Rs 4998.40 crore as detailed below.

Table 4.27
Depreciable asset as on 01.04.2021

Particulars	Amount	Remarks
	(Rs. Cr)	
Depreciable Asset as on 01.04.2020	4697.64	Table-2.39 of the True up order 2020-21
Depreciable assets added during the year 2020-21	30.76	
Total Depreciable assets as on 01.04.2021	4728.40	

4.65 In order to estimate the depreciable asset as on 01.04.2022, i.e., at the beginning of the MYT period 2022-23, the depreciable assets added during the year 202-22 also has to be considered. As per the petition, KSEB Ltd has claimed the total GFA addition of 2021-22 as Rs 366.60 crore, however, KSEB Ltd has not submitted the justification for the claim. Hence the Commission has adopted the average of the last three year asset addition as per the orders of Truing up for the years 2018-19, 2019-20 and 2020-21 as the 'asset addition' for the year 2021-22 for the purposes of estimating the ARR for the MYT period 2022-23 to 2026-27. The details are given below.

Table 4.28
Depreciable assets provisionally considered for the Year 2021-22 for estimating ARR

Particulars	2018-19	2019-20	2020-21	2021-22 (avg. 2018-19 to 2020-21)
	(Rs. Cr)	(Rs. Cr)	(Rs. Cr)	(Rs. Cr)
GFA addition eligible as per Regulation	103.86	116.27	78.20	99.44
Consumer contribution and grants	13.34	2.10	0.00	5.15
Net Asset addition (for Normative loan)	90.52	114.17	78.20	94.29
Less: Land value addition excluding the portion under part capitalization	0.46	1.01	47.44	16.30
GFA addition eligible for depreciation as per petition (Revised vide letter dated 30-7-2021)	90.06	113.16	30.76	77.99

4.66 The year wise details of the depreciable assets of SBU-G approved in the Chapter-3 of this order is extracted below.

Table 4.29
Depreciable asset addition of SBU-G for the MYT period

Year	GFA addition approved	Value of land (2.8% of the GFA)	Depreciable asset added during the year
	(Rs. Cr)	(Rs. Cr)	(Rs. Cr)
2022-23	686.11	19.21	666.90
2023-24	493.54	13.82	479.72
2024-25	288.16	8.07	280.09

Year	GFA addition approved	Value of land (2.8% of the GFA)	Depreciable asset added during the year
	(Rs. Cr)	(Rs. Cr)	(Rs. Cr)
2025-26	308.95	8.65	300.29
2026-27	206.37	5.78	200.59
Total	1983.12	55.53	1927.59

4.67 Based on the above details, the depreciation of SBU-G provisionally approved for the purposes of ARR for the MYT period is given below.

Table 4.30
SBU-G. Depreciation approved for the MYT period from 2022-23 to 2026-27

Sl. No	Particulars	2021-22	MYT period				
			2022-23	2023-24	2024-25	2025-26	2026-27
		(Rs.Cr)	(Rs.Cr)	(Rs.Cr)	(Rs.Cr)	(Rs.Cr)	(Rs.Cr)
1	Depreciable asset at the beginning of the Year	4728.40	4806.39	5473.29	5953.01	6233.10	6533.39
2	Depreciable asset added during the year	77.99	666.90	479.72	280.09	300.29	200.59
3	Depreciable asset at the end of the year	4806.39	5473.29	5953.01	6233.10	6533.39	6733.98
4	Depreciation on the assets at the beginning of the year	126.33	129.66	153.98	167.80	177.93	199.60
5	Depreciation on the assets added during the year	2.00	17.14	12.33	7.20	7.72	5.16
6	Total depreciation allowable during the year	128.33	146.80	166.31	175.00	185.65	204.76

4.68 The comparison of the depreciation claimed and provisionally approved for SBU-G for the purposes of estimating the ARR during the MYT period is given below.

Table 4.31

Depreciation claimed by KSEB Ltd and provisionally approved by the Commission

Year	KSEB petition	KSERC Provisional
	(Rs. Cr)	(Rs. Cr)
2022-23	174.22	146.80
2023-24	211.3	166.31
2024-25	226.65	175.00
2025-26	252.41	185.65
2026-27	316.77	204.76
Total	1181.35	878.52

Interest and financing charges

4.69 In the petition, KSEB Ltd has claimed interest on capital liabilities, interest on working capital, interest on GPF, interest on security deposits and interest on Bonds issued to Master Trust under interest and financing charges. Each of the item is explained below:

Interest on capital liabilities:

4.70 KSEB Ltd submitted that the normative loan and the interest thereon has been calculated as per regulations. The normative opening loan as on 01.04.2021 has been taken as per the truing up petition for 2020-21. Estimated amount towards GFA, depreciation, applicable consumer contribution and grants for 2021-22 has been considered to arrive at the normative loan at the beginning of the control period. The details given in the petition is as shown below:

Table : 4.32

KSEB petition- Normative loan and interest claimed (Rs. Cr)

Particulars	2020-21	2021-22	2022-23	2023-24	2024-25	2025-26	2026-27
Opening Loan	717.04	666.36	895.58	1875.21	2393.12	2485.3	3116.36
GFA addition	78.2	366.6	1153.86	729.2	318.83	883.47	1443.28
Less: Consumer Contribution & Grants	0	0	0	0	0	0	0
Less: Allowable Depreciation	128.88	137.38	174.22	211.3	226.65	252.41	316.77
Normative loan during the year	-50.68	229.22	979.64	517.9	92.18	631.06	1126.51
Closing Normative loan	666.36	895.58	1875.21	2393.12	2485.3	3116.36	4242.87
Average normative loan	691.7	780.97	1385.4	2134.17	2439.21	2800.83	3679.61
Interest rate for the year (%)	9.87	9.87	9.87	9.87	9.87	9.87	9.87
Interest for the year	68.3	77.11	136.79	210.73	240.85	276.55	363.32

As detailed above, KSEB Ltd has claimed interest on loan ranges from Rs 136.79 crore in the year 2022-23 to Rs 363.32 crore in the year 2026-27.

Comments of stakeholders:

4.71 The HT&EHT Association objected to the interest on loan claimed by KSEB Ltd. The interest on loan arrived by the Association ranges from Rs 85.75 crore in the year 2022-23 to Rs 111.30 crore in the year 2026-27.

Provisions in the Regulations

4.72 The Regulation 26 and 29 of the Tariff Regulations, 2021 specified the 'interest and finance charges and related issues' in detail. The relevant Regulations are extracted below.

26. Debt - Equity ratio –

(1) *For the purpose of determination of tariff, the debt equity ratio as on the date of commercial operation in the case of a new generating station, transmission line and distribution line/ equipment/ accessories or substation commissioned or*

capacity expanded on or after the first day of April, 2022, shall continue to be 70:30 of the capital cost as approved by the Commission:

Provided that the debt-equity ratio shall be applied only to the balance of such approved capital cost after deducting the financial support provided through consumer contribution, deposit work, capital subsidy or grant, if any.

- (2) *Where equity employed is more than thirty percent of the approved capital cost, the amount of equity for the purpose of tariff shall be limited to thirty percent and the balance amount shall be considered as normative loan and interest on the same may be allowed at the weighted average rate of interest of the actual loan portfolio.*
- (3) *Where actual equity employed is less than thirty percent of the capital cost, the actual equity shall be considered and the balance of the Commission approved capital cost after adjusting for grants and/ or contribution shall be treated as normative loan.*
- (4) *If any fixed asset is capitalized on account of capital expenditure incurred prior to the first day of April, 2022, the debt-equity ratio allowed by the Commission for determination of tariff for the period ending on the thirty first day of March, 2022, shall be considered.*
- (5) *The equity invested in foreign currency, if any, or any loan in foreign currency, shall be designated in equivalent Indian rupees, at the exchange rate specified by the Reserve Bank of India as on the date of each such investment.*
- (6) *In the case of retirement or replacement of assets, the equity capital approved as mentioned above, shall be reduced to the extent of thirty percent or the actual equity component for the asset, if it is lower than thirty percent of the original cost of the retired or replaced asset based on documentary evidence.*
- (7) *Swapping of foreign currency loans shall be permitted provided:*
 - (i) *it does not have the effect of increasing the tariff;*
 - (ii) *the cost of swapping and interest expenses thereon, shall be allowed by the Commission only after prudence check;*
 - (iii) *The generating business/ company or transmission business/ licensee or distribution business/ licensee shall provide full particulars of the swapped loans;*
 - (iv) *Prior approval of the Commission shall be obtained before entering into any foreign currency swap.*
- (8) *Restructuring of capital in terms of the relative share of loan and equity is subject to the maximum equity of 30 percentage and shall be permitted during the useful life of the project provided:*
 - (i) *It does not have the effect of increasing the tariff;*
 - (ii) *any benefit from such restructuring shall be shared in the ratio 2:1 among,-*
 - a) *the generating business/ company and the persons sharing the capacity charge; or*
 - b) *the transmission business/ licensee and the long-term intra-state open access customers including the distribution business/ licensee; or*
 - c) *The distribution business/ licensee and consumers.*

29. Interest, Finance charges and Carrying cost. –

- (1) *The loans arrived at in the manner indicated in Regulation 26 shall be considered as gross normative loan for calculation of interest on the loans:
Provided that the interest and finance charges on capital works in progress shall be excluded from such consideration and will not be considered in the ARR and truing up processes:
Provided further that in case of retirement or replacement of the assets, the normative loan amount approved by the Commission shall be reduced to the extent of outstanding loan component of the original value of the retired or replaced assets; based on documentary evidence.*
- (2) *The normative loan outstanding as on the first day of April, 2022, shall be worked out by deducting the amount of cumulative repayment as approved by the Commission upto the thirty first day of March, 2022, 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 the declaration of the commercial operation date 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 rate of interest on the last available loan shall be considered:
Provided further that if the generating business/ company or the transmission business/ licensee or the distribution business/ licensee or State Load Despatch Centre does not have any actual loan outstanding, but normative loan is outstanding, then interest shall be allowed at the base rate.*
- (5) *The interest on loan shall be calculated on the normative average loan as per the norms approved by the Commission for the financial year, by applying the weighted average rate of interest.*
- (6) *The generating business/ company or the transmission business/ licensee or the distribution business/ licensee or the State Load Despatch Centre, as the case may be, shall make every effort to re-finance the loan so as to reduce the interest costs and to effect net savings on interest. In that event the costs associated with such re-financing shall be borne by the borrower and any benefit from such refinancing shall be shared in the ratio 2:1 among,-*
 - (i) *the generating business/ company and the persons sharing the capacity charge; or*
 - (ii) *the transmission business/ licensee and long-term intra-state open access customers including distribution business/ licensee; or*
 - (iii) *The distribution business/ licensee and its consumers.*
- (7) *The changes to the terms and conditions of the loans during the financial year, if any, shall be effective from the date of coming into force of such changes.*

- (8) *Interest shall be allowed on the amount collected as security deposit in cash from the users of the transmission system or distribution system and the consumers, at the bank rate as on the first day of April of the financial year in which the petition is filed:*

Provided that only the 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

- (9) *The Commission shall allow Carrying Cost on the admissible amounts, with simple interest, at the weighted average rate of interest on the licensee's loans prevailing during the relevant year:*

Provided that, in case the distribution licensee is holding security deposit over and above their working capital requirement, no carrying cost on such excess security deposit shall be allowed.

Analysis and decision of the Commission

4.73 The Commission has examined the details submitted by KSEB Ltd. KSEB Ltd has estimated the normative opening loan as on 01.04.2021 as per the Truing Up petition for the year 2020-21. However, the Commission vide the order dated 24.06.2022 in Petition OP No. 23/2022 has approved the normative loan as on 01.04.2021 at Rs 531.97 crore.

4.74 For arriving the normative loan as on 31.03.2022, i.e., at the beginning of the MYT period 2022-23, the GFA addition eligible for normative loan for the year 2021-22 has to be estimated. KSEB Ltd in their petition has claimed the GFA addition of Rs 366.60 crore for the year 2021-22, however the same is much higher the GFA addition of the previous years of the MYT period 2018-19 to 2021-22. Hence the Commission has decided to adopt the GFA addition of 2021-22 at average of the actual asset addition approved as per the Truing Up orders of the years 2018-19 to 2020-21. The details are given below.

Table 4.33

GFA addition considered for the Year 2021-22 for estimating normative loan

Particulars	2018-19	2019-20	2020-21	2021-22 (avg. 2018-19 to 2020- 21)
	(Rs. Cr)	(Rs. Cr)	(Rs. Cr)	(Rs. Cr)
GFA addition eligible as per Regulation	103.86	116.27	78.20	99.44
Consumer contribution and grants	13.34	2.10	0.00	5.15
Net Asset addition (for Normative loan)	90.52	114.17	78.20	94.30

- 4.75 The GFA addition of SBU-G approved during the MYT period 2022-23 to 2026-27, eligible for normative loan as per Chapter-3 of this order is given below.

Table 4.34
GFA addition provisionally considered for estimating normative loan

Year	GFA addition (Provisional)
	(Rs. Cr)
2022-23	686.11
2023-24	493.54
2024-25	288.16
2025-26	308.95
2026-27	206.37
Total	1983.12

- 4.76 The average interest rate of loan of SBU-G claimed by KSEB Ltd is 9.87%. Based on the above, the Commission has estimated the normative loan and interest for the SBU-G as in the Table below.

Table 4.35
Normative loan and interest provisionally approved for the MYT period

	Particulars	2021-22 (Rs. Cr)	MYT Period				
			2022-23	2023-24	2024-25	2025-26	2026-27
			(Rs. Cr)	(Rs. Cr)	(Rs. Cr)	(Rs. Cr)	(Rs. Cr)
A	Opening Loan at the beginning of the year	531.97	497.93	1037.24	1364.47	1477.63	1600.93
B	GFA addition during the year	99.44	686.11	493.54	288.16	308.95	206.37
C	Less: Consumer Contribution & Grants received	5.15	0	0	0	0	0
D	Less: Depreciation allowed for the year	128.33	146.80	166.31	175.00	185.65	204.76
E	Normative loan added during the year (E=B-C-D)	-34.04	539.31	327.23	113.16	123.30	1.61
F	Closing Normative loan at the end of the year (F=A+E)	497.93	1037.24	1364.47	1477.63	1600.93	1602.54
G	Average normative loan during the year (G=(A+F)/2)	514.95	767.58	1200.85	1421.05	1539.28	1601.73
H	Interest rate for the year (%) claimed by KSEB Ltd	9.87%	9.87%	9.87%	9.87%	9.87%	9.87%
I	Interest allowed for the year (provisionally) for estimating the ARR (I=G*H)	50.83	75.76	118.52	140.26	151.93	158.09

4.77 The summary of the normative loan and interest claimed by KSEB Ltd in their petition and provisionally approved by the Commission for the purposes of ARR is given in the Table below.

Table 4.36
Summary of the normative loan and interest- claimed by KSEB Ltd and provisionally approved by KSERC

Year	KSEBL claim	KSERC Approval
	(Rs.Cr)	(Rs.Cr)
2022-23	136.79	75.76
2023-24	210.73	118.52
2024-25	240.85	140.26
2025-26	276.55	151.93
2026-27	363.32	158.09
Total	1228.24	644.56

Interest on Security deposits

4.78 KSEB Ltd did not claim interest on security deposits for SBU-G as there is no security deposits against SBU-G

Interest on GPF

4.79 KSEB Ltd in their MYT petition has estimated the interest on GPF for the control period is estimated @7.10% on the average anticipated balance of GPF. KSEB Ltd submitted that the pay revision arrears are ordered to be credited to the PF account of employees in 2021-22 and 2022-23. The details are given below:

Table : 4.37

KSEB Ltd petition- Estimation of interest on provident fund as per petition

Particulars	Actuals	Estimate	Projection				
	2020-21	2021-22	2022-23	2023-24	2024-25	2025-26	2026-27
	(RS.Cr)	(RS.Cr)	(RS.Cr)	(RS.Cr)	(RS.Cr)	(RS.Cr)	(RS.Cr)
Opening: Provident Fund as on 1 st April - Rs. Cr	2342.96	2430.72	2852.52	3274.31	3364.31	3454.31	3544.31
Addition (net) during the Financial Year - Rs. Cr	87.76	421.80	421.80	90.00	90.00	90.00	90.00
Closing: Provident Fund as on 31 st March - Rs. Cr	2430.72	2852.52	3274.31	3364.31	3454.31	3544.31	3634.31
Average PF during the Financial Year- Rs. Cr	2386.84	2641.62	3063.41	3319.31	3409.31	3499.31	3589.31
Average interest rate (%)	7.10%	7.10%	7.10%	7.10%	7.10%	7.10%	7.10%
Interest Charges - Rs. Cr	160.69	187.55	217.50	235.67	242.06	248.45	254.84

4.80 KSEB Ltd had segregated the GPF balance among SBUs on the basis of the employee cost ratio in 2020-21. The share of SBU-G is shown in the table below:

Table :4.38

SBU wise interest on provident fund estimated by KSEB Ltd

Particulars	SBU G	SBU T	SBU D	Total
	(RS.Cr)	(RS.Cr)	(RS.Cr)	(RS.Cr)
Employee cost ratio (2020-21)	5.40	11.25	83.35	100.00
2021-22	10.13	21.09	156.34	187.55
2022-23	11.74	24.46	181.30	217.50
2023-24	12.72	26.50	196.44	235.67
2024-25	13.07	27.22	201.77	242.06
2025-26	13.41	27.94	207.10	248.45
2026-27	13.76	28.66	212.42	254.84

Objections of stakeholders

4.81 The HT&EHT Association and other stakeholders has not raised any objection on the interest on GPF balance claimed by KSEB Ltd.

Analysis and decision of the Commission

4.82 As per the Truing Up order dated 24.06.2022 for the year 2020-21, the closing balance of GPF as on 01.04.2021 is Rs.2430.72 crore. The interest on GPF approved in the same order is @7.10%. KSEB Ltd had adopted the same figures for estimating the interest on GPF for the MYT period.

4.83 KSEB Ltd has estimated the GPF addition of Rs 421.80 crore during the years 2021-22 and 2022-23 on account pay revision arrears. For the remaining years, the GPF addition is claimed @Rs 90.00 crore per annum.

4.84 Accordingly, the Commission computed the interest on GPF allowable for the MYT period from 2022-23 to 2026-27 as detailed below.

Table 4.39

Interest on GPF provisionally approved for the MYT period for KSEB L

Particulars	Estimate	KSERC provisional approval				
	2021-22	2022-23	2023-24	2024-25	2025-26	2026-27
	(RS.Cr)	(RS.Cr)	(RS.Cr)	(RS.Cr)	(RS.Cr)	(RS.Cr)
Opening: Provident Fund as on 1 st April - Rs. Cr	2430.72	2852.52	3274.32	3364.32	3454.32	3544.32
Addition (net) during the Financial Year - Rs. Cr	421.80	421.80	90.00	90.00	90.00	90.00
Closing: Provident Fund as on 31 st March - Rs. Cr	2852.52	3274.32	3364.32	3454.32	3544.32	3634.32

Particulars	Estimate	KSERC provisional approval				
	2021-22	2022-23	2023-24	2024-25	2025-26	2026-27
	(RS.Cr)	(RS.Cr)	(RS.Cr)	(RS.Cr)	(RS.Cr)	(RS.Cr)
Average PF during the Financial Year- Rs. Cr	2641.62	3063.42	3319.32	3409.32	3499.32	3589.32
Average interest rate (%)	7.10%	7.10%	7.10%	7.10%	7.10%	7.10%
Interest Charges - Rs. Cr	187.56	217.50	235.67	242.06	248.45	254.84

4.85 Interest on GPF approved for the SBU-G of KSEB Ltd during the MYT period is as given below.

Table 4.40
Interest on GPF balance of SBU-G approved for the MYT 2022-23 to 2026-27

Particulars	KSERC provisional				
	2022-23	2023-24	2024-25	2025-26	2026-27
	(Rs. Cr)	(Rs. Cr)	(Rs. Cr)	(Rs. Cr)	(Rs. Cr)
Interest on GPF balance for KSEB Ltd	217.50	235.67	242.06	248.45	254.84
Interest on GPF balance for SBU-G (5.4% of the total)	11.75	12.73	13.07	13.42	13.76

Interest on working capital

4.86 KSEB Ltd in their petition has claimed interest on working capital for SBU-G as per the provision of Regulation 32 of the Tariff Regulations, 2020 on the normative level for each financial year of the MYT period. Regulation 32(2) allows Interest on normative level of working capital at two percent higher rate than the base rate as on first day of April of the year of ARR filing. Therefore, KSEB Ltd has computed the Interest on Working Capital at a rate of 9.40% (7.40% as on 1-4-2022 + 2%). However, the regulation does not allow receivables to be considered for computing working capital for generation owned by the distribution licensee. The parameters adopted for computation of Interest on Working capital for the control period for SBU-G are given below:

Table: 4.41

KSEBL petition- parameters for Interest on Working Capital (SBU-G) as per petition

No	Item	2022-23	2023-24	2024-25	2025-26	2026-27
1	O&M expenses (as per norms) (Rs. Cr)	193.19	228.05	244.93	263.61	308.02
2	Maintenance Spares (as per norms) (Rs.Cr)	53.947	65.485	72.77	75.966	84.8

4.87 Interest on working capital estimated by KSEB Ltd for the MYT period 2022-23 to 2026-27 is given below.

Table : 4.42

KSEBL petition- Interest on Working capital (SBU-G) (Rs. Cr)

Sl.No	Particulars	2022-23	2023-24	2024-25	2025-26	2026-27
1	Approved O&M expenses	163.12	170.38	177.97	185.90	194.18
2	O&M Expenses for new stations	30.07	57.67	66.96	77.71	113.84
3	Total O&M Expenses	193.19	228.05	244.93	263.61	308.02
4	O&M Expenses for one month	16.10	19.00	20.41	21.97	25.67
5	Opening GFA	5394.67	6548.53	7277.73	7596.56	8480.02
6	Cost of maintenance of spares at 1% of historical cost	53.95	65.49	72.78	75.97	84.80
7	Receivables (as per norms)	0.00	0.00	0.00	0.00	0.00
8	Total requirement of working Capital	70.05	84.49	93.19	97.93	110.47
9	Base rate as on first day of April	7.40	7.40	7.40	7.40	7.40
10	Interest rate on working capital (%)	9.40	9.40	9.40	9.40	9.40
11	Interest on working capital	6.58	7.94	8.76	9.21	10.38

Comments of the Stakeholders

4.88 The HT-EHT Association has submitted that, the interest on working capital may be limited to EBLR declared by SBI as on 1st of April every year. The EBLR rate as on 1st April 2022 is 6.65% only. Hence the applicable interest rate for computing IWC is 8.65% only.

Provisions of the Regulations

4.89 The Regulation 32 of the Tariff Regulations, 2021 specified the 'Interest on working capital' in detail. The relevant Regulations are extracted below.

“32. Interest on Working capital– (1) The generation business/ company or transmission business/ licensee or distribution business/ licensee or the State Load Despatch Centre shall be allowed interest on the normative level of working capital for the financial year, computed as under,-

- (i) In the case of liquid fuel based generating stations, the working capital shall comprise of,-*
 - a) cost of liquid fuel for one month corresponding to approved generation; plus*
 - b) operation and maintenance expenses for one month; plus*
 - c) cost of the maintenance spares at one per cent of the historical cost of the plant and equipments; plus*

d) *receivables equivalent to the fixed charges and energy charges for sale of electricity for one month calculated at the approved generation:*

Provided that in the case of own generating stations, no amount shall, in the computation of working capital in accordance with these Regulations, be allowed towards receivables, to the extent of supply of power by the generation business to the distribution business.

(iii) In the case of gas turbine/ combined cycle generating stations the working capital shall comprise of,-

a) *cost of gas and liquid fuel for one month corresponding to approved generation; plus*

b) *operation and maintenance expenses for one month; plus*

c) *cost of maintenance spares at one per cent of the historical cost of plant and equipments; plus*

d) *receivables equivalent to fixed charge and energy charge for sale of electricity for one month calculated at approved generation:*

Provided that in the case of own generating stations, no amount shall, in the computation of working capital in accordance with these Regulations, be allowed towards receivables, to the extent of supply of power by the generation business to the distribution business.

(iv) In the case of hydro-electric generating stations the working capital shall comprise of,

a) *operation and maintenance expenses for one month; plus*

b) *cost of maintenance spares at one per cent of the historical cost of plant and equipments; plus*

c) *receivables equivalent to fixed cost of one month:*

Provided that in the case of own generating stations, no amount shall, in the computation of working capital in accordance with these Regulations, be allowed towards receivables, to the extent of supply of power by the generation business to the distribution business.

.....
(2) Interest on normative level of working capital as per this Regulation shall be allowed at a rate equal to two percentage higher than the base rate as on the first day of April of the respective financial year, in respect of which the petition for approval of Aggregate Revenue Requirement and determination of tariff is filed. ”

Regulation 3(12) of the Tariff Regulations, 2021 defines the 'Base as follows.

“Base rate” means the External Benchmark-Linked Lending Rate (EBLR) declared by the State Bank of India as applicable on first day of April of respective financial year;

Analysis and decision of the Commission

4.90 As per the Regulation 32 of the Tariff Regulations, 2021, the working capital of SBU-G consists of the following.

- (1) O&M expenses for one month (as per norms)
- (2) Cost of maintenance of spares (1% of the historical cost of the plants and equipment).
- (3) Receivables – nil (since there is no cash flow between SBU–G, SBU-T and SBU-D of KSEB Ltd).

4.91 Accordingly, the working capital requirement provisionally estimated by the Commission for the purpose of ARR during the MYT period is given below.

Table 4.43
KSERC- Working capital requirement of SBU-G for the MYT period 2022-23 to 2026-27

	Particulars	2022-23	2023-24	2024-25	2025-26	2026-27
1	O&M expenses - approved	191.35	206.08	221.63	233.75	247.23
2	GFA of SBU-G (excluding land)	4806.39	5473.29	5953.01	6233.1	6533.39
3	O&M expenses for one month	15.95	17.17	18.47	19.48	20.60
4	Cost of maintenance of spares	48.06	54.73	59.53	62.33	65.33
5	Total working capital requirement = (3)+(4)	64.01	71.90	78.00	81.81	85.93

4.92 As per the Regulation 32(2), interest rate for working capital is 2% higher than the base rate as on the first day of the April of the respective financial year, in respect of the petition for the approval of the ARR is filed.

Further, as per the Regulation 3(12) of the Tariff Regulations, 2021, **Base rate**” means the External Benchmark-Linked Lending Rate (EBLR) declared by the State Bank of India as applicable on first day of April of respective financial year.

4.93 As per the published information, the EBLR of SBI as on date is given below.

Table 4.44
EBLR rate of SBI

Effective date	External Benchmark based Lending Rate (EBLR)
15.06.2022	7.55+CRP
01.06.2022	7.05+CRP
01.07.2020	6.65 + CRP
01.04.2020	7.05 + CRP
01.01.2020	7.80 + CRP
01.10.2019	8.05 + CRP

4.94 Further, the minimum 'credit risk premium (CRP)' rate of SBI is taken as zero. As above, the EBLR from 01.07.2020 to 31.05.2022 was 6.65% +CRP. However, from 01.06.2022 onwards the EBLR rate is increasing and as on 15.06.2022, the EBLR is 7.55+CRP. Considering the variation in EBLR during the last few months, the Commission has decided to adopt the EBLR as on 01.04.2022 as the basis for IWC for the year 2022-23 and EBLR as on 15.06.2022 as the basis for IWC for the FY 2023-24 to 2026-27.

4.95 Accordingly, the Commission adopt the following interest rates for estimating the IWC of SBU-G during the MYT period from 2022-23 to 2026-27.

Table 4.45
KSERC- Interest on Working Capital approved

Year	Base rate = EBLR as on 1st April	CRP	EBLR	IWC = EBLR+2%
	(%)	(%)	(%)	(%)
2022-23	6.65 + CRP	0%	6.65%	8.65%
2023-24 to 2026-27	7.55+CRP	0%	7.55%	9.55%

4.96 Based on the above considerations, the interest on working capital provisionally approved for estimating the ARR of SBU-G is given below.

Table 4.46
KSERC- Interest on working capital approved

Particulars	2022-23	2023-24	2024-25	2025-26	2025-27
Total working capital requirement of SBU-G (Table – 4.43 above)	64.01	71.90	78.00	81.81	85.93
Interest rate for WC	8.65%	9.55%	9.55%	9.55%	9.55%
Interest on working capital approved	5.54	6.87	7.45	7.81	8.21

Interest on Master Trust Bonds

4.97 KSEB Ltd submitted that Government of Kerala, as per notifications dated 31.10.2013 and 28.01.2015, ordered to establish a scheme for the creation of a Master Trust to meet the unfunded liability of pension, gratuity and leave surrender as on 31.10.2013, in respect of the personnel transferred from the erstwhile KSEB to KSEB Ltd. The total additional estimates of liability as on 31.10.2013 was estimated by KSEB Ltd appointed Actuaries at Rs.12418.72 Crore. Further, necessary funding arrangements were put in place through issue of 2 series of Bonds. According to KSEB Ltd, the Commission had recognized the unfunded pension liabilities as above and approved recovery of

interest on KSEB Ltd share of Bonds as per Regulation 34(iv) of Tariff Regulations, 2021. Accordingly, KSEB Ltd claimed interest on the bond issued by KSEB Ltd (Rs 8144.00 Crore) along with principal repayment in the present control period. The repayment has started from 2017-18 and the interest and principal due for the control period and its SBU wise segregation are furnished below:

Table : 4.47

Interest on Master Trust Bonds (Rs.Cr)

Existing Bonds (Rs. 8144 Cr)	Bond	Repayment	Int	Bal
	8144.00			
2017-18		407.20	814.40	7736.80
2018-19	7736.80	407.20	773.68	7329.60
2019-20	7329.60	407.20	732.96	6922.40
2020-21	6922.40	407.20	692.24	6515.20
2021-22	6515.20	407.20	651.52	6108.00
2022-23	6108.00	407.20	610.80	5700.80
2023-24	5700.80	407.20	570.08	5293.60
2024-25	5293.60	407.20	529.36	4886.40
2025-26	4886.40	407.20	488.64	4479.20
2026-27	4479.20	407.20	447.92	4072.00

Table :4.48

SBU wise Interest on Master Trust Bonds

Particulars	SBU G	SBU T	SBU D	Total
Employee cost ratio 2020-21	5.40	11.25	83.35	100.00
2022-23	32.98	68.69	509.13	610.80
2023-24	30.78	64.11	475.19	570.08
2024-25	28.58	59.53	441.25	529.36
2025-26	26.38	54.95	407.31	488.64
2026-27	24.19	50.37	373.36	447.92

Comments of the Stakeholders

4.98 The HT-EHT Association requested that the principal repayment to Master Trust may be dis-allowed.

Provisions in the Tariff Regulations, 2021

4.99 Regulation 30 and 34 of the Tariff Regulations, 2021 deals with 'interest on Master Trust bonds and related issues. The relevant Regulations is extracted below.

“Regulations 30.

Interest on bonds issued by KSEB Limited to service the terminal liabilities of its employees. –

- (1) The interest on the bonds issued by KSEB Limited to service the terminal liabilities of its employees shall be allowed for recovery through tariffs, at the rates stipulated in the relevant orders issued by the Government of Kerala.*
- (2) The bonds shall be amortized at the same rate as prescribed in the Transfer Scheme notified by the Government of Kerala.*
- (3) KSEB Ltd shall determine the up-to-date actuarial liability, draw up a proposal regarding how to fund the liability/uncovered liability and after its approval by the KSEB Board of Directors, shall submit to the Government for consideration. Once the Government has accorded approval in this regard, KSEB Ltd shall submit a petition in line with the Government approval to the Commission with the complete details indicating the assessed and approved actuarial liability and the proposal to fund this liability. The Commission shall consider this petition at the time of truing up of the accounts. Till such time, the Commission may based on a petition by KSEB Ltd consider approving a provisional amount towards the discharge of this liability.”*

“Regulations 34

Principles for adoption of Transfer Scheme for KSEB under Section 131 of the Act.-

The Commission may, for the purpose of approval of the Aggregate Revenue Requirements and determination of tariff, adopt the changes in the balance sheet, due to the re-organization of the erstwhile Kerala State Electricity Board, as per the provisions of the Transfer Scheme published by the Kerala State Government under Section 131 of the Act, subject to the following principles:-

- (i) Increase in the value of assets consequent to the revaluation of assets shall not qualify for computation of depreciation or for return on net fixed assets;*
- (ii) The equity of the Government of Kerala as per the above Transfer Scheme published vide Government Order No. GO(P) 46/2013/PD dated 31.10.2013 and GO(P) No. 3/2015/PD dated 28.01.2015 under Section 131 of the Act will be considered for computation of return on equity;*

- (iii) *The reduction of the contribution received from the consumers, grants and such other subventions for creation of assets, made as part of Transfer Scheme, shall not be considered while computing the depreciation;*
- (iv) **The amounts required for the payment of interest on the bonds issued to the Master Trust and for the principal repayment of such bonds shall be reckoned for computation of Aggregate Revenue Requirement and for truing up of accounts;**
- (v) *The Commission will subject to the petition by KSEB Ltd may take appropriate decision on the other issues relating to the Transfer Scheme and its implementation, on case to case basis.”*

Analysis and decision of the Commission

4.100 The Commission has examined the submissions of KSEB Ltd regarding interest on bonds issued to Master Trust. As per the details submitted by KSEB Ltd, the Master Trust is operational only from the FY 2017-18.

4.101 The Commission also noted that as per the Kerala Electricity Second Transfer (Amendment) Scheme (Re-vesting) 2015 dated 28.01.2015, the actuarial liability as on 31-10-2013 was assessed at Rs.12418.72 crore. The paragraphs 6(8) and 6(9) of the Kerala Electricity Second Transfer (Amendment) Scheme (Re-vesting) 2015, provides the following regarding the funding of pension and terminal liabilities of personnel transferred to KSEB Ltd. The relevant paragraphs is extracted below.

*“6(8) The State Government shall make appropriate arrangements in respect of funding of the terminal liabilities to the extent they are unfunded on the date of transfer of the personnel from the erstwhile Board or KSEB, as mentioned in subclause (9) of clause 6 of this Scheme. **As per the actuarial valuation carried out by the registered valuer, the net present value of unfunded liability is approximately 12419.00 crore as on the date of re-vesting i.e. 31st October 2013.** Till such time arrangements are made, the transferee and State Government shall be jointly and severally responsible to duly make such arrangements to the existing pensioners as well as the personnel who retire after the date of transfer but before the arrangement are put in place. The State Government, Kerala State Electricity Board Limited, and Employee Unions have entered into a tripartite agreement on 1st August 2014, in consideration of the promises and mutual conditions set forth therein. The Tripartite Agreement which forms part of this Scheme is appended as Schedule C.”*

“ 6(9) The State Government will fund Rs 5861 crore (Rupees Five thousand eight hundred and sixty one crores) over a period of next 10 years from the date of transfer

to the KSEB Ltd on annual basis for meeting the unfunded liabilities by way of retention of electricity duty.

- (a) *Kerala State Electricity Board Ltd will issue two series of bonds to a Master Trust:*
- *20 year bond with a coupon rate of 10% p.a. for Rs.8144 Cr(Rupees eight thousand one hundred and forty four crores)*
 - *10 year bond with a coupon rate of 9% p.a. for Rs. 3751 Cr(Rupees three thousand seven hundred and fifty one crores).*
- (b) *Bonds will be issued to the trust shall meet the liability of pension etc. in future from the **interest and principal repayment from KSEB Ltd against the bonds issued in favour of the trust.** With these arrangements the net present value of the fund towards pension etc. shall be Rs 12419.00 crores (approx) as on 31st October 2013 with matching investments in securities issued by the KSEB Ltd for Rs 11895.00 crore on net present value basis.*
- (c) *Another, Rs 524 crore will be funded by the State Government through budgetary provision over a period of 10 years in equal installments as per G.O (Ms) No. 43/2011/PD dated 3rd November 2011. Accordingly an amount of Rs 52.4 crore is being provided in the budget from the FY 2012-13 onwards.*
- (d) *State Government will permit the electricity duty collected by KSEB for the period from 01.04.2008 to 31.03.2012 to be retained by the KSEB Ltd as its contribution for funding the terminal liability.*
- (e) *In addition to the interest on bonds and repayment of principal, KSEB Ltd will be paying the annual pension contribution based on actuarial valuation to the master trust in respect of the personnel transferred to KSEBL.*

4.102 Based on the above KSEB Ltd had issued two sets of bonds to the Master Trust on 01.04.2017.

- *20 year bond with a coupon rate of 10% p.a. for Rs.8144 Cr (Rupees eight thousand one hundred and forty four crores)*
- *10 year bond with a coupon rate of 9% p.a. for Rs. 3751 Cr (Rupees three thousand seven hundred and fifty one crores).*

Out of the above, the interest and repayment of the 10 year bond for the amount of Rs 3751.00 crore is being borne by the State Government as envisaged in the Scheme.

4.103 However, as per the re-vesting notifications, the interest and repayment of the bond for Rs 8144.00 crore to the pension has to be borne by KSEB Ltd. The year wise details of the principal and repayment of the 20-year bond of KSEB Ltd is given below.

Table-4.49

Principal and interest to be paid by KSEB Ltd to the Trust as per the bond certificate issued for Rs 8144.00 crore

Year	Principal repayment	Interest	Total	Year	Principal repayment	Interest	Total
	(Rs. Cr)	(Rs. Cr)	(Rs. Cr)		(Rs. Cr)	(Rs. Cr)	(Rs. Cr)
1	407.20	814.40	1221.60	11	407.20	407.20	814.40
2	407.20	773.68	1180.88	12	407.20	366.48	773.68
3	407.20	732.96	1140.16	13	407.20	325.76	732.96
4	407.20	692.24	1099.44	14	407.20	285.04	692.24
5	407.20	651.52	1058.72	15	407.20	244.32	651.52
6	407.20	610.80	1018.00	16	407.20	203.60	610.80
7	407.20	570.08	977.28	17	407.20	162.88	570.08
8	407.20	529.36	936.56	18	407.20	122.16	529.36
9	407.20	488.64	895.84	19	407.20	81.44	488.64
10	407.20	447.92	855.12	20	407.20	40.72	447.92

4.104 The financial year 2022-23 is the 6th year of operation of the Master Trust. Hence the principal repayment of the KSEB Ltd bond of Rs 8144.00 crore with the interest rate @10% is given in the Table below.

Table 4.50

Principal repayment and interest on KSEB Ltd bond to the Master trust during MYT period

Year	Principal repayment	Interest	Total
	(Rs. Cr)	(Rs. Cr)	(Rs. Cr)
2022-23	407.20	610.80	1018.00
2023-24	407.20	570.08	977.28
2024-25	407.20	529.36	936.56
2025-26	407.20	488.64	895.84
2026-27	407.20	447.92	855.12

4.105 As extracted under paragraph 4.99 above, as per the Regulations 30 and 34 of the Tariff Regulations, 2021, KSEB Ltd is eligible to claim 'interest on the Master Trust bond and its repayment' through the ARR of the respective years considered. Hence, as per the provisions of the Tariff Regulations, 2021, the Commission hereby approves the 'repayment of the principal and interest on the KSEB Ltd bond of Rs 8144.00 crore issued to the Master Trust created for discharging the pension liabilities.

4.106 KSEB Ltd had apportioned the total 'repayment of principal and interest' in the ratio of employee cost. The Commission also decided to apportion the same in the same ratio used by KSEB Ltd in the ARR petition. Accordingly, the SBU wise details of the 'repayment of principal and interest to the Master Trust bond' approved for the MYT period from 2022-23 to 2026-27 is given below.

Table 4.51
SBU wise details of the 'interest on Master trust bond' approved during the MYT period 2022-23 to 2026-27

SBUs	Emp Ratio	2022-23	2023-24	2024-25	2025-26	2026-27
	(%)	(Rs.Cr)	(Rs.Cr)	(Rs.Cr)	(Rs.Cr)	(Rs.Cr)
SBU-G	5.40%	32.98	30.78	28.59	26.39	24.19
SBU-T	11.25%	68.72	64.13	59.55	54.97	50.39
SBU-D	83.35%	509.10	475.16	441.22	407.28	373.34
Total	100.00%	610.80	570.08	529.36	488.64	447.92

4.107 The 'repayment of principal' is also apportioned among the SBUs in the ratio of employee expenses' as adopted by KSEB Ltd. The details are given below.

Table 4.52
SBU wise details of the ' repayment of principal ' approved during the MYT period 2022-23 to 2026-27

SBUs	Emp Ratio	2022-23	2023-24	2024-25	2025-26	2026-27
	(%)	(Rs.Cr)	(Rs.Cr)	(Rs.Cr)	(Rs.Cr)	(Rs.Cr)
SBU-G	5.40%	21.99	21.99	21.99	21.99	21.99
SBU-T	11.25%	45.81	45.81	45.81	45.81	45.81
SBU-D	83.35%	339.40	339.40	339.40	339.40	339.40
Total	100.00%	407.20	407.20	407.20	407.20	407.20

4.108 ***The Commission allow to treat the SBU wise details of the 'repayment of principal and interest on master trust bond' as above to as expenses as part of ARR for the MYT period from 2022-23 to 2026-27, as per the provisions of Tariff Regulations, 2021.***

4.109 However, the Commission has serious observation regarding the laxity from the part of KSEB Ltd for not operationalizing the Master Trust. At present KSEB Ltd has been operating the Trust Accounts like a "Current Account" by remitting money into the account on requirement basis for dispersal and fulfilment of

retirement benefits. Hence, the payments into the Trust account by KSEB Ltd is not as per the original scheme envisaged but only as per the fund requirements to disburse the pension. This is highly objectionable and contrary to the very intent of setting up of the Master Trust. ***The Commission directs KSEB Ltd to take urgent corrective action to overcome this serious deviation from the Scheme. The Commission warns that, if KSEB Ltd does not urgently take corrective action, the very payment of the pension will be jeopardized and the retirement financial security of the retirees of KSEB Ltd shall be compromised.***

The Commission further direct that, if KSEB Ltd is fails to transfer the 'repayment of principal and interest on bond to the trust' as approved above, the Commission shall not allow to True up the same at the time of Truing Up of Accounts of the relevant years concerned. With this observation, the Commission hereby approve the 'repayment of principal and interest on Master Trust bond' as per the Table 4.50 above.

Summary of Interest and financing Charges

4.110 The summary of interest and finance charges estimated by KSEB Ltd for SBU-G for the control period is submitted below:

Table : 4.53

Summary of Interest & Finance Charges of SBU-G claimed by KSEB Ltd and provisionally approved by Commission

Particulars	KSEB Petition					KSERC provisional approval				
	2022-23	2023-24	2024-25	2025-26	2026-27	2022-23	2023-24	2024-25	2025-26	2026-27
	(Rs. Cr)	(Rs. Cr)	(Rs. Cr)	(Rs. Cr)	(Rs. Cr)	(Rs. Cr)	(Rs. Cr)	(Rs. Cr)	(Rs. Cr)	(Rs. Cr)
Interest on capital liabilities	136.79	210.73	240.85	276.55	363.32	75.76	118.52	140.26	151.93	158.09
Interest on GPF	11.74	12.72	13.07	13.41	13.76	11.75	12.73	13.07	13.42	13.76
Interest on working capital	6.58	7.94	8.76	9.21	10.38	5.54	6.87	7.45	7.81	8.21
Interest on Bonds issued to Master Trust	32.98	30.78	28.58	26.38	24.19	32.98	30.78	28.59	26.39	24.19
Total Interest & Finance Charges	188.09	262.17	291.26	325.55	411.65	126.03	168.90	189.37	199.55	204.25

4.111 The summary of repayment of bond claimed by KSEB Ltd and approved by the Commission as per the provisions of Tariff Regulations, 2021 is given in the Table below.

Table : 4.54

Year wise details of the repayment of bonds- claimed and approved for SBU-G

Particulars	KSEB Petition					KSERC provisional approval				
	2022-23	2023-24	2024-25	2025-26	2026-27	2022-23	2023-24	2024-25	2025-26	2026-27
	(Rs. Cr)	(Rs. Cr)	(Rs. Cr)	(Rs. Cr)	(Rs. Cr)	(Rs. Cr)	(Rs. Cr)	(Rs. Cr)	(Rs. Cr)	(Rs. Cr)
Repayment of master trust bond	22.01	22.01	22.01	22.01	22.01	21.99	21.99	21.99	21.99	21.99

Unfunded actuarial liability

4.112 KSEB Ltd submitted that the actuarial liability from 31.10.2013 to 31.03.2021 has not been funded so far. As per the latest actuarial valuation report as on 31.03.2021, the total pension liabilities of the personnel transferred to the KSEB Ltd as on 31.03.2021 is estimated at Rs 23121.47 crore, as detailed below.

Table 4.55

Unfunded pension liabilities as on 31.03.2021

Particulars of unfunded liability of pensioners and personnel transferred to KSEB Ltd as on 31.10.2013	Unfunded liability as on 31.03.2021
	(Rs. Cr)
Pension liability	19640.50
Gratuity liability	2446.45
Leave liability	1034.52
Total	23121.47
Funded Liability	12419.00
Unfunded Liability	10702.47

4.113 KSEB Ltd submitted that, out of the total unfunded liability of RS 23121.47 crore, funding arrangement was provided for Rs 12419.00 crore only. KSEB Ltd further submitted that, this issue was duly addressed by the Hon'ble Commission in Regulation 30 (3) Tariff Regulation, 2021. KSEB Ltd also submitted that the Regulation 30 (3) of the Tariff Regulations, 2021, mandates KSEB Ltd to propose provisional amount in the MYT petition for the control period from 2022-23 to 2026-27 for approval. KSEB Ltd is filing the petition duly adhering the Regulation. In line with the stipulation in Tariff Regulations, till approval of funding arrangement of unfunded actuarial liability, KSEB Ltd is seeking provisional approval for discharge of unfunded liability.

4.114 KSEB Ltd submitted that the additional actuarial liability stems out of three factors viz. Current service cost, Actuarial gain / loss and Interest cost. Current service cost denotes the liability on account of service put in by the serving employee, who is a member of the Trust, during the valuation period. Thus, Current service cost represents the actual liability arising on account of the service put in by the employee for the added service. As per actuarial valuation for 2017-18, 2018-19 and 2019-20, Current Service Cost has been valued at Rs.317.10 Cr, Rs. 346.19 Cr and Rs.361.80 Cr respectively.

4.115 KSEB Ltd sought provisional approval of Rs.400 Cr annually in the control period to ensure prompt discharge of pension and other terminal liabilities. SBU wise break up is furnished below:

Table 4.56
Additional Contribution to Mater Trust

Particulars	SBU G	SBU T	SBU D	Total
	(Rs. Cr)	(Rs. Cr)	(Rs. Cr)	(Rs. Cr)
Employee cost ratio 2020-21	5.40%	11.25%	83.35%	100.00%
2022-23	21.60	44.98	333.42	400.00
2023-24	21.60	44.98	333.42	400.00
2024-25	21.60	44.98	333.42	400.00
2025-26	21.60	44.98	333.42	400.00
2026-27	21.60	44.98	333.42	400.00

Comments of the stake holders

4.116 HT&EHT Association request before the Commission to dis-allow the KSEBL's provisional claim towards unfunded actuarial liability and also request to advise the State Government to take care of this claim in order to avoid undue burden to the consumers.

Provisions of the Regulations

4.117 Regulation 30 (3) of the Tariff Regulations, 2021 provides for additional fund to the Master Trust based on the up-to-date actuarial liability. The relevant Regulation is extracted below.

“Regulation 30(3)

KSEBL shall determine the up-to-date actuarial liability, draw up a proposal regarding how to fund the liability/uncovered liability and after its approval by the KSEB Board of Directors, shall submit to the Government for consideration. Once the Government has accorded approval in this regard, KSEB Ltd shall submit a petition in line with the Government approval to the Commission with the complete details indicating the assessed and approved actuarial liability and the proposal to fund this liability. The Commission shall consider this petition at the time of truing up of the accounts. Till such time, the Commission may, based on a petition by KSEB Ltd, consider approving a provisional amount towards the discharge of this liability.”

Analysis and Decision of the Commission

- 4.118 The Commission has examined the proposal of KSEB Ltd in detail. In addition to the “repayment of principal and interest on master trust bond” of KSEB Bond Rs.8144.00 crore, KSEB Ltd has also claimed Rs.400 crore as additional fund annually to the Master Trust for meeting the unfunded portion of the actuarial liability as on 31.03.2021. As per the details submitted by KSEB Ltd, the total unfunded actuarial liability as per the report of the actuary as on 31.03.2021 is Rs.23121.47 crore. Out of it, Rs.12419.00 crore is only funded till date by issuing two series of bonds as envisaged in Kerala Electricity Second Transfer (Amendment) Scheme (Revesting) 2015 dated 28.01.2015.
- 4.119 The Commission further noted that, KSEB Ltd is yet to take proper action plan to meet the unfunded liability based on the actuarial valuation of the pension and other liabilities of the employees and pensioners of erstwhile KSEB to the KSEB Ltd as on 31.10.2013. The Commission, duly considering the huge unfunded liability, has provided lumpsum provision of Rs. 300 crore to the trust for meeting the unfunded liability in the earlier orders on Truing up from the year 2018-19 to 2020-21.
- 4.120 The Commission has also noted that, the Regulation 30 (3) of the Tariff Regulations, 2021, clearly provides for determining the up to date actuarial liability and to draw a suitable proposal regarding how to fund the liability /uncovered liability with the approval of the KSEB management and with the approval of the State Government. The Tariff Regulation also stipulates that KSEB Ltd shall file a petition in line with the Government approval to meet the unfunded terminal liabilities, with complete details to fund such liabilities. The Commission further stipulates in the Tariff Regulations, 2021, that the Commission shall consider this petition at the time of Truing up of accounts of the relevant years. It is also stipulated in the Tariff Regulations, 2021, that till such time, the Commission may, based on a petition by KSEB Ltd, consider approving a provisional amount towards the discharge of this unfunded liability.
- 4.121 However, KSEB Ltd has not filed such petitions for funding the unfunded liabilities based on the actuarial report before the Commission with the approval of the State Government. Instead, KSEB Ltd has claimed a provisional amount of Rs.400 crore per annum during the MYT period from 2022-23 to 2026-27.
- 4.122 The Commission has serious concern on the huge unfunded liability arising year after year based on the actuarial report. However, KSEB Ltd has not made serious attempt to fund the unfunded liabilities. As on date, the total unfunded liability of KSEB Ltd as on 31.03.2021 is Rs.10702.47 crore. This indicates a serious emerging financial crisis in discharging the pension and other

retirement liabilities. The unfunded liability as on 31.03.2021 is about 46% of the total pension liability as on 31.03.2021. The Commission observed that, this is not at all an acceptable situation and urgent action is required to address the emerging catastrophe. Considering these aspects in detail, the Commission in the previous Orders on Truing up for the years 2018-19, 2019-20 and 2020-21 had provided Rs.300 crore to meet this unfunded liability.

4.123 The Commission after appraising the entire aspects in detail, has decided to provide an amount of Rs.400 crore provisionally as additional fund to the master trust for meeting the unfunded actuarial liability as on 31.03.2021. KSEB Ltd shall transfer this additional fund along with the additional fund approved in the earlier Orders on Truing up for the years 2017-18, 2018-19, 2019-20 and 2020-21 as specified in the relevant years of Truing up to the Trust as specified in that Order. If KSEB Ltd fails to transfer this amount, the Commission shall not approve the additional fund to master trust in future at the time of Truing up of relevant years concerned. With the above directions, the Commission approves Rs.400 crore towards additional fund to the master trust.

4.124 Accordingly, the year wise details additional fund to the master trust of each SBUs of KSEB Ltd is given in the Table below.

Table 4.57
Additional fund to the Master Trust- provisionally approved for the MYT period
2022-23 to 2026-27

Particulars	SBU G	SBU T	SBU D	Total
	(Rs. Cr)	(Rs. Cr)	(Rs. Cr)	(Rs. Cr)
Employee cost ratio 2020-21	5.40%	11.25%	83.35%	100.00%
2022-23	21.60	44.98	333.42	400
2023-24	21.60	44.98	333.42	400
2024-25	21.60	44.98	333.42	400
2025-26	21.60	44.98	333.42	400
2026-27	21.60	44.98	333.42	400

Return on Equity

4.125 In the petition, KSEB Ltd has stated that as per Regulation 34(b), the equity of Government of Kerala as per the Second Transfer Scheme published under section 131 of the Act is to be considered, for the computation of return on equity. The Government equity in KSEB as per the second transfer scheme is Rs 3499 crore. The Regulation 28 allows a RoE of 14% per annum.

Accordingly, the RoE of KSEB Ltd is proposed as Rs 489.86 crore (14% on the equity of Rs 3499 Crore). The SBU wise share of equity as per the annual accounts is given below. The RoE of SBU-G is apportioned by KSEB Ltd in the petition based on the above criteria.

Table : 4.58

SBU Wise Return on Equity proposed

SBU	Equity Share	% of Equity	RoE
	Rs. crore		Rs. Crore
SBU-G	831.27	23.76	116.38
SBU-T	857.05	24.49	119.99
SBU-D	1810.73	51.75	253.50

4.126 Thus the ROE for SBU-G would be Rs. 116.38 crore each year during the Control Period.

Comments of the Stakeholders

4.127 The HT&EHT Association submitted that, the equity of KSEB Ltd is not Rs 3499.00 crore. The consultant appointed by the Commission recommended a lower value of Rs 283.91 crore or the most Rs 1553.00 crore as equity of KSEB Ltd. Hence the Association requested to approve Rs 217.42 crore as RoE as against the total RoE of Rs 489.87 crore claimed by KSEB Ltd. The share of SBU-G is Rs 51.66 crore only as against Rs 116.38 crore claimed by KSEB Ltd.

Provisions in the Regulation

4.128 The Regulation 28 of the Tariff Regulations, 2021, specifies the Return on Equity and related aspects. The relevant Regulations is extracted below.

“28. Return on Paid up Equity or Net Fixed Assets. –

(1) Return on equity shall be computed in rupee terms, on the paid up equity share capital and shall be allowed at the rate of fourteen percent (14%) per annum:

Provided that in the case of increase in the equity share capital of the generating business/ company, transmission business/ licensee, distribution business/ licensee and State Load Despatch Centre, the additional amount of equity share capital infused into the generating business/ company, transmission business/ licensee, distribution business/ licensee and State Load Despatch Centre, and approved by the Commission for the assets put to its intended use shall be provided with ROE at 14% per annum on pro rata basis from the date of issuance of the equity shares:

Provided further that the generating business/ company, transmission business/ licensee, distribution business/ licensee and State Load Despatch Centre shall provide the complete details of the source of funding for such equity share capital.

- (2) *If there is no equity share capital invested in the business or the equity invested in the regulated business of the generating business/ company or transmission business/ licensee or distribution business/ licensee or State Load Despatch Centre or such equity share capital is not clearly identifiable, return at the rate of 5.50 percent shall be allowed on the net fixed assets at the beginning of the financial year for such regulated business:*

Provided that the net fixed assets shall be exclusive of the assets created out of consumer contribution, deposit works, capital subsidy or grants..”

Further, the Regulation 34 provides as follows:

“34. Principles for adoption of Transfer Scheme for KSEB under Section 131 of the Act.-

The Commission may, for the purpose of approval of the Aggregate Revenue Requirements and determination of tariff, adopt the changes in the balance sheet, due to the re-organization of the erstwhile Kerala State Electricity Board, as per the provisions of the Transfer Scheme published by the Kerala State Government under Section 131 of the Act, subject to the following principles:-

- (i) Increase in the value of assets consequent to the revaluation of assets shall not qualify for computation of depreciation or for return on net fixed assets;*
- (ii) The equity of the Government of Kerala as per the above Transfer Scheme published vide Government Order No. GO(P) 46/2013/PD dated 31.10.2013 and GO(P) No. 3/2015/PD dated 28.01.2015 under Section 131 of the Act will be considered for computation of return on equity;*
- (iii) The reduction of the contribution received from the consumers, grants and such other subventions for creation of assets, made as part of Transfer Scheme, shall not be considered while computing the depreciation;*
- (iv) The amounts required for the payment of interest on the bonds issued to the Master Trust and for the principal repayment of such bonds shall be reckoned for computation of Aggregate Revenue Requirement and for truing up of accounts;*
- (v) The Commission will subject to the petition by KSEB Ltd may take appropriate decision on the other issues relating to the Transfer Scheme and its implementation, on case to case basis.”*

Analysis and decision of the Commission

4.129 The Commission has carefully considered the issue of equity especially with regard to the amount that is required to be considered for its calculations. KSEB Ltd in their submission has claimed RoE at the rate of 14% per annum for an equity amount of Rs.3499.00 crore. KSEB Ltd has submitted that Regulation 34(b) provides that equity of the Government of Kerala as per the transfer scheme published under section 131 of the Act will be considered for computation of return on equity. As per clause 5 of the second transfer scheme “Kerala Electricity Second Transfer Scheme (Revesting) 2013” notified by Government of Kerala vide G.O.(P) No.46/2013/PD dated 13-10-2013, asset and liabilities of the erstwhile KSEB, which was vested into Government of Kerala, has been revested into the Company namely Kerala State Electricity Board Limited and opening balance sheet has been notified as part II of Schedule A of the said G.O, with and Equity amount of Rs.3499.00 crore.

The HT & EHT Association has drawn attention of the Commission to the Order of the Hon’ble APTEL wherein, the Commission was directed to determine the recommendation of the consultant. In this context, the Commission notes that the Government of Kerala subsequent to the G.O dated 13-10-2013 had issued G.O. (P) NO.3/2015/PD dated 28-1-2015 and G.O. (Ms) No.17/2015/PD dated 13-5-2015. The G.O. dated 28-1-2015 pertains to the amendments to Kerala Electricity Transfer Scheme (Revesting) 2013 and G.O dated 13-5-2015 pertains to the netting off of dues between Government and KSEB as on 13-10-2013 ie., the date of revesting. In the G.O dated 13-5-2013, it is stated that:

“.....Taking into consideration that netting off of dues between KSEB Ltd and Government forms an integral part of re-structuring of KSEB along with cleaning up of KSEB Limited’s Balance sheet, a part of the duty collected ie., Rs.1946 crore stands converted into the increased portion of equity (3499-1553) so as to ensure that the increase equity is a result of cash infusion to KSEB Ltd by Government thereby enabling the Government to participate in the increased return on equity in future years...”

The Commission also notes that in compliance to the above GO, KSEB Ltd has issued 349,92,00,000 equity shares of Rs.10 each in favour of Government Kerala for Rs.3499 crore as per the provisions of the Companies Act, 2013, deals with the issue of equity shares and its allotments. In this regard the Commission is satisfied that the allotment of equity shares for Rs.3499.20 crore in compliance to the GO conforms to the requirement for allotment of equity shares as per the provisions of the Companies Act, 2013. It was on this basis that, the Commission while considering the truing up petitions of KSEB Ltd for 2015-16, 2016-17, 2017-18, 2018-19, 2019-20 and 2020-21 had recognized the equity amount as Rs. 3499 crore and allowed RoE @ of 14% per annum.

Considering the above facts, the Commission is of the considered view that the claim of KSEB Ltd for an RoE @ 14% per annum for an amount of Rs.3499 crore is established and justified. Therefore, the Commission allows Rs.116.38 crore as the RoE in the ARR of SBU-G.

As per the provisions of the Regulation 34 of the Tariff Regulations,2021, the Commission is allowing the amount of equity as per the provisions of the Transfer Scheme published vide Government Order No. GO(P) 46/2013/PD dated 31.10.2013 andGO(P) No. 3/2015/PD dated 28.01.2015 under *Section 131* of the Act-2003.

The Regulations were finalised by the Commission after following the due process such as previous publication, public hearing etc., Once the Regulation has been finalised and notified after following the due procedure, it is binding on all the parties concerned and there is no scope for any deviation what so ever. Therefore, the arguments of the Association cannot be accepted. ***Accordingly, the share of RoE for SBU-G amounting to Rs.116.38 crore at the rate of 14% is allowed yearly during the MYT period from 2022-23 to 2026-27.***

Aggregate Revenue Requirement for SBU-G

4.130 The SBU-G handles the Generation assets of KSEB Ltd and the cost of SBU-G is passed on to SBU-D as a transfer cost of internal generation ie., the revenue requirement of SBU-G is the transfer cost of internal generation to SBU-D. The revenue requirement for SBU-G during the control period as estimated by KSEB Ltd is as shown below:

Table :4.59

KSEB petition – ARR of SBU-G for the control period as proposed by KSEB Ltd

Sl.No	Item	2022-23	2023-24	2024-25	2025-26	2026-27
		(Rs. Cr)	(Rs. Cr)	(Rs. Cr)	(Rs. Cr)	(Rs. Cr)
1	Operation & Maintenance Expenses	193.19	228.05	244.93	263.61	308.02
2	Interest & Finance Charges	188.10	262.17	291.26	325.56	411.65
3	Depreciation	174.22	211.30	226.65	252.41	316.77
4	Repayment of master trust bond	21.99	21.99	21.99	21.99	21.99
5	Additional contribution to master trust	21.60	21.60	21.60	21.60	21.60
7	Return on Equity	116.38	116.38	116.38	116.38	116.38
8	Aggregate Revenue Requirement	715.48	861.49	922.81	1001.55	1196.41

4.131 As against the proposal of KSEB Ltd, the ARR approved by the Commission is as shown below:

Table: 4.60
ARR of SBU-G for the control period as approved by the Commission

Sl.No	Item	2022-23	2023-24	2024-25	2025-26	2026-27
		(Rs. Cr)	(Rs. Cr)	(Rs. Cr)	(Rs. Cr)	(Rs. Cr)
1	Operation & Maintenance Expenses	191.35	206.08	221.63	233.75	247.23
2	Interest & Finance Charges	126.03	168.9	189.37	199.55	204.25
5	Depreciation	146.80	166.31	175.00	185.65	204.76
7	Repayment of master trust bond	21.99	21.99	21.99	21.99	21.99
8	Additional contribution to master trust	21.6	21.6	21.6	21.6	21.6
10	Return on Equity	116.38	116.38	116.38	116.38	116.38
12	Aggregate Revenue Requirement	624.15	701.26	745.97	778.92	816.21

Non-Tariff Income

4.132 As per the petition, the non-tariff income of SBU-G includes income from sale of scrap, interest on advances made to contractors, interest on staff loans and advances, Rent from buildings etc. The projection of Non-Tariff income of SBU-G for the control period as per the petition is furnished below:

Table :4.61
KSEB petition Other income and Non-Tariff Income for SBU-G

Sl. No	Particulars	2022-23	2023-24	2024-25	2025-26	2026-27
		(Rs.Cr)	(Rs.Cr)	(Rs.Cr)	(Rs.Cr)	(Rs.Cr)
1	Interest on staff loans and advances	0.00	0.00	0.00	0.00	0.00
2	Income from statutory investments	-	-	-	-	-
3	Income from sale of ash/rejected coal	-	-	-	-	-
4	Income from rent of land or buildings	0.67	0.71	0.74	0.78	0.82
5	Income from sale of scrap	4.08	4.29	4.50	4.73	4.96
6	Income from staff welfare activities	-	-	-	-	-
7	Rental from staff quarters	0.05	0.05	0.06	0.06	0.06
8	Excess found on physical verification	-	-	-	-	-
9	Interest on investments, fixed & call deposits, bank balances	2.60	2.73	2.87	3.01	3.16
10	Interest on advances to suppliers/contractors	-0.04	-0.04	-0.05	-0.05	-0.05
11	Income from hire charges from contractors and others	0.01	0.01	0.01	0.01	0.01
12	Income from advertisements, etc.	-	-	-	-	-
13	Miscellaneous receipts	2.92	3.07	3.22	3.38	3.55
	Total Other income	10.30	10.81	11.35	11.92	12.52

4.133 The Commission examined the non-tariff income claimed by KSEB Ltd. The Non tariff as per the True up order for the year 2020-21 is Rs.9.34 crore only. The projections of KSEB Ltd for SBU-G for the control period is consistent and accordingly, the Commission approves the Non-Tariff Income and other income as projected by KSEB Ltd.

Net ARR of SBU-G

4.134 The net ARR of SBU-G, for the control period 2022-23 to 2026-27 as per the petition is given below:

Table : 4.62

KSEBL petition- Net ARR for SBU-G as proposed by KSEB Ltd

Sl.No	Item	2022-23	2023-24	2024-25	2025-26	2026-27
		(Rs. Cr)	(Rs. Cr)	(Rs. Cr)	(Rs. Cr)	(Rs. Cr)
1	Gross ARR	715.48	861.48	922.81	1001.55	1196.41
2	Less Other Income	10.30	10.81	11.35	11.92	12.52
3	Net ARR of SBU G	705.18	850.67	911.46	989.63	1183.89

4.135 KSEB Ltd submitted that since the entire energy generated by SBU-G is treated as delivered / sold to SBU-D, the above Net-ARR would be the transfer cost to SBU-D.

Decision of the Commission

4.136 As mentioned in the previous para, the net ARR for SBU-G approved for the control period is as shown below:

Table 4.63

KSERC- Net ARR for SBU-G as approved for the MYT period

Sl.No	Item	2022-23	2023-24	2024-25	2025-26	2026-27
		(Rs. Cr)	(Rs. Cr)	(Rs. Cr)	(Rs. Cr)	(Rs. Cr)
1	Gross ARR	624.15	701.26	745.97	778.92	816.21
2	Less Other Income	10.30	10.81	11.35	11.92	12.52
3	Net ARR of SBU G	613.85	690.45	734.62	767.00	803.69

CHAPTER 5

ARR&ERC OF SBU-T

5.1. KSEB Ltd in their petition states that the functions of the STU as envisaged in the Electricity Act is entrusted to the Strategic Business Unit – Transmission (SBU-T). The Second Transfer Scheme entrusts the responsibility on the STU to develop and execute long term plans for evacuation and supply of power at voltages of and above 33KV, in consultation and co-ordination with the other SBUs and under the policy framework developed by KSEB Ltd. At present SBU-T is also carrying out the functions of State Load Despatch Centre, as provided in Part-II of Schedule-A1 of the Second Transfer Scheme. The Second transfer scheme requires that all assets of voltage level of 66KV and above is assigned to SBU-Transmission. At the same time, SBU-T is entrusted with the construction of 33kV and above system. A profile of SBU-T as on 31-3-2021 is given below:

Table: 5.1
Transmission System (as on 31-3-2021)

No	Item	Unit	Quantity
1	400 kV Lines	Ckt-km	1329.58*
2	220 kV Lines	Ckt-km	3141.40
3	110 kV Lines	Ckt-km	5030.86
4	66 kV Lines	Ckt-km	2004.79
5	33KV lines	Ckt-km	2108
6	400 kV Substations	Nos	5** + 1
7	220 kV Substations	Nos	27
8	110 kV Substations	Nos	173
9	66KV Substations	Nos	60
10	33 KV Substations	Nos	160
11	Total transmission capacity (MVA)	MVA	21304.60
	*PGCIL owned + KSEB Ltd owned Madakkathara-Malaparamba- Areekode line (177 ckt-km) **PGCIL owned		

5.2. KSEB Ltd stated that the SBU-T handles the transmission assets of KSEB Ltd and manages bulk transmission of power within the State for supply to SBU-D. In their petition, KSEB Ltd requested that **since the audited accounts of SLDC are not finalized**, the Commission may approve the Aggregate Revenue Requirement of State Load Despatch Centre, as a portion of the approved Aggregate Revenue Requirement of the transmission business of KSEB Ltd, based on the proposal filed by SBU-T for the said period of the Control Period as per Regulation 66(2) of the KSERC (Terms and Conditions for determination of Tariff) Regulations, 2021.

Table: 5.2
Summary of the ARR&ERC claimed by SBU-T & SLDC

No	Item	2022-23	2023-24	2024-25	2025-26	2026-27
		Rs. crore	Rs. crore	Rs. crore	Rs. Crore	Rs. Crore
1	Interest and Finance Charges	451.08	575.28	696.73	811.00	932.97
2	Return on Equity	119.99	119.99	119.99	119.99	119.99
3	Depreciation	289.35	357.47	431.00	500.74	583.68
4	O&M expenses	594.56	655.77	718.66	789.24	865.57
5	Repayment of existing master trust liability	45.79	45.79	45.79	45.79	45.79
6	Additional contribution to Master Trust	44.98	44.98	44.98	44.98	44.98
7	Edamon-Kochi line compensation	10.48	14.94	19.02	19.23	18.18
8	Pugalur-Thrissur line compensation	4.37	3.95	3.75	3.54	3.33
9	Aggregate Revenue Requirement	1560.67	1818.16	2079.91	2334.51	2614.49

5.3. In the following sections, analysis and decision of each of the items of the ARR is explained.

Capital investment plan for SBU-T

5.4. KSEB Ltd, along with the petition for approval of ARR, ERC and Tariff petition, has also filed the 'Capital Investment Plan' for the Strategic Business Units of Generation, Transmission and Distribution.

5.5. A preliminary appraisal of the capital investment proposed by SBU-T of KSEB Ltd for the MYT period from 2022-23 to 2026-27, the GFA addition proposed by KSEB Ltd and the GFA addition provisionally considered by the Commission for estimating the various components of ARR including interest on loan availed for capital investments, depreciation, R&M expenses are given in detail in chapter 3 of this Order. Its summary is given below.

Table 5.3
GFA addition of SBU-T provisionally considered for estimating ARR

	KSEB Petition (Rs. Cr)						KSERC provisional for ARR (Rs.Cr)					
	2022-23	2023-24	2024-25	2025-26	2026-27	Total	2022-23	2023-24	2024-25	2025-26	2026-27	Total
1 Gross GFA addition	1605.52	2037.04	1779.72	1721.15	2067.18	9210.61	1520.57	1593.33	1087.44	1045.66	841.93	6088.92
2 Subsidy/grants expected	160.16	340.23	226.78	23.40	203.08	953.65	160.16	340.23	226.78	23.40	203.08	953.65
3 Net GFA addition eligible for loan and depreciation	1445.36	1696.81	1552.94	1697.75	1864.10	8256.96	1360.41	1253.10	860.66	1022.26	638.85	5135.27

O&M expenses

5.6. The Operation & Maintenance Expenses of SBU-T is allowed on a normative manner as per the provisions of the Tariff Regulations, 2021 for the MYT period

2022-23 to 2026-27. The O&M expenses of SBU-T is recovered on the basis of the no. of bays, the MVA capacity of the Power Transformers and circuit length of lines in the system. Normative O&M expenses for each bay and kilometre length of lines are fixed as per Annexure-7 of the Tariff Regulations, 2021. Further transmission licensee shall be allowed to recover one time maintenance of special nature and expenses for operational improvement schemes. The O&M expenses for any year of the Control Period shall be allowed by multiplying the O&M norms for that year with the actual number of bays existing at the beginning of the financial year, total MVA capacity of the transformers and transmission line length in circuit km for the previous year and at 50 per cent of the circuit kilometer of transmission lines, MVA capacity of the transformers and number of Bays in the substation of the Transmission Licensee added during the year and put to its intended use. KSEB Ltd in their petition had estimated the number of bays, MVA capacity of Power Transformers and the Circuit kilometers of transmission lines including and above 66kV in the ratio 40:30:30 considering the capital additions planned for these years. KSEB Ltd has also further stated that the commission while arriving at the norms in Rs. Lakh per MVA as per the above methodology, has considered a MVA capacity of 17378.80 whereas the actual MVA capacity at the opening of 2018-19 was only 16645.9 MVA. KSEB Ltd has reworked the norms in Rs. Lakh per MVA based on this MVA Capacity.

- 5.7. It is also submitted that KSEB Ltd has already filed for the truing up of accounts for the financial years 2019-20 and 2020-21 and necessary steps has been taken to remove the subjudice of the issue of employee strength. Accordingly, the O&M expense for each year in the Control Period derived based on the corrected MVA capacity is proposed as shown below:

Table : 5.4
O&M norms for SBU-T proposed by KSEB Ltd for the control period

Item	2022-23	2023-24	2024-25	2025-26	2026-27
O&M cost for Bay (Rs lakh/Bay)	7.444	7.775	8.121	8.483	8.861
O&M cost (Rs lakh/circuit km)	1.502	1.569	1.639	1.712	1.788
O&M cost (Rs lakh/MVA)	0.860	0.898	0.938	0.980	1.024
Opening bays	2933	3072	3261	3405	3544
Bays added during the year	139	189	144	139	100
Opening line length	11025	11815	12132.1	12701.6	13665.8
Line length added during the year	790	317.1	569.5	964.2	768.9
Opening MVA	22055	24359.5	26094.5	27754	29708.5
MVA added during the year	2304.5	1735	1659.5	1954.5	1828
For assets at the beginning of the year –(A)	573.60	638.13	700.36	765.51	844.91
For assets added during the year – (B)	21.02	17.63	18.30	23.73	20.66
Total Normative O&M expenses – (A) + (B)	594.62	655.76	718.66	789.24	865.57

5.8. KSEB Ltd had segregated the O&M cost of SLDC from the total O&M cost in the ratio of 1.39%. Accordingly, the O&M cost claimed for SBU-T and SLDC for the MYT period is given below.

Table 5.5
KSEBL petition- segregation of O&M expenses among SBU-T & SLDC

Particulars	2022-23	2023-24	2024-25	2025-26	2026-27
	(Rs. Cr)	(Rs. Cr)	(Rs. Cr)	(Rs. Cr)	(Rs. Cr)
SBU-T O&M	586.29	648.48	703.32	763.82	814.31
SLDC O&M	8.26	9.14	9.91	10.77	11.48

Objections of the Stakeholders

5.9. The HT-EHT Association submitted that, the norms adopted by KSEB Ltd is different from that specified in the Tariff Regulations, 2021. The Association requested to approve the O&M cost of SBU-T strictly as per the norms specified in the Tariff Regulations 2021. The Association further submitted that, the parameters of O&M expenses such as number of bays, transmission line length and MVA capacity claimed by KSEB Ltd is excessively high. Hence the Association requested before the Commission to re-determine the O&M cost strictly as per the provisions of the Tariff Regulations, 2021.

Provisions of the Regulations

5.10. Regulation 58 of the Tariff Regulations, 2021 specifies the methodology to be adopted for claiming O&M cost of SBU-T of KSEB Ltd for the MYT period 2022-23 to 2026-27.

“58. Operation and maintenance expenses.– The transmission business/ licensee shall be allowed to recover the operation and maintenance expenses based on the number of ‘Bays’ and ‘Circuit km of lines’; as per the norms specified in Annexure 7 to these Regulations, for each financial year of the Control Period.

Explanation:

- (i) For the purpose of deriving the normative O&M expenses, ‘Bay’ shall mean a set of accessories that are required to connect an electrical equipment at 66 kV and above voltage level; such as transmission line, bus section breakers, potential transformers, power transformers, capacitors and transfer breakers, and the feeders emanating from the bus at the sub-station of the transmission business/ licensee.*
- (ii) For the purpose of deriving the normative O&M expenses, ‘circuit km’ means the length in circuit kilometres of the transmission lines at voltages of and above 66 kV.*
- (iii) For the purpose of deriving the normative O&M expenses, ‘circuit km’ means the length in circuit kilometres of the transmission lines at voltages of and above 66 kV.*

- (iv) *The O&M expenses for any year of the Control Period shall be allowed by multiplying the O&M norms for that year with the actual number of bays existing at the beginning of the financial year, total MVA capacity of the transformers and transmission line length in circuit km for the previous year and at 50 per cent of the circuit kilometre of transmission lines, MVA capacity of the transformers and number of Bays in the substation of the Transmission Licensee added during the year and put to its intended use.*

To clarify, the O&M expenses for FY 2022-23 shall be allowed by multiplying the O&M norms for FY 2022-23 with the actual number of bays, total MVA capacity of the transformers and transmission line length available in circuit km for FY 2021-22 and 50 per cent of the circuit kilometres of the transmission lines, MVA capacity of the transformers and number of Bays added during the FY 2022-23 onwards.

(2) In case, one time maintenance of special nature not in the form of routine repair and maintenance, if any, is required and is undertaken for the transmission system, expenses for such maintenance may be allowed by the Commission after prudence check; considering the details and justification furnished by the 68 | Page Transmission business/ licensee for incurring such an expenditure to the satisfaction of the Commission.

- (i) *Transmission Licensee may undertake Operational improvement (Opex) schemes for system automation, introduction of new technology and IT implementation etc., and such expenses may be allowed over and above the normative O&M Expenses, subject to their inclusion and approval in the Capital Investment Plan and prudence check by the Commission:*

Provided that the Transmission Licensee shall file detailed justification, cost benefit analysis of such schemes as against Capex schemes, and savings in O&M expenses, if any.

(3) The transmission business of KSEB Limited shall be allowed to recover the annual pension contribution to the Master Trust, based on actuarial valuation, in respect of the personnel allocated to the transmission business of KSEB Limited, in addition to the normative operation and maintenance expenses specified in sub regulation (1) above.”

“2(b) SBU-T Transmission Business of KSEB Limited,-

- (i) *O&M expenses for the Transmission business are allowed based on number of Bays, MVA capacity of Power Transformers and the Circuit kilometers of transmission lines including and above 66kV in the ratio 40:30:30 respectively.*

- (ii) As mentioned in Table 2, O&M expenses for 2018-19 including pay revision expenses is Rs.396.38 Crore. After allocating the amount on 40:30:30 basis to number of Bays, MVA capacity of Power Transformers and the Circuit kilometers is as shown below:

	Ratio	Notional O&M Cost for 2018-19 (Rs. Crore)	No. of Bays /No of power transformers/ Circuit km	Rs. lakh/bay, Rs. lakh/ MVA & Rs. lakh/circuit km
Bay	40%	158.56	2564.00	6.18
MVA Capacity of Power Transformers	30%	118.91	17378.80	0.684
Lines	30%	118.91	9529.59	1.248
Total	100%	396.38		

- (iii) The above derived normative per unit O&M cost for 2018-19 as per Table-4 above for the financial year 2018-19, is escalated at 4.84% per annum for determining the notional per unit O&M cost for the present Control Period 2019-20, 2020-21 & 2021-22.
- (iv) The above notional per unit O&M cost for 2021-22 is escalated at the rate of 4.454% for this MYT Control Period is as shown below:

	Current control period (indicative only)				Control period (Provisional)				
	2018-19	2019-20	2020-21	2021-22	2022-23	2023-24	2024-25	2025-26	2026-27
Rs.Lakh per bay	6.180	6.479	6.793	7.121	7.439	7.770	8.116	8.478	8.855
Rs.Lakh per MVA	0.684	0.717	0.752	0.788	0.823	0.860	0.898	0.938	0.980
Rs.Lakh per Ckt-km	1.248	1.308	1.372	1.438	1.502	1.569	1.639	1.712	1.788

(v) The O&M expenses for any year of the new Control Period shall be allowed by multiplying the normative O&M costs for that year with the actual number of bays, MVA capacity of Power Transformers and transmission line length in circuit kilometre at the beginning of the year. i.e., the O&M expenses for the financial year 2022-23 shall be allowed by multiplying the normative O&M costs for the financial year 2022-23 with the actual number of bays, MVA capacity of Power Transformers and transmission line length in circuit kilometre at the beginning of the financial year 2022-23 and at 50 percent of the transformers and the number of bays in the sub station of the Transmission Licensee added during the year and put to its intended use.”

Analysis and decision of the Commission

5.11. The Commission has examined in detail the O&M expenses of SBU-T claimed by KSEB Ltd. The Annexure-7 of the Tariff Regulations, 2021 specifies the norms for claiming the O&M expenses of SBU-T of KSEB Ltd for the MYT period from 2022-23 to 2026-27, which is extracted below for ready reference.

Table 5.6
Norms for determining O&M expenses of SBU-T

	Control Period (Provisional)				
	2022-23	2023-24	2024-25	2025-26	2026-27
Rs.lakh per Bay	7.439	7.770	8.116	8.478	8.855
Rs. lakh per MVA	0.823	0.860	0.898	0.938	0.980
Rs.lakh per circuit km	1.502	1.569	1.639	1.712	1.788

As detailed above, the norms for O&M expenses for SBU-T is specified under Annexure-7 of Tariff Regulations, 2021 in terms of number of bays, length of transmission lines an MVA capacity of SBU-T.

5.12. KSEB Ltd in the petition submitted that, they noticed an error in the norms specified for claiming O&M expenses of SBU-T in the Tariff Regulations, 2021. While arriving the norms, the Commission has considered 17378.80 MVA capacity at the beginning of the year 2018-19, whereas the actual MVA capacity was 16645.90 MVA only. Hence based on the actual MVA capacity at the beginning of the year 2018-19, KSEB Ltd reworked the norms, and estimated the O&M expenses based on the norms revised by them as their own.

5.13. The Commission noted the issue in detail. The Commission has notified the Tariff Regulations, 2021 after completing the due procedures specified in the Electricity Act, 2003 including pre-publication, stakeholder consultation and public hearing for notifying the Regulations by invoking the powers vested on the Commission under Section 181 of the Electricity Act, 2002. The licensee cannot deviate from the Tariff Regulations, 2021 so notified by the Commission. The Commission only have the powers to amend or modify or alter or relax any of the provisions of the Regulations notified by it. If KSEB Ltd find an error or aggrieved by any of the provisions of the Regulations including norms, KSEB Ltd should have to brought it to the attention of the Commission for revising or modifying it as per the procedures envisaged in the Act, 2003. Instead of invoking such provisions, KSEB Ltd unilaterally without the knowledge of the Commission has modified the norms and claimed the O&M cost based on the norms revised by themselves. This is highly objectionable and punishable as per the provisions of the EA-2003. **Hence the Commission hereby direct KSEB Ltd that, such illegal action shall not be done in future.**

Considering the above reasons, the Commission decided to estimate the O&M expenses provisionally as per the norms specified in the Tariff Regulations, 2021 notified on 16.11.2021.

5.14. The Commission has also appraised the number of bays, transmission lines and MVA capacity considered by the KSEB Ltd for estimating the O&M cost of SBU-T. The details are given below.

Table 5.7
KSEBL petition- Transmission parameters adopted by KSEB Ltd for
estimating O&M cost of SBU-T

Year	Bays		Trans line length		MVA capacity		Remarks
	At the beginning of the year	Added during the year	At the beginning of the year	Added during the year	At the beginning of the year	Added during the year	
	(Nos)	(Nos)	(ckt.km)	(ckt.km)	(MVA)	(MVA)	
2018-19	2564	43	9529	73	20820	362	Actual
2019-20	2607	64	9602	331	21182	122	
2020-21	2671	123	9933	208	21304	376	
2021-22	2794	139	10141	884	21680	376	
CAGR from 2018-19 to 2021-22	2.90%		2.10%		1.40%		
2022-23	2933	139	11025	790	22055	2305	Projection
2023-24	3072	189	11815	317	24360	1735	
2024-25	3261	144	12132	570	26095	1660	
2025-26	3405	139	12702	964	27754	1955	
2026-27	3544	100	13666	769	29709	1828	
CAGR from 2021-22 to 2026-27	4.90%		6.10%		6.50%		

It can be seen from the above table that, the actual CAGR of bays from 2018-19 to 2021-22 is 2.90% only, whereas the CAGR of the number of bays adopted for estimating the ARR is 4.90% during the MYT period from 2022-23 to 2026-27. Similarly, the CAGR of transmission lines adopted is 6.10% as against the actual growth rate of 2.10% only during the previous MYT period. The CAGR of MVA capacity adopted is 6.50% as against 1.40% in the previous MYT period.

5.15. The Commission also noted that, as discussed in Chapter-3, the GFA addition considered by the Commission for estimating the ARR is much less than that claimed by KSEB Ltd for the MYT period from 2022-23 to 2026-27. The details are given below.

Table 5.8
GFA addition provisionally considered by Commission for estimating the ARR

Year	GFA addition claimed by KSEB Ltd	KSERC provisional	(% of the GFA provisionally considered by KSERC)
	(Rs. Cr)	(Rs. Cr)	
2022-23	1605.52	1520.57	95%
2023-24	2037.04	1593.33	78%
2024-25	1779.72	1087.44	61%
2025-26	1721.15	1045.66	61%
2026-27	2067.18	841.93	41%
Total	9210.61	6088.93	66%

5.16. Based on the above consideration, the Commission decided to provisionally reduce the parameters such as 'number of bays', 'transmission length', MVA capacity in proportion of the GFA provisionally adopted by the Commission for estimating the ARR during the MYT period from 2022-23 to 2026-27. Accordingly, the parameters provisionally considered by the Commission for estimating the ARR for the MYT period from 2022-23 to 2026-27 is given below.

Table 5.9
Transmission parameters provisionally considered by the Commission for estimating O&M expenses of SBU-T

Year	KSEBL petition						KSERC provisional						(% of the newly added capacity considered provisionally)
	Bays		Trans line length		MVA capacity		Bays		Trans line length		MVA capacity		
	At the beginning of the year	Added during the year	At the beginning of the year	Added during the year	At the beginning of the year	Added during the year	At the beginning of the year	Added during the year	At the beginning of the year	Added during the year	At the beginning of the year	Added during the year	
	(Nos)	(Nos)	(ckt.km)	(ckt.km)	(MVA)	(MVA)	(Nos)	(Nos)	(ckt.km)	(ckt.km)	(MVA)	(MVA)	
2022-23	2933	139	11025	790	22055	2305	2933	132	11025	748	22055	2183	94.7%
2023-24	3072	189	11815	317	24360	1735	3065	148	11773	248	24238	1357	78.2%
2024-25	3261	144	12132	570	26095	1660	3212	88	12021	348	25595	1014	61.1%
2025-26	3405	139	12702	964	27754	1955	3300	84	12369	586	26609	1187	60.8%
2026-27	3544	100	13666	769	29709	1828	3385	41	12955	313	27796	745	40.7%

5.17. Based on the above parameters and also as per the norms specified in the Tariff Regulations, 2021, the Commission provisionally determine the O&M expenses of SBU-T as follows.

Table 5.10
O&M cost of SBU-T provisionally approved for the MYT period

Parameters	KSERC				
	2022-23	2023-24	2024-25	2025-26	2026-27
Bays (Rs.Lakh per bay)	7.439	7.770	8.116	8.478	8.855
Lines (Rs.Lakh per Ckt-km)	1.502	1.569	1.639	1.712	1.788
MVA (Rs.Lakh per MVA)	0.823	0.860	0.898	0.938	0.980
Opening bays	2933	3065	3212	3300	3385
Bays added during the year	132	148	88	84	41
Opening line length	11025	11773	12021	12369	12955
Line length added during the year	748	248	348	586	313
Opening MVA	22055	24238	25595	26609	27796
MVA added during the year	2183	1357	1014	1187	745
O&M cost as per Regulation (RS.Cr)					
For assets at the beginning of the year –(A)	565.29	631.29	687.59	741.16	803.77
For assets added during the year – (B)	19.50	13.52	10.97	14.16	8.25
Total Normative O&M expenses –(A) + (B)	584.79	644.81	698.57	755.33	812.02

5.18. The Commission noted that, the O&M expenses as approved above based on the norms specified in the Tariff Regulations, 2021, is inclusive of the 'Employee Expenses, A&G expenses and R&M expenses' for the MYT period from 2022-23 to 2026-27. The Commission noted that, each of the components of O&M expenses such as 'Employee Expenses, A&G expenses and R&M expenses' are separate expenses and controllable parameter. Further, KSEB Ltd is also accounting each item separately in their audited accounts. Hence, the Commission has decided to approve each item of the O&M expenses separately in the ratio of these expenses approved in the Truing up of accounts for the year 2020-21. Such an effort facilitates identification of areas of cost reduction, inefficiency, lack of prudent cost control etc which will enable the utility to effect appropriate corrective action. Hence the Commission decided to apportion the O&M expenses admissible as per norms among the three components of O&M expenses viz-a-viz employee expenses, A&G expense and R&M expenses in the ratio of these expenses in approved True up O&M expenses of SBU-T for the year 2020-21.

Table 5.11
KSERC Approval- Components wise O&M expenses of SBU-T Provisionally approved for the MYT period 2022-23 to 2026-27

Particulars	Ratio of the components of O&M expenses	KSERC Approval				
		2022-23	2023-24	2024-25	2025-26	2026-27
	(%)	(Rs. Cr)	(Rs. Cr)	(Rs. Cr)	(Rs. Cr)	(Rs. Cr)
Employee expense	72.94%	426.55	470.33	509.54	550.93	592.29
A&G expenses	5.16%	30.18	33.27	36.05	38.97	41.90
R&M expenses	21.90%	128.07	141.21	152.99	165.42	177.83
Total	100%	584.79	644.81	698.57	755.33	812.02

Pay revision expenses

5.19. KSEB Ltd submitted that, Regulation 14(3) provides for admission of expenses relating to pay revision during the control period after due prudence check. KSEB Ltd in their petition has submitted that the pay revision of Officers/workmen is due from July / August 2023. The additional liability is estimated at 10% of Basic pay and DA. Accordingly, the provision estimated to discharge liability as per the petition is furnished below:

Table: 5.12
Pay Revision expenses estimated by KSEB Ltd

Pay Revision Expenses (Cr)				
Particulars	2023-24	2024-25	2025-26	2026-27
Basic + DA	3345.35	3623.30	3920.60	4269.10
10% of above	334.53	362.32	392.06	426.91
Provision for Pay Revision	223.02	362.32	392.06	426.91

5.20. SBU wise details of the pay revision expenses estimated by KSEB Ltd is given below.

Table 5.13
SBU wise details of the pay revision expenses estimated by KSEB Ltd

Business Unit	Employee cost ratio	SBU wise Pay revision expenses (Rs. Cr)				
		2022-23	2023-24	2024-25	2025-26	2026-27
SBU G	5.40		12.04	19.56	21.17	23.05
SBU T	11.25		25.08	40.75	44.09	48.01
SBU D	83.35		185.90	302.02	326.80	355.85
Total	100.00	NA	223.02	362.32	392.06	426.91

5.21. KSEB Ltd further submitted that, they had not included the above provision in their ARR and requested that these expenses be allowed as and when it materializes during the truing up process.

Analysis and Decision of the Commission

5.22. Regulation 14(3) of the Tariff Regulations 2021 provide as follows.

“14(3) Expenses relating to pay revision, if any, during the Control Period, of the Generation business/ company or Transmission business/ licensee or distribution business/ licensee, will be considered for pass through after due prudence check.”

5.23. As discussed under paragraphs 5(19) and 5(20) above, KSEB Ltd has estimated the additional liability towards pay revision with effect from July/August 2023 onwards. However, as per the details submitted before the Commission, KSEB Ltd yet to take any steps towards revision of pay and allowances to its employees. Hence it is too premature to claim provision of pay revision at this stage. However, the Commission may allow the ‘revision of pay and allowances implemented during the MYT period’ as per the provisions of the Tariff Regulations, 2021, after prudence check.

With the above observation, the Commission decided not to provide any provision towards revision of pay and allowances to its employees during the MYT period 2022-23 to 2026-27.

Depreciation

5.24. The depreciation for SBU-T & SLDC as estimated by KSEB Ltd as per the provisions of Regulation 27 of the Tariff Regulations, 2021 for the control period is given below:

Table :5.14
Depreciation for SBU-T & SLDC proposed by KSEB Ltd

		2020-21	2021-22	2022-23	2023-24	2024-25	2025-26	2026-27
	Particulars	(Rs.Cr)	(Rs.Cr)	(Rs.Cr)	(Rs.Cr)	(Rs.Cr)	(Rs.Cr)	(Rs.Cr)
1	Opening GFA as on 1-4-2017 (As per TU Order 2017-18 (OA 9/2020 Dt 25.06.2021)	4628.56						
2	Total asset addition approved As per order dt 25.06.2021 for 2017-18	388.82						
3=(1+2)	Approved GFA as on 31.03.2018	5017.38						
4	GFA addition claimed for depreciation as per submission dt 30.07.2021 (2018-19)	347.17						
5	Asset addition for 2019-20 as per TU petition	384.17						
6=(3+4+5)	GFA at the beginning of the year considered for depreciation	5748.72	6335.02	7795.04	9400.56	11437.6	13217.32	14938.47
7	Assets >13 years old (for the control period)	2774.43	3029.03	3029.03	3253.94	3441.44	3735.89	3866.06
8	Fully depreciated Assets - Beyond 30 years	101.72	101.87	106.46	242.31	276.37	322.11	406.78
9	Add: Fully depreciated Contribution & grants							
10=(7-8+9)	Assets having life 13-30 yrs	2672.71	2927.16	2922.57	3011.63	3165.07	3413.78	3459.28
11=(10*2.80%)	Value of land (Average 2.8% of GFA)	74.84	81.96	81.83	84.33	88.62	95.59	96.86
12	Grants and contributions prior to 13 years							
13=(10-11-12)	Assets having life 12-30 yrs eligible for depreciation	2597.87	2845.2	2840.74	2927.3	3076.45	3318.19	3362.42
14=(13*1.42%)	Depreciation for Assets 12-30 years (@1.42%)	36.89	40.4	40.34	41.57	43.69	47.12	47.75
15=(6-7)	Assets < 12 years old (1-4-2008 to 31-3-2020)	2974.29	3305.99	4766.01	6146.62	7996.16	9481.43	11072.41
16=(15*2.80%)	Value of land (Average 2.8% of GFA)	83.28	92.57	133.45	172.11	223.89	265.48	310.03
17	Grants and contributions (less than 13 yrs old)	418.53	488.19	488.19	648.35	988.58	1215.37	1238.77
18=(15-16-17)	Opening balance of Assets < 13 years old	2472.48	2725.23	4144.37	5326.16	6783.68	8000.58	9523.61
19	Asset addition during the year	586.3	1460.02	1605.52	2037.04	1779.72	1721.15	2067.18
20	Contribution & grants received during the year	69.66	0	160.16	340.23	226.79	23.4	203.08
21=(19*2.80%)	Land value @ 2.80% on GFA addition	16.42	40.88	44.95	57.04	49.83	48.19	57.88
22=(18+19-20-21)	Closing balance of Assets <13 years Old	2972.7	4144.37	5544.77	6965.93	8286.78	9650.13	11329.83
23=(18+22)/2	Average Value of Assets <13 Years old	2722.59	3434.8	4844.57	6146.05	7535.23	8825.35	10426.72
24=(23*5.14%)	Depreciation for assets <13 years (@5.14%)	139.94	176.55	249.01	315.91	387.31	453.62	535.93
25=(14+24)	Total Depreciation for the year – (A)	176.83	216.95	289.35	357.47	431	500.74	583.68

KSEB Ltd has considered the GFA additions proposed during the MYT period for estimating the ARR during the said period.

Comments of the Stakeholders

5.25. HT& EHT Association submitted that, KSEB Ltd had claimed depreciation on the assets which is yet to be approved by the Commission. According to the Association, the total depreciation allowable is Rs.1070.85 crore only as against Rs.2162.24 crore claimed by KSEB Ltd.

Provisions in the Regulations

5.26. Provisions regarding depreciation is given below:

“27. Depreciation. –

(1) *Depreciation shall be calculated on the original capital cost of the asset as approved by the Commission:*

Provided that, no depreciation shall be allowed on the increase in value of the assets, on account of revaluation of assets:

Provided further that the depreciation shall not be allowed on the assets created through consumer contribution, deposit works, capital subsidies and grants.

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

(vii) *depreciation shall be allowed up to a maximum of 90% of the approved capital cost of asset.*

(viii) *depreciation shall be computed annually based on the straight line method at the rates specified in Annexure 1 to these Regulations for the first thirteen financial years from the date of Commercial operation;*

(ix) *the remaining depreciable value as on the thirty first day of March of the financial year ending after a period of thirteen financial years from the date of Commercial operation shall be spread over the balance useful life of the assets;*

(x) *the generating business/ company or transmission business/ licensee or distribution business/ licensee, shall file 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;*

(xi) *No depreciation shall be allowed for assets created through consumer contribution, deposit works, capital subsidies and grants;*

(xii) *the salvage value of the fully depreciated asset shall be ten per cent of the allowable capital cost as approved by the Commission;*

Provided that the salvage value of Information Technology equipment and computer software shall be considered at zero percent of the allowable capital cost.

- (3) Land, other than the land held under lease and the land for reservoir in the case of hydel generating station, shall not be a depreciable asset and its cost shall be excluded from the capital cost while computing the depreciable value of the assets.*
- (4) In case the land is held on lease, the lease premium paid will be eligible for depreciation over the lease period.*
- (5) Depreciation against assets relating to environmental protection shall be allowed on a case-to-case basis at the time of fixation of tariff, subject to the condition that the environmental standards as prescribed have been complied with during the previous tariff period.*
- (6) In the case of existing assets, the balance depreciable value of the asset as on the first day of April, 2022, shall be worked out by deducting the cumulative depreciation approved by the Commission upto the thirty first day of March, 2022, from the gross depreciable value of the assets.*
- (7) Depreciation shall be chargeable from the first financial year of Commercial operation:
Provided that in case the COD of the asset is declared during the course of the financial year, depreciation shall be charged on a daily pro-rata basis:
Provided further that depreciation shall be re-calculated for assets capitalized during the financial year at the time of truing up, based on the documentary evidence for capitalization of assets filed by the applicant, subject to prudence check of the Commission, in such a way that the depreciation is calculated proportionately from COD.*
- (8) In case a single tariff needs to be determined for all the units of a Generating Station, the depreciation shall be computed from the effective date of commercial operation of each of the units, taking into consideration the depreciation of individual generating units thereof.*

Analysis and decision of the Commission

- 5.27. The Commission has examined the details submitted by KSEB Ltd in detail. However, as detailed in Table 3.24 of Chapter-3, the GFA addition of SBU-T approved by the Commission is much less than the same claimed by KSEB Ltd.
- 5.28. The Regulation 27 of the Tariff Regulations 2021 provides for the methodology and the Annexure-1 of the Tariff Regulations, 2021 specifies the rate to be adopted for approving the depreciation.
- 5.29. The Tariff Regulations, 2021 provides for accelerated depreciation for the assets for the first thirteen years from the date of COD. The remaining depreciable value after completion of thirteen years from the COD shall be spread over the balance useful life of the assets. Further, as per the provisions of the Tariff Regulations,

2021, land is a non-depreciable asset. Based on the past practice and to ensure consistency in accounting policy, wherever the value of land is not provided, it is taken as taken as 2.80% of the total GFA of KSEB Ltd.

- 5.30. The Commission, duly considering the mix of various assets of KSEB Ltd with different useful life, the Commission has been adopting the e average rate of depreciation of assets having life less than 12 year @5.14% and the average depreciation rate of assets having life more than 12 years and upto 30 years is taken as 1.42%. All assets aged more than 30 years old is taken as fully depreciated assets and no further depreciation is provided.
- 5.31. As per the order of the Commission dated 24.06.2022 in the matter of Truing up of accounts of KSEB Ltd for the year 2020-21, the total depreciable asset of SBU-T as on 01.04.2021 is Rs.5180.94 crore as detailed below.

Table 5.15
Depreciable asset as on 01.04.2021of SBU-T

Particulars	Amount	Remarks
	(Rs. Cr)	
Depreciable Asset as on 01.04.2020	5180.94	Table- 3.31 of the True up order 2020-21
Depreciable assets added during the year 2020-21	292.38	
Total Depreciable assets as on 01.04.2021	5473.32	

- 5.32. In order to estimate the depreciable asset as on 01.04.2022, i.e., at the beginning of the MYT period 2022-23, the depreciable assets added during the year 2021-22 also has to be considered. As per the petition, KSEB Ltd has claimed the total GFA addition of 2021-22 as Rs 1460.02 crore, however, KSEB Ltd has not submitted the justification for the claim. Hence the Commission has adopted the average of the last three year asset addition as per the orders of Truing up for the years 2018-19, 2019-20 and 2020-21 as the 'asset addition' for the year 2021-22 for the purposes of estimating the ARR for the MYT period 2022-23 to 2026-27. The details are given below.

Table 5.16
Depreciable assets provisionally considered for the Year 2021-22 for estimating ARR of SBU-T

Particulars	2018-19	2019-20	2020-21	2021-22 (avg. 2018-19 to 2020-21)
	(Rs. Cr)	(Rs. Cr)	(Rs. Cr)	(Rs. Cr)
GFA addition eligible as per Regulation	347.17	384.17	586.30	439.21
Consumer contribution and grants	56.91	161.68	69.66	96.08
<u>Net Asset addition (for Normative loan)</u>	290.26	222.49	516.64	343.13
Less: Land value addition excluding the portion under part capitalization	3.89	8.65	224.26	78.93
GFA addition eligible for depreciation as per petition (Revised vide letter dated 30-7-2021)	286.37	213.84	292.38	264.20

5.33. The year wise details of the depreciable assets of SBU-T approved in the Chapter-3 of this order is extracted below.

Table 5.17
Depreciable asset addition of SBU-T for the MYT period

Year	GFA addition approved	Consumer contribution & grants	Net GFA eligible for loan	Value of land (2.8% of the GFA)	Depreciable asset at the end of the year
	(Rs. Cr)	(Rs. Cr)	(Rs. Cr)	(Rs. Cr)	(Rs. Cr)
2022-23	1520.57	160.16	1360.41	38.09	1322.32
2023-24	1593.33	340.23	1253.10	35.09	1218.01
2024-25	1087.44	226.78	860.66	24.10	836.56
2025-26	1045.66	23.40	1022.26	28.62	993.64
2026-27	841.93	203.08	638.85	17.89	620.97
Total	6088.93	953.65	5135.28	143.79	4991.49

5.34. Based on the above details, the depreciation of SBU-T provisionally approved for the purposes of ARR for the MYT period is given below.

Table 5.18
SBU-T. Depreciation approved for the MYT period from 2022-23 to 2026-27

Year	Particulars	2021-22	MYT period				
			2022-23	2023-24	2024-25	2025-26	2026-27
		(Rs. Cr)	(Rs. Cr)	(Rs. Cr)	(Rs. Cr)	(Rs. Cr)	(Rs. Cr)
1	Depreciable asset at the beginning of the Year	5473.32	5737.52	7059.84	8277.84	9114.40	10108.04
2	Depreciable asset added during the year	264.20	1322.32	1218.01	836.56	993.64	620.97
3	Depreciable asset at the end of the year	5737.52	7059.84	8277.84	9114.40	10108.04	10729.01
4	Depreciation on the assets at the beginning of the year	180.48	197.42	255.15	310.02	341.41	386.57
5	Depreciation on the assets added during the year	6.79	33.98	31.30	21.50	25.54	15.96
6	Total depreciation allowable during the year	187.27	231.40	286.45	331.52	366.95	402.53

5.35. The comparison of the depreciation claimed and provisionally approved for SBU-G for the purposes of estimating the ARR during the MYT period is given below.

Table 5.19
Depreciation claimed by KSEB Ltd and provisionally approved by the Commission

Year	KSEB petition	KSERC Provisional
	(Rs. Cr)	(Rs. Cr)
2022-23	289.35	231.40
2023-24	357.47	286.45
2024-25	431.00	331.52
2025-26	500.74	366.95
2026-27	583.68	402.53
Total	2162.24	1618.85

Interest and financing charges

5.36. KSEB Ltd, in the petition has claimed interest on capital liabilities, interest on working capital, interest on GPF and interest on Master Trust under interest and financing charges. Each of the item is explained below:

Interest on capital liabilities:

5.37. KSEB Ltd submitted that, the normative loan and its interest was estimated for the MYT period strictly as per the Tariff Regulations, 2021. The normative opening loan as on 01.04.2021 has been taken as per the truing up petition for 2020-21. Estimated amount towards GFA, depreciation, applicable consumer contribution and grants for 2021-22 has been considered to arrive at the normative loan at the beginning of the control period. The details of normative loan estimated by KSEB Ltd in the petition is as shown below:

Table: 5.20
KSEB petition- Normative loan and interest claimed for SBU-T (Rs. Cr)

Particulars	2020-21	2021-22	2022-23	2023-24	2024-25	2025-26	2026-27
	(Rs. Cr)	(Rs. Cr)	(Rs. Cr)	(Rs. Cr)	(Rs. Cr)	(Rs. Cr)	(Rs. Cr)
Opening Loan	1238.17	1577.97	2821.04	3977.06	5316.39	6438.32	7635.33
GFA addition during the year	586.30	1460.02	1605.52	2037.04	1779.72	1721.15	2067.18
Less: Consumer Contribution & Grants	69.66	0.00	160.16	340.23	226.79	23.40	203.08
Less: Allowable Depreciation	176.83	216.95	289.35	357.47	431.00	500.74	583.68
Normative loan during the year	339.80	1243.07	1156.01	1339.34	1121.93	1197.01	1280.42
Closing Normative loan	1577.97	2821.04	3977.06	5316.39	6438.32	7635.33	8915.75
Average normative loan	1408.07	2199.51	3399.05	4646.72	5877.36	7036.83	8275.54
Interest rate for the year	9.83	9.83	9.83	9.83	9.83	9.83	9.83
Interest for the year	138.44	216.26	334.19	456.86	577.86	691.86	813.65

As detailed above, KSEB Ltd has claimed interest on loan ranges from Rs.138.44 crore in the year 2022-23 to Rs.813.65 crore in the year 2026-27.

Comments of stakeholders:

5.38. The HT&EHT Association objected to the interest on loan claimed by KSEB Ltd. The interest on loan arrived by the Association ranges from Rs.153.38 crore in the year 2022-23 to Rs 174.72 crore in the year 2026-27.

Provisions in the Regulations

5.39. The Regulation 26 and 29 of the Tariff Regulations, 2021 specified the 'interest and finance charges and related issues' in detail. The relevant Regulations are extracted below.

26. Debt - Equity ratio. –

- (1) *For the purpose of determination of tariff, the debt equity ratio as on the date of commercial operation in the case of a new generating station, transmission line and distribution line/ equipment/ accessories or substation commissioned or capacity expanded on or after the first day of April, 2022, shall continue to be 70:30 of the capital cost as approved by the Commission:*
Provided that the debt-equity ratio shall be applied only to the balance of such approved capital cost after deducting the financial support provided through consumer contribution, deposit work, capital subsidy or grant, if any.
- (2) *Where equity employed is more than thirty percent of the approved capital cost, the amount of equity for the purpose of tariff shall be limited to thirty percent and the balance amount shall be considered as normative loan and interest on the same may be allowed at the weighted average rate of interest of the actual loan portfolio.*
- (3) *Where actual equity employed is less than thirty percent of the capital cost, the actual equity shall be considered and the balance of the Commission approved capital cost after adjusting for grants and/ or contribution shall be treated as normative loan.*
- (4) *If any fixed asset is capitalized on account of capital expenditure incurred prior to the first day of April, 2022, the debt-equity ratio allowed by the Commission for determination of tariff for the period ending on the thirty first day of March, 2022, shall be considered.*
- (5) *The equity invested in foreign currency, if any, or any loan in foreign currency, shall be designated in equivalent Indian rupees, at the exchange rate specified by the Reserve Bank of India as on the date of each such investment.*
- (6) *In the case of retirement or replacement of assets, the equity capital approved as mentioned above, shall be reduced to the extent of thirty percent or the actual equity component for the asset, if it is lower than thirty percent of the original cost of the retired or replaced asset based on documentary evidence.*
- (7) *Swapping of foreign currency loans shall be permitted provided:*
(i) it does not have the effect of increasing the tariff;
(ii) the cost of swapping and interest expenses thereon, shall be allowed by the Commission only after prudence check;
(iii) The generating business/ company or transmission business/ licensee or distribution business/ licensee shall provide full particulars of the swapped loans;
(iv) Prior approval of the Commission shall be obtained before entering into any foreign currency swap.
- (8) *Restructuring of capital in terms of the relative share of loan and equity is subject to the maximum equity of 30 percentage and shall be permitted during the useful life of the project provided:*
(i) It does not have the effect of increasing the tariff;
(ii) any benefit from such restructuring shall be shared in the ratio 2:1 among,-
a) the generating business/ company and the persons sharing the capacity charge; or

- b) the transmission business/ licensee and the long-term intra-state open access customers including the distribution business/ licensee; or
- c) The distribution business/ licensee and consumers.

29. Interest, Finance charges and Carrying cost. –

- (1) The loans arrived at in the manner indicated in Regulation 26 shall be considered as gross normative loan for calculation of interest on the loans:

Provided that the interest and finance charges on capital works in progress shall be excluded from such consideration and will not be considered in the ARR and truing up processes:

Provided further that in case of retirement or replacement of the assets, the normative loan amount approved by the Commission shall be reduced to the extent of outstanding loan component of the original value of the retired or replaced assets; based on documentary evidence.

- (2) The normative loan outstanding as on the first day of April, 2022, shall be worked out by deducting the amount of cumulative repayment as approved by the Commission upto the thirty first day of March, 2022, 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 the declaration of the commercial operation date 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 rate of interest on the last available loan shall be considered:

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

- (5) The interest on loan shall be calculated on the normative average loan as per the norms approved by the Commission for the financial year, by applying the weighted average rate of interest.
- (6) The generating business/ company or the transmission business/ licensee or the distribution business/ licensee or the State Load Despatch Centre, as the case may be, shall make every effort to re-finance the loan so as to reduce the interest costs and to effect net savings on interest. In that event the costs

associated with such re-financing shall be borne by the borrower and any benefit from such refinancing shall be shared in the ratio 2:1 among,-

- (i) the generating business/ company and the persons sharing the capacity charge; or*
 - (ii) the transmission business/ licensee and long-term intra-state open access customers including distribution business/ licensee; or*
 - (iii) The distribution business/ licensee and its consumers.*
- (7) The changes to the terms and conditions of the loans during the financial year, if any, shall be effective from the date of coming into force of such changes.*
- (8) Interest shall be allowed on the amount collected as security deposit in cash from the users of the transmission system or distribution system and the consumers, at the bank rate as on the first day of April of the financial year in which the petition is filed:*

Provided that only the 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

- (9) The Commission shall allow Carrying Cost on the admissible amounts, with simple interest, at the weighted average rate of interest on the licensee's loans prevailing during the relevant year:*

Provided that, in case the distribution licensee is holding security deposit over and above their working capital requirement, no carrying cost on such excess security deposit shall be allowed.

Analysis and decision of the Commission

5.40. The Commission has examined the details furnished by KSEB Ltd. KSEB Ltd has estimated the normative opening loan as on 01.04.2021 as per the Truing Up petition for the year 2020-21. However, the Commission vide the order dated 24.06.2022 in Petition OP No. 23/2022 has approved the normative loan of SBU-T as on 01.04.2021 at Rs.1452.68 crore.

5.41. For arriving the normative loan as on 31.03.2022, i.e., at the beginning of the MYT period 2022-23, the GFA addition eligible for normative loan for the year 2021-22 has to be estimated. KSEB Ltd in their petition has claimed the GFA addition of Rs 1460.02 crore for the year 2021-22, however the same is much higher the GFA addition of the previous years of the MYT period 2018-19 to 2021-22. Hence the Commission has decided to adopt the GFA addition of 2021-22 at average of the actual asset addition approved as per the Truing Up orders of the years 2018-19 to 2020-21. The details are given below.

Table 5.21
GFA addition of SBU-T considered for the Year 2021-22 for estimating normative loan

Particulars	2018-19	2019-20	2020-21	2021-22 (avg. 2018-19 to 2020-21)
	(Rs. Cr)	(Rs. Cr)	(Rs. Cr)	(Rs. Cr)
GFA addition eligible as per Regulation	347.17	384.17	586.30	439.21
Consumer contribution and grants	56.91	161.68	69.66	96.08
Net Asset addition (for Normative loan)	290.26	222.49	516.65	343.13

5.42. The GFA addition of SBU-T approved during the MYT period 2022-23 to 2026-27, eligible for normative loan as per Chapter-3 of this order is given below.

Table 5.22
GFA addition of SBU-T provisionally considered for estimating normative loan

Year	GFA addition approved	Consumer contribution & grants	Net GFA eligible for loan
	(Rs. Cr)	(Rs. Cr)	(Rs. Cr)
2022-23	1520.57	160.16	1360.41
2023-24	1593.33	340.23	1253.10
2024-25	1087.44	226.78	860.66
2025-26	1045.66	23.40	1022.26
2026-27	841.93	203.08	638.85
Total	6088.93	953.65	5135.28

5.43. The average interest rate of loan of SBU-T claimed by KSEB Ltd is 9.83%. Based on the above, the Commission has estimated the normative loan and interest for the SBU-T as in the Table below.

Table 5.23
Normative loan and interest provisionally approved for the MYT period

Particulars	2021-22	MYT Period				
		2022-23	2023-24	2024-25	2025-26	2026-27
	(Rs. Cr)	(Rs. Cr)	(Rs. Cr)	(Rs. Cr)	(Rs. Cr)	(Rs. Cr)
Opening Loan at the beginning of the year	1452.68	1608.54	2737.55	3704.19	4233.33	4888.65
GFA addition during the year	439.21	1520.57	1593.33	1087.44	1045.66	841.93
Less: Consumer Contribution & Grants received	96.08	160.16	340.23	226.78	23.40	203.08
Less: Depreciation allowed for the year	187.27	231.40	286.45	331.52	366.95	402.53
Normative loan added during the year	155.86	1129.01	966.64	529.14	655.32	236.32
Closing Normative loan at the end of the year	1608.54	2737.55	3704.19	4233.33	4888.65	5124.97
Average normative loan during the year	1530.61	2173.04	3220.87	3968.76	4560.99	5006.81

Particulars	2021-22	MYT Period				
		2022-23	2023-24	2024-25	2025-26	2026-27
	(Rs. Cr)	(Rs. Cr)	(Rs. Cr)	(Rs. Cr)	(Rs. Cr)	(Rs. Cr)
Interest rate for the year (%) claimed by KSEB Ltd	9.83%	9.83%	9.83%	9.83%	9.83%	9.83%
Interest allowed for the year (provisionally) for estimating the ARR	150.46	213.61	316.61	390.13	448.35	492.17

5.44. The summary of the normative loan and interest claimed by KSEB Ltd in their petition and provisionally approved by the Commission for the purposes of ARR is given in the Table below.

Table 5.24
Summary of the normative loan and interest- claimed by KSEB Ltd and provisionally approved by KSERC

Year	KSEBL claim	KSERC Approval
	(Rs.Cr)	(Rs.Cr)
2022-23	334.19	213.61
2023-24	456.86	316.61
2024-25	577.86	390.13
2025-26	691.86	448.35
2026-27	813.65	492.17
Total	2874.42	1860.87

Interest on security deposits:

5.45. KSEB Ltd has not claimed any interest on security deposit as SBU-T does not hold any security deposit.

Interest on GPF

5.46. KSEB Ltd in their MYT petition has estimated the interest on GPF for the control period is estimated @7.10% on the average anticipated balance of GPF. KSEB Ltd submitted that the pay revision arrears are ordered to be credited to the PF account of employees in 2021-22 and 2022-23. The details are given below:

Table: 5.25
KSEB Ltd petition- Estimation of interest on provident fund as per petition

Particulars	Actuals	Estimate	Projection				
	2020-21	2021-22	2022-23	2023-24	2024-25	2025-26	2026-27
	(RS.Cr)	(RS.Cr)	(RS.Cr)	(RS.Cr)	(RS.Cr)	(RS.Cr)	(RS.Cr)
Opening: Provident Fund as on 1 st April - Rs. Cr	2342.96	2430.72	2852.52	3274.31	3364.31	3454.31	3544.31
Addition (net) during the Financial Year - Rs. Cr	87.76	421.80	421.80	90.00	90.00	90.00	90.00
Closing: Provident Fund as on 31 st March - Rs. Cr	2430.72	2852.52	3274.31	3364.31	3454.31	3544.31	3634.31
Average PF during the Financial Year- Rs. Cr	2386.84	2641.62	3063.41	3319.31	3409.31	3499.31	3589.31
Average interest rate (%)	7.10%	7.10%	7.10%	7.10%	7.10%	7.10%	7.10%
Interest Charges - Rs. Cr	160.69	187.55	217.50	235.67	242.06	248.45	254.84

5.47. KSEB Ltd had segregated the GPF balance among SBUs on the basis of the employee cost ratio in 2020-21. The share of SBU-T is shown in the table below:

Table :5.26
SBU wise interest on provident fund estimated by KSEB Ltd

Particulars	SBU G	SBU T	SBU D	Total
	(RS.Cr)	(RS.Cr)	(RS.Cr)	(RS.Cr)
Employee cost ratio (2020-21)	5.40	11.25	83.35	100.00
2021-22	10.13	21.09	156.34	187.55
2022-23	11.74	24.46	181.30	217.50
2023-24	12.72	26.50	196.44	235.67
2024-25	13.07	27.22	201.77	242.06
2025-26	13.41	27.94	207.10	248.45
2026-27	13.76	28.66	212.42	254.84

Objections of stakeholders

5.48. The HT&EHT Association and other stakeholders has not raised any objection on the interest on GPF balance claimed by KSEB Ltd.

Analysis and decision of the Commission

5.49. As per the Truing Up order dated 24.06.2022 for the year 2020-21, the closing balance of GPF as on 01.04.2021 is Rs.2430.72 crore. The interest on GPF approved in the same order is @7.10%. KSEB Ltd had adopted the same figures for estimating the interest on GPF for the MYT period.

5.50. KSEB Ltd has estimated the GPF addition of Rs.421.80 crore during the years 2021-22 and 2022-23 on account pay revision arrears. For the remaining years, the GPF addition is claimed @Rs 90.00 crore per annum.

5.51. Accordingly, the Commission computed the interest on GPF allowable for the MYT period from 2022-23 to 2026-27 as detailed below.

Table 5.27
Interest on GPF provisionally approved for the MYT period for KSEB L

Particulars	Estimate	KSERC provisional approval				
	2021-22	2022-23	2023-24	2024-25	2025-26	2026-27
	(Rs.Cr)	(Rs.Cr)	(Rs.Cr)	(Rs.Cr)	(Rs.Cr)	(Rs.Cr)
Opening: Provident Fund as on 1 st April - Rs. Cr	2430.72	2852.52	3274.32	3364.32	3454.32	3544.32
Addition (net) during the Financial Year - Rs. Cr	421.80	421.80	90.00	90.00	90.00	90.00
Closing: Provident Fund as on 31 st March - Rs. Cr	2852.52	3274.32	3364.32	3454.32	3544.32	3634.32
Average PF during the Financial Year- Rs. Cr	2641.62	3063.42	3319.32	3409.32	3499.32	3589.32
Average interest rate (%)	7.10%	7.10%	7.10%	7.10%	7.10%	7.10%
Interest Charges - Rs. Cr	187.56	217.50	235.67	242.06	248.45	254.84

5.52. Interest on GPF approved for the SBU-T of KSEB Ltd during the MYT period is as given below.

Table 5.28
Interest on GPF balance of SBU-T approved for the MYT 2022-23 to 2026-27

Particulars	KSERC provisional				
	2022-23	2023-24	2024-25	2025-26	2026-27
	(Rs.Cr)	(Rs.Cr)	(Rs.Cr)	(Rs.Cr)	(Rs.Cr)
Interest on GPF balance for KSEB Ltd	217.50	235.67	242.06	248.45	254.84
Interest on GPF balance for SBU-T (11.25% of the total)	24.46	26.50	27.22	27.94	28.66

Interest on working capital

5.53. KSEB Ltd in their petition has claimed interest on working capital for SBU-T as per the provision of Regulation 32 of the Tariff Regulations, 2020 on the normative level for each financial year of the MYT period. Regulation 32(2) allows Interest on normative level of working capital at two percent higher rate than the base rate as on first day of April of the year of ARR filing. Therefore, KSEB Ltd has computed the Interest on Working Capital at a rate of 9.40% (7.40% as on 1-4-2022 + 2%).

The parameters adopted for computation of Interest on Working capital for the control period for SBU-T are given below:

Table : 5.29
KSEB L petition- Parameters for Working Capital

Item	2022-23	2023-24	2024-25	2025-26	2026-27
SBU-T					
Opening GFA (Rs.Cr.)	7773.82	9379.34	11315.95	13095.67	14816.82
O&M Cost (Rs.Cr.)	586.29	648.48	703.32	763.82	814.31

* excluding GFA of SLDC

** Pro-rated @ 1.39% based on actual O&M cost ratio of SLDC wr.t total for 2020-21

5.54. As per the petition, the Interest on Working Capital projected for the control period for SBU-T and SLDC are given in the tables below:

Table :5.30
Interest on Working capital claimed for SBU-T

No	Item	2022-23	2023-24	2024-25	2025-26	2026-27
		Rs. crore	Rs. crore	Rs. Crore	Rs. crore	Rs. crore
1	O&M expenses (as per norms)	48.86	54.04	58.61	63.65	67.86
2	Maintenance Spares (as per norms)	77.74	93.79	113.16	130.96	148.17
3	Receivables (as per norms)	124.07	145.21	166.07	187.00	208.30
4	Less: security deposits					

No	Item	2022-23	2023-24	2024-25	2025-26	2026-27
		Rs. crore	Rs. crore	Rs. Crore	Rs. crore	Rs. crore
5	Total Working Capital	250.66	293.04	337.84	381.61	424.33
6	Interest Rate (as per norms)	9.40%	9.40%	9.40%	9.40%	9.40%
7	Interest on Working Capital	23.56	27.55	31.76	35.87	39.89

Table : 5.31
Interest on Working capital claimed for SLDC

No	Item	2022-23	2023-24	2024-25	2025-26	2026-27
		Rs. crore	Rs. crore	Rs. Crore	Rs. Crore	
1	O&M expenses (as per norms)	0.69	0.76	0.83	0.90	0.96
2	Maintenance Spares (as per norms)	0.21	0.21	1.22	1.22	1.22
3	Receivables (as per norms)	0.99	1.68	1.79	1.88	2.12
5	Total Working Capital	1.89	2.65	3.83	3.99	4.29
6	Interest Rate (as per norms)	9.40%	9.40%	9.40%	9.40%	9.40%
7	Interest on Working Capital	0.18	0.25	0.36	0.38	0.40

Comments of the Stakeholders

5.55. The HT-EHT Association has submitted that, the interest on working capital may be limited to EBLR declared by SBI as on 1st of April every year. The EBLR rate as on 1st April 2022 is 6.65% only. Hence the applicable interest rate for computing IWC is 8.65% only.

Provisions of the Regulations

5.56. The Regulation 32(1)(iii) of the Tariff Regulations 2021 provide as under.

“32. Interest on Working capital.–

(1) *The generation business/ company or transmission business/ licensee or distribution business/ licensee or the State Load Despatch Centre shall be allowed interest on the normative level of working capital for the financial year, computed as under,-*

.....

(ii) *In the case of transmission business/ licensee the working capital shall comprise of,-*

- a) *operation and maintenance expenses for one month; plus*
- b) *cost of maintenance spares at one per cent of the historical cost of plant and equipment; plus*
- c) *receivables equivalent to transmission charges for one month calculated at target availability:*

Provided that the amount, if any, held as security deposits except the security deposits held in the form of bank guarantee from users of the transmission system shall be reduced while computing the working capital requirement.

.....

(2) Interest on normative level of working capital as per this Regulation shall be allowed at a rate equal to two percentage higher than the base rate as on the first day of April of the respective financial year, in respect of which the petition for approval of Aggregate Revenue Requirement and determination of tariff is filed. ”

Regulation 3(12) of the Tariff Regulations, 2021 defines the ‘Base rate’ as follows.

“**Base rate**” means the External Benchmark-Linked Lending Rate (EBLR) declared by the State Bank of India as applicable on first day of April of respective financial year;

Analysis and decision of the Commission

5.57. As per the Regulation 32 of the Tariff Regulations, 2021, the working capital of SBU-T consists of the following.

- (1) O&M expenses for one month (as per norms)
- (2) Cost of maintenance of spares (1% of the historical cost of the plants and equipment).
- (3) Receivables equivalent to transmission charges for one month calculated at target availability.

5.58. Accordingly, the working capital requirement provisionally estimated by the Commission for the purpose of ARR during the MYT period is given below.

Table 5.32
KSERC- Working capital requirement of SBU-T for the MYT period 2022-23 to 2026-27

Particulars	2022-23	2023-24	2024-25	2025-26	2026-27
	(Rs. Cr)	(Rs. Cr)	(Rs. Cr)	(Rs. Cr)	(Rs. Cr)
O&M expenses - approved	584.79	644.81	698.57	755.33	812.02
GFA of SBU-T (excluding land)	5737.52	7059.84	8277.84	9114.40	10108.04
SBU-T ARR	1299.20	1522.00	1694.77	1841.05	1971.64
O&M expenses for one month	48.73	53.73	58.21	62.94	67.67
Cost of maintenance of spares	57.38	70.60	82.78	91.14	101.08
Receivables for one month	108.27	126.83	141.23	153.42	164.30
Total working capital requirement = (3)+(4)	214.37	251.17	282.22	307.51	333.05

5.59. As per the Regulation 32(2), interest rate for working capital is 2% higher than the base rate as on the first day of the April of the respective financial year, in respect of the petition for the approval of the ARR is filed.

Further, as per the Regulation 3(12) of the Tariff Regulations, 2021, **Base rate**” means the External Benchmark-Linked Lending Rate (EBLR) declared by the State Bank of India as applicable on first day of April of respective financial year.

5.60. As per the published information, the EBLR of SBI as on date is given below.

Table 5.33
EBLR rate of SBI

Effective date	External Benchmark based Lending Rate (EBLR)
15.06.2022	7.55+CRP
01.06.2022	7.05+CRP
01.07.2020	6.65 + CRP
01.04.2020	7.05 + CRP
01.01.2020	7.80 + CRP
01.10.2019	8.05 + CRP

5.61. Further, the minimum 'credit risk premium (CRP)' rate of SBI is taken as zero. As above, the EBLR from 01.07.2020 to 31.05.2022 was 6.65% +CRP. However, from 01.06.2022 onwards the EBLR rate is increasing and as on 15.06.2022, the EBLR is 7.55+CRP. Considering the variation in EBLR during the last few months, the Commission has decided to adopt the EBLR as on 01.04.2022 as the basis for IWC for the year 2022-23 and EBLR as on 15.06.2022 as the basis for IWC for the FY 2023-24 to 2026-27.

5.62. Accordingly, the Commission adopt the following interest rates for estimating the IWC of SBU-T during the MYT period from 2022-23 to 2026-27.

Table 5.34
KSERC- Interest on Working Capital approved

Year	Base rate = EBLR as on 1st April	CRP	EBLR	IWC = EBLR+2%
	(%)	(%)	(%)	(%)
2022-23	6.65 + CRP	0%	6.65%	8.65%
2023-24 to 2026-2027	7.55+CRP	0%	7.55%	9.55%

5.63. Based on the above considerations, the interest on working capital provisionally approved for estimating the ARR of SBU-T is given below.

Table 5.35
KSERC- Interest on working capital approved

Particulars	2022-23	2023-24	2024-25	2025-26	2025-27
Total working capital requirement of SBU-T (Table – 5.32 above)	214.37	251.17	282.22	307.51	333.05
Interest rate for WC	8.65%	9.55%	9.55%	9.55%	9.55%
Interest on working capital approved	18.54	23.99	26.95	29.37	31.81

Interest on Master Trust Bonds

5.64. KSEB Ltd submitted that Government of Kerala, as per notifications dated 31.10.2013 and 28.01.2015, ordered to establish a scheme for the creation of a Master Trust to meet the unfunded liability of pension, gratuity and leave surrender as on 31.10.2013, in respect of the personnel transferred from the erstwhile KSEB to KSEB Ltd. The total additional estimates of liability as on 31.10.2013 was estimated by KSEB Ltd appointed Actuaries at Rs.12418.72 Crore. Further, necessary funding arrangements were put in place through issue of 2 series of Bonds. According to KSEB Ltd, the Commission had recognized the unfunded pension liabilities as above and approved recovery of interest on KSEB Ltd share of Bonds as per Regulation 34(iv) of Tariff Regulations, 2021. Accordingly, KSEB Ltd claimed interest on the bond issued by KSEB Ltd (Rs 8144.00 Crore) along with principal repayment in the present control period. The repayment has started from 2017-18 and the interest and principal due for the control period and its SBU wise segregation are furnished below:

Table : 5.36
Interest on Master Trust Bonds (Rs.Cr)

Existing Bonds (Rs. 8144 Cr)	Bond	Repayment	Int	Bal
	8144.00			
2017-18		407.20	814.40	7736.80
2018-19	7736.80	407.20	773.68	7329.60
2019-20	7329.60	407.20	732.96	6922.40
2020-21	6922.40	407.20	692.24	6515.20
2021-22	6515.20	407.20	651.52	6108.00
2022-23	6108.00	407.20	610.80	5700.80
2023-24	5700.80	407.20	570.08	5293.60
2024-25	5293.60	407.20	529.36	4886.40
2025-26	4886.40	407.20	488.64	4479.20
2026-27	4479.20	407.20	447.92	4072.00

Table :5.37
SBU wise Interest on Master Trust Bonds

Particulars	SBU G	SBU T	SBU D	Total
Employee cost ratio 2020-21	5.40	11.25	83.35	100.00
2022-23	32.98	68.69	509.13	610.80
2023-24	30.78	64.11	475.19	570.08
2024-25	28.58	59.53	441.25	529.36
2025-26	26.38	54.95	407.31	488.64
2026-27	24.19	50.37	373.36	447.92

Comments of the Stakeholders

5.65. The HT-EHT Association requested that the principal repayment to Master Trust may be dis-allowed.

Provisions in the Tariff Regulations, 2021

5.66. Regulation 30 and 34 of the Tariff Regulations, 2021 deals with 'interest on Master Trust bonds and related issues. The relevant Regulations is extracted below.

“Regulations 30.

Interest on bonds issued by KSEB Limited to service the terminal liabilities of its employees. –

- (4) The interest on the bonds issued by KSEB Limited to service the terminal liabilities of its employees shall be allowed for recovery through tariffs, at the rates stipulated in the relevant orders issued by the Government of Kerala.*
- (5) The bonds shall be amortized at the same rate as prescribed in the Transfer Scheme notified by the Government of Kerala.*
- (6) KSEB Ltd shall determine the up-to-date actuarial liability, draw up a proposal regarding how to fund the liability/uncovered liability and after its approval by the KSEB Board of Directors, shall submit to the Government for consideration. Once the Government has accorded approval in this regard, KSEB Ltd shall submit a petition in line with the Government approval to the Commission with the complete details indicating the assessed and approved actuarial liability and the proposal to fund this liability. The Commission shall consider this petition at the time of truing up of the accounts. Till such time, the Commission may based on a petition by KSEB Ltd consider approving a provisional amount towards the discharge of this liability.”*

“Regulations 34

Principles for adoption of Transfer Scheme for KSEB under Section 131 of the Act.-

The Commission may, for the purpose of approval of the Aggregate Revenue Requirements and determination of tariff, adopt the changes in the balance sheet, due to the re-organization of the erstwhile Kerala State Electricity Board, as per the provisions of the Transfer Scheme published by the Kerala State Government under Section 131 of the Act, subject to the following principles:-

- (vi) Increase in the value of assets consequent to the revaluation of assets shall not qualify for computation of depreciation or for return on net fixed assets;*
- (vii) The equity of the Government of Kerala as per the above Transfer Scheme published vide Government Order No. GO(P) 46/2013/PD dated 31.10.2013 and GO(P) No. 3/2015/PD dated 28.01.2015 under Section 131 of the Act will be considered for computation of return on equity;*
- (viii) The reduction of the contribution received from the consumers, grants and such other subventions for creation of assets, made as part of Transfer Scheme, shall not be considered while computing the depreciation;*

(ix) The amounts required for the payment of interest on the bonds issued to the Master Trust and for the principal repayment of such bonds shall be reckoned for computation of Aggregate Revenue Requirement and for truing up of accounts;

(x) The Commission will subject to the petition by KSEB Ltd may take appropriate decision on the other issues relating to the Transfer Scheme and its implementation, on case to case basis.”

Analysis and decision of the Commission

5.67. The Commission has examined the submissions of KSEB Ltd regarding interest on bonds issued to Master Trust. As per the details submitted by KSEB Ltd, the Master Trust is operational only from the FY 2017-18.

5.68. The Commission also noted that as per the Kerala Electricity Second Transfer (Amendment) Scheme (Re-vesting) 2015 dated 28.01.2015, the actuarial liability as on 31-10-2013 was assessed at Rs.12418.72 crore. The paragraphs 6(8) and 6(9) of the Kerala Electricity Second Transfer (Amendment) Scheme (Re-vesting) 2015, provides the following regarding the funding of pension and terminal liabilities of personnel transferred to KSEB Ltd. The relevant paragraphs is extracted below.

*“6(8) The State Government shall make appropriate arrangements in respect of funding of the terminal liabilities to the extent they are unfunded on the date of transfer of the personnel from the erstwhile Board or KSEB, as mentioned in subclause (9) of clause 6 of this Scheme. **As per the actuarial valuation carried out by the registered valuer, the net present value of unfunded liability is approximately 12419.00 crore as on the date of re-vesting i.e. 31st October 2013.** Till such time arrangements are made, the transferee and State Government shall be jointly and severally responsible to duly make such arrangements to the existing pensioners as well as the personnel who retire after the date of transfer but before the arrangement are put in place. The State Government, Kerala State Electricity Board Limited, and Employee Unions have entered into a tripartite agreement on 1st August 2014, in consideration of the promises and mutual conditions set forth therein. The Tripartite Agreement which forms part of this Scheme is appended as Schedule C.”*

“ 6(9) The State Government will fund Rs 5861 crore (Rupees Five thousand eight hundred and sixty one crores) over a period of next 10 years from the date of transfer to the KSEB Ltd on annual basis for meeting the unfunded liabilities by way of retention of electricity duty.

(a) Kerala State Electricity Board Ltd will issue two series of bonds to a Master Trust:

- 20 year bond with a coupon rate of 10% p.a. for Rs.8144 Cr(Rupees eight thousand one hundred and forty four crores)*
- 10 year bond with a coupon rate of 9% p.a. for Rs. 3751 Cr(Rupees three thousand seven hundred and fifty one crores).*

*(b) Bonds will be issued to the trust shall meet the liability of pension etc. in future from the **interest and principal repayment from KSEB Ltd against the bonds issued in favour of the trust.** With these arrangements the net*

- present value of the fund towards pension etc. shall be Rs 12419.00 crores (approx) as on 31st October 2013 with matching investments in securities issued by the KSEB Ltd for Rs 11895.00 crore on net present value basis.
- (c) Another, Rs 524 crore will be funded by the State Government through budgetary provision over a period of 10 years in equal installments as per G.O (Ms) No. 43/2011/PD dated 3rd November 2011. Accordingly an amount of Rs 52.4 crore is being provided in the budget from the FY 2012-13 onwards.
- (d) State Government will permit the electricity duty collected by KSEB for the period from 01.04.2008 to 31.03.2012 to be retained by the KSEB Ltd as its contribution for funding the terminal liability.
- (e) In addition to the interest on bonds and repayment of principal, KSEB Ltd will be paying the annual pension contribution based on actuarial valuation to the master trust in respect of the personnel transferred to KSEB Ltd.

5.69. Based on the above KSEB Ltd had issued two sets of bonds to the Master Trust on 01.04.2017.

- (f) 20 year bond with a coupon rate of 10% p.a. for Rs.8144 Cr (Rupees eight thousand one hundred and forty four crores)
- (g) 10 year bond with a coupon rate of 9% p.a. for Rs. 3751 Cr (Rupees three thousand seven hundred and fifty one crores).

Out of the above, the interest and repayment of the 10 year bond for the amount of Rs 3751.00 crore is being borne by the State Government as envisaged in the Scheme.

5.70. However, as per the re-vesting notifications, the interest and repayment of the bond for Rs 8144.00 crore to the pension has to be borne by KSEB Ltd. The year wise details of the principal and repayment of the 20-year bond of KSEB Ltd is given below.

Table-5.38

Principal and interest to be paid by KSEB Ltd to the Trust as per the bond certificate issued for Rs 8144.00 crore

Year	Principal repayment (Rs. Cr)	Interest (Rs. Cr)	Total (Rs. Cr)
1	407.20	814.40	1221.60
2	407.20	773.68	1180.88
3	407.20	732.96	1140.16
4	407.20	692.24	1099.44
5	407.20	651.52	1058.72
6	407.20	610.80	1018.00
7	407.20	570.08	977.28
8	407.20	529.36	936.56
9	407.20	488.64	895.84
10	407.20	447.92	855.12
11	407.20	407.20	814.40
12	407.20	366.48	773.68
13	407.20	325.76	732.96
14	407.20	285.04	692.24
15	407.20	244.32	651.52
16	407.20	203.60	610.80
17	407.20	162.88	570.08
18	407.20	122.16	529.36
19	407.20	81.44	488.64
20	407.20	40.72	447.92

5.71. The financial year 2022-23 is the 6th year of operation of the Master Trust. Hence the principal repayment of the KSEB Ltd bond of Rs 8144.00 crore with the interest rate @10% is given in the Table below.

Table 5.39
Principal repayment and interest on KSEB Ltd bond to the Master trust during MYT period

Year	Principal repayment	Interest	Total
	(Rs. Cr)	(Rs. Cr)	(Rs.Cr)
2022-23	407.20	610.80	1018.00
2023-24	407.20	570.08	977.28
2024-25	407.20	529.36	936.56
2025-26	407.20	488.64	895.84
2026-27	407.20	447.92	855.12

5.72. As extracted under paragraph 5.66 above, as per the Regulations 30 and 34 of the Tariff Regulations, 2021, KSEB Ltd is eligible to claim 'interest on the Master Trust bond and its repayment' through the ARR of the respective years considered. Hence, as per the provisions of the Tariff Regulations, 2021 the Commission hereby approves the 'repayment of the principal and interest on the KSEB Ltd bond of Rs 8144.00 crore issued to the Master Trust created for discharging the pension liabilities.

5.73. KSEB Ltd apportioned the total 'repayment of principal and interest' in the ratio of employee cost. The Commission also decided to apportion the same in the same ratio used by KSEB Ltd in the ARR petition. Accordingly, the SBU wise details of the 'repayment of principal and interest to the Master Trust bond' approved for the MYT period from 2022-23 to 2026-27 is given below.

Table 5.40
SBU wise details of the ' interest on Master trust bond' approved during the MYT period 2022-23 to 2026-27

SBUs	Emp Ratio	2022-23	2023-24	2024-25	2025-26	2026-27
	(%)	(Rs.Cr)	(Rs.Cr)	(Rs.Cr)	(Rs.Cr)	(Rs.Cr)
SBU-G	5.40%	32.98	30.78	28.59	26.39	24.19
SBU-T	11.25%	68.72	64.13	59.55	54.97	50.39
SBU-D	83.35%	509.10	475.16	441.22	407.28	373.34
Total	100.00%	610.80	570.08	529.36	488.64	447.92

5.74. The 'repayment of principal' also apportioned among the SBUs in the ratio of employee expenses' as adopted by KSEB Ltd. The details are given below.

Table 5.41
SBU wise details of the ' repayment of principal ' approved during the MYT period 2022-23 to 2026-27

SBUs	Emp Ratio	2022-23	2023-24	2024-25	2025-26	2026-27
	(%)	(Rs.Cr)	(Rs.Cr)	(Rs.Cr)	(Rs.Cr)	(Rs.Cr)
SBU-G	5.40%	21.99	21.99	21.99	21.99	21.99

SBU	Emp Ratio	2022-23	2023-24	2024-25	2025-26	2026-27
	(%)	(Rs.Cr)	(Rs.Cr)	(Rs.Cr)	(Rs.Cr)	(Rs.Cr)
SBU-T	11.25%	45.81	45.81	45.81	45.81	45.81
SBU-D	83.35%	339.40	339.40	339.40	339.40	339.40
Total	100.00%	407.20	407.20	407.20	407.20	407.20

5.75. **The Commission allow the SBU wise details of the ‘repayment of principal and interest on master trust bond’ as above to as expenses as part of ARR for the MYT period from 2022-23 to 2026-27, as per the provisions of Tariff Regulations, 2021.**

5.76. However, the Commission has serious observation regarding the laxity from the part of KSEB Ltd for not operationalizing the Master Trust. At present KSEB Ltd has been operating the Trust Accounts like a “Current Account” by remitting money into the account on requirement basis for dispersal and fulfilment of retirement benefits. Hence, the payments into the Trust account by KSEB Ltd is not as per the original scheme envisaged but only as per the fund requirements to disburse the pension. This is highly objectionable and contrary to the very intent of setting up of the Master Trust. **The Commission directs KSEB Ltd to take urgent corrective action to overcome this serious deviation from the Scheme. The Commission warns that, if KSEB Ltd does not urgently take corrective action, the very payment of the pension will be jeopardized and the retirement financial security of the retirees of KSEB Ltd shall be compromised.**

The Commission further direct that, if KSEB Ltd is fails to transfer the ‘repayment of principal and interest on bond to the trust’ as approved above, the Commission shall not allow to True up the same at the time of Truing Up of Accounts of the relevant years concerned. With this observation, the Commission hereby approve the ‘repayment of principal and interest on Master Trust bond’ as per the Table 5.40 and 5.41 above.

Summary of Interest and financing Charges

5.77. The summary of interest and finance charges estimated by KSEB Ltd for SBU-T for the control period is given below:

Table : 5.42

Summary of Interest & Finance Charges of SBU-T claimed by KSEB Ltd and provisionally approved by Commission

No	Item	KSEB Ltd					KSERC provisional				
		2022-23	2023-24	2024-25	2025-26	2026-27	2022-23	2023-24	2024-25	2025-26	2026-27
		(Rs. Cr)	(Rs. Cr)	(Rs. Cr)	(Rs. Cr)	(Rs. Cr)	(Rs. Cr)	(Rs. Cr)	(Rs. Cr)	(Rs. Cr)	(Rs. Cr)
1	Interest on capital liabilities	334.19	456.86	577.86	691.86	813.65	213.61	316.61	390.13	448.35	492.17

No	Item	KSEB Ltd					KSERC provisional				
		2022-23	2023-24	2024-25	2025-26	2026-27	2022-23	2023-24	2024-25	2025-26	2026-27
		(Rs. Cr)	(Rs. Cr)	(Rs. Cr)	(Rs. Cr)	(Rs. Cr)	(Rs. Cr)	(Rs. Cr)	(Rs. Cr)	(Rs. Cr)	(Rs. Cr)
2	Interest on GPF	24.46	26.5	27.22	27.94	28.66	24.46	26.5	27.22	27.94	28.66
3	Interest on Bonds issued to Master Trust	68.69	64.11	59.53	54.95	50.37	68.72	64.13	59.55	54.97	50.39
4	Interest on working capital	23.74	27.8	32.12	36.25	40.29	18.54	23.99	26.95	29.37	31.81
5	Total Interest & Finance Charges	451.08	575.28	696.73	811	932.97	325.33	431.23	503.85	560.62	603.03

5.78. The summary of repayment of bond claimed by KSEB Ltd and approved by the Commission as per the provisions of Tariff Regulations, 2021 is given in the Table below.

Table : 5.43
Year wise details of the repayment of bonds- claimed and approved for SBU-T

Particulars	KSEB Petition					KSERC provisional approval				
	2022-23	2023-24	2024-25	2025-26	2026-27	2022-23	2023-24	2024-25	2025-26	2026-27
	(Rs. Cr)	(Rs. Cr)	(Rs. Cr)	(Rs. Cr)	(Rs. Cr)	(Rs. Cr)	(Rs. Cr)	(Rs. Cr)	(Rs. Cr)	(Rs. Cr)
Repayment of master trust bond (11.25% of Rs 407.20 Cr)	45.79	45.79	45.79	45.79	45.79	45.81	45.81	45.81	45.81	45.81

Unfunded actuarial liability and additional fund to the Master Trust

5.79. KSEB Ltd submitted that the actuarial liability from 31.10.2013 to 31.03.2021 has not been funded so far. As per the latest actuarial valuation report as on 31.03.2021, the total pension liabilities of the personnel transferred to the KSEB Ltd as on 31.03.2021 is estimated at Rs 23121.47 crore, as detailed below.

Table 5.44
Unfunded pension liabilities as on 31.03.2021

Particulars of unfunded liability of pensioners and personnel transferred to KSEB Ltd as on 31.10.2013	Unfunded liability as on 31.03.2021 (Rs. Cr)
Pension liability	19640.50
Gratuity liability	2446.45
Leave liability	1034.52
Total	23121.47
Funded Liability	12419.00
Unfunded Liability	10702.47

5.80. KSEB Ltd submitted that, out of the total unfunded liability of RS 23121.47 crore, funding arrangement was provided for Rs 12419.00 crore only. KSEB Ltd further submitted that, this issue was duly addressed by the Hon'ble Commission in Regulation 30 (3) Tariff Regulations, 2021. KSEB Ltd also submitted that the Regulation 30 (3) of the Tariff Regulations, 2021, mandates

KSEB Ltd to propose provisional amount in the MYT petition for the control period from 2022-23 to 2026-27 for approval. KSEB Ltd is filing the petition duly adhering the Regulation. In line with the stipulation in Tariff Regulations, till approval of funding arrangement of unfunded actuarial liability, KSEB Ltd is seeking provisional approval for discharge of unfunded liability.

5.81. KSEB Ltd submitted that the additional actuarial liability stems out of three factors viz. Current service cost, Actuarial gain / loss and Interest cost. Current service cost denotes the liability on account of service put in by the serving employee, who is a member of the Trust, during the valuation period. Thus, Current service cost represents the actual liability arising on account of the service put in by the employee for the added service. As per actuarial valuation for 2017-18, 2018-19 and 2019-20, Current Service Cost has been valued at Rs.317.10 Cr, Rs. 346.19 Cr and Rs.361.80 Cr respectively.

5.82. KSEB Ltd sought provisional approval of Rs.400 Cr annually in the control period to ensure prompt discharge of pension and other terminal liabilities. SBU wise break up is furnished below:

Table 5.45
Additional Contribution to Mater Trust

Particulars	SBU G	SBU T	SBU D	Total
	(Rs. Cr)	(Rs. Cr)	(Rs. Cr)	(Rs. Cr)
Employee cost ratio 2020-21	5.40%	11.25%	83.35%	100.00%
2022-23	21.60	44.98	333.42	400.00
2023-24	21.60	44.98	333.42	400.00
2024-25	21.60	44.98	333.42	400.00
2025-26	21.60	44.98	333.42	400.00
2026-27	21.60	44.98	333.42	400.00

Comments of the stake holders

5.83. HT&EHT Association request before the Commission to dis-allow the KSEB Ltd's provisional claim towards unfunded actuarial liability and also request to advise the State Government to take care of this claim in order to avoid undue burden to the consumers.

Provisions of the Regulations

5.84. Regulation 30 (3) of the Tariff Regulations, 2021 provides for additional fund to the Master Trust based on the up-to-date actuarial liability. The relevant Regulation is extracted below.

“Regulation 30(3)

KSEBL shall determine the up-to-date actuarial liability, draw up a proposal regarding how to fund the liability/uncovered liability and after its approval by the KSEB Board of Directors, shall submit to the Government for consideration. Once the Government

has accorded approval in this regard, KSEB Ltd shall submit a petition in line with the Government approval to the Commission with the complete details indicating the assessed and approved actuarial liability and the proposal to fund this liability. The Commission shall consider this petition at the time of truing up of the accounts. Till such time, the Commission may, based on a petition by KSEB Ltd, consider approving a provisional amount towards the discharge of this liability.”

Analysis and Decision of the Commission

- 5.85. The Commission has examined the proposal of KSEB Ltd in detail. In addition to the “repayment of principal and interest on master trust bond” of KSEB Bond Rs.8144.00 crore, KSEB Ltd has also claimed Rs.400 crore as additional fund annually to the Master Trust for meeting the unfunded portion of the actuarial liability as on 31.03.2021. As per the details submitted by KSEB Ltd, the total unfunded actuarial liability as per the report of the actuary as on 31.03.2021 is Rs.23121.47 crore. Out of it, Rs.12419.00 crore is only funded till date by issuing two series of bonds as envisaged in Kerala Electricity Second Transfer (Amendment) Scheme (Revesting) 2015 dated 28.01.2015.
- 5.86. The Commission further noted that, KSEB Ltd is yet to take proper action plan to meet the unfunded liability based on the actuarial valuation of the pension and other liabilities of the employees and pensioners of erstwhile KSEB to the KSEB Ltd as on 31.10.2013. The Commission, duly considering the huge unfunded liability, has provided lumpsum provision of Rs. 300 crore to the trust for meeting the unfunded liability in the earlier orders on Truing up from the year 2018-19 to 2020-21.
- 5.87. The Commission has also noted that, the Regulation 30 (3) of the Tariff Regulations, 2021, clearly provides for determining the up to date actuarial liability and to draw a suitable proposal regarding how to fund the liability /uncovered liability with the approval of the KSEB management and with the approval of the State Government. The Tariff Regulation also stipulates that KSEB Ltd shall file a petition in line with the Government approval to meet the unfunded terminal liabilities, with complete details to fund such liabilities. The Commission further stipulates in the Tariff Regulations, 2021, that the Commission shall consider this petition at the time of Truing up of accounts of the relevant years. It is also stipulated in the Tariff Regulations, 2021, that till such time, the Commission may, based on a petition by KSEB Ltd, consider approving a provisional amount towards the discharge of this unfunded liability.
- 5.88. However, KSEB Ltd has not filed such petitions for funding the unfunded liabilities based on the actuarial report before the Commission with the approval of the State Government. Instead, KSEB Ltd has claimed a provisional amount of Rs.400 crore per annum during the MYT period from 2022-23 to 2026-27.
- 5.89. The Commission has serious concern on the huge unfunded liability arising

year after year based on the actuarial report. However, KSEB Ltd has not made serious attempt to fund the unfunded liabilities. As on date, the total unfunded liability of KSEB Ltd as on 31.03.2021 is Rs.10702.47 crore. This indicates a serious emerging financial crisis in discharging the pension and other retirement liabilities. The unfunded liability as on 31.03.2021 is about 46% of the total pension liability as on 31.03.2021. The Commission observed that, this is not at all an acceptable situation and urgent action is required to address the emerging catastrophe. Considering these aspects in detail, the Commission in the previous Orders on Truing up for the years 2018-19, 2019-20 and 2020-21 had provided Rs. 300 crore to meet this unfunded liability.

5.90. ***The Commission after appraising the entire aspects in detail, has decided to provide an amount of Rs.400 crore provisionally as additional fund to the master trust for meeting the unfunded actuarial liability as on 31.03.2021. KSEB Ltd shall transfer this additional fund along with the additional fund approved in the earlier Orders on Truing up for the years 2017-18, 2018-19, 2019-20 and 2020-21 as specified in the relevant years of Truing up to the Trust as specified in that Order. If KSEB Ltd fails to transfer this amount, the Commission shall not approve the additional fund to master trust in future at the time of Truing up of relevant years concerned. With the above directions, the Commission approves Rs.400 crore towards additional fund to the master trust.***

5.91. Accordingly, the year wise details additional fund to the master trust of each SBUs of KSEB Ltd is given in the Table below.

Table 5.46
KSERC approval- Additional fund to the Master Trust- provisionally approved for the MYT period 2022-23 to 2026-27

Particulars	SBU G	SBU T	SBU D	Total
	(Rs. Cr)	(Rs. Cr)	(Rs. Cr)	(Rs. Cr)
Employee cost ratio 2020-21	5.40%	11.25%	83.35%	100.00%
2022-23	21.60	44.98	333.42	400.00
2023-24	21.60	44.98	333.42	400.00
2024-25	21.60	44.98	333.42	400.00
2025-26	21.60	44.98	333.42	400.00
2026-27	21.60	44.98	333.42	400.00

Return on Equity

5.92. In the petition, KSEB Ltd has stated that as per Regulation 34(b), the equity of Government of Kerala as per the Second Transfer Scheme published under section 131 of the Act is to be considered, for the computation of return on equity. The Government equity in KSEB as per the second transfer scheme is Rs 3499 crore. The Regulation 28 allows a RoE of 14% per annum. Accordingly, the RoE of KSEB Ltd is proposed as Rs 489.86 crore (14% on the

equity of Rs 3499 Crore). The SBU wise share of equity as per the annual accounts is given below. The RoE of SBU-G is apportioned by KSEB Ltd in the petition based on the above criteria.

Table : 5.47
SBU Wise Return on Equity proposed

SBU	Equity Share Rs. crore	% of Equity	RoE Rs. Crore
SBU-G	831.27	23.76	116.38
SBU-T	857.05	24.49	119.99
SBU-D	1810.73	51.75	253.50

5.93. Thus, the ROE for SBU-T claimed is Rs. 119.99 crore each year during the Control Period.

Comments of the Stakeholders

5.94. The HT&EHT Association submitted that, the equity of KSEB Ltd is not Rs 3499.00 crore. The consultant appointed by the Commission recommended a lower value of Rs 283.91 crore or the most Rs 1553.00 crore as equity of KSEB Ltd. Hence the Association requested to approve Rs.217.42 crore as RoE as against the total RoE of Rs 489.87 crore claimed by KSEB Ltd. The share of SBU-T is Rs 53.25 crore only as against Rs.119.99 crore claimed by KSEB Ltd.

Provisions in the Regulation

5.95. The Regulation 28 of the Tariff Regulations, 2021, specifies the Return on Equity and related aspects. The relevant Regulations is extracted below.

“28. Return on Paid up Equity or Net Fixed Assets. –

(3) *Return on equity shall be computed in rupee terms, on the paid up equity share capital and shall be allowed at the rate of fourteen percent (14%) per annum:*

Provided that in the case of increase in the equity share capital of the generating business/ company, transmission business/ licensee, distribution business/ licensee and State Load Despatch Centre, the additional amount of equity share capital infused into the generating business/ company, transmission business/ licensee, distribution business/ licensee and State Load Despatch Centre, and approved by the Commission for the assets put to its intended use shall be provided with ROE at 14% per annum on pro rata basis from the date of issuance of the equity shares:

Provided further that the generating business/ company, transmission business/ licensee, distribution business/ licensee and State Load Despatch Centre shall provide the complete details of the source of funding for such equity share capital.

(4) *If there is no equity share capital invested in the business or the equity invested in the regulated business of the generating business/ company*

or transmission business/ licensee or distribution business/ licensee or State Load Despatch Centre or such equity share capital is not clearly identifiable, return at the rate of 5.50 percent shall be allowed on the net fixed assets at the beginning of the financial year for such regulated business:

Provided that the net fixed assets shall be exclusive of the assets created out of consumer contribution, deposit works, capital subsidy or grants..”

Further, the Regulation 34 provides as follows:

“34. Principles for adoption of Transfer Scheme for KSEB under Section 131 of the Act.-

The Commission may, for the purpose of approval of the Aggregate Revenue Requirements and determination of tariff, adopt the changes in the balance sheet, due to the re-organization of the erstwhile Kerala State Electricity Board, as per the provisions of the Transfer Scheme published by the Kerala State Government under Section 131 of the Act, subject to the following principles:-

- (i) Increase in the value of assets consequent to the revaluation of assets shall not qualify for computation of depreciation or for return on net fixed assets;*
- (ii) The equity of the Government of Kerala as per the above Transfer Scheme published vide Government Order No. GO(P) 46/2013/PD dated 31.10.2013 and GO(P) No. 3/2015/PD dated 28.01.2015 under Section 131 of the Act will be considered for computation of return on equity;*
- (iii) The reduction of the contribution received from the consumers, grants and such other subventions for creation of assets, made as part of Transfer Scheme, shall not be considered while computing the depreciation;*
- (iv) The amounts required for the payment of interest on the bonds issued to the Master Trust and for the principal repayment of such bonds shall be reckoned for computation of Aggregate Revenue Requirement and for truing up of accounts;*
- (v) The Commission will subject to the petition by KSEB Ltd may take appropriate decision on the other issues relating to the Transfer Scheme and its implementation, on case to case basis.”*

Analysis and decision of the Commission

5.96. The Commission has carefully considered the issue of equity especially with regard to the amount that is required to be considered for its calculations. KSEB Ltd in their submission has claimed RoE at the rate of 14% per annum for an equity amount of Rs.3499.00 crore. KSEB Ltd has submitted that Regulation 34(b) provides that equity of the Government of Kerala as per the transfer scheme published under section 131 of the Act will be considered for

computation of return on equity. As per clause 5 of the second transfer scheme “Kerala Electricity Second Transfer Scheme (Revesting) 2013” notified by Government of Kerala vide G.O.(P) No.46/2013/PD dated 13-10-2013, asset and liabilities of the erstwhile KSEB, which was vested into Government of Kerala, has been re-vested into the Company namely Kerala State Electricity Board Limited and opening balance sheet has been notified as part II of Schedule A of the said G.O, with and Equity amount of Rs.3499.00 crore.

The HT & EHT Association has drawn attention of the Commission to the Order of the Hon’ble APTEL wherein, the Commission was directed to determine the recommendation of the consultant. In this context, the Commission notes that the Government of Kerala subsequent to the G.O dated 13-10-2013 had issued G.O. (P) NO.3/2015/PD dated 28-1-2015 and G.O. (Ms) No.17/2015/PD dated 13-5-2015. The G.O. dated 28-1-2015 pertains to the amendments to Kerala Electricity Transfer Scheme (Revesting) 2013 and G.O dated 13-5-2015 pertains to the netting off of dues between Government and KSEB as on 13-10-2013 ie., the date of re-vesting. In the G.O dated 13-5-2013, it is stated that :

“.....Taking into consideration that netting off of dues between KSEB Ltd and Government forms an integral part of re-structuring of KSEB along with cleaning up of KSEB Limited’s Balance sheet, a part of the duty collected ie., Rs.1946 crore stands converted into the increased portion of equity (3499-1553) so as to ensure that the increase equity is a result of cash infusion to KSEB Ltd by Government thereby enabling the Government to participate in the increased return on equity in future years...”.

The Commission also notes that in compliance to the above GO, KSEB Ltd has issued 349,92,00,000 equity shares of Rs.10 each in favour of Government Kerala for Rs.3499 crore as per the provisions of the Companies Act, 2013, deals with the issue of equity shares and its allotments. In this regard the Commission is satisfied that the allotment of equity shares for Rs.3499.20 crore in compliance to the GO conforms to the requirement for allotment of equity shares as per the provisions of the Companies Act, 2013. It was on this basis that, the Commission while considering the trueing up petitions of KSEB Ltd for 2015-16, 2016-17, 2017-18, 2018-19, 2019-20 and 2020-21 had recognized the equity amount as Rs.3499 crore and allowed RoE at the rate of 14% per annum.

Considering the above facts, the Commission is of the considered view that the claim of KSEB Ltd for an RoE @ 14% per annum for an amount of Rs.3499 crore is established and justified. **Therefore, the Commission allows Rs.119.99 crore as the RoE in the ARR of SBU-T.**

As per the provisions of the Regulation 34 of the Tariff Regulations,2021, the Commission is allowing the amount of equity as per the provisions of the Transfer Scheme published vide Government Order No. GO(P) 46/2013/PD dated 31.10.2013 andGO(P) No. 3/2015/PD dated 28.01.2015 under *Section 131* of the Act-2003.

The Regulations were finalised by the Commission after following the due process such as previous publication, public hearing etc., Once the Regulation has been finalised and notified after following the due procedure, it is binding on all the parties concerned and there is no scope for any deviation what so ever. Therefore, the arguments of the Association cannot be accepted. ***Accordingly, the share of RoE for SBU-T amounting to Rs.119.99 crore at the rate of 14% is allowed yearly during the MYT period from 2022-23 to 2026-27.***

Other Items

Edamon -Kochi line Compensation:

5.97. KSEB Ltd has submitted that the Government of Kerala, vide G.O.(Ms) No.29/ 2015/ PD dated 30/07/2015 of Power (C) Department, approved a revised Special Compensation Package, meant exclusively for the construction of 400 kV transmission line in the Edmon – Kochi sector, as a special case. The Commission, as per order dated 09.08.2019 in OP 58/2018, has provisionally approved 50% of the additional financial liability due to the special compensation package of the 400 KV Edamon - Kochi transmission line as KSEB Ltd's share as per the orders of the Government. KSEB Ltd share of compensation actually paid was allowed to be recovered in 12 years with interest as part of truing up. An amount of Rs. 18 Crore during the year 2019-20 and an amount of Rs. 22 Crore during the year 2020-21 has been transferred to the District Collector, Ernakulam. A summary of the amortization amount and interest for the intangible assets for the FY 2022-23 to FY 2026-27 is submitted below:

Table 5.48

KSEB petition- Estimate of the amortization and interest of the Edamon-Kochi compensation package

2022-23	2023-24	2024-25	2025-26	2026-27
(Rs. Cr)	(Rs. Cr)	(Rs. Cr)	(Rs. Cr)	(Rs. Cr)
10.48	14.94	19.02	19.23	18.18

Analysis and Decision of the Commission

5.98. The Commission vide Order dated 09.08.2019 in Petition OP No. 58/2018 had approved the special compensation package of Edamon-Kochi Transmission system. The relevant part of the Order is extracted below.

“18. The Commission after examining the petition filed by KSEB Ltd as per the provisions of the Electricity Act, 2003, KSERC (Terms and Conditions for Determination of Tariff) Regulations, 2018, Ind As 38 and other relevant facts and documents, hereby orders the following.

(1) The Commission provisionally approves 50% of the additional financial liability due to the ‘special compensation package’ of the 400 kV Edamon- Kochi Transmission line, as KSEB Ltd’s share as per the orders of the State Government.

(2) The share of KSEB Ltd under additional special compensation package shall be treated as the ‘intangible assets’ of KSEB Ltd of the financial year(s) in which KSEB Ltd actually make the payment to the farmers and landowners, and it shall be allowed to be amortized over a period of 12 years from the year(s) from which KSEB Ltd actually make the payment.

(3) KSEB Ltd shall, along with the petitions on truing up of the relevant year(s) in which the payment towards the additional special compensation is made, submit the details of the additional special compensation paid to farmers and landowners in connection with the construction of the 400 kV Edamon-Kochi line.

(4) The Commission shall allow recovery of the yearly amortization amount along with interest, as expense of KSEB Ltd and to be recovered through tariff.

(5) The Commission shall not allow O&M expenses, return on equity or any such expenses over and above the ‘amortisation amount with interest’ to the intangible assets so created towards the KSEB Ltd share of additional special compensation package as per the orders of the State Government. Further, since the intangible asset so created is being amortised over a period of 12 years no separate provision for depreciation shall be provided.

The petition is disposed of accordingly.”

- 5.99. The Commission, after duly considering its order dated 09.08.2019 in Petition OP No. 58/2018, and also the proposal of KSEB Ltd, hereby provisionally approves the ‘anticipated expenses as of special compensation to be paid during the MYT period as part of compensation package of Edamon-Kochi transmission line. The Commission hereby clarify that, at the time of Truing up, the amortisation and interest of the actual amount disbursed only shall be Trued up.**

Pugalur-Thrissur HVDC Line Compensation:

- 5.100. KSEB Ltd submitted that, Government of Kerala vide G.O.(MS)No.7/2019/PD dated 4-5-2019 and G.O.(MS) No.15/2019/Power dated 19-7-2019 have issued special compensation package for construction of Thrissur to Pugalur +-320 KV HVDC transmission line from Thrissur to Pugalur forming part of the Raigarh-Pugalur-Thrissur HVDC scheme and for the Line in Line out construction of Thrissur to Kochi. Government vide order dated 18-5-2021 has ordered that the financial liability due to special compensation package shall be shared equally between Government of Kerala and KSEB Ltd.

The approximate estimate for the compensation to be paid in accordance with the orders is worked out as Rs.45 Crore and KSEB Ltd share is estimated as Rs.25.11 Cr assuming 50:50 sharing of expense by KSEB Ltd/GoK. An amount of Rs. 6,02,638/- has been already paid as the share of KSEB Ltd and Government of Kerala towards the compensation. A summary of the amortization amount and interest for the intangible assets for the FY 2022-23 to FY 2026-27 is as submitted below.

Table 5.49
KSEB petition -Estimate of the amortization and interest of the Pugalur-Thrissur Line Compensation

2022-23	2023-24	2024-25	2025-26	2026-27
(Rs. Cr)	(Rs. Cr)	(Rs. Cr)	(Rs. Cr)	(Rs. Cr)
4.37	3.95	3.75	3.54	3.33

Analysis and Decision of the Commission

5.101. The Commission examined the proposal in detail. Though the State Government issued the Special Compensation Package in the FY 2019-20, KSEB Ltd is yet to file necessary petition before the Commission with all relevant details separately. For any amount incurred to be passed on to the consumers, prior approval of the Commission is mandatory. **Hence the Commission hereby directs that, KSEB Ltd shall file a proper petition for the approval of the special compensation package of Pugalur-Thrissur line. Till KSEB Ltd gets approval of the package, the Commission provisionally disallow the claim.**

Aggregate Revenue Requirement

5.102. As per the petition, the total Aggregate Revenue Requirement of SBU-T and SLDC proposed for the control period 2022-23 to 2026-27 is given below:

Table 5.50
KSEB petition- summary of ARR of SBU-T including SLDC

Particulars	2022-23	2023-24	2024-25	2025-26	2026-27
	(Rs. Cr)	(Rs. Cr)	(Rs. Cr)	(Rs. Cr)	(Rs. Cr)
Interest and Finance Charges	451.08	575.28	696.73	811	932.97
Return on Equity	119.99	119.99	119.99	119.99	119.99
Depreciation	289.35	357.47	431	500.74	583.68
O&M expenses	594.56	655.77	718.66	789.24	865.57
Repayment of existing master trust liability	45.79	45.79	45.79	45.79	45.79
Additional contribution to Master Trust	44.98	44.98	44.98	44.98	44.98
Edamon-Kochi line compensation	10.48	14.94	19.02	19.23	18.18
Pugalur-Thrissur line compensation	4.37	3.95	3.75	3.54	3.33
Aggregate Revenue Requirement	1560.67	1818.16	2079.91	2334.51	2614.49

5.103. As against the proposal of KSEB Ltd, the summary of the ARR of SBU-T of KSEB Ltd provisionally approved for the MYT period from 2022-23 to 2026-27 is given below.

Table: 5.51
KSERC approval- ARR of SBU-T including SLDC provisionally approved

Particulars	2022-23	2023-24	2024-25	2025-26	2026-27
	(Rs. Cr)	(Rs. Cr)	(Rs. Cr)	(Rs. Cr)	(Rs. Cr)
Interest and Finance Charges	325.33	431.23	503.85	560.62	603.03
Return on Equity	119.99	119.99	119.99	119.99	119.99
Depreciation	231.40	286.45	331.52	366.95	402.53
O&M expenses	584.79	644.81	698.57	755.33	812.02
Repayment of existing master trust liability	45.79	45.79	45.79	45.79	45.79
Additional contribution to Master Trust	44.98	44.98	44.98	44.98	44.98
Edamon-Kochi line compensation	10.48	14.94	19.02	19.23	18.18
Pugalur-Thrissur line compensation					
Aggregate Revenue Requirement	1362.76	1588.20	1763.72	1912.89	2046.52

Non-Tariff Income

5.104. The non-tariff income of SBU-T includes income from sale of scrap, interest on advances made to contractors, interest on staff loans and advances, Rent from buildings etc. The projection of Non-Tariff income of SBU-T for the control period estimated by KSEB Ltd is given below.

Table : 5.52
Non- tariff of SBU-T including SLDC

No	Particulars	2022-23	2023-24	2024-25	2025-26	2026-27
		Rs.crore	Rs.crore	Rs.crore	Rs.crore	Rs.crore
1	Interest on staff loans and advances	0.01	0.01	0.01	0.01	0.01
2	Income from rent of land or buildings	0.66	0.70	0.73	0.77	0.80
3	Income from sale of scrap	25.52	26.80	28.14	29.54	31.02
4	Rental from staff quarters	0.07	0.07	0.08	0.08	0.08
5	Interest on investments, fixed and call deposits and bank balances	2.57	2.70	2.84	2.98	3.13
6	Interest on advances to suppliers/contractors	0.01	0.01	0.01	0.01	0.01
7	Miscellaneous receipts	23.41	24.58	25.80	27.09	28.46
8	Total	52.25	54.86	57.60	60.48	63.51

5.105. The Commission examined the non-tariff income claimed by KSEB Ltd. The Non-tariff as per the True up order for the year 2020-21 is Rs.41.64 crore only.

The projections of KSEB Ltd for SBU-T for the control period is consistent in the range of Rs52.25 crore to Rs.63.51 crore. ***The Commission after appraising the details, provisionally approves the non-Tariff income and other income as projected by KSEB Ltd.***

Net ARR of SBU-T and SLDC

5.106. The net ARR of SBU-T and SLDC for the control period claimed by KSEB Ltd in the petition is as shown below, which is proposed to be recovered as transfer cost of intra-state transmission from SBU-D.

Table : 5.53
KSEB petition- Net ARR of SBU-T including SLDC proposed by KSEB Ltd

Particulars	2022-23	2023-24	2024-25	2025-26	2026-27
	(Rs. Cr)	(Rs. Cr)	(Rs. Cr)	(Rs. Cr)	(Rs. Cr)
Aggregate Revenue Requirement	1560.67	1818.16	2079.91	2334.51	2614.49
Non tariff Income	52.25	54.86	57.60	60.48	63.51
Net ARR	1508.42	1763.30	2022.31	2274.03	2550.98

5.107. As against the claim of KSEB Ltd, the net ARR of SBU-T including SLDC provisionally approved is given below.

Table : 5.54
KSERC approval- - Net ARR of SBU-T including SLDC proposed by KSEB Ltd

Particulars	2022-23	2023-24	2024-25	2025-26	2026-27
	(Rs. Cr)	(Rs. Cr)	(Rs. Cr)	(Rs. Cr)	(Rs. Cr)
Aggregate Revenue Requirement	1362.76	1588.20	1763.72	1912.89	2046.52
Non-tariff Income	52.25	54.86	57.60	60.48	63.51
Net ARR	1310.51	1533.34	1706.12	1852.41	1983.01

ARR of SLDC

5.108. KSEB Ltd submitted that, they are in the process of preparing separate audited accounts of SLDC. As per Regulation 66(2) of the KSERC (Terms and Conditions for determination of Tariff) Regulations, 2021, in case separate accounts are not prepared for SLDC, for the first two years of the Control Period, the Commission may approve the Aggregate Revenue Requirement of State Load Despatch Centre, as a portion of the approved Aggregate Revenue Requirement of the transmission business of KSEB Limited, based on the proposal filed by SBU-T for the said period of the Control Period. The relevant regulation is extracted below.

“ 66. Aggregate revenue requirement of the State Load Despatch Centre (SLDC).– (1) The Commission shall, after prudence check, determine the Aggregate Revenue Requirement of the State Load Despatch Centre, which shall comprise of the following items of expenditure:- (i) Operation & maintenance expenses; (ii) Interest on working capital; (iii) RLDC fees and SRPC charges; (iv) Depreciation; (v) Interest and finance charges; and (vi)

Return on equity Provided that the income receipts from Open Access charges and NonTariff income shall be deducted from the ARR amount. (2) The State Load Despatch Centre shall file separate audited accounts of its business: Provided that, in case separate accounts are not prepared for SLDC, for the first two years of the Control Period, the Commission may approve the Aggregate Revenue Requirement of State Load Despatch Centre, as a portion of the approved Aggregate Revenue Requirement of the transmission business of KSEB Limited, based on the proposal filed by SBU-T for the said period of the Control Period.”

KSEBL further submitted that, since the audited accounts of SLDC are not finalized, KSEB Ltd requested to approve a portion of the ARR of SBU-T as submitted in the instant petition, as ARR of SLDC. The segregated ARR of SLDC claimed by KSEB Ltd is submitted below.

**Table 5.55
KSEB Ltd Petition- ARR of SLDC claimed**

Particulars	2022-23	2023-24	2024-25	2025-26	2026-27
	(Rs.Cr)	(Rs.Cr)	(Rs.Cr)	(Rs.Cr)	(Rs.Cr)
Interest and Finance Charges	0.77	4.42	4.90	5.16	6.42
Return on Equity	0.28	1.16	1.02	0.90	0.95
Depreciation	0.66	3.46	3.65	3.74	4.61
O&M expenses	8.26	9.14	9.91	10.77	11.48
Interest on Working capital	0.18	0.25	0.36	0.37	0.40
Interest on existing master trust liability	1.05	0.98	0.91	0.84	0.77
Repayment of existing master trust liability	0.70	0.70	0.70	0.70	0.70
Additional contribution to Master Trust	0.69	0.69	0.69	0.69	0.69
Interest on GPF	0.37	0.41	0.42	0.43	0.44
Contribution to contingency reserves	0.00	0.00	0.00	0.00	0.00
Aggregate Revenue Requirement	12.96	21.20	22.55	23.59	26.45
Less Non tariff income	1.42	1.49	1.56	1.64	1.72
Net ARR	11.54	19.71	20.99	21.95	24.73

Provisions of the Tariff Regulations, 2021

5.109. Regulations 66 and 67 of the Tariff Regulations, 2021 deals with ARR of SLDC and relevant matters. The relevant Regulations 2021 is extracted below.

“Aggregate revenue requirement of the State Load Despatch Centre (SLDC).–

(1) The Commission shall, after prudence check, determine the Aggregate Revenue Requirement of the State Load Despatch Centre, which shall comprise of the following items of expenditure:-

- (i) Operation & maintenance expenses;*
- (ii) Interest on working capital;*
- (iii) RLDC fees and SRPC charges;*
- (iv) Depreciation;*
- (v) Interest and finance charges; and*
- (vi) Return on equity*

Provided that the income receipts from Open Access charges and non-Tariff income shall be deducted from the ARR amount.

(2) The State Load Despatch Centre shall file separate audited accounts of

itsbusiness:

Provided that, in case separate accounts are not prepared for SLDC, for the first two years of the Control Period, the Commission may approve the Aggregate Revenue Requirement of State Load Despatch Centre, as a portion of the approved Aggregate Revenue Requirement of the transmission business of KSEB Limited, based on the proposal filed by SBU-T for the said period of the Control Period.”

Analysis and decision of the Commission

5.110. The Commission has examined the proposal of KSEB Ltd. KSEB Ltd submitted that, the licensee is yet to prepare separate audited accounts of SLDC. In the absence of the audited accounts, KSEB Ltd proposed to approve a portion of the ARR of the SBU-T as ARR of the SLDC. The year wise details of the portion of the ARR of SBU-T claimed by KSEB Ltd as ARR of the SLDC is given below.

Table 5.56
KSEB Petition- ARR of SLDC claimed by KSEB Ltd

Year	KSEBL petition		
	Total ARR of SBU-T including SLDC	SLDC ARR	(%) of the SLDC ARR out of the total ARR of SBU-T
	(Rs. Cr)	(Rs. Cr)	
2022-23	1508.42	11.54	0.77%
2023-24	1763.30	19.72	1.12%
2024-25	2022.31	20.99	1.04%
2025-26	2274.02	21.95	0.97%
2026-27	2550.99	24.73	0.97%
Average			0.97%

As detailed above, the ARR of SLDC claimed by KSEB Ltd ranges from 0.77% to 1.12% of the total ARR of the SBU-T. The average of the ARR of SLDC during the MYT is 0.97%. Considering these aspects in detail, the Commission decided to provisionally approve the ARR of the SLDC @0.97% of the total ARR.

5.111. Based on the above considerations, the ARR of SLDC approved for the MYT period from 2022-23 to 2026-27 is given below.

Table 5.57
Approved ARR of SLDC

Year	KSERC Approval		
	Total ARR of SBU-T including SLDC	SLDC ARR	(%) of the SLDC ARR out of the total ARR of SBU-T
	(Rs. Cr)	(Rs. Cr)	
2022-23	1310.51	12.71	0.97%
2023-24	1533.34	14.87	0.97%
2024-25	1706.12	16.55	0.97%
2025-26	1852.41	17.97	0.97%
2026-27	1983.01	19.24	0.97%

Chapter-6

ARR&ERC OF SBU-D

Introduction

- 6.1 SBU-D of KSEB Ltd is the deemed distribution licensee and is responsible for distribution of about 99% of the electricity in the State. Brief profile of the of SBU-D is given below:

Table: 6.1
KSEB Ltd petition- Profile of SBU-D

Particulars	As on 31-3-2021
Area Sq.km.	38863
Districts No's	14
Electrical Circle Offices	25
Population (Cr)	3.47
Consumers (Nos)	13142910
Distribution transformers (Nos)	83399
HT lines (11 KV,22 KV,33 KV lines) (Ckt Kms)	66664
LT lines (Ckt. Kms)	295697
Energy sales in MU	22151.60
Total consumption (in MU)	22830.55

- 6.2 A comparison of the growth of the electricity distribution business during the last 18 years is shown in the Table below:

Table: 6.2
Growth of the distribution system

Particulars	Units	2002-03	2020-21
Consumers	Nos	6947803	13142910
Energy sales n MU	MU	8752.1	22151.60
T&D loss	%	29.08%	10.32%
Revenue	Rs Cr	2480.69	13806.19
Distribution transformers	Nos	32637	83399
HT lines:			
33 KV lines	Ckt Km	408.17	2124
11 KV& 22 KV lines	Ckt Km	31455	64540
LT lines	Ckt Km	199721	295697

KSEB Ltd projection of Energy sales:

- 6.3 KSEB Ltd in the petition submitted that, the energy sales to the consumers during the MYT period from 2022-23 to 2026-27 was projected based on past data of consumer strength, energy consumption, connected load, consumers added / dismantled, increasing trend in consumption per consumer, regional characteristics of consumers, seasonal variations and change in consumer habits etc. The historical sales details from 2011-12 to 2020-21 furnished by KSEB Ltd is as shown below:

Table: 6.3

KSEB Ltd petition- Category wise Energy sales from 2011-12 to 2020-21 in MU

Category	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21
Domestic incl LT II	7705.86	8313.36	8739.52	9367.26	9943.48	10280.74	10574.84	10864.34	11898.13	12699.64
Commercial	2141.22	2224.06	2229.34	2418.28	2735.36	2957.95	3063.48	3221.43	3426.36	2982.47
Industrial	1097.04	1101.96	1096.56	1096.93	1103.23	1131.91	1112.33	1111.67	1085.16	1086.67
Agricultural	286.18	306.08	310.24	291.41	279.48	321.98	346.03	337.65	348.48	403.24
Streetlight	294.26	313.2	319.06	346.43	366.62	375.77	373.48	377.78	365.86	376.94
Sub Total (LT)	11524.56	12258.66	12694.72	13520.31	14428.16	15068.35	15470.15	15912.87	17124	17548.97
HT category	2586.27	2687.56	2791.64	2988.14	3130.94	3301.83	3494.04	3656.92	3738.77	3214.78
EHT Category	1243.12	1217.59	1243.85	1158.45	975.06	826.38	1041.94	1051.91	859.36	740.54
Railways+KMRL	154.49	173.67	200.69	205.31	212.83	229.59	265.8	318.04	322.96	150.94
Bulk Supply	472.09	500.76	523.15	554.06	578.08	612.1	608.77	597.04	615.73	496.37
Total Sales	15980.53	16838.24	17454.05	18426.27	19325.07	20038.25	20880.7	21536.77	22660.82	22151.6
Open Access & captive consumption*				4.43	135.25	441.55	378.02	357.78	611.32	678.94
Total Consumption	15980.53	16838.24	17454.05	18430.7	19460.32	20479.8	21258.71	21894.55	23272.14	22830.55

* includes captive generation energy

6.4 The following table shows the growth in number of consumers in the previous years.

Table : 6.4

KSEB Ltd petition- Growth in number of consumers from 2011-12 to 2020-21 (Nos)

Category	FY-14	FY-15	FY-16	FY-17	FY-18	FY-19	FY-20	FY-21
Domestic incl LT II	8788916	8987947	9124747	9384957	9562253	9705347	9881528	10076070
Commercial	1795160	1830937	1923402	1994916	2081567	2196919	2280904	2370427
Industrial	137744	142001	136693	141683	136964	138834	140205	143013
Agricultural	463006	461287	473882	447551	462763	470517	476297	496022
St Lights	3789	4072	4281	20350	27131	34653	40950	50794
Electric vehicle charging stations							8	56
Total (LT)	11188615	11426244	11663005	11989457	12270678	12546270	12819892	13136382
HT category	4217	4592	4963	5293	5578	5870	6226	6461
EHT Category	39	40	42	42	42	41	40	40
Railways	8	8	9	12	12	14	16	16
Bulk Supply	11	11	12	12	11	11	11	11
Total HT& EHT	4275	4651	5026	5359	5643	5936	6293	6528
Total	11192890	11430895	11668031	11994816	12276321	12552206	12826185	13142910

6.5 The total consumption in the State for the year 2021-22 is as shown below:

Table: 6.5

KSEB Ltd petition- Energy consumption estimated for FY 2021-22 considered for projection

Category	Energy in MU
Domestic	12913.24
Commercial	3265.08

Category	Energy in MU
Industrial	1107.13
Agriculture	368.69
Street Lights	367.61
LT II	3.62
LT IX	1.12
LT X	0.54
HT Category	
HT I	2254.37
HT II	802.03
HT III	9.16
HT IV	633.51
HT V	18.83
EHT I	312.68
EHT II	752.48
EHT III	125.29
EHT General	55.65
Railway Traction	293.79
Kochi Metro	9.30
Bulk Licensees	500.24
Total	23794.31

- 6.6 KSEB Ltd in the petition has stated that the energy consumption for the year 2020-21 has shown a drastic reduction owing to the restriction imposed due to lockdowns introduced as a result of Covid Pandemic. Hence, KSEB Ltd has arrived upon the above table after allowing appropriate corrections for various consumer categories and for the consumption for month of May. The energy consumption (of the remaining months are estimated by providing an escalation based on previous trends over the average of energy consumption of first 7 months. This data is used as the base data for projection of energy sales for the next control period except for bulk licensees. In the case of bulk licensees, KSEB Ltd has stated that, the energy consumption during the first half of control period was much less as compared to the previous years of FY 2019 and FY 2020. Hence the base year data of each licensee is taken by projecting the energy consumption data of respective licensee for FY 2019-20 by considering the 3-year CAGR.
- 6.7 KSEB Ltd stated that based on the historical consumption and other parameters, the energy sales for the various consumer categories have been projected by KSEB Ltd for the control period. The rationale used by KSEB Ltd for the projections for different categories is explained below:
- *In the case of LT domestic, commercial, agriculture categories, 4-year CAGR is taken for projection.*
 - *As for Industrial category, the consumption shows a small negative growth rate CAGR is seen. Hence 1 % growth is considered for projection.*

- In the case of HT & EHT category, it is not possible to predict the quantum of energy purchase by open access consumers because they resort to short term power purchase and have not furnished any definite proposals for the future. Hence energy sales including energy wheeled by embedded open access consumers is also considered for future projections. Energy consumed from captive generation is not considered for future energy sales projection.
- In the case of street light category, a reduction of 67 MU is expected during the first year of the control period due to the energy savings on account of replacing tube lights with LED under NILAAV scheme. KSEB Ltd has used past 5-year CAGR is used for yearly projection.
- The 4-year CAGR is used for energy sales projection of HT Industrial, Commercial & General combined, HT Agriculture category, HT Domestic category and EHT 1 category.
- Negative CAGR is seen for EHT 110 kV category and hence 2 % is taken for 110 KV.
- In the case of EHT 220 KV, being a captive generator, there is a wide variation in their consumption; hence projection based on their previous trends cannot be relied. A 5 % growth is considered as the energy consumption for FY 2021-22 shows an increase in energy consumption for more than 10%.
- In addition to the sale to its own consumers, KSEB Ltd has been providing electricity to other licensees at the BST approved by the Hon Commission. In the case of licensees, 3-year CAGR considered for energy sales projection for energy sales projection.

6.8 Based on the above, the energy sales projected for the control period from 2022-23 to 2026-27 is estimated and the details are given below:

Table: 6.6

KSEB Ltd petition- Energy Projection without considering the impact of solar penetration and e mobility for the next control period

Category	Control period				
	2022-23	2023-24	2024-25	2025-26	2026-27
	(MU)	(MU)	(MU)	(MU)	(MU)
Domestic	13507.13	14128.34	14778.13	15457.79	16168.72
Commercial	3453.72	3653.25	3864.32	4087.58	4323.74
Industrial	1118.20	1129.38	1140.68	1152.09	1163.61
Agricultural	389.61	411.70	435.05	459.72	485.80
Street Lights	303.90	307.24	310.61	314.02	317.46
LT II	3.70	3.77	3.85	3.92	4.00
LT IX	1.15	1.17	1.19	1.22	1.24
LT X	0.57	0.60	0.63	0.66	0.69
LT Total	18777.97	19635.46	20534.45	21476.99	22465.25
HT I	2341.71	2432.43	2526.67	2624.57	2726.25

Category	Control period				
	2022-23	2023-24	2024-25	2025-26	2026-27
	(MU)	(MU)	(MU)	(MU)	(MU)
HT II	848.82	898.34	950.75	1006.21	1064.91
HTIII	10.09	11.13	12.26	13.52	14.90
HT IV	673.37	715.75	760.79	808.66	859.55
HT V	21.98	25.65	29.94	34.95	40.79
EHT-1	316.92	321.22	325.58	329.99	334.47
EHT-II	767.53	782.88	798.54	814.51	830.80
EHT-III	132.80	140.77	149.22	158.17	167.66
EHT Non industrial	56.77	57.90	59.06	60.24	61.45
Railway Traction	321.49	351.82	385.00	421.31	461.04
Bulk licensees	661.96	677.27	693.09	709.44	726.35
Kochi metro	9.76	10.25	10.75	11.29	11.85
HT & EHT Total	6163.20	6425.41	6701.65	6992.86	7300.02
Energy sales	24941.19	26060.86	27236.10	28469.85	29765.27
Growth%		4.49	4.51	4.53	4.55

6.9 The energy projection for licensees who purchase power from KSEB Ltd for next control period is as given below:

Table 6.7
KSEB Ltd petition- Energy projection of other licensees

Licensee	2022-23	2023-24	2024-25	2025-26	2026-27
Cochin Port Trust	38.65	39.06	39.48	39.90	40.33
Cochin Special Economic Zone	57.09	57.26	57.43	57.60	57.77
Kannan Devan Hills Plantation Corporation Limited (KDHPCL)	70.94	73.77	76.73	79.79	82.99
Kinesco Power (KPUPL)	108.39	113.65	119.17	124.95	131.01
Military Engineer Services	74.20	74.85	75.51	76.18	76.85
Electricity Department Karnataka	0.83	0.84	0.85	0.85	0.86
Rubber Park Ltd	27.00	27.27	27.55	27.82	28.10
Technopark	93.96	95.30	96.67	98.05	99.45
Thrissur Corporation	172.06	175.61	179.23	182.93	186.70
Infopark, Cherthala	14.14	14.84	15.59	16.36	17.18
Smart City	4.71	4.81	4.90	5.00	5.10
Total	661.96	677.27	693.09	709.44	726.35
Growth rate		2.31%	2.34%	2.36%	2.38%

Impact of Renewable Energy Penetration:

6.10 KSEB Ltd has stated that the Renewable Energy penetration especially solar through own project and consumer projects has a major impact on the estimation of energy sales of during the next control period. Even though, KSEB Ltd has started to implement solar projects since 2017 in large scale ,the severe flooding and Covid 19 pandemic in the forthcoming years as well as restrictions

in import from China has hampered the large scale implementation which has resulted in lower than expected growth in solar penetration to the grid during the last few years. Assuming a normal growth without any hindrance for the next control period, KSEB Ltd is expecting a greater impact for solar penetration during the next control period.

Total solar capacity installed up to December 2021 was 226.61 MW.

The Solar capacity expected to add during the MYT period from 2022-23 to 2026-27 is detailed below.

Table 6.8
KSEB petition- Solar capacity expected to add during the MYT period

Particulars	Prosumer	Saura	Total addition during the year	Cumulative capacity as on March 31st
	(MW)	(MW)	(MW)	(MW)
Cumulative Solar capacity as on 31.12.2021				226.61
2021-22 (from Jan-22 to Mar-22)	50.33	66.23	116.56	343.17
2022-23	73.62	150.00	223.62	566.79
2023-24	102.49	100.00	202.49	769.28
2024-25	143.24	100.00	243.24	1012.52
2025-26	195.08		195.08	1207.60
2026-27	258.02		258.02	1465.62

6.11 KSEB Ltd also submitted the category wise solar energy addition expected during the MYT period. The details are given below.

Table 6.9
KSEB Ltd petition- Category wise solar energy addition

Category	2022-23	2023-24	2024-25	2025-26	2026-27
	(MU)	(MU)	(MU)	(MU)	(MU)
LT-1A	136.70	386.36	552.80	719.24	727.50
LT-4A	1.46	5.45	11.01	18.77	29.08
LT-4B	0.26	0.58	1.02	1.65	2.48
LT-5A	0.01	0.02	0.03	0.04	0.06
LT-5B	0.11	0.51	1.06	1.84	2.87
LT-6A	16.30	30.67	50.67	78.63	115.74
LT-6B	2.40	8.87	17.88	30.48	47.20
LT-6C	1.09	3.88	7.76	13.20	20.41
LT-6D	1.33	2.03	3.01	4.38	6.19
LT-6E	0.03	0.08	0.15	0.24	0.36
LT-6F	5.42	11.91	20.95	33.58	50.35
LT-6G	0.87	4.27	9.00	15.61	24.38
LT-7A	8.77	36.43	74.96	128.77	200.22
LT-7B	0.16	0.17	0.19	0.21	0.24
LT-7C	0.12	0.51	1.05	1.81	2.82

Category	2022-23	2023-24	2024-25	2025-26	2026-27
	(MU)	(MU)	(MU)	(MU)	(MU)
LT-9	0.00	0.09	0.22	0.40	0.64
LT-10	0.02	0.04	0.08	0.12	0.19
EHT II	4.99	9.64	16.11	25.15	37.14
HT IA	3.55	9.29	17.28	28.45	43.27
HT IB	0.08	0.50	1.08	1.90	2.98
HT II A	1.43	9.63	21.03	36.98	58.14
HT II B	7.05	33.95	71.41	123.75	193.23
HT III B	0.00	0.04	0.09	0.17	0.27
HT IV A	1.14	7.14	15.49	27.16	42.66
HT IV B	0.69	3.20	6.70	11.59	18.08
HT V	0.03	0.94	2.19	3.95	6.29
Total	194.00	566.20	903.22	1308.07	1632.76

Impact of e-mobility:

6.12 KSEB Ltd has submitted that when the population of electric vehicles in the State matches with existing number of ICE vehicles, the daily energy requirement for electric vehicle charging will be approximately 50 MU. It is also expected that near to 100% of electric 2Ws, and 70% of 3Ws and 80 % of 4Ws will be resorting to home charging– which will have a significant impact on the distribution grid especially during late evening hours. As the e-mobility is on initial phase and sufficient data is not available for estimating the energy requirement, KSEB Ltd has estimated the additional energy requirement as detailed below based on the following assumptions:

- *The base value of vehicles is arrived based on the number of vehicles as on March 2017.*
- *Year wise vehicle selling growth is based on previous trends and the percentage growth is around 4 %.*
- *The energy requirement is estimated based on the number of vehicles, efficiency and average km travelled per day.*

6.13 The additional energy requirement estimated by KSEB Ltd on account of e-mobility is given below.

Table 6.10
KSEB Ltd petition- Additional energy requirement on account of e-mobility

Financial year	Energy in MU		
	Domestic	Public Charging Station	Total
2022-23	101.39	31.81	133.20
2023-24	154.65	48.27	202.92
2024-25	435.84	127.86	563.70
2025-26	808.19	210.24	1018.43
2026-27	1165.61	289.98	1455.59

Summary of the estimate of energy sale

6.14 The total estimated energy sales under each category after accounting the impact of solar penetration and e-mobility estimated by KSEB Ltd is given below:

Table 6.11
KSEB Ltd petition- Estimate of the energy sale for the MYT period

Sl No	Category	2022-23	2023-24	2024-25	2025-26	2026-27
		in MU	in MU	in MU	in MU	in MU
I. LT Category						
1	LT I Domestic	13471.82	13896.64	14661.16	15546.75	16606.83
2	LT II Colony	3.70	3.77	3.85	3.92	4.00
3	LT IV A Industrial	1107.12	1114.22	1119.86	1123.40	1124.52
4	LT IV B Industrial	9.36	9.14	8.79	8.26	7.53
5	LT V A Agriculture	326.28	344.78	364.32	384.97	406.79
6	LT V B Agriculture	63.21	66.40	69.64	72.87	76.07
7	LT VI A General	200.56	198.72	191.97	178.03	155.75
8	LT VI B General	124.56	125.42	124.17	119.78	111.74
9	LT VI C General	248.31	259.93	271.28	281.97	291.81
10	LT VI D General	21.58	22.20	22.63	22.74	22.50
11	LT VI E General	3.06	3.19	3.32	3.42	3.51
12	LT VI F General	957.21	1006.34	1056.12	1105.72	1154.77
13	LT VI G General	75.06	76.05	75.96	74.26	70.68
14	LT VII A Commercial	1562.62	1625.74	1683.26	1731.01	1767.02
15	LT VII B Commercial	202.23	213.91	226.27	239.33	253.14
16	LT VII C Commercial	22.03	22.92	23.73	24.40	24.91
17	LT VIII A Public Lighting	196.25	198.40	200.58	202.78	205.01
18	LT VIII B Public Lighting	107.65	108.83	110.03	111.24	112.46
19	LT IX Advertisements and Hoardings	1.15	1.08	0.97	0.81	0.60
20	LT X Electric vehicle charging stations	0.55	0.55	0.55	0.53	0.50
	LT Subtotal	18704.32	19298.24	20218.46	21236.21	22400.15
II HT category						
1	HT I A Industrial	2323.12	2407.52	2493.16	2579.26	2665.46
2	HT I B Industrial	14.96	15.13	15.15	14.97	14.54
3	HT II A General	204.22	208.02	209.31	206.80	199.86
4	HT II B General	636.13	646.75	649.00	638.68	613.68
5	HT III A Agriculture	7.96	8.77	9.67	10.66	11.75
6	HT III B Agriculture	2.14	2.32	2.50	2.69	2.88
7	HT IV A Commercial	344.87	360.64	375.44	388.36	399.02
8	HT IV B Commercial	326.67	344.76	363.16	381.54	399.79
9	HT V Domestic	21.94	24.72	27.75	31.00	34.51

Sl No	Category	2022-23	2023-24	2024-25	2025-26	2026-27
		in MU	in MU	in MU	in MU	in MU
10	HT VI Electric Vehicle Charging Stations	31.81	48.27	127.86	210.24	289.98
	HT Sub Total	3913.81	4066.88	4272.99	4464.19	4631.47
III	EHT Category					
1	EHT (General) A	12.92	13.18	13.45	13.72	13.99
2	EHT (General) B	43.84	44.72	45.61	46.53	47.46
3	EHT I (66 kV) Industrial	316.92	321.22	325.58	329.99	334.47
4	EHT II (110 kV) Industrial	762.54	773.24	782.43	789.36	793.66
5	EHT II (110 kV) Railway Traction	321.49	351.82	385.00	421.31	461.04
	EHT III (220 kV) Industrial	132.80	140.77	149.22	158.17	167.66
	KMRL	9.76	10.25	10.75	11.29	11.85
	EHT Sub Total	1600.28	1655.20	1712.04	1770.37	1830.13
IV	Bulk Licensees					
1	Licensee: Other State 11KV-Karnataka	0.83	0.84	0.85	0.85	0.86
2	Licensee: CPT	38.65	39.06	39.48	39.90	40.33
3	Licensee: CSEZ	57.09	57.26	57.43	57.60	57.77
4	Licensee: KDHPCL	70.94	73.77	76.73	79.79	82.99
5	Licensee: KPUPL	108.39	113.65	119.17	124.95	131.01
6	Licensee: MES	74.20	74.85	75.51	76.18	76.85
7	Licensee: RPL	27.00	27.27	27.55	27.82	28.10
8	Licensee: Technopark	93.96	95.30	96.67	98.05	99.45
9	Licensee: Thrissur Corporation	172.06	175.61	179.23	182.93	186.70
10	Licensee: Infopark, Cherthala	14.14	14.84	15.59	16.36	17.18
	Licensee: Smart City	4.71	4.81	4.90	5.00	5.10
	Subtotal	661.96	677.27	693.09	709.44	726.35
V	Grand Total(I+II+III+IV+V)	24880.38	25697.59	26896.58	28180.22	29588.10

Comments of the stakeholders

6.15 The HT-EHT Association submitted that, since KSEB Ltd had made detailed category wise sales projections and also attempted to factor the impact of roof-top solar/prosumers and e-mobility on the category wise sales. Hence the Association has not submitted any specific comments on the sales projected by KSEB Ltd.

Provisions in the Regulations

6.16 “72. Sales forecast. – (1) The distribution business/ licensee shall file, along with the petition for approval of Aggregate Revenue Requirement and determination of tariff, a forecast of the 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 proposed growth in number of consumers and proposed consumption per consumer, the demand for electricity in the preceding financial years, anticipated growth in the succeeding financial years and any other factor, which the Commission may consider relevant and thereafter approve the distribution licensee's forecast of sale of electricity to the consumers, with such modifications as deemed appropriate.

Analysis and decision of the Commission

6.17 The Commission has examined in detail the energy sale forecast by KSEB Ltd. KSEB Ltd has expected an overall annual growth rate of 4.32% to 4.55% in energy sales during the MYT period from 2022-23 to 2026-27. The category wise CAGR adopted by KSEB Ltd for estimating the energy sales is given below.

Table 6.12
KSEB Ltd petition- Category wise CAGR adopted for estimating the energy sales

<u>LT Category</u>	2022-23	2023-24	2024-25	2025-26	2026-27
Domestic	4.60%	4.60%	4.60%	4.60%	4.60%
Commercial	5.78%	5.78%	5.78%	5.78%	5.78%
Industrial	1.00%	1.00%	1.00%	1.00%	1.00%
Agricultural	5.67%	5.67%	5.67%	5.67%	5.67%
Street Lights	1.00%	1.10%	1.10%	1.10%	1.10%
LT II	2.21%	1.89%	2.12%	1.82%	2.04%
LT IX	2.68%	1.74%	1.71%	2.52%	1.64%
LT X	5.56%	5.26%	5.00%	4.76%	4.55%
LT Total	4.17%	4.57%	4.58%	4.59%	4.60%
HT Category					
HT I	3.87%	3.87%	3.87%	3.87%	3.87%
HT II	5.83%	5.83%	5.83%	5.83%	5.83%
HTIII	10.15%	10.31%	10.15%	10.28%	10.21%
HT IV	6.29%	6.29%	6.29%	6.29%	6.29%
HT V	16.73%	16.70%	16.73%	16.73%	16.71%
EHT-1	1.36%	1.36%	1.36%	1.35%	1.36%
EHT-II	2.00%	2.00%	2.00%	2.00%	2.00%
EHT-III	5.99%	6.00%	6.00%	6.00%	6.00%
EHT Non industrial	2.01%	1.99%	2.00%	2.00%	2.01%
Railway Traction	9.43%	9.43%	9.43%	9.43%	9.43%
Kochi metro	4.95%	5.02%	4.88%	5.02%	4.96%
Bulk licensees	7.64%	2.31%	2.34%	2.36%	2.38%
HT & EHT Total	4.78%	4.25%	4.30%	4.35%	4.39%
Overall	4.32%	4.49%	4.51%	4.53%	4.55%

6.18 Based on the CAGR as above, KSEB Ltd estimated the energy sale of different categories of consumers as below.

Table 6.13
KSEB Ltd petition- Category wise energy sales estimated without considering the impact of Solar penetration and e-mobility

Category	Control period				
	2022-23	2023-24	2024-25	2025-26	2026-27
	(MU)	(MU)	(MU)	(MU)	(MU)
Domestic	13507.13	14128.34	14778.13	15457.79	16168.72
Commercial	3453.72	3653.25	3864.32	4087.58	4323.74
Industrial	1118.20	1129.38	1140.68	1152.09	1163.61
Agricultural	389.61	411.70	435.05	459.72	485.80
Street Lights	303.90	307.24	310.61	314.02	317.46
LT II	3.70	3.77	3.85	3.92	4.00
LT IX	1.15	1.17	1.19	1.22	1.24
LT X	0.57	0.60	0.63	0.66	0.69
LT Total	18777.97	19635.46	20534.45	21476.99	22465.25
HT I	2341.71	2432.43	2526.67	2624.57	2726.25
HT II	848.82	898.34	950.75	1006.21	1064.91
HTIII	10.09	11.13	12.26	13.52	14.90
HT IV	673.37	715.75	760.79	808.66	859.55
HT V	21.98	25.65	29.94	34.95	40.79
EHT-1	316.92	321.22	325.58	329.99	334.47
EHT-II	767.53	782.88	798.54	814.51	830.80
EHT-III	132.80	140.77	149.22	158.17	167.66
EHT Non industrial	56.77	57.90	59.06	60.24	61.45
Railway Traction	321.49	351.82	385.00	421.31	461.04
Bulk licensees	661.96	677.27	693.09	709.44	726.35
Kochi metro	9.76	10.25	10.75	11.29	11.85
HT & EHT Total	6163.20	6425.41	6701.65	6992.86	7300.02
Energy sales	24941.19	26060.86	27236.10	28469.85	29765.27
Growth%		4.49	4.51	4.53	4.55

6.19 The Commission has examined the energy sales projections as detailed in Tables 6.12 and 6.13 above. The overall growth rate of energy sales in the control period ranges from 4.49% to 4.55%. However, for some categories such as HT-V Domestic and HT-III agriculture, KSEB Ltd has adopted a higher rate above 10%, considering the energy sales growth in the recent past. HT-V domestic tariff generally availed for common services of the residential flats. The overall consumption of HT-V ranges from 21.98 MU in the year 2022-23 to 40.79 MU in the year 2026-27 of the MYT period. HT-III is the agriculture connections including connections for dewatering, poultry farms etc. The energy consumption of this category estimated by KSEB Ltd ranges from 10.09MU in the year 2022-23 to 14.09 MU in the year 2026-27. The energy sales estimated for other categories seems to be realistic.

6.20 KSEB Ltd has also factored the impact of solar penetration including roof top solar installation anticipated during the MYT period from 2022-23. The year wise details of the energy consumption by the prosumers through Solar installation including the 'roof top' solar installations under SAURA Scheme is detailed below.

Table 6.14
KSEB Ltd petition- Impact of Solar penetration

Year	Solar energy generation by the prosumers
	(MU)
2022-23	194.00
2023-24	566.20
2024-25	903.22
2025-26	1308.07
2026-27	1632.76

After careful considerations of the above projections, the Commission is of the view that the proposed sales estimates are rather very ambitious and on the higher side.

6.21 KSEB Ltd has also estimated the additional energy sale due to e-mobility during the MYT period from 2022-23 to 2026-27. Its details are given below.

Table 6.15
Additional energy sale due to e-mobility

Financial year	Addl energy sale estimated due to e-mobility
	(Rs.Cr)
2022-23	133.20
2023-24	202.92
2024-25	563.70
2025-26	1018.43
2026-27	1455.59

The above table reveals that the distribution licensee has estimated a growth percentage of 1093% during the above periods. Though the projections presents a healthy trend considering the current fuel prices and international climate change obligations, the actual realisation of these projections may actually be difficult.

6.22 The annual energy sales estimated during the MYT period from 2022-23 to 2026-27, after accounting the impact of solar penetration and e-mobility is detailed below.

Table 6.16

KSERC. Energy sale estimated after accounting the impact of solar penetration and e-mobility

Year	Energy sale estimated (without considering the impact of solar penetration and e-mobility)	Less Solar penetration	Additional sale due to e- mobility	Net Energy sale (annual)
	(MU)	(MU)	(MU)	(MU)
2022-23	24941.19	194.00	133.20	24880.38
2023-24	26060.86	566.20	202.92	25697.67
2024-25	27236.10	903.22	563.70	26896.58
2025-26	28469.85	1308.07	1018.43	28180.22
2026-27	29765.27	1632.76	1455.59	29588.10

- 6.23 ***As discussed in the preceding paragraphs, the Commission after detailed examination of the estimate of energy sales, decided to approve the same provisionally for the MYT period. The category wise energy sales estimated by KSEB Ltd during the MYT period from 2022-23 to 2026-27, as detailed in Table 6.13 above also provisionally approved for the purposes of ARR. However, the actual energy sales after prudence check will only be considered for the purpose of Truing up of accounts of the respective years.***

Aggregate Technical and Commercial Losses

- 6.24 KSEB Ltd has stated that the AT & C losses comprises of two components – Technical loss and Commercial loss. The Transmission & Distribution loss depends upon various factors such as size of the network, energy demand, connected Load etc. KSEB Ltd has consistently been reducing the Transmission and Distribution losses of its system. Also, the technical losses primarily takes place due to transformation loss and $I^2 R$ losses, which cannot be completely eliminated. The commercial losses include losses due to theft and pilferage, low metering efficiency, non-reading of meters, faulty meter reading, inefficient billing, under billing, faulty bill distribution, software errors, prolonged disputes, inadequate revenue collection etc. According to KSEB Ltd, the major share of distribution loss is in LT distribution network.
- 6.25 In order to reduce the technical loss, network improvements such as augmenting the transmission and distribution infrastructure, timely replacement of sluggish meters with modern electronic and smart meters, conducting inspections, conducting energy audits, motivating consumers to reduce reactive energy by providing incentives etc are continuously taken up by the licensee. Through these efforts, KSEB Ltd could reduce the T&D losses from 30.76% in 2001-02 to 12.08% in 2019-20. The T&D loss for FY 2020-21 is 10.32%. KSEB Ltd has not considered the T&D loss figure for FY 2020-21 for

estimating the T&D loss for next control period as the figures will lead to non-realistic results due to demand reduction on account of frequent lockdowns as a result of covid pandemic. For estimation purpose KSEB Ltd is considering a T&D loss reduction of 0.2% from FY 2019-20 (12.08 %) onwards up to FY 2021-22.

- 6.26 According to KSEB Ltd, due to the increasing demand and capital works planned, they are expecting an annual T&D loss reduction of 0.4 % for the next control period up to 2024-25 and 0.2% each for 2025-26 and 2026-27.

Table : 6.17

T&D loss proposed by KSEB Ltd during the control period

No	Particulars	FY-23	FY-24	FY-25	FY-26	FY-27
1	Yearly loss reduction target	0.40%	0.40%	0.40%	0.2%	0.2%
2	T & D loss level	11.28%	10.88%	10.48%	10.28%	10.08%
3	Transmission Losses	3.40%	3.30%	3.20%	3.10%	3.00%

- 6.27 Based on the above, KSEB Ltd has requested the Commission to consider the loss targets as proposed below:

Table : 6.18

KSEB Ltd Projected loss during the control period

No	Particulars	2022-23	2023-24	2024-25	2025-26	2026-27
1	Energy injected into the system (MU)	28043.71	28834.82	30045.33	31409.07	32904.92
2	Percentage of Transmission loss incl substation auxiliary consumption (%)	3.40%	3.30%	3.20%	3.10%	3.00%
3	Loss of energy (MU)	953.49	951.55	961.45	973.68	987.15
4	Energy handled (MU)	27090.22	27883.27	29083.88	30435.39	31917.77
5	Energy sales including EHT sales by Distribution licensee	24880.38	25697.59	26896.58	28180.22	29588.10
6	Distribution loss (MU)	2209.84	2185.68	2187.30	2255.17	2329.67
7	Distribution loss in %	8.16	7.84	7.52	7.41	7.30

Comments of the Stakeholders

- 6.28 The HT-EHT Association suggested to approve the transmission losses from 2.82% to 2.42% during the MYT period as against the estimate of 3.40% in 2022-23 to 3.00% in the year 2026-27. The Association further requested to approve the distribution loss target at 7.08% in 2022-23 to 6.22% in 2026-27, as against 8.16% to 7.30% proposed by KSEB Ltd.

Provisions in the Regulations

6.29 Transmission loss

“64.(1)Transmission losses.- The energy losses in the intra-State transmission system, as determined by the State Load Despatch Centre and approved by the Commission, shall be considered as Transmission

Losses and borne by the Transmission System Users in proportion to their usage of the intra-State transmission system.

(2) The energy consumed for supply of power by the transmission sub-station to the associated offices of the Licensee, its housing colony and other facilities, and for construction works at the sub-station, shall not be considered as energy consumed by the auxiliary equipment of a transmission sub-station.

Distribution loss

“73. Distribution losses: (1)The distribution business/ licensee shall,-

- (i) carry out appropriate 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;*
- (ii) file separate details of actual and anticipated losses at different voltages, while computing its total energy requirement;*
- (iii) file 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 five financial years and the estimates for each year of the Control Period and the basis on which such losses have been worked out;*
- (iv) propose the loss reduction targets for each financial year of the Control Period, along with absolute loss levels;*
- (v) Substantiate the proposed loss levels with necessary data from studies and their results.*

(2) The Commission may after due consideration approve the target of distribution loss reduction for each financial year of the Control Period considering the opening loss levels, filings of the distribution business/ licensee, investments made by the licensees which have a bearing on the distribution losses, submissions and objections raised by the stakeholders and the findings of the Commission.

Provided that the Commission may while truing up of accounts, if it considers appropriate consider the distribution loss reduction targets for the each year of the control period in a range of (+)/(-) 10% of the absolute loss reduction target set for any of the years of the control period.

Provided further that such reset targets shall not qualify for any reward/ penalty while truing up of accounts.

(3) Any variation between the actual level of distribution losses and the approved level of distribution losses shall be dealt with, as part of

the truing up of the respective financial year in the Control Period, in the following manner:-

(i) If the actual distribution loss is higher than the approved level of distribution loss for any particular financial year of the Control Period, then the quantum of power purchased corresponding to the excess distribution loss for that financial year, shall be disallowed at the average cost of power purchase for the respective financial year;

(ii) If the actual distribution loss is lower than the approved level of distribution loss for any particular financial year of the Control Period, then the savings in power purchase cost corresponding to the difference in distribution loss for that financial year at the average cost of power purchase for the respective financial year, shall be shared between the distribution business/ licensee and its consumers in the ratio of 2:1;

(iii) Export of power to other states, if any, and the revenue thereof shall be considered by the Commission appropriately, while determining the disallowance on account of excess distribution loss.

Analysis and decision of the Commission

6.30 The Commission has examined in detail the T&D loss reduction target proposed by KSEB Ltd. KSEB Ltd submitted that, the actual T&D loss for the year 2019-20 was 12.08%. Since the T&D loss achieved in the year 2020-21 @10.32% is not realistic due to the reduction in consumption on account of restrictions imposed due to Covid-19 pandemic, KSEB Ltd has not considered this figure. For fixing the target, KSEB Ltd adopted the target of 0.20% reduction in the years 2020-21 and 2021-22 from the actual loss of 12.08% in the year 2019-20. Further, during the year 2022-23 to 2024-25, KSEB Ltd proposed the loss reduction target of 0.40%, and for the remaining years of the control period from 2025-26 to 2026-27, KSEB Ltd proposed a reduction target of 0.20%.

6.31 The Commission examined the proposal of KSEB Ltd in detail. During the previous MYT period from 2018-19 to 2021-22, the Commission has proposed the yearly T&D loss reduction target of 0.40% every year. Accordingly, the T&D loss approved in the MYT order dated 08.07.2019 in OP No. 15/2018 was 11.68%.

The Commission also noted the huge capital investment proposed by KSEB Ltd, especially the Dhyuthi Scheme implemented in previous MYT period and the RDSS scheme and Dhyuthi Scheme proposed in the current MYT period from 2022-23 to 2026-27. Considering all these aspects, ***the Commission approves a yearly loss reduction target of 0.40% annually during the MYT period from 2022-23 to 2026-27.***

6.32 The yearly T&D loss reduction target proposed by KSEB Ltd and the same approved by the Commission for the MYT period is given below.

Table 6.19
T&D loss reduction target for the MYT period- Approved

Year	KSEB Ltd proposal in the Petition			KSERC Approval		
	T&D loss (actual)	KSEB Target for projection	Remarks/ target	Target level of T&D loss	Annual target for loss reduction	Remarks
	(%)	Target in (%)		(%)	(%)	
2018-19	12.47%			12.82%		Target for previous MYT
2019-20	12.08%			12.42%	0.40%	
2020-21	10.32%	11.88%	Due to Covid-19 energy sales & Peak demand was much less. So KSEB could achieve higher loss reduction target, Hence 0.20% reduction for target for future years	12.02%	0.40%	
2021-22		11.68%		11.62%	0.40%	
2022-23		11.28%	0.4% target	11.22%	0.40%	Target for current MYT
2023-24		10.88%		10.82%	0.40%	
2024-25		10.48%		10.42%	0.40%	
2025-26		10.28%		10.02%	0.40%	
2026-27		10.08%		0.2% target	9.62%	

Energy Input required at KSEB Periphery during the MYT period

6.33 Based on the energy sales approved provisionally and the T&D loss target approved for the MYT period, the energy input required during the MYT period is given below.

Table 6.20
Energy requirement/demand for the MYT period

No	Particulars	KSEB Ltd proposal					KSERC Approval				
		2022-23	2023-24	2024-25	2025-26	2026-27	2022-23	2023-24	2024-25	2025-26	2026-27
1	Total energy sales projected in MU	24880.38	25697.59	26896.58	28180.22	29588.10	24880.38	25697.59	26896.58	28180.22	29588.10
2	T&D Loss In %	11.28%	10.88%	10.48%	10.28%	10.08%	11.22%	10.82%	10.42%	10.02%	9.62%
3	Energy Requirement / demand in MU	28043.71	28834.82	30045.33	31409.07	32904.92	28024.76	28815.42	30025.21	31318.32	32737.44
4	Average growth rate		2.82%	4.20%	4.54%	4.76%		2.82%	4.20%	4.31%	4.53%

Segregation of the approved T&D Loss among Transmission Loss and Distribution loss

(a) Transmission loss

6.34 The Transmission loss estimated by KSEB Ltd for the MYT period is given below.

Table 6.21
KSEB Ltd petition- Transmission loss projected for the MYT period

Particulars	2022-23	2023-24	2024-25	2025-26	2026-27
Percentage of Transmission loss incl substation auxiliary consumption (%)	3.40%	3.30%	3.20%	3.10%	3.00%

Regarding 'transmission loss' the Commission noted with concern that KSEB Ltd is yet to take any efforts for measuring the actual losses in the transmission system and actual energy input into the SBU -D. Instead of the same, KSEB Ltd has been estimating the transmission losses based on the load flow studies using the computer simulation model in "MI- Power" Software. It is a fact that the computersimulation model is being used for planning purposes only and the loss level estimation based on the study cannot be used for assessing the transmission losses. The Commission noticed that KSEB Ltd has already installed meters at all its transmission substations. By taking proper reading of the metered data of the substations, KSEB Ltd can accurately assess the transmission losses and the losses in the distribution system of KSEB Ltd. The licensee is also aware that distribution loss is a performance indicator of the distribution utility. So, the transmission losses can be segregated from the present practice of accounting Transmission and Distribution losses (T&D losses) together. **Hence, the Commission hereby directs that KSEB Ltd shall within 3 months from the date of this order take steps to measure and account the transmission losses in the SBU-T of KSEB Ltd separately by taking measurement of meter readings of meters installed at each substation of SBU-T.**

With the above observation, **the Commission approves the transmission losses estimated by the KSEB Ltd for the purpose of MYT period 2022-23 to 2026-27.**

(b) Distribution loss

6.35 Based on the energy input/demand, T&D loss and Transmission losses, the Distribution losses in the KSEB Ltd system during the MYT period is estimated by the Commission is given below.

Table 6.22
Distribution losses for the MYT period

No	Particulars	2022-23	2023-24	2024-25	2025-26	2026-27
1	Energy injected into the system (MU)	28024.76	28815.42	30025.21	31318.32	32737.44
2	Percentage of Transmission loss incl substation auxiliary consumption (%) (as per petition)	3.40%	3.30%	3.20%	3.10%	3.00%
3	Transmission losses = (1)*(2)	952.84	950.91	960.81	970.87	982.12
4	Energy input to SBU-D	27071.92	27864.51	29064.40	30347.45	31755.32
5	Energy sales approved	24880.38	25697.59	26896.58	28180.22	29588.10
6	Distribution losses in MU= (4)-(5)	2191.54	2166.92	2167.82	2167.23	2167.22
7	Distribution losses in percentage = (6)/((4)	8.10%	7.78%	7.46%	7.14%	6.82%

Collection Efficiency and AT&C loss

6.36 As per Regulation 75(2) of the Tariff Regulations, 2021, the distribution licensee is required to propose collection efficiency target. Regulation 75(3) of the said Regulations requires the Commission to approve the collection efficiency target based on the filing of the licensee and comments of the stakeholders. During the public hearings many consumers commented that KSEB should improve the collection efficiency and reduce the pending arrears. The Commission has considered the comments of the stakeholders. It is a fact that the accumulation of arrears will adversely impact the cash flow of KSEB Ltd. The accumulated arrears as on 31.12.2021 was Rs 2771.14 crore. KSEB Ltd submitted that, this increase is also due to the extension of time period granted to the consumers for the payment of electricity charges due to Covid-19 pandemic.

6.37 KSEB Ltd in their petition has proposed a collection efficiency of 99.00%. Accordingly, the AT&C loss at the collection efficiency of 99.00% estimated by the Commission is as below.

Table 6.23
AT&C loss approved for the MYT period 2022-23 to 2026-27

		2022-23	2023-24	2024-25	2025-26	2026-27
1	Energy Requirement / demand in MU	28024.76	28815.42	30025.21	31318.32	32737.44
2	Total energy sales projected in MU	24880.38	25697.59	26896.58	28180.22	29588.10
3	Collection efficiency (%)	99%	99%	99%	99%	99%
4	Units realised through tariff (2)x (3)	24631.58	25440.61	26627.61	27898.42	29292.22
5	Total loss (including T&D loss & collection efficiency)	3393.18	3374.80	3397.59	3419.90	3445.22
6	AT&C Loss = (5)/(1)	12.11%	11.71%	11.32%	10.92%	10.52%

Aggregate Revenue Requirement of SBU-D

Cost of Internal generation

6.38 As detailed in Chapter 4, internal generation from various sources and ARR of SBU-G approved for the MYT period is given below

Table : 6.24
Approved Cost of internal generation

Year	Hydro (net)	Solar (net)	Wind	Total	Net ARR (Transfer cost to SBU-D)
	(MU)	(MU)	(MU)	(MU)	(Rs.Cr)
2022-23	6972.72	60.47	1.14	7034.33	613.85
2023-24	7077.22	72.50	0.00	7149.72	690.45
2024-25	7379.75	78.07	0.00	7457.83	734.62
2025-26	7272.29	78.85	0.00	7351.13	767.00
2026-27	7314.72	78.65	0.00	7393.37	803.69

Intra state Transmission charges

6.39 The net ARR of SBU-T approved for the MYT period is given below.

Table 6.25
Net ARR of the SBU-T for the MYT period 2022-23 to 2026-27

Particulars	2022-23	2023-24	2024-25	2025-26	2026-27
	(Rs. Cr)	(Rs. Cr)	(Rs. Cr)	(Rs. Cr)	(Rs. Cr)
Aggregate Revenue Requirement	1362.76	1588.20	1763.72	1912.89	2046.52
Non tariff Income	52.25	54.86	57.60	60.48	63.51
Net ARR	1310.51	1533.34	1706.12	1852.41	1983.01

GFA Addition of SBU-D during the MYT period from 2022-23 to 2026-27

6.40 KSEB Ltd, along with the petition for approval of ARR, ERC and Tariff petition, has also filed the 'Capital Investment Plan' for the Strategic Business Units of Generation, Transmission and Distribution.

6.41 A preliminary appraisal of the capital investment proposed by SBU-D of KSEB Ltd for the MYT period from 2022-23 to 2026-27, the GFA addition proposed by KSEB Ltd and the GFA addition provisionally considered by the Commission for estimating the various components of ARR including interest on loan availed for capital investments, depreciation, R&M expenses are given in detail. Its summary is given below.

Table 6.26
GFA addition of SBU-D provisionally considered for estimating ARR

Sl No	Particulars	KSEB Petition						KSERC provisional for estimating ARR					
		2022-23	2023-24	2024-25	2025-26	2026-27	Total	2022-23	2023-24	2024-25	2025-26	2026-27	Total
		(Rs.Cr)	(Rs.Cr)	(Rs.Cr)	(Rs.Cr)	(Rs.Cr)	(Rs.Cr)	(Rs.Cr)	(Rs.Cr)	(Rs.Cr)	(Rs.Cr)	(Rs.Cr)	(Rs.Cr)
1	Gross GFA addition	912.83	878.53	3754.60	1522.04	1415.03	8483.03	683.15	667.68	3514.97	759.45	695.55	6320.81
2	Government grants/ consumer contribution etc	210.96	200.00	1886.65	200.00	200.00	2697.61	210.96	200.00	1886.65	200.00	200.00	2697.61
3	Net GFA addition eligible for loan and depreciation	701.87	678.53	1867.95	1322.04	1215.03	5785.42	472.19	467.68	1628.32	559.45	495.55	3623.20

Cost of Power Purchase

6.42 KSEB Ltd submitted that, the entire energy requirement of the state cannot be met from own generation alone. Balance requirement is met by purchasing power from different sources such as Central Generating Stations (CGS), Independent power producers (IPP) within as well as outside the State, traders and power exchanges. KSEB Ltd has entered into several long-term agreements or contracts which have been approved by the Hon Commission.

KSEB Ltd further submitted that, the forecast of energy generation is made based on the following assumptions.

- (1) Forecast of purchase of power from different sources based on normative availability;
- (2) fixed cost and variable charges payable to CGS and IPPS,
- (3) The transmission charges payable to the ISTS operator Central Transmission Utility of India Ltd (CTUIL).
- (4) Other supplementary claims will be claimed during the time of truing up based on actual figures.

6.43 KSEB Ltd further submitted that, the cost of power purchase is estimated based on the following.

- (i) The fixed charges of Central Generating Stations, IPPs such as Maithon Power Ltd, DVC Mejia, DVC RTPS is determined by CERC. Even though, various generating stations filed their tariff petitions based on the Tariff Regulation 2019, applicable for the control period 2019-24, Tariff orders of the stations RSTPS -Stage III and Maithon Power Ltd are issued as on 10/01/2022. As the final orders are yet to be issued, KSEB Ltd has been making payment to these stations at the tariff determined by the CERC for 2018-19 (the last year of the previous control period 2014-19).

However, for estimating the ARR, KSEB Ltd has adopted 95% of the fixed charges as per the Tariff petitions of CGS and IPPs for the period upto the FY 2023-24, on the basis that CERC had approved 95% of the fixed cost claimed in the case of RSTPS-III and Maithon Power Ltd. Further, for the remaining period of the control period from 2024-25 to 2026-27, an **annual escalation of 2% is provided for all old generating stations** and an annual reduction of 1% is provided for new stations.

- (ii) Cost claimed for installing Emission Control System (ECS).
KSEB Ltd submitted that, the Government of India, Ministry of Environment, Forest & Climate Change (MOEFCC) vide its Notification No. S.O. 3305(E) dated 07.12.2015 notified the Environment (Protection) Amendment Rules, 2015 (hereinafter called "the MOEFCC Notification") amending/introducing the standards for emission of environmental pollutants to be followed by all existing as well as future

thermal power plants. By the said Notification, all thermal power plants are mandatorily required to comply with the revised norms within the period of two years from the date of the said Notification. By the said amendment, MOEFCC has revised the norms as detailed hereunder:

Revised the emission parameters for particulate Matter for thermal power plants;

Introduced additional parameters/ limits for thermal power plants - Emission norms for Sulphur dioxide (SO₂), Oxides of Nitrogen (NO_x) & Mercury (Hg),

- (i) Amount of cooling water to be used per unit
- (ii) Directed all thermal plants with Once-Through Cooling (OTC) to install Cooling Tower (CT)

In order to comply with the revised norms, the thermal power plants is required to install ECS, which will result in-

- (a) Additional Capital expenditure because of installation of Emission Control system (ECS) required meeting the revised norms,
- (b) Increase in O & M expenses of the power station on account of installation of ECS to meet the revised norms
- (c) Increase in auxiliary consumption of the power station due to installation of ECS
- (d) Disruption in power generation during the installation phase of the above equipment
- (e) Issue of fixed cost recovery for shut down period

The implementation of emission control system in the existing and upcoming thermal power plants to curb SO_x emissions is expected to complete by December 2022.

The approximate hard cost of installation of emission control system (ECS) recommended by Central Electricity Authority was Rs 0.435 Cr per MW ie; approximately 62 paise per unit. Various generating stations have filed petitions for recovery of the same. The rate mentioned in the petitions is taken for computation of the impact of ECS in fixed charges and variable charges. The additional expenditure on account of installation of ECS is taken from 2023-24 to 2026-27.

- (iii) Additional expenditure on account of Fly ash transportation
KSEB Ltd further submitted that, MoEF & CC in exercise of Power under EP Act and EP rules issued fly ash notification mandating the utilization of Fly ash from coal & lignite based Thermal Power Plant. As per the notification TPPs were required to bear the cost of transportation of fly ash to user industry within a radius of 100 kilometers and cost for transportation of fly ash to the user industry beyond 100 kilometers and up to 300 Kilometers, shall be shared equally by the TPPs and the user. Further, the TPPs are required to bear the entire cost of transportation within a radius of 300 KM if ash is transported to the site of road construction projects under Pradhan Mantri Gramin Sadak Yojna and asset creation programs of the Government. The additional cost towards fly ash transportation is on account of amendment to the Notification dated 25.1.2016 issued by the Ministry of Environment and Forests,

Govt. of India and the expenditure is admissible under the Change in law in principle.

Government of India vide notification dated 22.09.2021 notifies that all Coal/lignite-based power plants needs to provide fly ash to the end users for all new commitments for supply of fly ash through a transparent bidding process, If after bidding/ auction some quantity of Fly Ash still remains un-utilized, it could be considered to be given free of cost on first come first served basis if the user agency is willing to bear transportation cost. If ash remains unutilized further, TPP shall bear the cost of transportation of Fly Ash to be provided free to eligible projects. The end users shall be obligated to source the fly ash from the nearest TPPs to reduce the cost of fly ash transportation. If the nearest TPP refuses to do so, the end user project shall approach Ministry of Power for appropriate directions. The transportation cost wherever required to be borne as per provisions of MOEF&CC notification by the power plants, shall be discovered on competitive bidding basis only. The fly ash should be offered to the end users on the competing demand basis in order to reduce the burden on the consumers.

An increase of 0.15 paise per unit is expected on account of the additional expenditure due to fly ash notification.

- (iv) Transmission charges are arrived based on the average of the actual transmission charges from April to October 2021.

Power Purchase from Central Generating Stations

6.44 Capacity allocation from Central Generating Stations (CGS).

The total allocated share of power from CGS for the State is 1757.24 MW. The details are given below.

Table: 6.27

Capacity allocation from Central Generating Stations for the control period

No	Station	Installed Capacity	Allocation (%)	Allocation (MW)
1	NTPC (RSTPS) Stage I & II	2100	11.67%	245.14
2	NTPC (RSTPS) Stage III	500	12.20%	61.02
3	TALCHER - II	2000	21.35%	427.03
4	NTPC Simhadri	1000	8.55%	85.50
5	NLCII - Stage I	630	10.00%	63.02
6	NLCII - Stage II	840	10.72%	90.01
7	NLC - I Exp	420	16.22%	68.12
8	NLC II Exp	500	16.22%	81.10
9	MAPS	440	5.23%	23.02
10	KAIGA stage-1 &2	880	8.29%	72.99
11	Kudamkulam stage-1&2	2000	13.68%	273.53
12	Vallur STPS	1500	3.33%	49.98
13	NTPL	1000	7.25%	72.53
14	NTPC-Kudgi TPS Stg-I	2400	4.66%	111.84
15	NNTPP	1000	3.24%	32.40
	Total	17210		1757.23

KSEB Ltd estimated the energy availability from the CGS on the assumption that the entire capacity shall be continue during the MYT period from 2022-23 to 2026-27.

Energy availability from Central Generating Stations

6.45 The energy availability from CGS is estimated based on the operational norms specified in CERC (Terms and Conditions of Tariff) Regulations, 2019. The Interstate Transmission Losses (ISTS) in the PGCIL lines are calculated on the basis of the average transmission losses of 3.43%, for the period from April-September during FY 2020-21.

The energy availability from Central Generating stations for the control period is as given below:

Table : 6.28

Energy availability projection by KSEB Ltd from CGS for **FY 22-23 to FY 26-27**

No.	Station	Allocation (MW)	Aux Cons (%)	Target PLF	Ex-bus Energy (MU)	ISTS losses (MU)	Net Energy (MU)
1	RSPTS Stage I & II	245	7.04%	85%	1696.81	58.2	1638.61
2	RSTPS Stage III	61	6.25%	85%	425.93	14.61	411.32
3	TALCHER - Stage II	427	6.25%	85%	2980.96	102.25	2878.71
4	Simhadri Exp	86	5.75%	85%	600.03	20.58	579.45
5	NLC-II- Stage-1	63	10.00%	85%	422.33	14.49	407.84
6	NLC-II- Stage-2	90	10.00%	85%	603.17	20.69	582.48
7	NLC- Exp- Stage-1	68	8.50%	85%	464.13	15.92	448.22
8	NLC - II Exp	81	10.00%	80%	511.51	17.54	493.97
9	MAPS	23	10.50%	68%	122.72	4.21	118.51
10	KAIGA Stg I & II	73	10.50%	68%	389.17	13.35	375.82
11	Kudamkulam I & II	274	7.50%	68%	1507.12	51.69	1455.43
12	Vallur JV with	50	5.75%	85%	350.72	12.03	338.69
13	NTPL(Tuticorin JV)	73	6.25%	85%	506.33	17.37	488.96
14	Kudgi Unit I II & III	112	6.25%	85%	780.71	26.78	753.93
15	NNTPP	32	6.25%	85%	226.17	7.76	218.41
	Total	1757			11587.82	397.46	11190.36

Estimation of fixed charges of CGS for the MYT period

6.46 The station wise fixed charges considered and the additional expenditure on account of installation of emission control system and fly ash transportation is given below.

Table 6.29
Fixed charges of CGS considered for estimating fixed charges during the MYT period

No.	Station	Fixed charge (FC) claimed in the petition		Additional expenditure on account of ECS on		Additional expenditure on account of Fly ash notification
		FY-23	FY-24	FC	EC	FC
		Rs Cr	(Rs Cr)	(Rs/unit)	(Rs/unit)	(Rs/unit)
1	RSPTS Stage I & II	1126.19	1251.71	0.18	0.03	0.15
2	RSTPS Stage III	290.82	299.83	0.25	0.07	0.15
3	TALCHER - Stage II	1243.29	1303.57	0.34	0.11	0.15
4	Simhadri Exp	1061.13	1050.67	0.19	0.06	0.15
5	NLC-II- Stage-1	384.99	393.96	0.37	0.14	0.15
6	NLC-II- Stage-2	505.92	518.86	0.41	0.13	0.15
7	NLC- Exp- Stage-1	314.77	312.46	0.33	0.13	0.15
9	NLC - II Exp	726.41	719.82	0.33	0.13	0.15
10	Vallur JV with	1847.07	1834.3	0.34	0.11	0.15
11	NTPL(Tuticorin JV)	1242.2	1222.72	0.27	0.08	0.15
12	Kudgi Unit I II & III	2909.5	2868.54	0.22	0.07	0.15
13	NNTPP	1575.87	1557.04	0.45	0.15	0.15

Note

1. 95% of the FC claimed in the petition filed before CERC for 2022-23 & 2023-24
2. 2% escalation in FC for old stations and 1% reduction for remaining period of the control period
3. Hard cost for installing emission control system (ECS)- Rs 0.435 crore/MW
4. Addl cost for disposal of fly ash -Rs 0.15/unit

6.47 The fixed charges estimated for the CGS for the MYT period is given below.

Table 6.30
Fixed charges of CGS for the MYT period

No.	Station	Energy availability (MU)	Fixed charges (Rs Crores)				
			2022-23	2023-24	2024-25	2025-26	2026-27
1	RSPTS Stage I & II	1696.81	124.89	138.81	141.59	144.42	147.31
2	RSTPS Stage III	425.93	35.49	36.59	37.32	38.07	38.83
3	TALCHER - Stage II	2980.96	252.19	264.42	269.71	275.10	280.60
4	Simhadri Exp	600.03	86.19	85.34	84.49	83.64	82.81
5	NLC-II- Stage-1	422.33	36.59	37.44	38.19	38.95	39.73
6	NLC-II- Stage-2	603.17	51.50	52.82	53.87	54.95	56.05
7	NLC- Exp- Stage-1	464.13	48.50	48.15	47.66	47.19	46.72
8	NLC - II Exp	511.51	111.93	110.92	109.81	108.71	107.62
9	Vallur JV with	350.72	58.46	58.06	57.48	56.90	56.33
10	NTPL(Tuticorin JV)	506.33	85.60	84.25	83.41	82.58	81.75
11	Kudgi Unit I II & III	780.71	128.80	126.99	125.72	124.46	123.22
12	NNTPP	226.17	48.51	47.93	47.45	46.97	46.50
	Sub total		1068.65	1091.70	1096.69	1101.94	1107.47

6.48 The year wise details of the additional fixed charges claimed due to the installation of Emission Control System is given below.

Table 6.31

Additional Fixed charges claimed for the installation of ECS for the MYT period

No.	Station	Energy availability (MU)	Rate	Additional expenditure due to Installation of ECS (Rs Cr)				
			Rs/ unit	FY-23	FY-24	FY-25	FY-26	FY-27
1	RSPTS Stage I & II	1696.81	0.18		30.97	30.97	30.97	30.97
2	RSTPS Stage III	425.93	0.25		10.85	10.85	10.85	10.85
3	TALCHER - Stage II	2980.96	0.34		100.61	100.61	100.61	100.61
4	Simhadri Exp	600.03	0.19		11.46	11.46	11.46	11.46
5	NLC-II- Stage-1	422.33	0.37		15.58	15.58	15.58	15.58
6	NLC-II- Stage-2	603.17	0.41		24.43	24.43	24.43	24.43
7	NLC- Exp- Stage-1	464.13	0.33		15.27	15.27	15.27	15.27
8	NLC - II Exp	511.51	0.33		16.83	16.83	16.83	16.83
9	Vallur JV with	350.72	0.34		11.84	11.84	11.84	11.84
10	NTPL(Tuticorin JV)	506.33	0.27		13.42	13.42	13.42	13.42
11	Kudgi Unit I II & III	780.71	0.22		17.31	17.31	17.31	17.31
12	NNTPP	226.17	0.45		10.18	10.18	10.18	10.18
					278.74	278.74	278.74	278.74

6.49 The additional expenditure claimed due to fly ash transportation is given below.

Table 6.32

Additional fixed charges claimed due to fly ash transportation

No.	Station	Energy availability (MU)	Additional expenditure due to Fly ash transportation @ 15 paise per unit				
			2022-23	2023-24	2024-25	2025-26	2026-27
1	RSPTS Stage I & II	1696.81	25.45	25.45	25.45	25.45	25.45
2	RSTPS Stage III	425.93	6.39	6.39	6.39	6.39	6.39
3	TALCHER - Stage II	2980.96	44.71	44.71	44.71	44.71	44.71
4	Simhadri Exp	600.03	9.00	9.00	9.00	9.00	9.00
5	NLC-II- Stage-1	422.33	6.33	6.33	6.33	6.33	6.33
6	NLC-II- Stage-2	603.17	9.05	9.05	9.05	9.05	9.05
7	NLC- Exp- Stage-1	464.13	6.96	6.96	6.96	6.96	6.96
8	NLC - II Exp	511.51	7.67	7.67	7.67	7.67	7.67
9	Vallur JV with	350.72	5.26	5.26	5.26	5.26	5.26
10	NTPL(Tuticorin JV)	506.33	7.59	7.59	7.59	7.59	7.59
11	Kudgi Unit I II & III	780.71	11.71	11.71	11.71	11.71	11.71
12	NNTPP	226.17	3.39	3.39	3.39	3.39	3.39
	Sub Total		143.53	143.53	143.53	143.53	143.53

6.50 Thus the total fixed charges of CGS claimed by KSEB Ltd is given below.

Table 6.33
Total fixed charges claimed by KSEB Ltd for the MYT period including ECS and Fly ash transportation

No.	Station	Energy availability	Total fixed charges(Rs Cr)				
		(MU)	FY-23	FY-24	FY-25	FY-26	FY-27
1	RSPTS Stage I & II	1696.81	150.34	195.23	198.01	200.84	203.73
2	RSTPS Stage III	425.93	41.88	53.83	54.56	55.31	56.07
3	TALCHER - Stage II	2980.96	296.90	409.74	415.03	420.42	425.92
4	Simhadri Exp	600.03	95.19	105.80	104.95	104.10	103.27
5	NLC-II- Stage-1	422.33	42.92	59.36	60.11	60.87	61.65
6	NLC-II- Stage-2	603.17	60.55	86.29	87.35	88.43	89.52
7	NLC- Exp- Stage-1	464.13	55.47	70.38	69.90	69.42	68.95
8	NLC - II Exp	511.51	119.61	135.42	134.31	133.21	132.12
9	Vallur JV with	350.72	63.72	75.15	74.57	74.00	73.43
10	NTPL(Tuticorin JV)	506.33	93.19	105.27	104.43	103.59	102.77
11	Kudgi Unit I II & III	780.71	140.51	156.01	154.74	153.48	152.24
12	NNTPP	226.17	51.90	61.50	61.02	60.54	60.07
	Total	9568.81	1212.18	1513.98	1518.96	1524.22	1529.74

Estimation of Energy Charges for the CGS

6.51 KSEB Ltd submitted that, the variable charges for FY 2022-23 are estimated by escalating the average of variable charges of respective generators for the first half of the FY 2021-22 by 2 %. The variable charges of remaining years are estimated by providing an escalation of 2% annually over the variable charges of preceding year. The impact of additional expenditure due to installation of ECS is also included over and above the so arrived variable charges.

Table 6.34
Variable charge per unit considered for estimating the VC of CGS for the MYT period

No.	Station	Energy availability	Variable charges (Rs per unit)					Additional expenditure due to Installation of ECS (Rs/unit) 2023-24 onwards
		(MU)	2022-23	2023-24	2024-25	2025-26	2026-27	
1	RSPTS Stage I & II	1696.81	2.78	2.83	2.89	2.95	3.01	0.026
2	RSTPS Stage III	425.93	2.61	2.66	2.72	2.77	2.83	0.069
3	TALCHER - Stage II	2980.96	1.87	1.9	1.94	1.98	2.02	0.113
4	Simhadri Exp	600.03	2.92	2.98	3.04	3.1	3.16	0.061
5	NLC-II- Stage-1	422.33	2.7	2.75	2.81	2.86	2.92	0.136
6	NLC-II- Stage-2	603.17	2.7	2.75	2.81	2.87	2.92	0.133
7	NLC- Exp- Stage-1	464.13	2.46	2.5	2.55	2.61	2.66	0.125

No.	Station	Energy availability	Variable charges (Rs per unit)					Additional expenditure due to Installation of ECS (Rs/unit) 2023-24 onwards
		(MU)	2022-23	2023-24	2024-25	2025-26	2026-27	
8	NLC - II Exp	511.51	2.6	2.65	2.71	2.76	2.82	0.125
9	MAPS	122.72	2.57	2.62	2.68	2.73	2.78	
10	KAIGA Stg I	389.17	3.52	3.59	3.66	3.74	3.81	
11	Kudankulam	1507.12	4.17	4.26	4.34	4.43	4.52	
12	Vallur JV with	350.72	3.19	3.26	3.32	3.39	3.46	0.113
13	NTPL(Tuticorin JV)	506.33	3.07	3.13	3.19	3.25	3.32	0.078
14	Kudgi Unit I II & III	780.71	3.56	3.64	3.71	3.78	3.86	0.074
15	NNTPP	226.17	2.24	2.28	2.33	2.37	2.42	0.15

6.52 The total variable cost claimed by KSEB Ltd for the MYT period from 2022-23 to 2026-27 is given below.

Table 6.35
Total variable cost of CGS claimed for CGS during the MYT period

No.	Station	Energy availability	Total Variable charges (Rs Crores)				
		(MU)	2022-23	2023-24	2024-25	2025-26	2026-27
1	RSPTS Stage I & II	1696.81	471.30	485.19	494.81	504.61	514.62
2	RSTPS Stage III	425.93	111.22	116.37	118.64	120.96	123.32
3	TALCHER - Stage II	2980.96	556.28	600.94	612.29	623.86	635.67
4	Simhadri Exp	600.03	175.13	182.29	185.86	189.50	193.22
5	NLC-II- Stage-1	422.33	113.96	121.98	124.30	126.68	129.09
6	NLC-II- Stage-2	603.17	162.87	174.15	177.47	180.86	184.32
7	NLC- Exp- Stage-1	464.13	113.96	122.04	124.36	126.73	129.15
8	NLC - II Exp	511.51	133.04	142.10	144.81	147.58	150.40
9	MAPS	122.72	31.56	32.19	32.84	33.49	34.16
10	KAIGA	389.17	136.97	139.71	142.51	145.36	148.26
11	Kudankulam	1507.12	628.97	641.55	654.38	667.47	680.82
12	Vallur JV with	350.72	112.02	118.21	120.50	122.83	125.20
13	NTPL(Tuticorin JV)	506.33	155.24	162.29	165.46	168.69	171.98
14	Kudgi Unit I II & III	780.71	278.29	289.64	295.32	301.11	307.02
15	NNTPP	226.17	50.55	54.95	55.99	57.04	58.11
	Total	11587.82	3231.37	3383.62	3449.54	3516.78	3585.36

6.53 Total power cost claimed for CGS for the MYT period is given below.

Table 6.36
Total cost of power purchase claimed for the MYT period

No.	Station	Energy availability	Total Power Purchase cost from CGS for the control period (Rs Crores)				
		(MU)	2022-23	2023-24	2024-25	2025-26	2026-27
1	RSPTS Stage I & II	1696.81	621.64	680.42	692.81	705.45	718.34
2	RSTPS Stage III	425.93	153.10	170.20	173.20	176.27	179.39
3	TALCHER - Stage II	2980.96	853.18	1010.68	1027.31	1044.28	1061.59
4	Simhadri Exp	600.03	270.32	288.09	290.81	293.61	296.49
5	NLC-II- Stage-1	422.33	156.88	181.34	184.41	187.55	190.74
6	NLC-II- Stage-2	603.17	223.42	260.44	264.82	269.29	273.84
7	NLC- Exp- Stage-1	464.13	169.42	192.42	194.26	196.15	198.10
8	NLC - II Exp	511.51	252.65	277.52	279.12	280.79	282.53
9	MAPS	122.72	31.56	32.19	32.84	33.49	34.16
10	KAIGA Stg I	389.17	136.97	139.71	142.51	145.36	148.26
11	Kudankulam	1507.12	628.97	641.55	654.38	667.47	680.82
12	Vallur JV with	350.72	175.75	193.37	195.07	196.83	198.63
13	NTPL(Tuticorin JV)	506.33	248.43	267.56	269.89	272.28	274.75
14	Kudgi Unit I II & III	780.71	418.80	445.65	450.06	454.59	459.26
15	NNTPP	226.17	102.45	116.45	117.00	117.58	118.18
	Total	11587.82	4443.55	4897.60	4968.50	5040.99	5115.10

Comments of the stakeholders

6.54 The HT&EHT Association submitted that, the latest actual fixed charges may be considered without any escalation. The cost related to installation of ECS may not be considered at this stage. The cost related to fly ash utilisation may be considered. The energy charges as per the latest invoices may be adopted without any escalation for estimating the cost of power purchase of CGS.

Analysis and Decision of the Commission

6.55 The Commission has examined in detail the energy availability, fixed and variable cost estimated by KSEB Ltd from CGS during the current MYT period for the purpose of estimating the ARR.

6.56 The Commission generally approves the allocation and energy availability from CGS as proposed by KSEB Ltd. However, in the previous MYT period, KSEB Ltd has started scheduling power from CGS whose schedule was not approved in the previous MYT Order dated 08.07.2019. One of such example is the purchase of power from New Neyveli Thermal Power Station (NNTPS). KSEB Ltd during deliberations of this subject issue submitted that, Tariff Regulations 2014, and Tariff Regulations 2018, which stipulate that all the PPAs entered into after the notifications of these Tariff Regulations shall be only be done with the prior approval of this Commission. Since the PPA of the NNTPS was signed

on 10.10.2010, much before the notifications of the Tariff Regulations, 2014 and Tariff Regulations, 2018, KSEB Ltd was not sought separate approval for scheduling power from this station after its COD. KSEB Ltd further submitted, all the PPAs signed after notifications of the Tariff Regulations 2018 shall be done only with the prior approval of the Hon'ble Commission.

The Commission has examined the submission of KSEB Ltd regarding the power purchase from NNTPS since December 2019. The Commission also noted that, though the PPA was signed on 10.10.2010, the COD of the 1st unit was only on 28.12.2019, i.e after 9 years and 58 days from the date of signing PPA. It is also a fact that, the power situation in the country and the overall power situation in the State has also considerably changed since then. The maturity of the short-term power market including power exchanges and also the electricity generation RE sources such as solar and wind has resulted in overall reduction in cost of power purchase. Hence, KSEB Ltd is required to exercise the choice of whether to continue or not to continue with the PPA at the time of COD of such delayed projects. The Commission specifically points out that such large time overruns completely alter the economic viability of power generated from such plants due to cost overrun. Hence, a project which is viable at the time of sanctioning of the project may not be so after such larger time gaps. The Commission also states that, any contract entered into between the generator and KSEB Ltd is mutually binding and time is the essence of any contract. Hence, if COD and provisional tariff mentioned in the PPA is substantially altered, there is no obligation on the part of KSEB Ltd to purchase such power due to non-honouring of the generator's commitments.

The Commission further directs KSEB Ltd that mere allocation of power by the Ministry of Power does not make it obligatory to purchase such power. In fact, all power purchase have to be done only after it is approved by the Appropriate Commission as mandated in Section 86(1)(b) of the EA-2003.

Hence the Commission hereby direct that, KSEB Ltd shall obtain the fresh approvals for power purchases from CGS whose COD was delayed even though the PPA of such projects are signed earlier. If KSEB Ltd fail to get the fresh approval for such PPAs, the Commission shall dis-allow cost of such power purchase at the time of Truing up and treat such purchase as unauthorised.

With the above observation, the Commission hereby approves the energy schedule estimated by KSEB Ltd for the MYT period from 2022-23 to 2026-27.

- 6.57 The Commission has also examined in detail the fixed cost liability estimated from CGS for the MYT period. KSEB Ltd claimed that, the fixed cost for most of the CGS is yet to be approved by the CERC for the Tariff period 2019-20 to 2023-23. Hence KSEB Ltd estimated the fixed cost of CGS whose tariff is not

yet approved @95% of the fixed claimed by the generators in their tariff petitions for the years 2022-23 to 2023-24, on the assumption that CERC may approve 95% of the fixed cost claimed while issuing the final orders. For the next control period of CERC Tariff Regulations, KSEB Ltd has provided 2% escalation on fixed cost of 2023-24 for old stations. However, in the case of new stations, KSEB Ltd has provided a reduction in fixed cost of 1% over the same for the year 2023-24.

KSEB Ltd has also claimed additional fixed cost for providing Emission Control System as per the notifications of MOEFCC dated 07.12.2015, and also the cost towards fly ash transportation. The additional impact of Fixed cost on installation of ECS is. Similarly, the impact of ECS in variable cost in the range of Rs 0.03/unit to Rs 0.15/unit. The additional expense claimed towards fly ash transportation is Rs 0.15/unit.

The Commission notes that, the above proposed rates are very much on the higher side and will adversely impact electricity prices within the State. Hence, the Commission hereby direct KSEB in collaboration with other distribution licensees to make a strong representation before CERC so that only the most optimum expenditure is approved and incorporated in the Tariff. However, in the absence of other reliable information and details for estimating the fixed cost of CGS, the Commission is constrained to adopt the fixed cost as claimed by KSEB Ltd. However, the Commission would also like to place on record that, it shall at the time of Truing up assess the actual fixed cost as per the Tariff orders issued by the CERC and only such expenditure be allowed. *With this observation, the Commission hereby approves the Fixed cost claimed by KSEB Ltd.*

- 6.58 The Commission also examined in detail the variable cost claimed by KSEB Ltd for the MYT period. KSEB Ltd has adopted the average variable cost of CGS from April 2021 to October 2021 as the base. For estimating the variable cost from 2022-23 onwards, KSEB Ltd has provided 2% escalation annually on the base year variable cost. KSEB Ltd has also claimed additional variable cost in the range of Rs 0.026/unit to Rs 0.136/unit as part of installation of ECS. The variable cost provisionally approved by the Commission for estimating the cost of power purchase from CGS is detailed below.

Table 6.37
Variable charges provisionally approved for the MYT period

No.	Station	Variable charges (Rs per unit)					Additional expenditure due to Installation of ECS (Rs/unit) 2023-24 onwards
	Variable charges considered for	2022-23	2023-24	2024-25	2025-26	2026-27	
1	RSPTS Stage I & II	2.78	2.83	2.89	2.95	3.01	0.03
2	RSTPS Stage III	2.61	2.66	2.72	2.77	2.83	0.07

No.	Station	Variable charges (Rs per unit)					Additional expenditure due to Installation of ECS (Rs/unit) 2023-24 onwards
	Variable charges considered for	2022-23	2023-24	2024-25	2025-26	2026-27	
3	TALCHER - Stage II	1.87	1.90	1.94	1.98	2.02	0.11
4	Simhadri Exp	2.92	2.98	3.04	3.10	3.16	0.06
5	NLC-II- Stage-1	2.70	2.75	2.81	2.86	2.92	0.14
6	NLC-II- Stage-2	2.70	2.75	2.81	2.87	2.92	0.13
7	NLC- Exp- Stage-1	2.46	2.50	2.55	2.61	2.66	0.13
8	NLC - II Exp	2.60	2.65	2.71	2.76	2.82	0.13
9	MAPS	2.57	2.62	2.68	2.73	2.78	
10	KAIGA Stg I	3.52	3.59	3.66	3.74	3.81	
11	Kudankulam	4.17	4.26	4.34	4.43	4.52	
12	Vallur JV with	3.19	3.26	3.32	3.39	3.46	0.11
13	NTPL(Tuticorin JV)	3.07	3.13	3.19	3.25	3.32	0.08
14	Kudgi Unit I II & III	3.56	3.64	3.71	3.78	3.86	0.07
15	NNTPP	2.24	2.28	2.33	2.37	2.42	0.15

6.59 The summary of the cost of power purchase from CGS approved for the MYT period from 2022-23 to 2026-27 is given below.

Table 6.38

Summary of the cost of power purchase from CGS approved for the MYT period from 2022-23 to 2026-27

No.	Station	Capacity allocation	Energy availability at exbus	Energy availability at Kerala periphery	Total Power Purchase cost from CGS for the control period (Rs Crores) 9provisional)				
		(MW)	(MU)	(MU)	2022-23	2023-24	2024-25	2025-26	2026-27
1	RSPTS Stage I & II	245.14	1696.81	1638.61	621.64	680.42	692.81	705.45	718.34
2	RSTPS Stage III	61.02	425.93	411.32	153.10	170.20	173.20	176.27	179.39
3	TALCHER - Stage II	427.03	2980.96	2878.71	853.18	1010.68	1027.31	1044.28	1061.59
4	Simhadri Exp	85.50	600.03	579.45	270.32	288.09	290.81	293.61	296.49
5	NLC-II- Stage-1	63.02	422.33	407.84	156.88	181.34	184.41	187.55	190.74
6	NLC-II- Stage-2	90.01	603.17	582.48	223.42	260.44	264.82	269.29	273.84
7	NLC- Exp- Stage-1	68.12	464.13	448.22	169.42	192.42	194.26	196.15	198.10
8	NLC - II Exp	81.10	511.51	493.97	252.65	277.52	279.12	280.79	282.53
9	MAPS	23.02	122.72	118.51	31.56	32.19	32.84	33.49	34.16
10	KAIGA Stg I&2	72.99	389.17	375.82	136.97	139.71	142.51	145.36	148.26
11	Kudankulam 1&2	273.53	1507.12	1455.43	628.97	641.55	654.38	667.47	680.82
12	Vallur JV with	49.98	350.72	338.69	175.75	193.37	195.07	196.83	198.63
13	NTPL(Tuticorin JV)	72.53	506.33	488.96	248.43	267.56	269.89	272.28	274.75
14	Kudgi Unit I II & III	111.84	780.71	753.93	418.80	445.65	450.06	454.59	459.26
15	NNTPP	32.40	226.17	218.41	102.45	116.45	117.00	117.58	118.18
	Total	1757.23	11587.81	11190.35	4443.54	4897.59	4968.49	5040.99	5115.08

Power purchase from Maithon and DVC stations whose tariff is determined by CERC

6.60 The contracted capacity and energy availability from Maithon and DVC stations are given in the Table below.

Table 6.39
Contracted capacity and energy availability from Maithon and DVC stations

No	Trader/Source	contracted capacity (MW)	Auxiliary consumption %	LTA approved capacity (MW)	PLF	Ex-bus Energy (MU)	Energy at periphery (MU)
					(%)		
1	Maithon power limited	150	6.250	139.00	85%	1034.96	999.46
2	Maithon power limited	150	6.250	139.00	85%	1034.96	999.46
3	DVC-Mejia TPS	100	5.250	94.75	85%	705.51	681.31
4	DVC-Reghunathpur TPS	50	5.250	46.75	85%	348.06	336.12
	Total	450		419.50		3123.49	3016.35

6.61 KSEB Ltd further submitted that, the tariff of M/s Maithon Power Ltd and DVC stations are determined by CERC. The fixed charges approved by the CERC vide the tariff order dated 08.01.2022 is adopted for estimating the fixed charges of Maithon power stations for the years 2022-23 and 2023-24. The fixed charges for the remaining years of the MYT period from 2024-25, 2025-26 and 2026-27 is estimated by providing 1% reduction on fixed charges approved for the year 2023-24. The impact of ECS also included over and above the fixed charges for the year 2023-24. The cost for fly as transportation also considered.

6.62 The tariff orders of DVC stations for the period from 2019-20 to 2023-24 is yet to approved by CERC. Hence the fixed charges for DVC stations are estimated by adopting 95% of the fixed charges claimed in the tariff petitions filed before the CERC for the year 2022-23 and 2023-24. The fixed charges for the remaining period of the MYT period from 2024-25 to 2026-2027 is estimated by providing 1% reduction on fixed charges of the year 2023-24. The impact of ECS also included over and above the fixed charges for the year 2023-24. The cost for fly ash transportation also considered.

Fixed charges claimed

6.63 The base fixed charges considered for estimating the fixed cost for the contracted power from Maithon and DVC stations are given below.

Table 6.40
KSEB LTD petition- Base fixed charges adopted for estimating the fixed charge for the MYT period

No.	Station	Installed capacity (MW)	Fixed charge claimed in the petition/approved in Tariff order		Additional expenditure estimated on account of ECS on	
			2022-23	2023-24	FC (Rs/unit)	EC (Rs/unit)
			Rs Cr			
1	Maithon Power Ltd-Bid I	1050	1098.63	1085.9	0.45	0.15
2	Maithon Power Ltd-Bid II		1098.63	1085.9	0.45	0.15
3	DVC Mejia	1000	1209.92	1331.74	0.34	0.11
4	DVC RTPS	1200	1571.73	1538.16	0.23	0.09

6.64 The estimate of fixed charges claimed by KSEB Ltd for Maithon and DVC stations are given below.

Table 6.41
KSEB Ltd petition- Fixed charges estimate of Maithon and DVC for the MYT period

Station	Energy availability	Fixed charges (Rs Crores)				
	(MU)	2022-23	2023-24	2024-25	2025-26	2026-27
Maithon Power Ltd-Bid I	1034.96	155.13	153.47	151.93	150.41	148.91
Maithon Power Ltd-Bid II	1034.96	155.13	153.47	151.93	150.41	148.91
DVC Mejia	705.51	108.89	119.86	118.66	117.47	116.30
DVC RTPS	348.06	58.94	57.68	57.10	56.53	55.97
Sub Total	3123.49	478.09	484.47	479.62	474.83	470.08

6.65 Estimate of the additional fixed charges claimed for installing the ECS system is given below.

Table 6.42
Additional Fixed charges claimed for installing ECS system at Maithon and DVC for the MYT period

Station	Energy availability	Additional expenditure due to Installation of ECS (Rs Cr)					
	(MU)	Rs per unit	2022-23	2023-24	2024-25	2025-26	2026-27
Maithon Power Ltd-Bid I	1034.96	0.45	0	46.57	46.57	46.57	46.57
Maithon Power Ltd-Bid II	1034.96	0.45	0	46.57	46.57	46.57	46.57
DVC Mejia	705.51	0.34	0	23.81	23.81	23.81	23.81
DVC RTPS	348.06	0.23	0	8.05	8.05	8.05	8.05
Sub Total				125.01	125.01	125.01	125.01

6.66 The estimate of the total fixed charges for the Maithon and DVC stations for the MYT period from 2022-23 to 2026-27 is given below.

Table 6.43
Total Fixed charges claimed for Maithon and DVC for the MYT period from 2022-23 to 2026-27

Station	Energy availability	Total fixed charges (Rs Cr)				
	(MU)	2022-23	2023-24	2024-25	2025-26	2026-27
Maithon Power Ltd-Bid I	1034.96	155.13	200.04	198.5	196.98	195.48
Maithon Power Ltd-Bid II	1034.96	155.13	200.04	198.5	196.98	195.48
DVC Mejia	705.51	108.89	143.67	142.47	141.28	140.11
DVC RTPS	348.06	58.94	65.74	65.16	64.59	64.02
Sub Total	3123.49	478.09	609.48	604.64	599.84	595.09

Variable charges claimed

6.67 KSEB Ltd submitted that, the average of the variable cost of Maithon and DVC stations during the first half of the year 2021-22 is used as the base. The variable cost for the MYT period from 2022-23 to 2026-27 is arrived by escalating the base variable cost @2% annually. The additional variable cost due to the installation of the ECS system also considered separately.

6.68 The variable charges considered for estimating the variable cost of Maithon and DVC stations for the MYT period from 2022-23 to 2026-27 is given below.

Table 6.44
Variable cost per unit considered for estimating variable charges

Station	Energy availability (MU)	Variable charges (Rs /unit)					Additional expenditure on account of ECS (Rs/unit)
		2022-23	2023-24	2024-25	2025-26	2026-27	
Maithon Power Ltd-Bid I	1034.96	2.54	2.59	2.64	2.70	2.75	0.15
Maithon Power Ltd-Bid II	1034.96	2.54	2.59	2.64	2.70	2.75	0.15
DVC Mejia	705.51	2.93	2.99	3.05	3.11	3.17	0.11
DVC RTPS	348.06	3.14	3.20	3.27	3.33	3.40	0.09

6.69 The estimate of the total variable charges of Maithon and DVC stations for the MYT period from 2022-23 to 2026-27 is given below.

Table 6.45
KSEB Ltd petition- Estimate of the Variable charges for the MYT period

Station	Energy availability	Estimate of the total variable cost (Rs.Cr)				
	(MU)	2022-23	2023-24	2024-25	2025-26	2026-27
Maithon Power Ltd-Bid I	1034.96	262.86	283.64	286.32	289.03	291.76
Maithon Power Ltd-Bid II	1034.96	262.86	283.64	286.32	289.03	291.76
DVC Mejia	705.51	206.82	218.89	223.11	227.41	231.8
DVC RTPS	348.06	109.23	114.71	116.94	119.21	121.53
Sub Total	3123.49	841.77	900.88	912.69	924.68	936.86

Total cost (fixed charge and variable charge)

6.70 The estimate of the total cost of power purchase including fixed cost and variable cost is given below.

Table 6.46
KSEB Ltd petition- Estimate of the total cost of power purchase for the MYT period

Station	Energy availability at exbus	Energy availability at KSEB bus	Total cost of Power purchase (Rs. Cr)				
	(MU)	(MU)	2022-23	2023-24	2024-25	2025-26	2026-27
Maithon Power Ltd-Bid I	1034.96	999.46	417.99	483.68	484.82	486.01	487.24
Maithon Power Ltd-Bid II	1034.96	999.46	417.99	483.68	484.82	486.01	487.24
DVC Mejia	705.51	681.31	315.71	362.56	365.58	368.69	371.91
DVC RTPS	348.06	336.12	168.17	180.45	182.10	183.80	185.55
Sub Total	3123.49		1319.86	1510.37	1517.32	1524.51	1531.94

Analysis and Decisions of the Commission

6.71 The Commission approved the power purchase from Maithon and DVC Stations as per the approvals given below.

Table 6.47
Details of power purchase approvals given for Maithon and DVC stations

Source	Contracted Capacity (MW)	Date of approval	Period of contract	Approved Tariff
Maithon Power	150	No.2158/C.Engg/Maithon/2013/1398 dated 26.12.2013	25 years	Approved under Section 62 of Electricity Act 2003
Maithon Power	150	Order dated 08 - 07- 2015	25 years	
DVC Mejia	100	No.500/C.Engg/DVC/2014/348 dated 28.03.2014 & Order dated 21.01.2016	25 years	
DVC RTPS	50		25 years	

6.72 The tariff of these stations are being determined by the Central Electricity Regulatory Commission, as per the Tariff Regulations notified by that Commission from time to time. KSEB Ltd estimated the energy availability from these stations as per the norms specified in the CERC (Terms and Conditions for Determination of Tariff) Regulations, 2019.

6.73 The Commission further notes that, CERC approved the tariff of Maithon stations for the period from 2019-20 to 2023-24, however the tariff of DVC stations yet to be announced. Hence KSEB Ltd has claimed fixed charges of DVC stations for the years 2022-23 and 2023-24 at 95% of the fixed cost claimed by DVC in their tariff petitions filed before the CERC. The fixed charge rate for the years 2024-25, 2025-26 and 2026-27 was estimated by providing a reduction of 1% on the fixed cost claimed for the year 2023-24. KSEB Ltd has also provided provisions for additional cost for installing Emission Control

System. Since the fly ash transportation is included in their tariff petitions, KSEB Ltd has not claimed the same separately.

- 6.74 The variable charges of Maithon and DVC stations for the base year 2021-22 is estimated at the average of the actual variable charges during the first half of the year 2021-22. For the subsequent years from 2022-23 to 2026-27, KSEB Ltd has provided 2% escalation on the variable cost of the base year.

The variable cost provisionally approved for the purposes of ARR for the MYT period from 2022-23 to 2026-27 is given below.

Table 6.48
KSEB petition- Variable cost provisionally approved for Maithon and DVC stations

Station	Variable charges (Rs /unit)					Additional expenditure on account of ECS (Rs/unit)
	2022-23	2023-24	2024-25	2025-26	2026-27	
Maithon Power Ltd-Bid I	2.54	2.59	2.64	2.70	2.75	0.15
Maithon Power Ltd-Bid II	2.54	2.59	2.64	2.70	2.75	0.15
DVC Mejia	2.93	2.99	3.05	3.11	3.17	0.11
DVC RTPS	3.14	3.20	3.27	3.33	3.40	0.09

- 6.75 The Commission has examined the estimate of the cost of power purchase of Maithon and DVC stations in detail. The present exercise of estimate is only for the purposes of ARR. The Commission also compared the estimate of the fixed cost and variable cost with respect to the latest orders on Truing up for the year 2020-21 and are comparable. The **Commission hereby clarify that, the actual cost of power purchases of Maithon and DVC stations only be allowed for Truing up. With this observation, the Commission hereby approves the cost of power purchase from Maithon and DVC stations as shown below.**

Table 6.49
KSERC- Cost of power purchase provisionally approved for Maithon and DVC stations

Station	Capacity allocation	Energy availability at exbus	Energy availability at KSEB bus	Total cost of Power purchase (Rs. Cr)				
	(MW)	(MU)	(MU)	2022-23	2023-24	2024-25	2025-26	2026-27
Maithon Power Ltd-Bid I	150	1034.96	999.46	417.99	483.68	484.82	486.01	487.24
Maithon Power Ltd-Bid II	150	1034.96	999.46	417.99	483.68	484.82	486.01	487.24
DVC Mejia	100	705.51	681.31	315.71	362.56	365.58	368.69	371.91
DVC RTPS	50	348.06	336.12	168.17	180.45	182.10	183.80	185.55
Sub Total	450	3123.49	3016.35	1319.86	1510.37	1517.32	1524.51	1531.94

Cost of Power Purchase claimed by KSEB Ltd for purchase of power from DBFOO contracts including the unapproved contracts

6.76 KSEB Ltd submitted that, the fixed charges and variable charges of DBFOO contracts are estimated as per the provisions in PSA for M/s Jindal Power Ltd (200 MW), M/s Jhabua Power Ltd (115 MW) under Bid I and M/s BALCO (100 MW) under Bid II. In the case of power purchase through DBFOO contracts the transmission charges and losses at the time of bidding is considered in the bid rate. As per PSA, the difference between transmission charges as on bid date and actual has to be borne by KSEB Ltd. Similarly, the difference between the transmission losses as on bid date and actuals has to be borne/ shared with KSEB Ltd. The additional expenditure due to installation of ECS and fly ash transportation is also claimed over and above the fixed charges and variable charges since these are payable under change in law. The additional expenditure due to ECS for stations under DBFOO is estimated at 75 % of expenditure estimated by CEA (0.435Cr/ MW).ie; 45 paise per unit.

In the case of M/s Jindal Power Ltd (Bid II,150 MW), M/s Jhabua Power Ltd (Bid II ,100 MW) and M.s JITPL (Bid II, 100 MW) the rate of purchase of energy from M/s BALCO is taken for computing the power purchase cost. KSEB Ltd requested that, the actual may kindly allow at the time of truing up of the petition.

The fixed charges estimated for the next control period as per PSA and the additional expenditure estimated on account of ECS and fly ash transportation is given in table below.

Table 6.50
Fixed charges considered by KSEB Ltd for MYT period 2022-23 to 2026-27

No.	DBFOO stations	Fixed charges estimated as per PSA(Rs/unit)					Additional expenditure due to ECS (Rs /unit)	Additional expenditure due to fly ash transportation (Rs /unit)
		2022-23	2023-24	2024-25	2025-26	2026-27	FY 2023-24 to 2026-27	FY 2022-23 to 2026-27
1	Jindal Power Limited-Bid I	2.50	2.45	2.40	2.36	2.31	0.34	0.15
2	Jindal Power Limited-Bid II	3.20	3.13	3.07	3.01	2.95	0.34	0.15
3	Jindal India Thermal Limited-Bid II	3.30	3.23	3.17	3.10	3.04	0.34	0.15
4	Jhabua Power Limited-Bid I	1.97	1.93	1.89	1.85	1.82	0.34	0.15
5	Jhabua Power Limited-Bid II	2.50	2.45	2.40	2.35	2.30	0.34	0.15
6	BALCO	3.03	2.97	2.91	2.85	2.79	0.34	0.15

6.77 The variable charges estimated by KSEB Ltd for DBFOO contracts for the next control period is given below.

Table 6.51
KSEB petition- Variable charges considered by KSEB Ltd for MYT period 2022-23 to 2026-27

No.	DBFOO	Variable charges as per PSA(Rs/unit)					Additional expenditure due to ECS (Rs/ kWh)
		2022-23	2023-24	2024-25	2025-26	2026-27	
1	Jindal Power Limited-Bid I	1.33	1.33	1.34	1.34	1.34	0.11
2	Jindal Power Limited-Bid II	1.33	1.33	1.34	1.34	1.34	0.11
3	Jindal India Thermal Limited-Bid II	1.17	1.17	1.18	1.18	1.18	0.11
4	Jhabua Power Limited-Bid I	1.99	1.99	2.00	2.00	2.00	0.11
5	Jhabua Power Limited-Bid II	2.00	2.01	2.01	2.01	2.01	0.11
6	BALCO	1.18	1.18	1.18	1.19	1.19	0.11

6.78 The estimate of the variation in transmission charges as on bid date and the same as on date, has to be borne by KSEB Ltd as per the petition is given below.

Table 6.52
KSEB petition- Transmission charges to be borne by KSEB Ltd for MYT period 2022-23 to 2026-27

Source	Contracted capacity(MW)	Transmission charges estimated for next Control period payable to CTUIL (Rs/MW)	Transmission charges refunded by the Generator (Rs/MW)	Net Transmission charges payable as part of DBFOO contracts (Rs Cr)
Jindal I	200	298810.37	236134	14.29
Jindal II	150	298810.37	236134	10.72
JITPL	100	298810.37	236134	7.15
Jhabua-I	115	298810.37	206134	12.15
Jhabua-II	100	298810.37	206134	10.57
BALCO	100	298810.37	206134	10.57
Total	765			65.43

6.79 As per the PSA, the variation in transmission losses as on bid date and actual has to be borne/shared with KSEB Ltd. The actual transmission loss was less than the same as on bid date. Hence the reduction in cost of power purchase due to variation in transmission losses estimated by KSEB Ltd is given below.

Table 6.53
Reduction in cost of power purchase due to variation in transmission losses (Rs.Cr)

Source	Quantum(MU)	Loss as on bid date(%)	2022-23	2023-24	2024-25	2025-26	2026-27
Jindal I	1497.96	3.41	19.56	19.31	19.10	18.90	18.64
Jindal II	1123.47	4.51	22.95	22.60	22.34	22.04	21.74
JITPL	748.98	3.41	11.42	11.24	11.11	10.93	10.78
Jhabua-I	861.33	3.92	13.37	13.24	13.13	13.00	12.90
Jhabua-II	748.98	3.70	12.47	12.36	12.22	12.08	11.94
BALCO	748.98	4.22	13.31	13.12	12.93	12.77	12.58

6.80 The year wise details of the power purchase through DBFOO contracts claimed by KSEB Ltd's is given below.

Table 6.54

KSEB petition- Estimate of the cost of power purchases of DBFOO contracts for the FY 2022-23

Source	FC	EC	Charges due to difference in transmission losses	Total cost	Total cost limiting the rate to BALCO
	(Rs.Cr)	(Rs.Cr)	(Rs.Cr)	(Rs.Cr)	(Rs.Cr)
Jindal I	396.96	199.23	-19.56	576.62	576.62
Jindal II	376.36	149.42	-22.95	502.83	469.87
JITPL	258.40	87.63	-11.42	334.61	313.25
Jhabua-I	182.60	171.40	-13.37	340.63	340.63
Jhabua-II	198.48	149.80	-12.47	335.81	313.25
BALCO	238.18	88.38	-13.31	313.25	313.25
Total	1650.98	845.86	-93.08	2403.76	2326.88

Table 6.55

KSEB petition- Estimate of the cost of power purchases of DBFOO contracts for the FY 2023-24

Source	FC	EC	Charges due to difference in transmission losses	Total cost	Total cost limiting the rate to BALCO
	(Rs.Cr)	(Rs.Cr)	(Rs.Cr)	(Rs.Cr)	(Rs.Cr)
Jindal I	440.03	216.08	-19.31	636.80	636.80
Jindal II	406.42	162.06	-22.60	545.88	513.97
JITPL	278.43	96.06	-11.24	363.25	342.65
Jhabua-I	208.23	181.09	-13.24	376.08	376.08
Jhabua-II	220.01	158.97	-12.36	366.62	342.65
BALCO	258.96	96.81	-13.12	342.65	342.65
Total	1812.07	911.07	-91.86	2631.29	2554.80

Table 6.56

KSEB petition- Estimate of the cost of power purchases of DBFOO contracts for the FY 2024-25

Source	FC	EC	Charges due to difference in transmission losses	Total cost	Total cost limiting the rate to BALCO
	(Rs.Cr)	(Rs.Cr)	(Rs.Cr)	(Rs.Cr)	(Rs.Cr)
Jindal I	432.54	217.58	-19.10	631.01	631.01
Jindal II	399.67	163.18	-22.34	540.51	507.52
JITPL	273.94	96.81	-11.11	359.64	338.34
Jhabua-I	204.78	181.96	-13.13	373.60	373.60
Jhabua-II	216.27	158.97	-12.22	363.02	338.34
BALCO	254.47	96.81	-12.93	338.34	338.34
Total	1781.66	915.30	-90.84	2606.12	2527.16

Table 6.57
KSEB petition- Estimate of the cost of power purchases of DBFOO contracts for the FY 2025-26

Source	FC	EC	Charges due to difference in transmission losses	Total cost	Total cost limiting the rate to BALCO
	(Rs.Cr)	(Rs.Cr)	(Rs.Cr)	(Rs.Cr)	(Rs.Cr)
Jindal I	426.54	217.58	-18.90	625.22	625.22
Jindal II	392.93	163.18	-22.04	534.08	502.14
JITPL	268.70	96.81	-10.93	354.57	334.76
Jhabua-I	201.34	181.96	-13.00	370.29	370.29
Jhabua-II	212.52	158.97	-12.08	359.41	334.76
BALCO	249.97	97.55	-12.77	334.76	334.76
Total	1752.00	916.05	-89.72	2578.33	2501.92

Table 6.58
KSEB petition- Estimate of the cost of power purchases of DBFOO contracts for the FY 2026-27

Source	FC	EC	Charges due to difference in transmission losses	Total cost	Total cost limiting the rate to BALCO
	(Rs.Cr)	(Rs.Cr)	(Rs.Cr)	(Rs.Cr)	(Rs.Cr)
Jindal I	419.05	217.58	-18.64	617.99	617.99
Jindal II	386.19	163.18	-21.74	527.64	495.68
JITPL	264.20	96.81	-10.78	350.23	330.45
Jhabua-I	198.75	181.96	-12.90	367.81	367.81
Jhabua-II	208.78	158.97	-11.94	355.81	330.45
BALCO	245.48	97.55	-12.58	330.45	330.45
Total	1722.46	916.05	-88.58	2549.93	2472.84

6.81 KSEB Ltd further submitted that, in the case of M/s Jindal Power Ltd (150 MW), M/s Jhabua Power Ltd (100 MW) and M/s JITPL (100 MW), the rate of purchase of energy from M/s BALCO is taken for computing the power purchase cost. The summary of the total cost of power purchase from DBFOO contracts is given below.

Table 6.59
KSEB petition-Summary of the estimate of the cost of power purchases of DBFOO contracts

No.	Station	Power Purchase cost for the control period through DBFOO contracts				
		2022-23	2023-24	2024-25	2025-26	2026-27
1	Jindal Power Limited-Bid I	576.62	636.80	631.01	625.22	617.99
2	Jindal Power Limited-Bid II	469.87	513.97	507.52	502.14	495.68
3	Jindal India Thermal limited -Bid II	313.25	342.65	338.34	334.76	330.45
4	Jhabua Power Limited-Bid I	340.63	376.08	373.60	370.29	367.81
5	Jhabua Power Limited-Bid II	313.25	342.65	338.34	334.76	330.45
6	BALCO	313.25	342.65	338.34	334.76	330.45
		2326.88	2554.80	2527.16	2501.92	2472.84

Analysis and Decision of Power purchase of DBFOO Contracts

6.82 The Commission decided to appraise and approve the cost of power purchase from the DBFOO contracts separately under following heads.

- (1) Cost of power purchase of approved DBFOO contracts and
- (2) Cost of power purchase of unapproved DBFOO contracts

Cost of power purchase from approved DBFOO contracts

6.83 KSEB Ltd had invited two separate bids, on Design, Build, Finance, Own and Operate (DBFOO) basis for procuring 450MW power from December-2016 onwards for 25 years, and for procuring 400MW power from October-2017 onwards for 25years. Accordingly, the first bid was invited on 05.03.2014 (referred to as Bid 1) and the second bid was invited on 25.04.2014 (referred to as Bid 2). Bid 1 was opened on 31.10.2014 and Bid 2 was opened on 14.11.2014.

6.84 KSEB Ltd sought approval of the Commission for the purchase of 865 MW of power under Section 63 of the Act as per petition No. OP 13 of 2015 dated 21-4-2015. The Commission vide Order dated 31-8-2016 gave approval for purchase of 200 MW of power from M/s Jindal Power Ltd at the rate of Rs.3.60 / kWh being L1 of Bid -1 only. In the same Order, the Commission had also approved the purchase of 100 MW of power by KSEB Ltd from M/s Bharat Aluminium Company Ltd, Chhattisgarh at the rate of Rs.4.29/ kWh being the L1 of the Bid -2 dated 25.04.2014. The relevant portion of the order is extracted below.

“40. In view of the facts, circumstances and legal provisions explained above the Commission hereby issues the following orders,-

(1) The purchase of 200 MW of power by KSEB Ltd from M/s Jindal Power Ltd, New Delhi at the rate of Rs.3.60 / kWh as per the Bid -1 dated 05.03.2014 which was opened on 31.10.2014, is approved.

(2) The purchase of 100 MW of power by KSEB Ltd from M/s Bharat Aluminium Company Ltd, Chhattisgarh at the rate of Rs.4.29/ kWh as per the Bid -2 dated 25.05.2014 which was opened on 14.11.2014, is approved.

(3) The approval of the following purchases of power by KSEB Ltd from the bidders other than the lowest bidder (L1) will be considered on getting the approval from Government of India for the deviations from the guidelines and on getting the views from Government of Kerala on the issues raised in paragraphs 34 and 38 of this order.

(a) The purchase of 115 MW of power by KSEB Ltd from M/s Jhabua Power Ltd, Gurgaon at the rate of Rs.4.15/ kWh as per the Bid -1 dated 05.03.2014 which was opened on 31.10.2014.

(b) The purchase of 100 MW of power at the rate of Rs.4.29/ kWh by KSEB Ltd from M/s Jindal India Thermal Power Ltd, New Delhi (L2) as per the Bid - 2 dated 25.05.2014 which was opened on 14.11.2014.

(c) The purchase of 100 MW of power at the rate of Rs.4.29/ kWh by KSEB Ltd from M/s Jhabua Power Limited, Gurgaon (L3) as per the Bid -2 dated 25.05.2014 which was opened on 14.11.2014.

(d) The purchase of 150 MW of power at the rate of Rs.4.29/ kWh by KSEB Ltd from M/s Jindal Power Limited, New Delhi (L4) as per the Bid -2 dated 25.05.2014 which was opened on 14.11.2014.

(e) The purchase of 100 MW of power at the rate of Rs.4.29/ kWh by KSEB Ltd from M/s East Coast Energy Private Limited, Andhra Pradesh (L5) as per the Bid -2 dated 25.05.2014 which was opened on 14.11.2014.

(4) A copy of this order will be submitted to Government of Kerala with request to communicate their views after duly considering the relevant facts and legal provisions in view of the Government Order GO (MS) No. 45/2014/PD dated 20.12.2014 sanctioning the purchase of 865 MW of power by KSEB Ltd on DBFOO basis.

(5) KSEB Ltd is directed to follow up the matter in Government of India and in Government of Kerala and to submit the results to the Commission as early as possible, considering the fact that the power purchases as per Bid-1 will have to commence with effect from December, 2016.

6.85 As above, the Commission vide the order dated 30.08.2016 had adopted the tariff and final approval only for the procurement of 200 MW from Jindal Power Ltd, L1 of Bid-1. Similarly, vide the same order the Commission has also adopted the tariff and granted approval for the procurement of 100MW from M/s BALCO, L1 of Bid-2. The details are given below.

Table 6.60
Details of power purchase approvals given for projects under DBFOO

Source	Contracted Capacity (MW)	Date of approval	Period of contract
Jindal Power Ltd-Bid I (DBFOO)	200	Order dated 30.8.2016	25 years
BALCO -Bid-I (DBFOO)	100	Order dated 30.8.2016	25 years

6.86 The contracted capacity, and energy availability as per the provisions of the PSA is given below.

Table 6.61
Contracted capacity and energy availability from approved DBFOO contracts for the MYT period

No	Trader/Source	contracted capacity (MW)	Auxillary consumption %	LTA approved capacity (MW)	PLF	Ex-bus Energy (MU)	Energy at periphery (MU)
					(%)		
1	Jindal Power Limited -I	200	5.00	190	90%	1497.96	1446.58
2	BALCO-II	100	5.00	95	90%	748.98	723.29

6.87 KSEB Ltd has estimated the fixed cost of these stations as per the provisions of the PSA, and claimed about 2% reduction in fixed cost in each year of the MYT period. KSEB Ltd has also provided additional expenditure towards installation of ECS and also for fly ash transportation. Accordingly, the fixed cost claimed for the MYT period from 2022-23 to 2026-27 is given below.

Table 6.62
Fixed cost provisionally approved for the MYT period of approved DBFOO contracts

No.	DBFOO stations	Fixed charges estimated as per PSA(Rs/unit)					Additional expenditure due to ECS (Rs /unit)	Additional expenditure due to fly ash transportation (Rs /unit)
		2022-23	2023-24	2024-25	2025-26	2026-27	FY 2023-24 to 2026-27	FY 2022-23 to 2026-27
1	Jindal Power Limited-Bid I	2.50	2.45	2.40	2.36	2.31	0.34	0.15
2	BALCO	3.03	2.97	2.91	2.85	2.79	0.34	0.15

6.88 The variable cost is estimated by KSEB Ltd as the average of the actual variable cost of first half of the FY 2021-22, and the same is given below.

Table 6.63
Average of the actual variable cost from April-2021 to September 2021

Month	Jindal Power Ltd-Bid I	BALCO
	(Rs/kWh)	(Rs/kWh)
Apr-21	1.32	1.17
May-21	1.32	1.17
Jun-21	1.32	1.17
Jul-21	1.32	1.17
Aug-21	1.33	1.17
Sep-21	1.33	1.16
Average	1.32	1.17

6.89 The variable cost claimed for the approved DBFOO contracts for the MYT period is given below. In addition to the same, KSEB Ltd also claimed additional expenditure towards installation of ECS @Rs 0.11/unit for the approved DBFOO contracts. The details are given below.

Table 6.64
Variable charges claimed for the approved DBFOO contracts for the MYT period

No.	DBFOO	Variable charges as per PSA(Rs/unit)					Additional expenditure due to ECS (Rs/ kWh)
		2022-23	2023-24	2024-25	2025-26	2026-27	
1	Jindal Power Limited-Bid I	1.33	1.33	1.34	1.34	1.34	0.11
2	BALCO	1.18	1.18	1.18	1.19	1.19	0.11

6.90 The transmission charges payable as the difference between the transmission charges payable as on bid date and the same as of now for the approved DBFOO contracts is given below.

Table 6.65
Transmission charges claimed for the approved DBFOO contracts for the MYT period

Source	Contracted capacity(MW)	Transmission charges estimated for next control period payable to CTUIL(Rs/MW))	Transmission charges refunded by the Generator(Rs/MW)	Net Transmission charges payable as part of DBFOO contracts (Rs Cr)
Jindal I	200	298810.37	236134	14.29
BALCO	100	298810.37	206134	10.57
Total	300			24.86

6.91 The reduction in cost of power purchase estimated on account of the difference between the transmission losses as on bid date and the actuals claimed during the MYT period is given below.

Table 6.66
Reduction in cost of power purchase from approved DBFOO contracts for the MYT period

Source	Quantum(MU)	Loss as on bid date(%)	2022-23	2023-24	2024-25	2025-26	2026-27
Jindal I	1497.96	3.41	19.56	19.31	19.10	18.90	18.64
BALCO	748.98	4.22	13.31	13.12	12.93	12.77	12.58
Total	2246.94		32.87	32.43	32.03	31.67	31.22

6.92 Based on the above, the details of the power purchase claimed of the approved DBFOO contracts for the MYT period from 2022-23 to 2026-27 is given below.

Table 6.67
Power purchase cost of approved DBFOO contracts for the MYT period

Year	Jindal Power Limited-Bid I				BALCO			
	FC	EC	Reduction in cost of PP	Total cost	FC	EC	Reduction in cost of PP	Total cost
	(Rs.Cr)	(Rs.Cr)	(Rs.Cr)	(Rs.Cr)	(Rs.Cr)	(Rs.Cr)	(Rs.Cr)	(Rs.Cr)
2022-23	396.96	199.23	-19.56	576.63	238.18	88.38	-13.31	313.25
2023-24	440.03	216.08	-19.31	636.80	258.96	96.81	-13.12	342.65
2024-25	432.54	217.58	-19.10	631.02	254.47	96.81	-12.93	338.35
2025-26	426.54	217.58	-18.90	625.22	249.97	97.55	-12.77	334.75
2026-27	419.05	217.58	-18.64	617.99	245.48	97.55	-12.58	330.45

6.93 Based on the above considerations, the summary of the cost of power purchase provisionally approved for the approved DBFOO contracts is detailed below.

Table 6.68
Summary of power purchase cost provisionally approved for approved DBFOO contracts for the MYT period

Source	contracted capacity (MW)	Ex-bus Energy (MU)	Energy at periphery (MU)	Power Purchase cost for the control period through DBFOO contracts				
				2022-23	2023-24	2024-25	2025-26	2026-27
Jindal I	200	1497.96	1446.58	576.63	636.8	631.02	625.22	617.99
BALCO	100	748.98	723.29	313.25	342.65	338.35	334.75	330.45
Total	300	2246.94	2169.87	889.88	979.45	969.37	959.97	948.44

Power purchase of the unapproved DBFOO contracts

6.94 The Commission notes that, the distribution licensee has not till date complied with the directions issued by the Commission vide the Order dated 31.08.2016 in OP No. 13 of 2015 and in the Order dated 22.11.2016. The relevant portion of the Order dated 31.08.2016 is reproduced below.

“

“40. In view of the facts, circumstances and legal provisions explained above the Commission hereby issues the following orders,-

(1) The purchase of 200 MW of power by KSEB Ltd from M/s Jindal Power Ltd, New Delhi at the rate of Rs.3.60 / kWh as per the Bid -1 dated 05.03.2014 which was opened on 31.10.2014, is approved.

(2) The purchase of 100 MW of power by KSEB Ltd from M/s Bharat Aluminium Company Ltd, Chhattisgarh at the rate of Rs.4.29/ kWh as per the Bid -2 dated 25.05.2014 which was opened on 14.11.2014, is approved.

(3) The approval of the following purchases of power by KSEB Ltd from the bidders other than the lowest bidder (L1) will be considered on getting the approval from Government of India for the deviations from the guidelines and on getting the views from Government of Kerala on the issues raised in paragraphs 34 and 38 of this order.

(a)The purchase of 115 MW of power by KSEB Ltd from M/s Jhabua Power Ltd, Gurgaon at the rate of Rs.4.15/ kWh as per the Bid -1 dated 05.03.2014 which was opened on 31.10.2014.

(b) The purchase of 100 MW of power at the rate of Rs.4.29/ kWh by KSEB Ltd from M/s Jindal India Thermal Power Ltd, New Delhi (L2) as per the Bid -2 dated 25.05.2014 which was opened on 14.11.2014.

(c) The purchase of 100 MW of power at the rate of Rs.4.29/ kWh by KSEB Ltd from M/s Jhabua Power Limited, Gurgaon (L3) as per the Bid -2 dated 25.05.2014 which was opened on 14.11.2014.

(d) The purchase of 150 MW of power at the rate of Rs.4.29/ kWh by KSEB Ltd from M/s Jindal Power Limited, New Delhi (L4) as per the Bid -2dated 25.05.2014 which was opened on 14.11.2014.

(e) The purchase of 100 MW of power at the rate of Rs.4.29/ kWh by KSEB Ltd from M/s East Coast Energy Private Limited, Andhra Pradesh (L5) as per the Bid -2 dated 25.05.2014 which was opened on 14.11.2014.

(4) A copy of this order will be submitted to Government of Kerala with request to communicate their views after duly considering the relevant facts and legal provisions in view of the Government Order GO (MS) No. 45/2014/PD dated 20.12.2014 sanctioning the purchase of 865 MW of power by KSEB Ltd on DBFOO basis.

(5) KSEB Ltd is directed to follow up the matter in Government of India and in Government of Kerala and to submit the results to the Commission as early as possible, considering the fact that the power purchases as per Bid-1 will have to commence with effect from December, 2016.

“

Relevant portion of the Order dated 22.12.2016 is given below:

“In view of the facts, circumstances and urgency explained by KSEB Ltd and in view of the decision of Government of Kerala in GO (Rt) No.238/2016/PD dated 31.11.2016, the Commission hereby approves provisionally the purchase of 115 MW of power by KSEB Ltd from M/s Jhabua Power Ltd at the rate of Rs.4.15 /kWh as per the power purchase agreement dated 31.12.2014, subject to the clearance from Government of India and subject to the final decision of the Hon’ble High Court in Writ Petition No. WP (C) 33100/2014.”

6.95 Further the Commission notes that KSEB Ltd has proposed the procurement of power from these provisionally approved/ unapproved DBFOO contracts as shown in the Table below.

Table 6.69
Details of procurement from provisionally approved/ unapproved DBFOO contracts

No	Trader/Source	contracted capacity (MW)	Auxillary consumption %	LTA approved capacity (MW)	PLF	Ex-bus Energy (MU)	Energy at periphery (MU)
					(%)		
1	Jhabua Power Limited-1	115	5.000	109.25	90%	861.33	831.78
2	Jindal Power Limited-II	150	5.000	142.5	90%	1123.47	1084.93
3	Jindal India Thermal -II	100	5.000	95	90%	748.98	723.29
4	Jhabua Power Limited-II	100	5.000	95	90%	748.98	723.29
	Total	465				3482.76	3363.29

The Commission has arrived at the following conclusions regarding each of the provisionally approved/ unapproved PSAs.

(a) Power purchase from Jhabua Power Ltd of Bid-1

6.96 KSEB Ltd in its letter 15.11.2016 had requested the Commission to take appropriate decision relating to the purchase of 115 MW of power from the L2 bidder of Bid 1, i.e., M/s Jhabua Power Ltd. The Commission in the Order dated 22-12-2016, had provisionally approved the purchase of 115 MW of power from Jabhua Power Ltd, L2 bidder of Bid 1, in view of the facts, circumstances and urgency explained by KSEB Ltd and in view of the decision of Government of

Kerala in GO (Rt) No.238/2016/PD dated 31.11.2016. Relevant portion of the Order is given below:

“In view of the facts, circumstances and urgency explained by KSEB Ltd and in view of the decision of Government of Kerala in GO (Rt) No.238/2016/PD dated 31.11.2016, the Commission hereby approves provisionally the purchase of 115 MW of power by KSEB Ltd from M/s Jhabua Power Ltd at the rate of Rs.4.15 /kWh as per the power purchase agreement dated 31.12.2014, subject to the clearance from Government of India and subject to the final decision of the Hon’ble High Court in Writ Petition No. WP (C) 33100/2014.”

- 6.97 As mentioned above, the Commission had only given a conditional provisional approval for purchase of power from M/s Jhabua Power Ltd, subject to the approval of the Central Government on this matter. In the meantime, Ministry of Power, vide its letter dated 18.11.2016 clarified that,

“the deviations as pointed out by the KSERC would have been got vetted and approved by the before the issuance of RFQ, RFP and PSA and not at this stage. As per the Guidelines deviations on the provisions of the bidding documents are approved if necessary and not the actions taken by the utility as per practice or precedent.”

Further, the Central Government vide the letter dated 11th December 2019, reiterated the same position and clarified as follows.

“The views of Ministry of Power as communicated earlier vide letter dated 18.11.2016 are reiterated. The deviations as pointed out by KSERC would have been got vetted and approved by the Central Government before issuance of RFQ, RFP and PSA and not at this stage. Government of Kerala/ KSEB Ltd may take actions as appropriate in consultation with KSERC.”

The Commission also noted that while the Central Government had refused to approve the unauthorized deviations by KSEB Ltd in the tender process, the State Government has neither approved the deviations pointed out by KSERC nor accorded final approval to the purchase of the unapproved DBFOO contracts. Further, the approval for any deviations from the standard bidding documents could be issued only by the Ministry of Power, Government of India. However, as stated above, the Ministry of Power already refused the request of the State Government twice to approve post facto the deviations made by KSEB Ltd.

- 6.98 In view of the fact that the Central Government has affirmatively communicated that, it shall not grant approval for the deviations made by KSEB Ltd in accepting the L2 bid of Bid-1, the Commission is of the clear view that the tender finalisation procedure adopted by KSEB Ltd and its further actions of entering into a PSA did not comply with the requirements of Section 63 of the Electricity Act, 2003, which is reproduced below.

“63. Determination of tariff by bidding process,- Notwithstanding anything contained in Section 62, the Appropriate Commission shall adopt the tariff if

such tariff has been determined through transparent process of bidding in accordance with the guidelines issued by the Central Government’.

Under such circumstances, the Commission cannot approve any further purchase of power based on the provisionally approved PSA from the L2 bidder of Bid-1 M/s Jhabua Power Ltd (115 MW).

Unapproved contracts

6.99 The Commission has also examined in detail the power purchase proposal submitted by KSEB Ltd from the following three unapproved DBFOO contracts for the MYT period from 2022-23 to 2026-27.

- (1) 150MW from Jindal Power Limited
- (2) 100MW from Jindal India Thermal Limited
- (3) 100 MW from Jhabua Power Limited.

6.100 In this matter, the Commissions views are as follows.

- (1) KSEB Ltd had invited two separate bids, on Design, Build, Finance, Own and Operate (DBFOO) basis for procuring 450 MW power from December-2016 onwards for 25 years, and for procuring 400 MW power from October-2017 onwards for 25years. Accordingly, the first bid was invited on 05.03.2014 (referred to as Bid 1) and the second bid was invited on 25.04.2014 (referred to as Bid 2). Bid 1 was opened on 31.10.2014 and Bid 2 was opened on 14.11.2014.
- (2) KSEB Ltd sought approval of the Commission for the purchase of 865 MW of power under Section 63 of the Act as per petition No. OP 13 of 2015 dated 21-04-2015. The Commission vide order dated 31-8-2016 gave approval for purchase of 200 MW of power from M/s Jindal Power Ltd at the rate of Rs.3.60/ kWh being L1 of Bid -1 only. In the same order, the Commission had also approved the purchase of 100 MW of power by KSEB Ltd from M/s Bharat Aluminium Company Ltd, Chhattisgarh at the rate of Rs.4.29/ kWh being the L1 of the Bid -2 dated 25.04.2014. The relevant portion of the order is extracted below.

“40. In view of the facts, circumstances and legal provisions explained above the Commission hereby issues the following orders,-

(1) The purchase of 200 MW of power by KSEB Ltd from M/s Jindal Power Ltd, New Delhi at the rate of Rs.3.60 / kWh as per the Bid -1 dated 05.03.2014 which was opened on 31.10.2014, is approved.

(2) The purchase of 100 MW of power by KSEB Ltd from M/s Bharat Aluminium Company Ltd, Chhattisgarh at the rate of Rs.4.29/ kWh as per the Bid -2 dated 25.05.2014 which was opened on 14.11.2014, is approved.

(3) The approval of the following purchases of power by KSEB Ltd from the

bidders other than the lowest bidder (L1) will be considered on getting the approval from Government of India for the deviations from the guidelines and on getting the views from Government of Kerala on the issues raised in paragraphs 34 and 38 of this order.

(a) The purchase of 115 MW of power by KSEB Ltd from M/s Jhabua Power Ltd, Gurgaon at the rate of Rs.4.15/ kWh as per the Bid -1 dated 05.03.2014 which was opened on 31.10.2014.

(b) The purchase of 100 MW of power at the rate of Rs.4.29/ kWh by KSEB Ltd from M/s Jindal India Thermal Power Ltd, New Delhi (L2) as per the Bid -2 dated 25.05.2014 which was opened on 14.11.2014.

(c) The purchase of 100 MW of power at the rate of Rs.4.29/ kWh by KSEB Ltd from M/s Jhabua Power Limited, Gurgaon (L3) as per the Bid -2 dated 25.05.2014 which was opened on 14.11.2014.

(d) The purchase of 150 MW of power at the rate of Rs.4.29/ kWh by KSEB Ltd from M/s Jindal Power Limited, New Delhi (L4) as per the Bid -2 dated 25.05.2014 which was opened on 14.11.2014.

(e) The purchase of 100 MW of power at the rate of Rs.4.29/ kWh by KSEB Ltd from M/s East Coast Energy Private Limited, Andhra Pradesh (L5) as per the Bid -2 dated 25.05.2014 which was opened on 14.11.2014.

(4) A copy of this order will be submitted to Government of Kerala with request to communicate their views after duly considering the relevant facts and legal provisions in view of the Government Order GO (MS) No. 45/2014/PD dated 20.12.2014 sanctioning the purchase of 865 MW of power by KSEB Ltd on DBFOO basis.

(5) KSEB Ltd is directed to follow up the matter in Government of India and in Government of Kerala and to submit the results to the Commission as early as possible, considering the fact that the power purchases as per Bid-1 will have to commence with effect from December, 2016.

- (3) As is clear from the foregoing paras, the Commission had not given approval for the purchase of the following 450 MW of power contracted through DBFOO basis under Bid 2, for want of approval from the Ministry of Power and approval of the State Government for the purchase.

Table 6.70

Details of contracted quantum for which approval is not given

Name of generator	Quantum contracted
Jindal Power Ltd Bid-II,	150 MW
Jhabua Power Ltd-Bid II	100 MW
Jindal India thermal power Limited-Bid-II	100 MW
East coast energy Pvt Ltd-Bid-II	100 MW
Total	450 MW

The Commission also noted that since M/s East Coast Energy Pvt Ltd did not commission the project as scheduled, their PSA was cancelled by KSEB Ltd, thereby reducing the quantity of the unapproved contract to 350MW.

- (4) KSEB Ltd further submitted that though they had approached the Government of India for approval of deviations from the guidelines, the Central Government has not approved the deviations.

Central Government, vide its letter dated 18.11.2016 clarified that,

“the deviations as pointed out by the KSERC would have been got vetted and approved by the before the issuance of RFQ, RFP and PSA and not at this stage. As per the Guidelines deviations on the provisions of the bidding documents are approved if necessary and not the actions taken by the utility as per practice or precedent.”

Further, the Central Government vide the letter dated 11th December 2019, stated that

“The views of Ministry of Power as communicated earlier vide letter dated 18.11.2016 are reiterated. The deviations as pointed out by KSERC would have been got vetted and approved by the Central Government before issuance of RFQ, RFP and PSA and not at this stage. Government of Kerala/ KSEB Ltd may take actions as appropriate in consultation with KSERC.”

The Commission also noted that while the Central Government had refused to approve the unauthorized deviations by KSEB Ltd in the tender process. The State Government has also neither approved the deviations pointed out by KSERC nor accorded final approval to the purchase of the unapproved DBFOO contracts.

- (5) As above, the Central Government has affirmatively communicated that, it shall not grant approval for the deviations made by KSEB Ltd for accepting the L2 bidder of Bid-1 also. Hence it is clear that the tenders floated by KSEB Ltd and its further processes did not comply with the requirements of Section 63 of the Electricity Act, 2003, which is reproduced below.

“63. Determination of tariff by bidding process,- Notwithstanding anything contained in Section 62, the Appropriate Commission shall adopt the tariff if such tariff has been determined through transparent process of bidding in accordance with the guidelines issued by the Central Government’.

- (6) Subsequently, as per the request of KSEB Ltd and in view of the Government Order G.O.(Ms) No.22/2017/PD dated 21-10-2017, the Commission as per the letter dated 22-12-2017, allowed KSEB Ltd to schedule the contracted power of 350MW from 1-10-2017 from three projects of bid 2, ie., 100 MW of power from M/s Jindal India Thermal Power Ltd, New Delhi, 100 MW of power from M/s Jhabua Power Limited and 150 MW of power M/s Jindal Power Limited. The State Government vide the GO (Ms) No.22/2017/PD dated 21.10.2017 ordered as follows

“ KSEB Ltd has concluded long term agreements for 25 years for 550MW of power on the basis of e-tenders on DBFOO terms with effect from 01.01.2017. These contracts were concluded on the basis of an analysis of the demand-supply gap in Kerala and the projected availability of transmission corridors from the States in which the generating plants are located, to Kerala. Pending detailed consideration of the matter, Government are pleased to hereby permit KSEB Ltd to draw the contracted power with effect from 01.10.2017. Final orders in the matter shall be issued in due course.”

The letter of the Commission dated 22.12.2017 is extracted below for ready reference.

“ The Commission has examined the order of State Government vide order No G.O.(Ms)No.22/2017/PD dated 21.10.2017 permitting K S E B Ltd. to draw the power contracted power and the request of K S E B Ltd., to grant approval to draw the power contracted power under DBFOO from 01/10/2017 on wards.

In view of the State Government order dated 21.10.2017, K S E B Ltd. may draw the contracted power on DBFOO from 01/10/2017 onwards. It may please be noted that the Power Department G.O dated 21.10.2017 is only an interim measure and final orders are yet to be issued. Since the Government is yet to give its final decision, it is informed that, the Commission may approve the power purchase proposal including the rate for the pending approvals under DBFOO only after the State Government accords the final approval for the entire power purchase under DBFOO.”

As seen from the Commission’s letter, the Commission has made it clear that since the G.O dated 21-10-2017 is only an interim measure and final orders are yet to be issued, the Commission may approve the power purchase proposal including the rate for the pending approvals under DBFOO only after State Government accords final approval for the entire power purchase under DBFOO.

- (7) KSEB Ltd in the MYT petition OP No. 15/2018 dated 31.10.2018 for the period from 2018-19 to 2021-22 had included the schedule of power from the three unapproved DFBOO contracts also as the sources of power purchase.
- (8) The Commission after detailed examination of the projected power requirement vis-à-vis the availability, permitted scheduling of power from the unapproved DBFOO contracts vide the MYT Order dated 08.07.2019 strictly at the rate to be paid to BALCO generator, which is the L1 in Bid-2. It is here important to note that the Commission had used the word “rate” which is singular and not “rates” which means more than one. Further, as per the tender this “rate” is for delivery at Kerala Periphery. The Commission further clarifies that, though the price of electricity may

have a fixed and variable cost, usage of the term “rate” is clearly indicative of the fact that it is the total of both these cost and is a unitary price at Kerala Periphery.

- (9) Hence, KSEB Ltd is not at liberty to separately calculate the fixed and variable cost component for these 3 unapproved contracts, but instead must pay the final ‘rate’ i.e., the fixed cost plus variable cost paid to M/s BALCO at the Kerala periphery on each and every bill. No deviation from this rate is allowed and any amount paid over and above the rate paid to L1 of Bid-2 BALCO is irregular and not allowable.
- (10) In addition, the Commission had also clearly stated in the order that, the consideration of schedule strictly as per the request of KSEB Ltd shall not be **construed as an approval of the power purchase, rate or of the PPA itself as per Section 63 of the Act 2003.**

The relevant portion of the MYT Order is extracted below.

“5.104 Hence the Commission has considered scheduling power from the three projects of Bid-2, ie., 100 MW of power from M/s Jindal India Thermal Power Ltd, New Delhi, 100 MW of power from M/s Jhabua Power Limited and 150 MW of power M/s Jindal Power Limited for the limited purpose of estimating the ARR&ERC for the control period. Since the required approvals from Gol and State Government is still awaited, the Commission is constrained to use the rate equivalent to the cost of power from Balco, which is the L1 of Bid 2. The Commission emphasises that this consideration is only for the purposes of estimating the cost of power provisionally in the ARR and shall not be construed as an approval of the power purchase, rate or of the PPA itself as per Section 63 of the Act which can be considered only after the fulfilment of conditions specified by the Commission in its order dated 31-8-2016. It is relevant here to note that the Commission in their Order on suomotu determination of Tariff dated 17-4-2017 had approved Rs.4.00 per unit for the purchase of additional quantity of power for meeting the deficit from traders and exchanges.”

6.101 The Commission also clarify the difference between “approval of PPA” and “allowing to schedule power” from the DBFOO unapproved generators. It is to be noted that scheduling of power is based on SLDCs assessment of power demand and its availability. Hence ‘scheduling of power” is directly dependent upon demand and does not give a free licence to KSEB Ltd to construe it as “approval of PPA or power purchase”.

6.102 The Commission had allowed the scheduling of power considering the request of KSEB Ltd regarding the anticipated shortage of power vide letter dated 22-

12-2017. Hence, the Commission had allowed KSEB Ltd to schedule power of 350MW from 01-10-2017 from the three projects of Bid-II, i.e., 100 MW of power from M/s Jindal India Thermal Power Ltd, New Delhi, 100 MW of power from M/s. Jhabua Power Limited and 150 MW of power M/s Jindal Power Limited. It is to be specifically noted that in the said letter, ***the Commission has made it clear that since the State Government's G.O dated 21-10-2017 is only an interim measure and final orders are yet to be issued, the Commission may approve the power purchase proposal including the rate for the pending approvals under DBFOO only after State Government accords final approval for the entire power purchase under DBFOO.*** The details are given below:

Table 6.71
Details of power scheduling

Source	Contracted Capacity (MW)	Date of Commission's Letter
Jindal Power Ltd-Bid II (DBFOO)*	150	Letter dated 22.12.2017
Jhabua Power Ltd-Bid-II (DBFOO)*	100	Letter dated 22.12.2017
JITPL* - Bid-II (DBFOO)	100	Letter dated 22.12.2017

- 6.103 The Commission further notes that in the MYT tariff Order for 2018-19 to 2021-22 dated 08-07-2019, the Commission has stated specifically that the scheduled power from the three unapproved PSAs in Bid II shall be at the rate equivalent to the cost of power of BALCO, which is L1 of Bid-II.
- 6.104 The Commission further clarify that, in the in the MYT Tariff Order dated 08-07-2019, the Commission has stated that for the scheduling of power from the unapproved PSAs in Bid II, the Commission will consider only the rates same as that of BALCO, which is L1 of Bid-II. At this stage, it is important to specifically state as to what the Commission meant by the word 'rate'. It is an established fact in all conventional power purchase that the cost of power has two elements – fixed cost and variable or fuel costs. While the fixed cost is generally predetermined and included in the PPAs the variable in fuel cost will vary based on factors such as cost of fuel, calorific value, transportation cost, heat rate, etc.,
- 6.105 Under such circumstances, till date, the Commission has not approved the PSA of the above three DBFOO contracts. Hence, KSEB Ltd shall not be permitted to make payments to these generators as per the unapproved PSA rates and conditions entered into. It is very clearly and emphatically directed in the MYT Order that, the rate considered for the purpose of ARR is at the BALCO rate, i.e, the rate at Kerala periphery for the purchase of power from BALCO generator, the L1 bidder in Bid-2.

6.106 The Commission further notes that, vide Order dated 14.02.2020 in OA No.29/2019 in the matter of fuel surcharge the period April 2019 to June 2019 of KSEB Ltd, the Commission had orders as follows.

“25. KSEB Ltd has claimed fuel surcharge for the following DBFOO contracts of Bid-2 invited by KSEB Ltd, for which the Commission neither granted approval of the PPA nor adopted the tariff as per Section 63 of the Electricity Act, 2003.

(i) 100 MW power from M/s Jindal India Thermal Power Ltd, New Delhi.

(ii) 100 MW from M/s Jhabua Power Limited.

(iii) 150 MW from M/s Jindal Power Limited.

The Commission, vide the letter dated 22.12.2017 allowed KSEB Ltd to schedule the above contracted power, in view of the order of the State Government GO (Ms) No. 22/2017/PD dated 21.10.2017,. The Commission had in the said letter clearly mentioned that, the approval of the power purchase mentioned above including the rate of the DBFOO contracts shall be given, only after getting approvals from Government of India for the deviations from the standard bidding documents issued by Ministry of Power, Government of India and after getting the approval of the Government of Kerala on the entire power purchase under DBFOO.

While approving the ARR, ERC and Tariff for the MYT period 2018-19 to 2021-22, the Commission stated as follows.

“Hence the Commission has considered scheduling power from the three projects of Bid-2, ie., 100 MW of power from M/s Jindal India Thermal Power Ltd, New Delhi, 100 MW of power from M/s Jhabua Power Limited and 150 MW of power M/s Jindal Power Limited for the limited purpose of estimating the ARR&ERC for the control period. Since the required approvals from Gol and State Government is still awaited, the Commission is constrained to use the rate equivalent to the cost of power from Balco, which is the L1 of Bid 2. The Commission emphasises that this consideration is only for the purposes of estimating the cost of power provisionally in the ARR and shall not be construed as an approval of the power purchase, rate or of the PPA itself as per Section 63 of the Act which can be considered only after the fulfilment of conditions specified by the Commission in its order dated 31-8-2016”.

The Commission noticed from the invoices and other documents submitted by KSEB Ltd that, the actual tariff paid by KSEB Ltd for procuring power from these three sources were much higher and amounted to Rs.22.38 crore more when compared to the L1 rate of Rs.4.15 per unit paid to BALCO which is the L1 of Bid-2. As mentioned above, the Commission vide its order dated 22.12.2017 had allowed KSEB Ltd, to schedule the contracted power from these three generators subject to conditions and while approving the ARR & ERC and tariff for the MYT period 2018-19 to 2021-22, the Commission had considered the rate equivalent to the cost of power from BALCO for estimating the cost of power provisionally from these three generators. The Commission reiterate that, during the truing up of accounts for the respective financial years, such excess amount incurred for procuring power from these three generators shall not be considered, unless KSEB Ltd gets the approval of power purchase from Government of India for the deviations from the guidelines and on getting the approval of the Government of Kerala on the entire power purchase under DBFOO.”

Similar Order was issued in OA 02/2020 vide Order dated 27.04.2020 in the matter of fuel surcharge the period July 2019 to September 2019 of KSEB Ltd.

6.107 In response to the above orders, KSEB Ltd filed a review petitions No RP 02/2020 and RP 04/2020. The Commission after due process including conduct of public hearing through video conference on 15.07.2020 had dismissed the review petition and ordered vide Common Order dated 14.08.2020 as follows.

“

24. Commission, after detailed examination of the Review Petitions RP No.02/2020 and RP No.04/2020 as per the provisions of the Electricity Act, 2003 and Regulations in force as detailed in the preceding paragraphs, here by orders the following.

(1) The first prayer of the petition RP No. 02/2020 ‘to review the order dated 14.02.2020 in Petition OA No. 29/2019 and allow passing on the additional fuel cost incurred against PSAs with Jindal India Thermal Power Ltd, Jindal Power Ltd and Jhabua Power Ltd under Bid 2 of DBFOO’ is hereby rejected.

(2) The first prayer of the petition RP No. 04/2020 ‘to review the order dated 27.04.2020 in Petition OA No. 02/2020 and allow passing on the additional fuel cost incurred against PSAs with Jindal India Thermal Power Ltd, Jindal Power Ltd and Jhabua Power Ltd under Bid 2 of DBFOO’ is hereby rejected.

(3) Second prayer of both the Review Petitions RP No. 02/2020 and RP No. 04/2020 is ‘to “(2) To issue appropriate directions on the drawal of power contracted against these PSAs if Hon’ble Commission is not inclined to pass on the liabilities of 350MW PSAs executed on DBFOO basis under Bid 2.” This is a new issue raised by KSEB Ltd, which was neither included nor deliberated in the original petitions OA 29/209 and OA No. 02/2020. Hence this prayer cannot be decided through Review Petitions filed by KSEB Ltd and the prayer is rejected.’”

6.108 The above orders make it very clear that the Commission has strictly prohibited KSEB Ltd from paying any unit energy charge to the unapproved DBFOO contracts at a rate higher than that paid to BALCO i.e., the L1 of Bid-2 at Kerala periphery.

6.109 The Commission has also noted that KSEB Ltd vide letter 09-09-2020 informed to Jindal India Thermal Power Limited as follows.

“You are aware that, KSEB Ltd, after entering into long-term Power Sale Agreement (PSA) vide reference 1 above , had filed petition before Hon'ble KSERC for the adoption of tariff as envisaged under clause 4.1.2 of the PSA . This petition had been disposed by the Hon'ble KSERC on 30-08-2016 wherein the adoption of tariff as per this PSA was kept pending for want of approval of Govt. of India and for obtaining the views of Govt of Kerala (GoK). KSEB Ltd had apprised GoK on the matter and requested to convey the decision on this matter to KSERC.

Based on the clarification requested by GoK, Ministry of Power (MoP) had communicated that Govt of Kerala may take action as appropriate in consultation with

KSERC. This clarification obtained from MoP had also been intimated to GoK and KSERC on time

Meanwhile, as you are aware, Govt of Kerala vide order dated 21-10-2017 had permitted KSEB Ltd to draw power from the entire DBFOO contracts contracted by KSEB Ltd, pending detailed consideration of the matter. It was also stated that final orders in this matter shall be issued in due course. Based on this order of GoK, KSERC vide letter dated 22-12-2017 had also permitted KSEB Ltd to draw the entire power, stating that the Commission may approve the power purchase proposal including the rate for the pending approvals under DBFOO only after GoK accords the final approval for the entire power purchase under DBFOO. The final decision of the Government on this matter is awaited.

Meanwhile, KSERC while issuing orders on 14-02-2020 and 27-04-2020, in respect of the fuel surcharge petitions filed by KSEB Ltd for the approval of the additional cost incurred due to the increase in fuel charges by various generators for the period from April 2019 to June 2019 (Quarter 1) and July to September 2019 (Quarter 2) respectively, had limited the amount payable against 350 MW non approved PSAs executed under Bid 2, to the amount paid to L1 bidder, M/s Balco under Bid 2. KSERC has also ordered that same principle would be applicable during the truing up stage also. Accordingly, the excess amount paid against 350 MW PSAs under Bid 2 had already been disallowed by KSERC for the first quarter and second quarter of 2019-20.

In this regard KSEB Ltd filed review petitions RP-2/2020 on 30-03-2020 and RP-4/2020 on 04-06-2020 before the Hon'ble KSERC. The matter was intimated to you vide reference 4 above wherein it was mentioned that the outcome in the review petition is likely to impact the administration of the related PSAs. Now, KSERC had rejected these review petitions in the Common Order issued on 14-08-2020.

In this order, KSERC has reiterated that the contracts do not have approval of KSERC and any amount paid above the rate applicable to L1 bidder will not be passed on. Apparently, with this order of KSERC, the conditions precedents mandated under the PSA remains unfulfilled. In this circumstances, KSEB Ltd is filing a separate petition before KSERC seeking specific order on the approval or otherwise, of the respective PSAs. Meanwhile, KSEB Ltd is constrained to limit the payment against the monthly bills with respect of the power scheduled from your Station to that of the tariff rate of BALCO in the respective monthly bills, in compliance with the orders of Hon'ble Commission. The difference in amounts, if any, is sought to be settled in accordance with specific orders of KSERC in the petition.”

6.110 Thereafter, M/s Jindal India Thermal Power Ltd (JITPL) filed a petition against the Commission's order before the Hon'ble APTEL as DFR No. 369 of 2020. Hon'ble APTEL vide judgment dated 20.11.2020 ordered as follows.

“During the hearing today, we were informed that the second Respondent i.e. Kerala State Electricity Board Ltd. (KSEB Ltd) has approached the State Commission (first Respondent) by a fresh petition seeking approval for procurement of power from the Appellant and the PSA as also adoption of tariff discovered in bid process. The State Commission, we are further informed, has issued notice to the Appellant as well.

All sides through their respective counsel submitted that they would rather await the decision of the State Commission on the fresh petition referred to above. The Appellant, at the same time, seeks protection of its interest in the context of the impugned order dated 14.02.2020 on the fuel surcharge. The learned counsel representing KSEB Ltd also expressed the difficulties that would arise as consequences flowing from the said order. In the facts and circumstances and bearing in mind also the fact that the approval of the State Commission for the PSA and the prayer for tariff adoption is still awaited, we feel it just and proper to direct stay against the operation of the impugned orders dated 14.02.2020 and 27.04.2020 on subject of fuel surcharge and, in the consequence, restoring status quo ante to the dispensation prevailing immediately anterior thereto, as an ad-interim arrangement, such ad-interim order to continue till the application for stay and appeal are adjudicated upon after final hearing. We clarify that the appeal and application filed therewith will be taken up for final hearing after the decision on the fresh petition for approval/adoption has been rendered by the State Commission. Ordered accordingly.

Since the matter is simmered too long before the State Commission, we would expect the State Commission to conclude the proceedings on the fresh petition expeditiously and render its decision as early as possible. Be listed on 15.02.2021. The State Commission will submit its status report well in advance.”

- 6.111 Since the above decision of the Hon’ble APTEL was not acceptable to the Commission, it filed an Appeal Petition, Civil Appeal No.41/2021 before the Hon’ble Supreme Court and the APEX Court was pleased to stay the proceedings vide Order dated 27.01.2021 and issue interim order as follows.

“Until further Orders, there shall be an ad interim stay of the impugned order dated 20.11.2020 passed by the Appellate Tribunal Electricity, New Delhi in DFR no.369 of 2020.”

- 6.112 In view of the foregoing facts and developments, the Commission cannot permit KSEB Ltd to continue scheduling of power from the following four provisionally approved/ unapproved contracts, (i) Purchase of 115MW of Power from Jhbu power Ltd of L2 of Bid-1, (ii) 150 MW from Jindal Power Ltd of Bid-2, (iii) 100MW from Jindal India Power Ltd and (iv) 100 MW of power from Jhabua Power Ltd of Bid-2.

- 6.113 The Commission noted that, as detailed under Table 6.69 above, during the MYT period 2022-23 to 2026-27, KSEB Ltd has proposed to schedule 465 MW and 3263.29 MU annually from the above four DBFOO contracts. As per the power requirement projected by KSEB Ltd in the present petition and in order to avoid any power shortage and other contingencies, ***the Commission hereby permits KSEB Ltd to make necessary arrangements for procuring 465 MW of equivalent power on medium term basis through competitive bidding as per Section 63 of the Electricity Act, 2003. Alternatively, KSEB***

Ltd may make necessary arrangements for procuring 465 MW from power plants through competitive bidding route who have assigned coal linkage as per the SHAKTI policy of the Central Government.

Once the competitive bidding process as mentioned above is completed by KSEB Ltd, they shall file a separate petition for obtaining approval of the Commission for this purchase including its quantity and adoption of its tariff as per the provisions of the Electricity Act, 2003 and Tariff Regulations, 2021.

6.114 However, for the limited purposes of estimating the cost of power purchase for the MYT period, the Commission has decided to estimate the cost of power purchase for the 3263.29MU of power at Kerala periphery in lieu of the four unapproved DBFOO contracts at Rs 4.00/ kWh for the year 2022-23 and an escalation of 2% for the subsequent years of the MYT period. The Commission hereby clarifies that this provisional rate of Rs 4.00/kWh is only for estimation purposes and the actual rate discovered through the competitive bidding process in accordance with Section 63 of the EA-2003 shall be adopted. **Accordingly, the cost of power for purchase of 3263.29 MU is provisionally assessed at Kerala periphery as detailed below.**

Table 6.72

Cost of power purchase provisionally for the purchase of 3363.29MU in lieu of unapproved DBFOO power

Year	Quantum of power at Kerala periphery	Provisional rate of power purchase @Rs 4.00/unit for 2022-23 with annual escalation @2% per annum	Provisional cost of power purchase for power to be contracted in lieu of the unapproved DBFOO contracts
	(MU)	(Rs/unit)	(Rs. Cr)
2022-23	3363.29	4.00	1345.32
2023-24	3363.29	4.08	1372.22
2024-25	3363.29	4.16	1399.13
2025-26	3363.29	4.24	1426.03
2026-27	3363.29	4.32	1452.94

Power purchase from Medium Term contracts

6.115 KSEB Ltd submitted that, in order to meet the peak demand during summer months, KSEB Ltd has taken arrangements for procuring 270 MW RTC power on medium term basis, through PTC, the Aggregator appointed by MoP under Pilot Scheme II, for the period from January to June in a year for three years with the date of commencement of supply from 01-01-2022 with the approval of the Commission at a rate of Rs 3.31/unit. As per the provisions of PSA the variable charges are to be escalated based on inflation indices and an increase of 2 paise per unit is expected for subsequent years. The energy procurement and cost of power purchase is provided in the table given below.

Table 6.73
KSEB Ltd petition- Cost of power purchase from Medium term contracts

Financial Year	Installed capacity	Energy generation ex bus	Energy at Kerala periphery	Rate	Total cost
	MW	MU	MU	Rs/unit	Rs Cr
2022-23	270	996.95	962.75	3.31	318.67
2023-24	270	996.95	962.75	3.33	320.60
2024-25	270	501.23	484.04	3.35	162.15

Analysis and Decision of the Commission

6.116 The Commission examined the proposed power purchase through medium term contracts. The Commission vide the order dated 07.10.2022 in petition OP No. 44/2021 ordered as follows.

“ (1) Grant approval for procuring 270 MW RTC power on medium term basis, through PTC, the Aggregator appointed by Ministry of Power, Government of India, under Pilot Scheme II of Central Government, for the period from January to June in a year for three years with the date of commencement of supply from 01-01-2022.

(2) Approve the Draft Supplementary Power Supply Agreement to be signed with the Aggregator PTC under Pilot Scheme-II of Central Government with KSEB Ltd to incorporate the specific provisions related to the procurement of 270 MW RTC power under order (1) above. The Supplementary Power Supply Agreement shall form the integral part of the PSA to be signed with the Aggregator PTC as per the Model Bidding Document of Pilot Scheme-II.”

As above, the Commission vide the order dated 07.10.2021 has approved the purchase of power under Medium Term contracts for three years from the dated of commencement of supply from 01.01.2022. **After examining the details, the Commission approves the purchase as proposed in the Table 6.71 above for the years 2022-23 to 2024-25 of the current MYT period.**

Power procurement from Renewable Sources

6.117 The solar RPO and Non-solar RPO for the MYT period is estimated by KSEB at the RPO target notified by the Ministry of Power, GOI as per the MoP Order dated 29.01.2021, wherein the Solar RPO for the FY 2021-22 is fixed @10.50% and the Non-Solar RPO other than large hydro is also fixed @10.50%.

6.118 Since the hydro generation provisionally estimated by the KSEB Ltd and the same provisionally approved by the Commission is slightly varies, there is slight difference in the RPO target estimated by the KSEB Ltd and the same provisionally approved by the Commission as per the MoP order dated 29.01.2021. The details are given below.

Table 6.74

RPO target proposed by KSEB Ltd and the same provisionally approved for the MYT period

Particulars	KSEB					KSERC				
	Quantum in MU					Quantum in MU				
	2022-23	2023-24	2024-25	2025-26	2026-27	2022-23	2023-24	2024-25	2025-26	2026-27
Anticipated consumption of KSEB Ltd excluding bulk licensee consumption	24218.42	25020.32	26203.51	27470.77	28861.75	24218.42	25020.32	26203.49	27470.78	28861.75
Hydro generation incl small hydro(MU) (small hydro also to be included as per MoP order dtd 1-4-2021	7057.26	7163.06	7474.51	7443.65	7573.24	6972.72	7077.22	7379.75	7272.29	7314.72
Net consumption	17161.16	17857.25	18729.00	20027.12	21288.51	17245.70	17943.10	18823.74	20198.49	21547.03
Solar RPO to be met as per MoP	10.50	10.50	10.50	10.50	10.50	10.50%	10.50%	10.50%	10.50%	10.50%
	1801.92	1875.01	1966.54	2102.85	2235.29	1810.80	1884.03	1976.49	2120.84	2262.44
Non-Solar RPO to be met as per MoP	10.50	10.50	10.50	10.50	10.50	10.50%	10.50%	10.50%	10.50%	10.50%
	1801.92	1875.01	1966.55	2102.85	2235.29	1810.80	1884.03	1976.49	2120.84	2262.44

6.119 Existing and approved sources RE purchases within the State and outside the State are given in the Tables below.

Wind power.

6.120 The sources of wind power as per the existing contracts – within the State and outside the State is given below.

Table 6.75

KSEB petition - Wind power sources- existing and contracted – available for the MYT period

Sl No	Particulars	Installed Capacity (MW)	Annual energy (MU)	Rate (Rs/unit)	Annual cost of power purchase (Rs.Cr)	Remarks
I	Wind sources within the State					
1	Ramakkalmedu, Wind	14.25	27.87	3.14	8.75	Existing, PPA approved by Commission
2	Agali, Wind	13.80	29.72	3.14	9.33	
3	Koundikkal	4.80	12.56	3.14	3.94	
4	Ahalya Wind	8.40	20.98	5.23	10.97	
5	INOX	16.00	30.84	4.09	12.61	
6	Kosamattam	1.00	1.01	3.93	0.40	
	Total	58.25	122.98		46.01	
II	Wind sources within the State					

Sl No	Particulars	Installed Capacity	Annual energy	Rate	Annual cost of power purchase	Remarks
		(MW)	(MU)	(Rs/unit)	(Rs.Cr)	
1	PSA with SECI for purchase of Wind Power	75.00	210.00	2.82	59.22	Existing PPA approved by the Commission
2	PSA with SECI for purchase of Wind Power	100.00	262.80	2.82	74.11	PPA approved, power flow expected to start from 2022-23 onwards
	Subtotal from 2023-24 onwards	175.00	472.80		133.33	

As above, the total energy availability estimated from Wind IPPs is above 472.80 MU annually and the total fixed cost estimated is Rs.133.33 crore yearly.

Small Hydro Power

6.121 Existing contracts and likely to be contracted during the MYT period is given in the Table below.

Table 6.76
KSEB petition – SHP- claimed for power purchase for the MYT period

Sl No	Particulars	Installed Capacity	Annual energy	Rate	Annual cost of power purchase	Remarks
		(MW)	(MU)	(Rs/unit)	(Rs.Cr)	
I	Power purchase approved/ provisionally approved					
1	Ullumkal IPP hydel Net	7.00	17.79	2.44	4.34	Existing, PPA approved by Commission
2	Iruttukanam IPP Hydel net	4.50	24.69	2.70	6.67	
3	Kaarikayam IPP Hydel net	10.50	37.56	4.16	15.62	
4	Meenvallam IPP Hydel Net	3.00	8.44	4.88	4.12	
5	Kallar	0.05	0.00	5.47	0.00	
6	Mankulam GP	0.11	0.00	5.47	0.00	
7	Pathamkayam	8.00	25.54	3.49	8.91	Provisional tariff approved
8	Deviyar micro HEP	0.11	0.02	4.06	0.01	
9	Anakkampoil	8.00	27.67	4.00	11.07	
	Sub total	41.27	141.71		50.74	
II	Power purchase not yet approved					
1	Arippara*	4.50	14.00			PPA and tariff yet to be approved
2	Mukkadam*	4.00	10.51			
3	Palakuzhi GP*	1.00	2.63			
4	Kozhiyalakuthu*	1.00	2.63			
	Sub total	10.50	29.77			

6.122 As detailed above, **the Commission has approved SHPs having a total installed capacity of 41.27 MW so far and the annual energy availability expected is 141.71 MU. At the approved tariff, the annual cost for purchasing power from SHPs is estimated at Rs 50.74 crore annually.**

However, as detailed in the Table 6.76 above, KSEB Ltd has also claimed to have purchase of power from four other sources of SHPs, whose tariff and PPA is yet to be approved by the Commission. The Commission is of the considered view that, such purchases cannot be considered by the Commission while approving the sources of power purchases for the MYT period. However, KSEB Ltd or the generator can file petition before the Commission for the determination of tariff and approval of PPA as per the provisions of the EA-2003. Once the approval is granted, KSEB Ltd can included such sources in their power purchase and claim the cost at the time of Truing up of accounts.

Solar purchase

6.123 The details of the power purchase from various Solar sources within the State and outside the State are given in the table below.

Table 6.77
KSEB petition – Solar sources- claimed for power purchase for the MYT period

Sl No	Particulars	Installed Capacity (MW)	Annual energy (MU)	Rate (Rs/unit)	Annual cost of power purchase (Rs.Cr)	Remarks
I.	Within the State					
1	Ambalathara	50	73.37	3.83	28.10	Existing
2	THDCIL	50	73.37	3.1	22.74	Existing
3	PM-KUSUM Project Component A	40	66.58	3.66	24.37	Approval given
4	PM-KUSUM Project Component C	6	9.99	3.66	3.66	
5	NTPC Solar float	92	177.3	3.16	56.03	Approval given
	Sub total- approved schemes	238	400.61		134.90	
1	Kuzhalmandam (ANERT)	2	2.55			PPA yet to be approved
2	NHPC Solar float	50	96.36	3.16		
3	Floating solar plants in 8 reservoirs of KSEB Ltd and 2 belonging to KWA	100	219	3.16		
	Un approved schemes	152	317.91			
II	Out side the State					
	TP Sourya Ltd.	110	211.99	2.44	51.73	2023-24
	SECI 300MW Solar Tranche IX	300	578.16	2.44	141.07	2023-24
	Subtotal from 2023-24 onwards	410	790.15		192.80	

6.124 Out of the above, the Commission, so far granted approval for the purchase of 238MW of Solar power from the generators within the State and 410MW from various sources outside the State. While approving the ARR, **the Commission**

shall consider the solar purchases from approved sources only during the MYT period, as detailed in the Table 6.77 above.

As above, for the estimation of cost of power purchase for the MYT period, the Commission considers the purchase of 400.61 MU from solar power from plants within the state at a total cost of Rs.134.90 crore annually. In addition, the Commission also considered the solar plant from sources outside the State where PPA is approved by the Commission.

Waste to energy sources

6.125 The proposed power purchase from various Waste to Energy plant during the MYT period is given below.

Table 6.78
KSEB petition – Waste to Energy plants- claimed for power purchase for the MYT period

Sl No	Particulars	Installed Capacity	Annual energy	Rate	Annual cost of power purchase	Remarks
		(MW)	(MU)	(Rs/unit)	(Rs.Cr)	
1	Kozhikode	6	39.42	6.31	24.87	PPA approved
2	Wayanad	0.2	1.31			PPA yet to be approved
3	Brahmapuram	10	65.7			

Out of the above three plants, the Commission so far approved the purchase of power from the Waste to Energy plant at Kozhikode only. Hence for estimating the cost of power purchase for the ARR, **the Commission considered the power purchase from Waste to Energy plant at Kozhikode only.**

6.126 Based on the above, the cost of power purchase from RE sources including the RE power purchase for each year of the control period, estimated by KSEB Ltd and provisionally approved by the Commission is given in the Tables below. While estimating the cost of additional power purchase of RE sources for meeting the RPO requirements, KSEB Ltd has estimated the cost of 'non-solar purchase' @ Rs 2.82/unit and 'solar purchase' @ Rs 3.00/unit. However, the Commission decided to approve the additional solar power purchase @Rs 2.44/unit only.

6.127 The summary of the RE purchase during the year 2022-23 is given below.

Table 6.79
Summary of the RE purchase for the year 2022-23

Sl No	Source	KSEB Ltd		KSERC		Remarks
		Energy in MU	Purchase cost (Rs Cr)	Energy in MU	Purchase cost (Rs Cr)	
1	Small Hydel Total (Existing)	155.71	56.34	141.71	50.74	Approved purchases only considered
2	Small Hydel Total (Addition)	0	0	0	0	
3	Sub Total Small Hydel	155.71	56.34	141.71	50.74	

Sl No	Source	KSEB Ltd		KSERC		Remarks
		Energy in MU	Purchase cost (Rs Cr)	Energy in MU	Purchase cost (Rs Cr)	
4	Wind Within the State (Existing)	332.98	105.23	122.98	46.01	
5	Wind from outside the State			210.00	59.22	
7	Sub Total Wind	332.98	105.23	332.98	105.23	
8	Waste to energy (Existing)	0	0	0	0	
9	Waste to energy (Addition)	0	0	0	0	
10	Sub Total waste to energy	0	0	0	0	
11	Total Non-solar procurement	488.69	161.57	474.69	155.97	
12	Solar Total (Existing)	326.6	107.56	324.05	106.58	
13	Solar Total (Addition)	0	0	0	0	
14	Total Solar RPO procurement	326.6	107.56	324.05	106.58	
	Addl Non Solar Purchase to meet RPO					
15	KSEB own SHP & large Hydro commissioned after 2020	854.17		854.2		
16	SHP captive- eligible for RPO	84.79		84.79		RPO eligible due to banking
16	Existing wind captive (Manorama)	25.97		25.97		
17	Additional RPO non solar procurement @Rs2.82	347.17	97.9	371.18	104.67	@2.82
	Addl Solar procurement to meet RPO					
18	Solar KSEB existing	60.63		60.63		
19	Solar captive	526.6		526.60		
20	Additional RPO solar procurement @ Rs 3	888.10	266.43	899.53	219.48	@2.44/unit
21	Total RE purchase	2050.56	633.46	2069.44	586.70	

6.128 The summary of the RE purchase claimed and approved during the year 2023-24 is given below.

Table 6.80
Summary of the RE purchase for the year 2023-24

Sl No	Source	KSEB Ltd		KSERC		Remarks
		Energy in MU	Purchase cost (Rs Cr)	Energy in MU	Purchase cost (Rs Cr)	
1	Small Hydel Total (Existing)	155.71	56.34	141.71	50.74	Approved purchases only considered
2	Small Hydel Total (Addition)	0	0	0	0	
3	Sub Total Small Hydel	155.71	56.34	141.71	50.74	
4	Wind Within the State (Existing)	332.98	105.23	122.98	46.01	
5	Wind from outside the State	262.8	74.11	472.80	133.33	
7	Sub Total Wind	595.78	179.34	595.8	179.3	
8	Waste to energy (Existing)	0	0	0	0	
9	Waste to energy (Addition)	19.44	12.27	19.44	12.27	
10	Sub Total waste to energy	19.44	12.27	19.44	12.27	
11	Total Non-solar procurement	770.93	247.95	756.93	242.35	14.00
12	Solar Total (Existing)	326.6	107.56	324.04	106.8722	
13	Solar Total (Addition)	413.21	117.49	522.01	138.424	

Sl No	Source	KSEB Ltd		KSERC		Remarks
		Energy in MU	Purchase cost (Rs Cr)	Energy in MU	Purchase cost (Rs Cr)	
14	Total Solar RPO procurement	739.81	225.05	846.1	245.3	
	Addl Non Solar Purchase to meet RPO					
15	KSEB own SHP & large Hydro commissioned after 2020	943.02		943.0		
16	SHP captive- eligible for RPO	84.79		84.79		RPO eligible due to banking
16	Existing wind captive (Manorama)	25.97		25.97		
	KSEB wind	1.14		1.14		
17	Additional RPO non solar procurement @Rs2.82	50.31	14.19	72.18	20.35	@2.82
	Addl Solar procurement to meet RPO					
18	Solar KSEB existing	72.69		72.69		
19	Solar captive	898.79		898.79		
20	Additional RPO solar procurement @ Rs 3	163.73	49.12	66.50	16.23	@2.44/unit
21	Total RE purchase	1724.78	536.31	1741.652	524.22	

6.129 Summary of the RE purchase claimed and approved for the year 2024-25 is given below.

Table 6.81
Summary of the RE purchase for the year 2024-25

Sl No	Source	KSEB Ltd		KSERC		Remarks
		Energy in MU	Purchase cost (Rs Cr)	Energy in MU	Purchase cost (Rs Cr)	
1	Small Hydel Total (Existing)	155.71	56.34	141.71	50.74	Approved purchases only considered
2	Small Hydel Total (Addition)	7.88	4.66	0.00	0.00	
3	Sub Total Small Hydel	163.59	61.00	141.71	50.74	
4	Wind Within the State (Existing)	332.98	105.23	122.98	46.01	
5	Wind from outside the State	262.82	74.11	472.80	133.33	
7	Sub Total Wind	595.80	179.34	595.78	179.34	
8	Waste to energy (Existing)	0.00	0.00	0.00	0.00	
9	Waste to energy (Addition)	72.27	44.91	39.42	24.87	
10	Sub Total waste to energy	72.27	44.91	39.42	24.87	
11	Total Non-solar procurement	831.66	285.25	776.91	254.95	
12	Solar Total (Existing)	326.60	107.56	324.04	106.87	
13	Solar Total (Addition)	1182.07	320.47	1044.02	276.85	
14	Total Solar RPO procurement	1508.67	428.03	1368.06	383.72	
	Addl Non Solar Purchase to meet RPO					
15	KSEB own SHP & large Hydro commissioned after 2020	1126.22		1110.08		
16	SHP captive- eligible for RPO	84.79		84.79		

Sl No	Source	KSEB Ltd		KSERC		Remarks
		Energy in MU	Purchase cost (Rs Cr)	Energy in MU	Purchase cost (Rs Cr)	
16	Existing wind captive (Manorama)	25.97		25.97		RPO eligible due to banking
	KSEB wind	6.31		6.31		
17	Additional RPO non solar procurement @Rs2.82	0.00	0.00		0.00	(Excess)
	Addl Solar procurement to meet RPO					
18	Solar KSEB existing	78.00		78.00		
19	Solar captive	1235.81		1235.81		
20	Additional RPO solar procurement @ Rs 3	0.00	0.00			(Excess)
21	Total RE purchase	2340.33	713.28	2144.97	638.67	

6.130 The Summary of the RE power purchase claimed and approved for the year 2025-26 is given below.

Table 6.82
Summary of the RE purchase for the year 2025-26

Sl No	Source	KSEB Ltd		KSERC		Remarks
		Energy in MU	Purchase cost (Rs Cr)	Energy in MU	Purchase cost (Rs Cr)	
1	Small Hydel Total (Existing)	155.71	56.34	141.71	50.74	Approved purchases only considered
2	Small Hydel Total (Addition)	15.77	9.32	0	0	
3	Sub Total Small Hydel	171.48	65.66	141.71	50.74	
4	Wind Within the State (Existing)	595.78	179.34	122.98	46.01	
5	Wind from outside the State			472.80	133.33	
7	Sub Total Wind	595.78	179.34	595.78	179.34	
8	Waste to energy (Existing)	0	0	0	0	
9	Waste to energy (Addition)	105.77	65.36	39.42	24.87	
10	Sub Total waste to energy	105.77	65.36	39.42	24.87	
11	Total Non-solar procurement	873.03	310.36	776.91	254.95	
12	Solar Total (Existing)	326.6	107.56	324.04	106.87	
13	Solar Total (Addition)	1182.07	320.47	1044.02	276.85	
14	Total Solar RPO procurement	1508.67	428.03	1368.1	383.7	
	Addl Non Solar Purchase to meet RPO			0.0	0.0	
15	KSEB own SHP & large Hydro commissioned after 2020	1187.25		1171.1		
16	SHP captive- eligible for RPO	84.79		84.79		RPO eligible due to banking
16	Existing wind captive (Manorama)	25.97		25.97		
	KSEB wind	12.6		12.6		

Sl No	Source	KSEB Ltd		KSERC		Remarks
		Energy in MU	Purchase cost (Rs Cr)	Energy in MU	Purchase cost (Rs Cr)	
17	Additional RPO non solar procurement @Rs2.82	0	0	49.46	13.95	
	Addl Solar procurement to meet RPO					
18	Solar KSEB existing	79.05		79.05		
19	Solar captive	1640.66		1640.66		
20	Additional RPO solar procurement @ Rs 3					(Excess)
21	Total RE purchase	2381.7	738.39	2194.432	652.62	

6.131 The RE purchase claimed and approved for the year 2026-27 is given below.

Table 6.83
Summary of the RE purchase for the year 2026-27

Sl No	Source	KSEB Ltd		KSERC		Remarks
		Energy in MU	Purchase cost (Rs Cr)	Energy in MU	Purchase cost (Rs Cr)	
1	Small Hydel Total (Existing)	155.71	56.34	141.71	50.74	Approved purchases only considered
2	Small Hydel Total (Addition)	15.77	9.32	0	0	
3	Sub Total Small Hydel	171.48	65.66	141.71	50.74	
4	Wind Within the State (Existing)	595.78	179.34	122.98	46.01	
5	Wind from outside the State			472.80	133.33	
7	Sub Total Wind	595.78	179.34	595.78	179.34	
8	Waste to energy (Existing)	0	0	0	0	
9	Waste to energy (Addition)	106.43	65.78	39.42	24.87	
10	Sub Total waste to energy	106.43	65.78	39.42	24.87	
11	Total Non-solar procurement	873.69	310.78	776.91	254.95	
12	Solar Total (Existing)	1508.68	428.03	324.04	106.87	
13	Solar Total (Addition)			1044.02	276.85	
14	Total Solar RPO procurement			1368.1	383.7	
	Addl Non Solar Purchase to meet RPO					
15	KSEB own SHP & large Hydro commissioned after 2020	1345.16		1110.8		
16	SHP captive- eligible for RPO	84.79		84.79		RPO eligible due to banking
16	Existing wind captive (Manorama)	25.97		25.97		
	KSEB wind	12.6		12.6		
17	Additional RPO non solar procurement @Rs2.82	0	0	0.00	0.00	
	Addl Solar procurement to meet RPO					
18	Solar KSEB existing	79.05		79.05		

Sl No	Source	KSEB Ltd		KSERC		Remarks
		Energy in MU	Purchase cost (Rs Cr)	Energy in MU	Purchase cost (Rs Cr)	
19	Solar captive	1965.36		1965.36		
20	Additional RPO solar procurement @ Rs 3					(Excess)
21	Total RE purchase	2382.37	738.81	2144.97	638.67	

6.132 The summary of the Renewable purchase units claimed and approved during the MYT period from 2022-23 to 2026-27 is given below.

Table 6.84
Summary of the quantum of RE purchase during the MYT period

Source	KSEB L					KSERC				
	Energy in MU					Energy in MU				
	2022-23	2023-24	2024-25	2025-26	2026-27	2022-23	2023-24	2024-25	2025-26	2026-27
Wind IPPs	332.98	595.78	595.78	595.78	595.78	332.98	595.78	595.78	595.78	595.78
Small hydel IPPs	155.71	155.71	163.594	171.478	171.478	141.71	141.71	141.71	141.71	141.71
Solar IPPs	326.6	739.81	1508.68	1508.68	1508.68	324.04	846.05	1368.06	1368.06	1368.06
Waste to energy	0	19.44	72.27	105.77	106.43	0	19.44	39.42	39.42	39.42
Additional non solar RPO requirement	347.05	50.31				371.18	72.18		49.46	
Additional solar RPO requirement	888.1	163.73				899.53	66.50			
Subtotal	2050.66	1724.78	2332.44	2381.708	2382.368	2069.44	1741.65	2144.97	2194.43	2144.97

6.133 The summary of the cost of purchase from RE sources claimed and approved during the MYT period is given below.

Table 6.85
Summary of the cost of RE purchase during the MYT period

Source	KSEB Ltd- Power Purchase cost (Rs Cr)					KSERC -provisional- Power Purchase cost (Rs Cr)				
	2022-23	2023-24	2024-25	2025-26	2026-27	2022-23	2023-24	2024-25	2025-26	2026-27
Wind IPPs	105.23	179.34	179.34	179.34	179.34	105.23	179.34	179.34	179.34	179.34
Small hydel IPPs	56.34	56.34	61	65.659	65.659	50.74	50.74	50.74	50.74	50.74
Solar IPPs	107.56	225.05	428.03	428.03	428.03	106.58	245.30	383.72	383.72	383.72
Waste to energy		12.27	44.912	65.3612	65.78	0.00	12.27	24.87	24.87	24.87
Additional non-solar RPO requirement	97.901	14.19				104.67	20.35		13.95	
Additional solar RPO requirement	266.43	49.12				219.48	16.23			
Subtotal	633.461	536.31	713.272	738.39	738.81	586.70	524.22	638.67	652.62	638.67

6.134 Average rate of power purchase from RE sources claimed and approved during the MYT period is given below.

Table 6.86
Average cost of RE purchase during the MYT period

Source	KSEB Ltd					KSERC-				
	Average rate of purchase of RE (Rs/ kWh)					Average rate of purchase of RE (kWh)				
	2022-23	2023-24	2024-25	2025-26	2026-27	2022-23	2023-24	2024-25	2025-26	2026-27
Wind IPPs	3.16	3.01	3.01	3.01	3.01	3.16	3.01	3.01	3.01	3.01
Small hydel IPPs	3.62	3.62	3.73	3.83	3.83	3.58	3.58	3.58	3.58	3.58
Solar IPPs	3.29	3.04	2.84	2.84	2.84	3.30	2.90	2.80	2.80	2.80
Waste to energy		6.31	6.21	6.18	6.18		6.31	6.31	6.31	6.31
Additional nonsolar RPO requirement	2.82	2.82				2.82	2.82		2.82	
Additional solar RPO requirement	3.00	3.00				2.44	2.44			
Subtotal	3.09	3.11	3.06	3.10	3.10	2.84	3.01	2.98	2.97	2.98

Energy procurement from RGCCPP Kayamkulam

6.135 KSEB Ltd in their petition submitted that, due to the high variable cost the licensee is not expecting to schedule RGCCPP during the MYT period, except for emergency situations. However, the fixed charge commitment of Rs. 100 Cr has to be paid to the generator for the period from FY 2022-23 to FY 2024-25.

Analysis and Decision of the Commission

6.136 The Commission vide Order dated 15.03.2021 in petition OP No. 02/2021 had approved the settlement reached between the NTPC Ltd and KSEB Ltd for extending the PPA of the RGCCPP Kayamkulam upto 28.02.2025. The relevant portion of the order is extracted below.

“25. After considering the matter in details along with the submissions of the parties and the stakeholders, the Commission hereby orders as follows:

a. The extension of PPA with RGCCPP for a period up to 28-02-2025 is approved under Section 86 of the Electricity Act 2003, based on the settlement reached between M/s KSEB Ltd and M/s NTPC Limited as per minutes of the meeting held on 12-11-2020, on the condition that the continuation of the compensatory allocation of 180MW of cheaper 13 power from Talcher is provided by NTPC Limited for the entire period of PPA. KSEB Ltd has to ensure the compliance to this condition.

b. The annual fixed charge of Rs.100 crore per annum as agreed to by the parties is also approved for the PPA period

c. The rate of energy charges as agreed to by the parties is also approved considering the fact that the stock of Naphtha is to be exhausted for reducing the Fixed charges.

KSEB Ltd shall seek prior approval from the Commission for further scheduling of the Plant.

d. KSEB Ltd shall provide necessary schedule to RGCCPP, Kayamkulam for exhausting the stock of Naphtha available with RGCCPP/ BPCL as per the terms of Agreement.

e. KSEB Ltd shall ensure that all litigations pending in various Courts and other judicial forum, if any are withdrawn before releasing any AFC as per this Order.”

6.137 **As above, the Commission has approved the annual fixed charges of RGCCPP Kayamkulam @Rs 100.00 crore per annum till 28.02.2025. Accordingly, the Commission approved the fixed cost of RGCCPP Kayamkulam for the MYT period as follows.**

Table 6.87
Cost of power purchase of RGCCPP-Kayamkulam

Year	Claimed by KSEB Ltd	KSERC Approval	
	(Rs. Cr)	(Rs. Cr)	Remarks
2022-23	100	100	
2023-24	100	100	
2024-25	100	91.67	Up to 28.02.2025
2025-26			
2026-27			

Inter-state transmission charges payable

(a) Central Generating Stations

6.138 KSEB Ltd submitted that, the transmission charges to be paid for ISTS for the next control period are estimated on the basis of transmission charges for the period from April to October 2021. The transmission charges payable to CTUIL for the next control period is given below.

Table 6.88
Month wise details of the transmission charges paid from April-2021 to October 2021

Month	Total Transmission charges(Rs)	LTA	Transmission charges/MW/ month
		MW	Rs/MW
Apr-21	89,63,19,944	2790.74	321176.56
May-21	86,80,59,527	2755.28	315053.68
Jun-21	78,26,84,726	2748.3	284789.09
Jul-21	82,06,88,411	2777.07	295523.23
Aug-21	75,14,63,897	2768.43	271440.16
Sep-21	77,38,16,371	2783.61	277990.62
Oct-21	89,92,24,005	2760.9	325699.24
Average			298810.37

6.139 Based on the above, the year wise details of the inter-state transmission charges payable during the MYT period is given below.

Table 6.89
Station wise details of the Transmission charges payable for CGS annually during the MYT period

Station	Allocation	LTA	Per MW average	Transmission charges
NTPC (RSTPS) Stage I & II	245	228	298810.37	81.710
NTPC (RSTPS) Stage III	61	57	298810.37	20.510
TALCHER - II	427	400	298810.37	143.550
NTPC Simhadri	86	81	298810.37	28.900
NLCII - Stage I	63	57	298810.37	20.340
NLCII - Stage II	90	81	298810.37	29.050
NLC - I Exp	68	62	298810.37	22.350
NLC II Exp	81	73	298810.37	26.170
MAPS	23	21	298810.37	7.390
KAIGA Stg I	38	34	298810.37	12.190
KAIGA Stg II	35	31	298810.37	11.240
Kudankulam	141	130	298810.37	46.460
Kudankulam Unit II	133	123	298810.37	44.260
Vallur STPS	50	47	298810.37	16.890
NTPL	73	68	298810.37	24.380
NTPC-Kudgi TPS Stg-I	112	105	298810.37	37.600
NNTPP	32	30	298810.37	10.890
Total	1757	1628	298810.37	583.870

(b) Maithon and DVC stations

6.140 KSEB Ltd submitted that, the transmission charges to be paid for ISTS for the next control period are estimated on the basis of transmission charges for the period from April to October 2021. The yearly transmission charges for the next control period is given below.

Table 6.90
Transmission charges payable for Maithon & DVC Stations

Trader/Source	Contracted capacity (MW)	LTA(MW)	Per MW average transmission charges(Rs/MW)	Transmission charges (Rs.Cr)
Maithon power limited	150	140.63	298810.37	50.42
Maithon power limited	150	140.63	298810.37	50.42
DVC-Mejia TPS	100	94.75	298810.37	33.97
DVC-Reghunathpur TPS	50	47.38	298810.37	16.99
Sub total	450	423.38	298810.37	151.81

(c) Additional Transmission charges payable for approved DBFOO stations

6.141 KSEB Ltd submitted that, in the case of DBFOO contracts, the variation between the transmission charges as on bid date and the actuals has to be borne by KSEB Ltd. The estimate of the additional transmission charges payable by KSEB Ltd for the approved DBFOO contract is given below.

Table 6.91
Additional transmission charges payable for approved DBFOO contracts

Source	Contracted capacity(MW)	Transmission charges estimated for next control period payable to CTUIL(Rs/MW))	Transmission charges refunded by the Generator(Rs/MW)	Net Transmission charges payable as part of DBFOO contracts (Rs Cr)
Jindal Power Ltd -Bid-1	200	298810.37	236134	14.29
BALCO	100	298810.37	206134	10.57
				24.86

6.142 The summary of the inter-state transmission charges payable is given below.

Table 6.92

Inter State Transmission charges provisionally approved for the MYT period annually

Source	KSEB Ltd claim	KSERC Approval
	(Rs. Cr)	(Rs. Cr)
Central Generating Stations	583.87	583.87
Long Term Contracts-Tariff determined by CERC	151.81	151.81
Long Term Contracts -DBFOO	65.43	24.86
Total	801.12	760.55

NLDC/RLDC/SLDC charges

6.143 KSEB Ltd had provided a provision of Rs 3.00 crore towards NLDC/RLDC charges. ***The Commission provisionally approve the same for the Control Period.***

6.144 The summary of the energy demand availability claimed by KSEB Ltd and same provisionally approved for each year of the MYT period is given in the Tables below.

(1) Financial year 2022-23

Table 6.93

KSEB petition- Demand and availability claimed by KSEB Ltd

Month	Demand	Own generation	IPPs inside the State	Addl solar & Non solar	CGS	LTA incl wind	MTOA	Total availability	Surplus/ Deficit(-)
April	2629.36	761.86	41.22	102.94	919.76	720.20	159.57	2710.99	81.62
May	2672.96	758.72	52.95	102.94	950.41	743.62	164.89	2778.97	106.01
June	2245.15	500.27	50.58	102.94	919.76	720.20	159.57	2458.74	213.60
July	2137.65	536.25	57.23	102.94	950.41	743.62	0.00	2395.88	258.23
August	2160.49	563.58	55.24	102.94	950.41	743.62	0.00	2421.22	260.73
September	2139.83	494.26	58.21	102.94	919.76	720.20	0.00	2300.79	160.96
October	2235.02	558.88	62.39	102.94	950.41	743.62	0.00	2423.67	188.65
November	2261.21	475.81	46.47	102.94	919.76	720.20	0.00	2270.60	9.39
December	2335.63	515.37	46.54	102.94	950.41	743.62	0.00	2364.32	28.69
January	2206.27	545.72	47.11	102.94	950.41	743.62	164.89	2560.13	353.86
February	2276.56	575.73	43.55	102.94	858.44	673.35	148.93	2408.37	131.81
March	2743.58	747.92	44.03	102.94	950.41	743.62	164.89	2759.25	15.67
Total	28043.71	7034.36	605.51	1235.27	11190.36	8759.52	962.75	29852.93	1809.22

Table 6.94

KSERC- Demand and availability provisionally approved by KSERC

Month	Demand	Own generation	IPPs inside the State	CGS	LTA	Addl LTA in lieu of DBFOO	MTOA	Total availability	Surplus/ Deficit(-)
April	2627.58	762.02	140.88	919.76	426.26	276.43	159.57	2684.92	57.33
May	2671.15	758.86	180.97	950.41	440.47	285.65	164.89	2781.25	110.09
June	2243.63	500.28	172.87	919.76	426.26	276.43	159.57	2455.17	211.54
July	2136.21	536.21	195.59	950.41	440.47	285.65	0.00	2408.34	272.13
August	2159.03	563.50	188.79	950.41	440.47	285.65	0.00	2428.83	269.80
September	2138.38	494.15	198.94	919.76	426.26	276.43	0.00	2315.55	177.17
October	2233.51	558.77	213.23	950.41	440.47	285.65	0.00	2448.53	215.02
November	2259.68	475.71	158.82	919.76	426.26	276.43	0.00	2256.98	-2.70
December	2334.05	515.33	159.06	950.41	440.47	285.65	0.00	2350.92	16.87
January	2204.78	545.73	161.01	950.41	440.47	285.65	164.89	2548.16	343.38
February	2275.02	575.76	148.84	858.44	397.85	258.01	148.93	2387.82	112.80
March	2741.73	748.03	150.48	950.41	440.47	285.65	164.89	2739.94	-1.79
Total	28024.76	7034.33	2069.44	11190.36	5186.22	3363.29	962.75	29806.41	1781.66

(2) Financial Year 2023-24

Table 6.95
KSEB petition- Demand and availability claimed by KSEB Ltd

Month	Demand	Own generation	IPPs inside the State	Addl solar & Non solar	CGS	LTA incl wind	MTOA	Total availability	Surplus/ Deficit(-)
April	2729.09	730.89	95.25	17.84	919.76	720.20	159.57	2643.51	-85.59
May	2798.05	738.49	117.11	17.84	950.41	743.62	164.89	2732.36	-65.69
June	2354.55	537.55	119.75	17.84	919.76	720.20	159.57	2474.67	120.12
July	2173.88	486.92	126.81	17.84	950.41	743.62	0.00	2325.61	151.73
August	2139.71	512.02	105.46	17.84	950.41	743.62	0.00	2329.35	189.64
September	2216.22	500.92	111.80	17.84	919.76	720.20	0.00	2270.52	54.30
October	2261.67	514.34	123.33	17.84	950.41	743.62	0.00	2349.55	87.88
November	2247.30	547.67	96.16	17.84	919.76	720.20	0.00	2301.62	54.32
December	2400.73	593.03	102.59	17.84	950.41	743.62	0.00	2407.50	6.77
January	2456.17	504.85	104.99	17.84	950.41	743.62	164.89	2486.61	30.44
February	2301.95	588.05	97.19	17.84	858.44	673.35	148.93	2383.80	81.85
March	2755.51	894.97	100.29	17.84	950.41	743.62	164.89	2872.03	116.52
Total	28834.82	7149.72	1300.74	214.03	11190.36	8759.52	962.75	29577.12	742.30

Table 6.96
KSERC- Demand and availability provisionally approved by KSERC

Month	Demand	Own generation	RE IPPs	CGS	LTA	Addl LTA in lieu of DBFOO	MTOA	Total availability	Surplus/ Deficit(-)
April	2727.25	731.01	127.54	919.76	426.26	276.43	159.57	2640.58	-86.68
May	2796.17	738.61	156.81	950.41	440.47	285.65	164.89	2736.84	-59.32
June	2352.97	537.57	160.34	919.76	426.26	276.43	159.57	2479.94	126.97
July	2172.42	586.92	169.79	950.41	440.47	285.65	0.00	2433.25	260.83
August	2138.27	611.97	141.21	950.41	440.47	285.65	0.00	2429.72	291.45
September	2214.73	540.82	149.70	919.76	426.26	276.43	0.00	2312.97	98.24
October	2260.15	564.21	165.14	950.41	440.47	285.65	0.00	2405.89	145.74
November	2245.79	477.57	128.76	919.76	426.26	276.43	0.00	2228.78	-17.00
December	2399.11	513.01	137.36	950.41	440.47	285.65	0.00	2326.91	-72.20
January	2454.52	554.87	140.58	950.41	440.47	285.65	164.89	2536.87	82.35
February	2300.40	538.06	130.13	858.44	397.85	258.01	148.93	2331.42	31.02
March	2753.66	755.09	134.29	950.41	440.47	285.65	164.89	2730.80	-22.85
Total	28815.43	7149.72	1741.65	11190.36	5186.22	3363.29	962.75	29593.97	778.54

(3) Financial year 2024-25

Table 6.97
KSEB petition- Demand and availability claimed by KSEB Ltd

Month	Demand	Own generation	IPPs inside the State	CGS	LTA incl wind	MTOA	Total availability	Surplus/ Deficit(-)
April	2876.81	660.23	67.11	919.76	720.20	159.57	2526.87	-349.94
May	2920.00	818.25	181.66	950.41	743.62	164.89	2858.84	-61.16
June	2443.49	461.88	307.54	919.76	720.20	159.57	2568.95	125.46
July	2264.43	466.15	330.78	950.41	743.62	0.00	2490.97	226.53
August	2193.70	468.67	211.48	950.41	743.62	0.00	2374.19	180.49
September	2284.96	487.01	261.22	919.76	720.20	0.00	2388.19	103.23
October	2331.88	507.14	248.72	950.41	743.62	0.00	2449.90	118.02
November	2357.11	714.32	106.77	919.76	720.20	0.00	2461.05	103.94
December	2508.65	745.05	122.88	950.41	743.62	0.00	2561.96	53.32
January	2579.09	493.31	127.57	950.41	743.62	0.00	2314.92	-264.17
February	2410.54	743.13	88.55	858.44	673.35	0.00	2363.47	-47.07
March	2874.69	904.31	76.15	950.41	743.62	0.00	2674.50	-200.18
Total	30045.33	7469.44	2130.44	11190.36	8759.52	484.04	30033.79	-11.54

Table 6.98
KSERC- Demand and availability provisionally approved by KSERC for the FY 2024-25

Month	Demand	Own generation	RE IPP	CGS	LTA	Addl LTA in lieu of DBFOO	MTOA	Total availability	Surplus/ Deficit(-)
April	2874.88	659.20	67.57	919.76	426.26	276.43	159.57	2508.80	-366.09
May	2918.04	816.98	182.90	950.41	440.47	285.65	164.89	2841.30	-76.74
June	2441.85	461.16	309.64	919.76	426.26	276.43	159.57	2552.82	110.97
July	2262.91	465.43	333.04	950.41	440.47	285.65	0.00	2475.00	212.08
August	2192.23	467.94	212.92	950.41	440.47	285.65	0.00	2357.40	165.17
September	2283.43	486.25	263.00	919.76	426.26	276.43	0.00	2371.71	88.28
October	2330.32	506.35	250.42	950.41	440.47	285.65	0.00	2433.30	102.99
November	2355.53	713.21	107.50	919.76	426.26	276.43	0.00	2443.16	87.63
December	2506.97	743.89	123.72	950.41	440.47	285.65	0.00	2544.15	37.18
January	2577.36	492.54	128.44	950.41	440.47	285.65		2297.52	-279.84
February	2408.93	741.97	89.15	858.44	397.85	258.01		2345.42	-63.51
March	2872.76	902.90	76.67	950.41	440.47	285.65		2656.11	-216.65
Total	30025.23	7457.83	2144.97	11190.36	5186.22	3363.29	484.03	29826.70	-198.53

(4) Financial Year 2025-26

Table 6.99

KSEB petition- Demand and availability claimed by KSEB Ltd for the FY 2025-26

Month	Demand	Own generation	IPPs inside the State	CGS	LTA incl wind	Total availability	Surplus/Deficit (-)
April	3042.25	730.63	68.24	919.76	720.20	2438.82	-603.42
May	3057.04	725.39	185.11	950.41	743.62	2604.54	-452.50
June	2543.92	547.37	313.09	919.76	720.20	2500.42	-43.50
July	2366.33	602.50	336.96	950.41	743.62	2633.50	267.18
August	2256.26	653.48	215.88	950.41	743.62	2563.40	307.14
September	2363.38	580.10	266.55	919.76	720.20	2486.60	123.21
October	2412.00	610.82	253.77	950.41	743.62	2558.63	146.63
November	2480.21	565.99	109.00	919.76	720.20	2314.94	-165.27
December	2629.83	544.46	125.25	950.41	743.62	2363.74	-266.08
January	2716.86	582.03	130.01	950.41	743.62	2406.08	-310.78
February	2532.35	558.01	90.26	858.44	673.35	2180.06	-352.29
March	3008.64	745.91	77.59	950.41	743.62	2517.54	-491.10
Total	31409.07	7446.70	2171.71	11190.36	8759.52	29568.28	-1840.79

Table 6.100

KSERC- Demand and availability provisionally approved by KSERC for the FY 2025-26

Month	Demand	Own generation	IPPs inside the State	CGS	LTA	Addl LTA in lieu of DBFOO	Total availability	Surplus/Deficit(-)
April	3033.46	721.25	215.31	919.76	426.26	276.43	2559.01	-474.45
May	3048.21	716.08	213.76	950.41	440.47	285.65	2606.38	-441.83
June	2536.57	540.35	161.30	919.76	426.26	276.43	2324.10	-212.47
July	2359.49	594.77	177.55	950.41	440.47	285.65	2448.85	89.36
August	2249.74	645.09	192.57	950.41	440.47	285.65	2514.20	264.46
September	2356.55	572.66	170.95	919.76	426.26	276.43	2366.06	9.51
October	2405.03	602.98	180.00	950.41	440.47	285.65	2459.52	54.49
November	2473.04	558.73	166.79	919.76	426.26	276.43	2347.97	-125.07
December	2622.23	537.47	160.44	950.41	440.47	285.65	2374.45	-247.78
January	2709.01	574.56	171.52	950.41	440.47	285.65	2422.61	-286.40
February	2525.03	550.85	164.44	858.44	397.85	258.01	2229.58	-295.46
March	2999.95	736.34	219.81	950.41	440.47	285.65	2632.68	-367.26
Total	31318.32	7351.13	2194.43	11190.36	5186.22	3363.29	29285.42	-2032.90

(5) Financial Year 2026-27

Table 6.101

KSEB petition- Demand and availability claimed by KSEB Ltd for the FY 2026-27

Month	Demand	Own generation	IPPs inside the State	CGS	LTA incl wind	Total availability	Surplus/ Deficit(-)
April	3217.95	760.16	68.38	919.76	720.20	2468.49	-749.46
May	3201.26	762.51	185.05	950.41	743.62	2641.60	-559.66
June	2649.10	574.04	313.19	919.76	720.20	2527.18	-121.92
July	2533.94	579.65	337.07	950.41	743.62	2610.75	76.81
August	2321.15	630.21	215.95	950.41	743.62	2540.19	219.04
September	2445.07	600.67	266.62	919.76	720.20	2507.25	62.18
October	2495.44	605.77	253.84	950.41	743.62	2553.65	58.21
November	2610.35	571.68	109.03	919.76	720.20	2320.67	-289.68
December	2757.50	552.54	125.29	950.41	743.62	2371.86	-385.64
January	2862.65	595.96	130.05	950.41	743.62	2420.04	-442.61
February	2660.94	576.53	90.29	858.44	673.35	2198.61	-462.33
March	3149.56	765.76	77.61	950.41	743.62	2537.41	-612.15
Total	32904.92	7575.47	2172.37	11190.36	8759.52	29697.71	-3207.21

Table 6.102

KSERC- Demand and availability provisionally approved by KSERC for the FY 2026-27

Month	Demand	Own generation	IPPs inside the State	CGS	LTA	Addl LTA in lieu of DBFOO	Total availability	Surplus/ Deficit(-)
April	3201.57	741.89	67.52	919.76	426.26	276.43	2431.86	-769.71
May	3184.97	744.18	182.72	950.41	440.47	285.65	2603.43	-581.53
June	2635.62	560.24	309.24	919.76	426.26	276.43	2491.94	-143.68
July	2521.04	565.72	332.82	950.41	440.47	285.65	2575.07	54.03
August	2309.34	615.06	213.23	950.41	440.47	285.65	2504.82	195.49
September	2432.63	586.23	263.26	919.76	426.26	276.43	2471.94	39.32
October	2482.74	591.21	250.64	950.41	440.47	285.65	2518.38	35.64
November	2597.06	557.94	107.65	919.76	426.26	276.43	2288.05	-309.02
December	2743.46	539.26	123.71	950.41	440.47	285.65	2339.50	-403.96
January	2848.08	581.63	128.41	950.41	440.47	285.65	2386.58	-461.50
February	2647.40	562.67	89.15	858.44	397.85	258.01	2166.11	-481.28
March	3133.53	747.35	76.63	950.41	440.47	285.65	2500.52	-633.01
Total	32737.43	7393.37	2144.97	11190.36	5186.22	3363.29	29278.22	-3459.21

6.145 The summary of the demand and availability during the MYT period as per KSEB Ltd estimation and KSERC appraisal is given in the Table below.

Table 6.103

Summary of the demand and availability

Year	KSEB			KSERC		
	Energy demand	Energy availability	Surplus/deficit	Energy demand	Energy availability	Surplus/deficit
	(MU)	(MU)	(MU)	(MU)	(MU)	(MU)
2022-23	28043.71	29852.93	1809.22	28024.76	29806.41	1781.66
2023-24	28834.82	29577.12	742.30	28815.43	29593.97	778.54
2024-25	30045.33	30033.79	-11.54	30025.23	29826.70	-198.53
2025-26	31409.07	29568.28	-1840.79	31318.32	29285.42	-2032.90
2026-27	32904.92	29697.71	-3207.21	32737.43	29278.22	-3459.21

6.146 The summary of the peak demand and availability during the MYT period is given below.

Table 6.104

Peak demand and shortage expected during the MYT period

Year	Peak demand	Power availability	Surplus/deficit
	(MW)	(MW)	(MW)
2022-23	4547.00	4215.00	-332.00
2023-24	4779.00	4190.00	-589.00
2024-25	4924.00	3915.00	-1009.00
2025-26	5073.00	3916.00	-1157.00
2026-27	5227.00	3981.00	-1246.00

6.147 The strategies proposed by KSEB Ltd to meet the energy and peak shortages, and for selling the surplus energy available is given below.

- (1) Surplus energy is proposed to sell at an average rate of Rs 3.50 per unit. ***The Commission noted the suggestion, however direct KSEB Ltd to sell the surplus energy at an average rate of Rs 3.75/unit.***
- (2) Energy shortage (except during peak hours) is proposed to met by procuring electricity at the average rate of Rs 4.00/unit. ***However, the Commission provisionally approve the energy shortage to be met from short-term market/ traders @Rs 3.75/unit competitively.***
- (3) Peak shortage is proposed to be met by procuring electricity at a slightly higher rate of Rs 4.00 per unit. ***The Commission agrees with the proposal.***

6.148 The summary of the additional power purchases to meet the peak shortages and energy shortages is given below.

Table 6.105
Summary of the power purchase to meet energy and peak shortage

Financial Year	KSEB			KSERC			Remarks
	Energy (MU)	Power Purchase Cost (Rs Cr)	Avg rate (Rs/unit)	Energy (MU)	Power Purchase Cost (Rs Cr)	Avg rate (Rs/unit)	
2022-23	164.56	65.82	4.00	164.56	65.82	4.00	Peak purchase only
2023-24	240.55	96.22	4.00	240.55	96.22	4.00	
2024-25	514.76	205.9	4.00	514.76	205.90	4.00	
2025-26	1840.79	736.32	4.00	2032.90	762.34	3.75	
2026-27	3207.21	1282.98	4.00	3459.21	1297.20	3.75	

6.149 The summary of year wise details of the surplus energy sale and additional revenue expected to be earned during the MYT period is given below

Table 6.106
Summary of the surplus energy sale during the MYT period

Financial Year	KSEB			KSERC			Remarks
	Surplus Energy (MU)	Addl revenue (Rs Cr)	Avg rate (Rs/kWh)	Surplus Energy (MU)	Addl revenue (Rs Cr)	Avg rate (Rs/kWh)	
2022-23	1908.40	667.94	3.50	1946.22	729.83	3.75	Surplus includes surplus due to peak purchase also
2023-24	982.85	344.00	3.50	1019.09	382.16	3.75	
2024-25	503.22	176.09	3.50	316.23	118.59	3.75	
2025-26	-	-	-	-	-	-	
2026-27	-	-	-	-	-	-	

Summary of the Power purchase and Cost during the MYT period from 2022-23 to 2026-27

6.150 The summary of the power purchase claimed and provisionally approved is given in the Table below.

Table 6.107
Summary of the quantum of power purchase during the MYT period (Units in MU)

	Source	KSEB					KSERC				
		2022-23	2023-24	2024-25	2025-26	2026-27	2022-23	2023-24	2024-25	2025-26	2026-27
1	CGS	11190.36	11190.36	11190.36	11190.36	11190.36	11190.36	11190.36	11190.36	11190.36	11190.36
2	Maithon & DVC stations	3016.35	3016.35	3016.35	3016.35	3016.35	3016.35	3016.35	3016.35	3016.35	3016.35
3	DBFOO-approved contracts	2169.87	2169.87	2169.87	2169.87	2169.87	2169.87	2169.87	2169.87	2169.87	2169.87
4	DBFOO-provisionally unapproved contracts	3363.29	3363.29	3363.29	3363.29	3363.29	0	0	0	0	0

	Source	KSEB					KSERC				
		2022-23	2023-24	2024-25	2025-26	2026-27	2022-23	2023-24	2024-25	2025-26	2026-27
5	Addl power purchase in lieu of provisionally Approved/ Un approved DBFOO contracts						3363.29	3363.29	3363.29	3363.29	3363.29
6	Medium term contracts	962.75	962.75	484.04			962.75	962.75	484.04	0.00	0.00
7	RE purchase	2050.66	1724.78	2332.44	2381.71	2382.37	2069.44	1741.65	2144.97	2194.43	2144.97
8	Short term power purchase	164.56	240.55	514.76	1840.79	3207.21	164.56	240.55	514.76	2032.90	3459.21
9	RGCCPP										
9	Total power purchase	22917.84	22667.95	23071.11	23962.37	25329.45	22936.62	22684.82	22883.64	23967.20	25344.05
	Less										
10	Surplus sale	1908.40	982.85	503.22	0.00	0.00	1946.22	1019.09	316.23	0.00	0.00
11	Net Power purchase	21009.44	21685.10	22567.89	23962.37	25329.45	20990.40	21665.73	22567.41	23967.20	25344.05

6.151 The summary of the cost of power purchase claimed and provisionally approved during the MYT period is given below.

Table 6.108

Summary of the cost of power purchase claimed and approved during the MYT period (Rs.Cr)

Sl No	Source	KSEB Ltd					KSERC				
		2022-23	2023-24	2024-25	2025-26	2026-27	2022-23	2023-24	2024-25	2025-26	2026-27
1	CGS	4443.55	4897.60	4968.50	5040.99	5115.10	4443.54	4897.59	4968.49	5040.99	5115.08
2	Maithon & DVC stations	1319.86	1510.37	1517.32	1524.51	1531.94	1319.86	1510.37	1517.32	1524.51	1531.94
3	DBFOO- approved contracts	889.88	979.45	969.37	959.97	948.44	889.88	979.45	969.37	959.97	948.44
4	DBFOO- unapproved contracts	1437.01	1575.35	1557.81	1541.94	1524.40	0.00	0.00	0.00	0.00	0.00
5	Addl power purchase in lieu of unapproved DBFOO contracts						1345.32	1372.22	1399.13	1426.03	1452.94
6	Medium term contracts	318.67	320.60	162.15	0.00	0.00	318.67	320.60	162.15	0.00	0.00
7	RE purchase	633.46	536.31	713.27	738.39	738.81	586.70	524.22	638.67	652.62	638.67
8	Short term purchase	65.82	96.22	205.90	736.32	1282.98	65.82	96.22	205.90	762.34	1297.20
9	RGCCPP	100.00	100.00	100.00			100.00	100.00	91.67		
10	Intra-state transmission charges	801.12	801.12	801.12	801.12	801.12	760.55	760.55	760.55	760.55	760.55
11	NLDC charges	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00
	Total	10012.37	10820.02	10998.44	11346.24	11945.79	9833.64	10564.23	10716.26	11130.01	11747.83
12	Less										
13	Revenue from surplus sale	667.94	344.00	176.13	0.00	0.00	729.83	382.16	118.59	0.00	0.00
14	Net cost of Power purchase	9344.43	10476.02	10822.32	11346.24	11945.79	9103.81	10182.07	10597.67	11130.01	11747.83

6.152 The average cost of power purchase claimed and provisionally approved during the MYT period is given below.

Table 6.109
Summary of the Cost of Power purchase during the MYT period

Year	KSEB Ltd claim			KSERC Approval		
	Net power purchase	Cost	Avg. cost	Net power purchase	Cost	Avg. cost
	(MU)	(Rs. Cr)	(Rs/ kWh)	(MU)	(Rs. Cr)	(Rs/ kWh)
2022-23	21009.44	9344.43	4.45	20990.40	9103.81	4.34
2023-24	21685.10	10476.02	4.83	21665.73	10182.07	4.70
2024-25	22567.89	10822.32	4.80	22567.41	10597.67	4.70
2025-26	23962.37	11346.24	4.74	23967.20	11130.01	4.64
2026-27	25329.45	11945.79	4.72	25344.05	11747.83	4.64

6.153 The average cost of power purchase including cost of internal generation (SBU-G) is given in the Tables below.

Table 6.110
Summary of the cost of power purchase including internal generation claimed by KSEB Ltd

Year	Internal generation of SBU-G		Power purchase (net)		Total		Weighted average cost of Power purchase
	Quantum	Cost	Quantum	Cost	Quantum	Cost	
	(MU)	(Rs.CR)	(MU)	(Rs. Cr)	(MU)	(Rs. Cr)	
2022-23	7034.36	705.18	21009.44	9344.43	28043.80	10049.61	3.58
2023-24	7149.72	850.67	21685.10	10476.02	28834.82	11326.69	3.93
2024-25	7469.45	911.46	22567.89	10822.32	30037.34	11733.78	3.91
2025-26	7446.71	989.63	23962.37	11346.24	31409.08	12335.87	3.93
2026-27	7575.47	1183.89	25329.45	11945.79	32904.92	13129.68	3.99

Table 6.111
Summary of the cost of power purchase including internal generation provisionally approved

Year	Internal generation of SBU-G		Power purchase (net)		Total		Weighted average cost of Power purchase
	Quantum	Cost	Quantum	Cost	Quantum	Cost	
	(MU)	(Rs.CR)	(MU)	(Rs. Cr)	(MU)	(Rs. Cr)	
2022-23	7034.33	613.85	20990.40	9103.81	28024.73	9717.67	3.47
2023-24	7149.72	690.45	21665.73	10182.07	28815.45	10872.53	3.77
2024-25	7457.83	734.62	22567.41	10597.67	30025.24	11332.30	3.77
2025-26	7351.13	767.00	23967.20	11130.01	31318.33	11897.02	3.80
2026-27	7393.37	803.69	25344.05	11747.83	32737.42	12551.52	3.83

O&M expenses

6.154 KSEB Ltd in the petition has stated that the recovery of employee cost and A&G expenses claimed are **as per norms** specified in Annexure-7 of Tariff Regulation 2021. The number of consumers is estimated based on CAGR of 3 years from 2018-19 to 2020-21. The quantum of lines and transformers are projected for the control period FY 2022-23 to 2026-27 considering the capital addition planned for the control period. KSEB Ltd in their petition has estimated the O&M expenses as shown below:

Table 6.112

Employee cost and A&G expenses proposed by KSEB for the MYT period:

Parameters	FY-23	FY-24	FY-25	FY-26	FY-27
No. of consumers (Rs. L/1000)	4.282	4.473	4.672	4.88	5.098
Dist Transformers (Rs. L/DTr)	0.845	0.883	0.922	0.964	1.006
Length of HT line (Rs. L/km)	0.837	0.874	0.913	0.954	0.996
Length of HT line (Rs. L/km)	0.183	0.191	0.2	0.209	0.218
Energy sales (Rs/unit)	0.189	0.197	0.206	0.215	0.225
No. of consumers (No) for previous year	13451213	13762404	14082258	14411229	14749633
No. of Dist Transformers (Nos) for previous year	84798	86998	89198	91398	93598
HT Line (Ckt-Km) for previous year	67651.23	69851.23	72051.23	74251.23	76451.23
LT Line (Ckt-Km) for previous year	298454.40	301454.4	304454.4	307454.4	310454.4
Energy sales in MU for previous year	23207.24	24880.38	25697.59	26896.58	28180.22
Employee, A&G Cost (Rs Cr)	2843.55	3060.21	3276.44	3513.56	3765.83

6.155 KSEB Ltd has estimated the R&M expenses at 4 % of opening GFA along with pro rata allowance for the assets added during the year. As per the petition, R&M expenses for the opening level of GFA excluding expenditure of prepaid smart metering for the control period is furnished below:

Table: 6.113

Total R&M expenses proposed by KSEB Ltd for the control period

No	Item	FY-23	FY-24	FY-25	FY-26	FY-27
1	Opening GFA excluding land	14084.06	14996.89	15875.42	19630.02	21152.06
2	R&M expenses @ 4%	547.59	583.08	617.24	763.22	822.39

6.156 Based on the above, KSEB Ltd has proposed the normative O& M expenses for next control period as given below:

Table 6.114

Normative O&M Cost for SBU-D (Rs Cr)

No	Item	2022-23	2023-24	2024-25	2025-26	2026-27
1	Employee & A&G costs	2843.55	3060.21	3276.44	3513.56	3765.83
2	R&M expenses	547.59	583.08	617.24	763.22	822.39
3	Normative O&M expenses	3391.14	3643.28	3893.67	4276.77	4588.22

6.157 The O&M Expenses estimation of KSEB Ltd based on past trends is as given in the table below:

Table 6.115
O&M Cost based on past trends (Rs Cr)

No	Year	2022-23	2023-24	2024-25	2025-26	2026-27
1	Employee cost	2978.04	3372.55	3712.07	3976.07	4213.99
2	A&G	480.15	505.61	532.42	560.67	590.43
3	R&M	249.36	261.82	274.92	288.66	303.09
4	O & M Expenses	3707.55	4139.98	4519.41	4825.40	5107.51

Comments of Stakeholders

6.158 The HT-EHT Association objected to the O&M cost estimated by KSEB Ltd. According to the Association, there is no logic or rationale for the asset addition considered by KSEB Ltd for claiming O&M cost. According to the Association, the O&M cost proposed by KSEB Ltd is exorbitantly high. The O&M computed by the Association is less by Rs.271.53 crore less than the total O&M cost claimed by KSEB Ltd during the MYT period.

Provisions in the Regulations

6.159 Regulation 80 of the Tariff Regulations, 2021 provide as follows.

“80. (1) The distribution licensee shall be allowed to recover the operation and maintenance expenses, as per the norms specified in Annexure 7 to these Regulations, for each financial year of the Control Period:

Provided that the distribution business of KSEB Limited shall be allowed to recover the annual pension contribution paid to the Master Trust, based on the actuarial valuation and subject to prudence check by the Commission, in respect of the personnel allocated to the distribution business of KSEB Limited, in addition to the above specified normative operation and maintenance expenses

Annexure-7(2c)

O&M norms for the distribution business/licensees

- (i) The parameters for allowing ‘the employee costs and A&G expenses’ for the distribution business under this MYT Regulation shall be:
- | | |
|--|-----|
| a) the number of consumers | 20% |
| b) the number of distribution transformers | 25% |
| c) the length of HT lines in kilometres | 20% |
| d) the length of LT lines in kilometres | 20% |
| e) The quantum of energy sales | 15% |
- (ii) As mentioned in Table 2, the O&M expenses for 2018-19 including pay revision expenses is provisionally estimated as Rs.2183.79 crore. It is also to be noted that the Commission’s Orders on truing up of accounts for 2018-19 is being issued. Once the same is issued, the amount shall stand revised as per the trued up figures

(iii) After allocating the amount to the five parameters, the normative O&M costs for the Control Period is as shown below:

Table – 6

Particulars		Ratio	2018-19 Rs. crore	Normative Value	Unit
No. of consumers (Nos)	12276321	20%	436.76	3.558	Rs.lakh/1000 consumers
No. of Distribution Transformers (Nos)	77724	25%	545.95	0.702	Rs.lakh/transformer
Length of HT lines (km)	62835	20%	436.76	0.695	Rs.lakh/km line
Length of LT lines (km)	286784	20%	436.76	0.152	Rs.lakh/km line
Energy Sales (MU)	20880.7	15%	327.57	0.157	Rs./unit
Employee cost & A&G expenses		100%	2,183.79		

(iv) The above normative Average Employee cost and A&G expense for 2018-19 is allocated among the five parameters viz. No. of consumers, No. of distribution transformers, length of HT lines, length of LT lines and Energy sold in the ratio; 20: 25: 20: 20: 15 to arrive at the provisional per unit cost for each parameter for the year 2018-19. This norm is escalated @ 4.84% to fix the notional norms for years 2019-20 to 2021-22.

(v) The per unit rate so arrived for 2021- 22 is escalated at the escalation rate of 4.454% for the Control Period to arrive at the provisional norm for the MYT Control Period as indicated in the Table-7 below:

Table- 7

Particulars	Current Control Period indicative only				Control period (Provisional)				
	2018-19	2019-20	2020-21	2021-22	2022-23	2023-24	2024-25	2025-26	2026-27
Rs. lakh /1000 consumers	3.558	3.730	3.910	4.100	4.282	4.473	4.672	4.880	5.098
Rs. lakh/ transformer	0.702	0.736	0.772	0.809	0.845	0.883	0.922	0.964	1.006
Rs. lakh/km HT line	0.695	0.729	0.764	0.801	0.837	0.874	0.913	0.954	0.996
Rs.lakh/L Tline	0.152	0.160	0.167	0.175	0.183	0.191	0.200	0.209	0.218
Rs./unit	0.157	0.164	0.172	0.181	0.189	0.197	0.206	0.215	0.225

(vi) The O&M expenses (excluding the R&M expenses) for any year of the new Control Period shall be allowed by multiplying the per unit cost of the parameters for that year (provided in Table- 6 above), with the actual number of consumers, number of distribution transformers, length of HT & LT lines in kilometre and the energy sales for the year (at the beginning of the year). i.e., the O&M expenses for the financial year 2022-23 shall be allowed, by multiplying the per unit cost of the parameters for the financial year 2022-23 with the actual; number of consumers, number of distribution transformers, length of HT & LT lines in kilometre at the beginning of the year (2022-23) and the energy sold for the previous year 2021-22.

(vii) The R&M expenses for the distribution business is benchmarked @ 4.0% of the

value of the opening Distribution Gross Fixed Assets (excluding the value of land and land under lease) as on 1st April of the respective financial year.

(viii) The Normative O&M cost for each year for SBU-D is the sum of the figures under clauses (v) & (vi) above.

Note:

Details provided in para 2 and figures provided in Tables 2 to 7 above are provisional. The issue of employee strength of KSEB Ltd as mentioned above is sub judice. Hence, the employee strength adopted in the Order on the Truing Up of accounts for the year 2017-18 is retained. It is noted that KSEB Ltd has not yet filed the petition for the truing up of accounts for the financial years 2019-20 and 2020-21 based on the audited accounts of the respective financial years.

Many stakeholders and Associations have raised their serious concern with regard to the number of employees actually available in KSEB Ltd vis-à-vis those numbers considered by the Commission while truing up of accounts of the previous years. During February 2021, KSEB Ltd has implemented the Pay Revision with effect from July/August 2018 for its Officers and staff. As per Hon'ble APTEL decision in OP 1/2013 and 19/2013 in the Order dated 10.11.2014, the effect of pay revision have to be allowed as part of employee cost. The final norms of KSEB Ltd can be arrived at only after the truing up of the figures from the financial year 2018-19 is over and after the subjudice matter is resolved. The norms will be reworked accordingly. KSEB Ltd may file the petition for the approval of ARR & ERC for the Control period based on the provisional figures as mentioned in Tables 2 to 7 above.

Analysis and decision of the Commission

6.160 The Commission has carefully examined the estimate of the O&M expenses claimed by SBU-D of KSEB Ltd for the MYT period from 2022-23 to 2026-27. The O&M expenses of SBU-D claimed by KSEB Ltd includes the following.

- (i) Employee expenses,
- (ii) Administration and General expenses (A&G expenses), and
- (iii) Repair and Maintenance Expenses (R&M expenses).

Employee expenses and A&G expenses

6.161 The Table-7 of the Annexure-7 of the Tariff Regulations 201 specifies the norms for approving the 'employee expenses and A&G expenses' of KSEB Ltd, linked to the following parameters.

- (i) Number of consumers
- (ii) Number of distribution transformers
- (iii) Length of HT lines,
- (iv) Length of LT lines and
- (v) Energy sales.

6.162 The parameters of the 'employee cost and A&G expenses claimed by KSEB Ltd as above is given below.

Table 6.116

KSEB Ltd petition- Distribution parameters adopted for estimating the employee cost & A&G expenses

Particulars	2021-22	2022-23	2023-24	2024-25	2025-26	CAGR
No. of consumers (No)	13451213	13762404	14082258	14411229	14749633	2.33%
No. of Dist Transformers (Nos)	84798	86998	89198	91398	93598	2.50%
HT Line (Ckt-Km)	67651	69851	72051	74251	76451	3.10%
LT Line (Ckt-Km)	298454	301454	304454	307454	310454	0.99%
Energy sales in MU	23207	24880	25698	26897	28180	4.97%

6.163 The HT &EHT Association submitted that, the HT lines and Distribution transformers proposed during the MYT period is excessively high. The Commission noted the argument of the Association and decided to look into the actuals of the various distribution parameters added into the system during the period from 2016-17 to 2020-21 based on the audited accounts. The details are given below.

Table 6.117

Actuals of the distribution parameters for the period from 2016-17 to 2020-21

Particulars	2016-17	2017-18	2018-19	2019-20	2020-21	CAGR
Consumers (Nos)	11994816	12276321	12552206	12826185	13142910	2.3%
Distribution transformers (Nos)	75579	77724	79876	81470	83399	2.5%
HT lines (Ckt. Kms)	61398.43	62855.31	64568.02	66269.49	66663.5	2.1%
LT lines (Kms)	291328	286784	289804	293280	295697	0.4%
Energy sales including external sales MU	20038.25	20880.7	21536.77	22728.34		4.3%

6.164 Considering the actuals as above, the Commission has decided to provisionally provide an annual growth of 2% in number of consumers and HT lines and 2.50% growth in distribution transformers and 0.50% growth in LT lines. Energy sale is adopted as per the estimate of the ARR. Accordingly, the parameters considered by the Commission for estimating the 'employee cost and A&G expenses is detailed below.

Table 6.118

Distribution parameters adopted for estimating the 'employee cost and A&G expenses' during the MYT period

Particulars	Consumers (Nos)	Distribution transformers (Nos)	HT lines (Ckt. Kms)	LT lines (Kms)	Energy sales including external sales MU
2016-17	11994816	75579	61398.43	291328	20038.25
2017-18	12276321	77724	62855.31	286784	20880.7

Particulars	Consumers (Nos)	Distribution transformers (Nos)	HT lines (Ckt. Kms)	LT lines (Kms)	Energy sales including external sales MU
2018-19	12552206	79876	64568.02	289804	21536.77
2019-20	12826185	81470	66269.49	293280	22728.34
2020-21	13142910	83399	66663.5	295697	
CAGR	2.3%	2.5%	2.1%	0.4%	4.3%
CAGR adopted for the MYT period	2.00%	2.50%	2.00%	0.50%	Estimate as per ARR
2021-22	13405768	85484	67997	297175	23207.24
2022-23	13673884	87621	69357	298661	24880.38
2023-24	13947361	89812	70744	300155	25697.59
2024-25	14226308	92057	72159	301655	26896.58
2025-26	14510835	94358	73602	303164	28180.22

6.165 Based on the above, the Employee cost and A&G expenses of SBU-D of KSEB Ltd is estimated for the MYT period as given below.

Table 6.119
Employee cost and A&G expenses provisionally approved for the MYT period

Parameters	2022-23	2023-24	2024-25	2025-26	2026-27
No. of consumers (Rs. L/1000)	4.282	4.473	4.672	4.88	5.098
Dist Transformers (Rs. L/DTr)	0.845	0.883	0.922	0.964	1.006
Length of HT line (Rs. L/km)	0.837	0.874	0.913	0.954	0.996
Length of LT line (Rs. L/km)	0.183	0.191	0.2	0.209	0.218
Energy sales (Rs/unit)	0.189	0.197	0.206	0.215	0.225
No. of consumers (No) for previous year	13405768	13673884	13947361	14226308	14510835
No. of Dist Transformers (Nos) for previous year	85067	86768	88504	90274	92079
HT Line (Ckt-Km) for previous year	67997	69357	70744	72159	73602
LT Line (Ckt-Km) for previous year	297175	298661	300155	301655	303164
Energy sales in MU for previous year	23207.24	24880.38	25697.59	26896.58	28180.22
Employee cost and A&G Cost (Rs Cr)	2844.43	3044.56	3243.20	3461.61	3694.11

6.166 The Commission noted that, the Tariff Regulations, 2021 allows the employee cost and A&G expenses in a composite matter for the MYT period from 2022-23 to 2026-27. However, the Commission is of the strong view that, each of the components of O&M expenses such as 'Employee Expenses, A&G expenses and R&M expenses' are separate expenses and controllable parameters. Further, KSEB Ltd is also accounting each item separately in their audited accounts. Hence, the Commission has decided to segregate the 'employee cost and A&G expenses, separately in the same proportion as adopted by the Commission while approving the Truing up of Accounts for the year 2020-21. Based on the above, the 'Employee cost & A&G expenses' approved for the MYT period is given below.

Table 6.120
Employee cost and A&G expenses provisionally approved for the MYT period

Year	Employee cost (Rs.Cr)	A&G expenses (Rs.Cr)	Total (Rs.Cr)
	94.65%	5.35%	100%
2022-23	2692.25	152.18	2844.43
2023-24	2881.68	162.88	3044.56
2024-25	3069.68	173.51	3243.20
2025-26	3276.42	185.20	3461.61
2026-27	3496.47	197.63	3694.11

6.167 The Commission also notes that KSEB Ltd has in OP No.63/2021 filed a separate petition for redetermination of allowable employee strength since 31.03.2009. The Commission notes that the HT&EHT Association filed a writ petition (W.P.(C)No.4752 of 2022) before the Hon'ble High Court seeking among others, directing the Commission not to take up or consider any proposal for increasing the manpower. There is no stay in the proceeding before the Hon'ble. High Court.

In view of the above legal process, the Commission hereby states that the above provisional approval of employee cost may undergo changes depending upon the outcome of the above mentioned petitions.

R&M expenses

6.168 As per the Annexure-7 to Tariff Regulations, 2021, the R&M expenses allowable to SBU-D is benchmarked @4% of the value of the opening Gross Fixed Asset (excluding value of land and land under lease) as on 1st April of the respective financial year.

6.169 As per the orders on Truing Up of accounts as on 31.03.2021, the GFA of SBU-D as on 01.04.2021 is approved at Rs.12876.06 crore. In order to arrive the GFA as on 01.04.2022, the GFA of SBU-D added during the year 2021-22 has to be reasonably estimated. In the absence of reliable information, the Commission has estimated the GFA of SBU-D added during the year 2021-22 at the average of the GFA added during the last three years 2018-19, 2019-20 and 2020-21, whose Truing up of accounts was already approved by the Commission.

Table 6.121
Estimate of the GFA addition for the year 2021-21

Particulars	2018-19	2019-20	2020-21	2021-22 (Avg. 2018-19 to 2020-21)
	(Rs. Cr)	(Rs. Cr)	(Rs. Cr)	(Rs. Cr)
GFA addition eligible as per Regulation	1202.50	1642.19	1801.42	1548.70

6.170 As detailed under Chapter-3 and as extracted under Table 6.26 above, the GFA addition provisionally considered by the Commission for the purpose of ARR for the MYT period is given below.

Table 6.122
Estimate of the GFA addition for the MYT period

Year	GFA Addition provisionally considered
	(Rs. Cr)
2022-23	683.15
2023-24	667.68
2024-25	3514.97
2025-26	759.45
2026-27	695.55

6.171 The Commission notes that, KSEB Ltd is yet to submit the details of the cost of land. Hence the Commission has provisionally considered the cost of land @2.8% of the GFA for the respective years. However, at the stage of Truing up, the Commission shall consider the actual cost of land capitalised during that financial year and take an appropriate decision in this regard. Based on the above, the R&M expenses of SBU-D approved for the MYT period is given below.

Table 6.123
R&M cost provisionally approved for the MYT period from 2022-23 to 2026-27

Year	GFA at the beginning of the year (Rs.Cr)	GFA added during the year (Rs.Cr)	Cost of land @2.80% of the opening GFA	Opening GFA excluding land value	R&M cost allowable (Rs. Cr) @4% (excl.land)
2021-22	12876.06	1548.70	360.53	12515.53	500.62
2022-23	14424.76	683.15	403.89	14020.87	560.83
2023-24	15107.91	667.68	423.02	14684.89	587.40
2024-25	15775.60	3514.97	441.72	15333.88	613.36
2025-26	19290.57	759.45	540.14	18750.43	750.02
2026-27	20050.02	695.55	561.40	19488.62	779.54

6.172 Based on the above, the total O&M expenses claimed and provisionally approved for the MYT period is given below.

Table 6.124
Summary of the O&M expenses provisionally approved for the MYT period

Year	KSEB Ltd petition			KSERC provisional			
	Employee & A&G costs	R&M expenses	Total	Employee expenses	A&G expenses	R&M expenses	Total
	(Rs. Cr)	(Rs. Cr)	(Rs. Cr)	(Rs. Cr)	(Rs. Cr)	(Rs. Cr)	(Rs. Cr)
2022-23	2843.55	547.59	3391.14	2692.25	152.18	500.62	3345.05
2023-24	3060.21	583.08	3643.29	2881.68	162.88	560.83	3605.40
2024-25	3276.44	617.24	3893.68	3069.68	173.51	587.40	3830.59
2025-26	3513.56	763.22	4276.78	3276.42	185.20	613.36	4074.97
2026-27	3765.83	822.39	4588.22	3496.47	197.63	750.02	4444.12

Pay revision expenses

6.173 KSEB Ltd submitted that, Regulation 14(3) provides for admission of expenses relating to pay revision during the control period after due prudence check. KSEB Ltd in their petition has submitted that the pay revision of Officers/workmen is due from July / August 2023. The additional liability is estimated at 10% of Basic pay and DA. Accordingly, the provision estimated to discharge liability as per the petition is furnished below:

Table : 6.125
Pay Revision expenses estimated by KSEB Ltd

Pay Revision Expenses (Cr)				
Particulars	2023-24	2024-25	2025-26	2026-27
Basic + DA	3345.35	3623.3	3920.6	4269.1
10% of above	334.53	362.32	392.06	426.91
Provision for Pay Revision	223.02	362.32	392.06	426.91

6.174 SBU wise details of the pay revision expenses estimated by KSEB Ltd is given below.

Table 6.126
SBU wise details of the pay revision expenses estimated by KSEB Ltd

SBU wise Pay revision expenses (Rs.Cr)						
Business Unit	Employee cost ratio	2022-23	2023-24	2024-25	2025-26	2026-27
SBU G	5.40		12.04	19.56	21.17	23.05
SBU T	11.25		25.08	40.75	44.09	48.01
SBU D	83.35		185.90	302.02	326.80	355.85
Total	100.00	NA	223.02	362.32	392.06	426.91

KSEB Ltd further submitted that, they had not included the above provision in their ARR and requested that these expenses be allowed as and when it materializes during the truing up process.

Analysis and Decision of the Commission

6.175 Regulation 14(3) of the Tariff Regulations 2021 provide as follows.

“14(3) Expenses relating to pay revision, if any, during the Control Period, of the Generation business/ company or Transmission business/ licensee or distribution business/ licensee, will be considered for pass through after due prudence check.”

6.176 As discussed under paragraphs 6.173 and 6.174 above, KSEB Ltd has estimated the additional liability towards pay revision with effect from July/August 2023 onwards. However, as per the details submitted before the Commission, KSEB Ltd yet to take any steps towards revision of pay and allowances to its employees. Hence it is too premature to claim provision of pay revision at this stage. However, the Commission may allow the 'revision of pay and allowances implemented during the MYT period' as per the provisions of the Tariff Regulations, 2021, after prudence check.

With the above observation, ***the Commission decided not to provide any provision towards revision of pay and allowances to its employees during the MYT period 2022-23 to 2026-27.***

Depreciation

6.177 KSEB Ltd has estimated the depreciation on the fixed assets of SBU-D at the net average rate of depreciation approved by the Commission vide the Tariff Regulations, 2021. KSEB Ltd further submitted that, the depreciation in line with Regulation 27 of the Tariff Regulations, 2021 for the control period as per the estimate of KSEB Ltd is given below:

Table : 6.127
Depreciation proposed for SBU-D

Normative Depreciation		2020-21	2021-22	2022-23	2023-24	2024-25	2025-26	2026-27
	Particulars	SBU-D	SBU-D	SBU-D	SBU-D	SBU-D	SBU-D	SBU-D
1	Opening GFA as on 1-4-2017 (As per TU Order 2017-18 (OA 9/2020 Dt 25.06.2021)	7530.50						
2	Total asset addition approved As per order dt 25.06.2021 for 2017-18	699.45						
3=(1+2)	Approved GFA as on 31.03.2018	8229.95						
4	GFA addition claimed for depreciation as per submission dt 30.07.2021 (2018-19)	1202.50						
5	Asset addition for 2019-20 as per TU petition	1642.19						
6=(3+4+5)	GFA at the beginning of the year considered for depreciation	11074.64	12876.06	14084.06	16435.89	20759.42	27880.02	29402.06
7	Assets >13 years old (for the control period)	2845.86	3088.04	3088.04	3529.34	4067.19	4530.86	5193.78
8	Fully depreciated Assets - Beyond 30 years	309.49	333.43	368.60	476.90	558.38	629.31	697.51
9	Add: Fully depreciated Contribution & grants	92.09	108.42	128.35	151.13	181.82	228.83	288.37
10=(7-8+9)	Assets having life 13-30 yrs	2628.46	2863.03	2847.79	3203.57	3690.63	4130.38	4784.64
11=(10*2.80%)	Value of land (Average 2.8% of GFA)	73.60	80.16	79.74	89.70	103.34	115.65	133.97
12	Grants and contributions prior to 13 years	2081.57	2504.14	2953.91	3308.49	3618.61	3997.81	4169.87

Normative Depreciation		2020-21	2021-22	2022-23	2023-24	2024-25	2025-26	2026-27
	Particulars	SBU-D	SBU-D	SBU-D	SBU-D	SBU-D	SBU-D	SBU-D
13=(10-11-12)	Assets having life 13-30 yrs eligible for depreciation	473.29	278.73	-185.86	-194.62	-31.32	16.92	480.80
14=(13*1.42%)	Depreciation for Assets 12-30 years (@1.42%)	6.72	3.96	-2.64	-2.76	-0.44	0.24	6.83
15=(6-7)	Assets < 13 years old (1-4-2008 to 31-3-2020)	8228.78	9788.02	10996.02	12906.55	16692.23	23349.16	24208.28
16=(15*2.80%)	Value of land (Average 2.8% of GFA)	230.41	274.06	307.89	361.38	467.38	653.78	677.83
17	Grants and contributions (less than 13 yrs old)	5169.94	5450.23	5520.46	6815.84	10150.72	15024.17	15052.11
18=(15-16-17)	Opening balance of Assets < 13 years old	2828.43	4063.73	5167.67	5729.33	6074.13	7671.22	8478.34
19	Asset addition during the year	1801.42	1208.00	2351.83	4323.53	7120.60	1522.04	1415.03
20	Contribution & grants received during the year	702.86	520.00	1649.96	3645.00	5252.65	200.00	200.00
21= (19*2.80%)	Land value @ 2.80% on GFA addition	50.44	33.82	65.85	121.06	199.38	42.62	39.62
22=(18+19-20-21)	Closing balance of Assets <13 years Old	3876.56	4717.90	5803.69	6286.80	7742.70	8950.64	9653.75
23=(18+22)/2	Average Value of Assets <13 Years old	3352.50	4390.82	5485.68	6008.06	6908.42	8310.93	9066.04
24=(23*5.14%)	Depreciation for assets <13 years (@5.14%)	172.32	225.69	281.96	308.81	355.09	427.18	465.99
25=(14+24)	Total Depreciation for the year	179.04	229.65	279.32	306.05	354.65	427.42	472.82

Comments of the Stakeholders

6.178 The total depreciation computed by the HT&EHT Association is only Rs.1389.73 crore as against Rs.1840.26 crore claimed by KSEB Ltd. This is mainly due to the reason that, the Association has considered the GFA addition of Rs.1336.39 crore as against Rs 8483.03 crore claimed by KSEB Ltd.

Provisions in the Regulations

6.179 Provisions regarding depreciation is given below:

“27. Depreciation. –

- (1) *Depreciation shall be calculated on the original capital cost of the asset as approved by the Commission:*

Provided that, no depreciation shall be allowed on the increase in value of the assets, on account of revaluation of assets:

Provided further that the depreciation shall not be allowed on the assets created through consumer contribution, deposit works, capital subsidies and grants.

- (2) *The generation business/ company or transmission business/ licensee or distribution business/ licensee shall be permitted to recover depreciation*

on the approved capital cost of fixed assets used in their respective business, computed in the following manner:-

- (xiii) depreciation shall be allowed upto a maximum of 90% of the approved capital cost of asset.*
- (xiv) depreciation shall be computed annually based on the straight line method at the rates specified in Annexure 1 to these Regulations for the first thirteen financial years from the date of Commercial operation;*
- (xv) the remaining depreciable value as on the thirty first day of March of the financial year ending after a period of thirteen financial years from the date of Commercial operation shall be spread over the balance useful life of the assets;*
- (xvi) the generating business/ company or transmission business/ licensee or distribution business/ licensee, shall file 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;*
- (xvii) No depreciation shall be allowed for assets created through consumer contribution, deposit works, capital subsidies and grants;*
- (xviii) the salvage value of the fully depreciated asset shall be ten per cent of the allowable capital cost as approved by the Commission;*

Provided that the salvage value of Information Technology equipment and computer software shall be considered at zero percent of the allowable capital cost.

- (3) Land, other than the land held under lease and the land for reservoir in the case of hydel generating station, shall not be a depreciable asset and its cost shall be excluded from the capital cost while computing the depreciable value of the assets.*
- (4) In case the land is held on lease, the lease premium paid will be eligible for depreciation over the lease period.*
- (5) Depreciation against assets relating to environmental protection shall be allowed on a case-to-case basis at the time of fixation of tariff, subject to the condition that the environmental standards as prescribed have been complied with during the previous tariff period.*
- (6) In the case of existing assets, the balance depreciable value of the asset as on the first day of April, 2022, shall be worked out by deducting the cumulative depreciation approved by the Commission upto the thirty first day of March, 2022, from the gross depreciable value of the assets.*
- (7) Depreciation shall be chargeable from the first financial year of Commercial operation:*

Provided that in case the COD of the asset is declared during the course of the financial year, depreciation shall be charged on a daily pro-rata basis:

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

- (8) *In case a single tariff needs to be determined for all the units of a Generating Station, the depreciation shall be computed from the effective date of commercial operation of each of the units, taking into consideration the depreciation of individual generating units thereof.*

Analysis and decision of the Commission

- 6.180 The Commission has examined the details submitted by KSEB Ltd in detail. However, as detailed in Table-3.33 of Chapter-3, the GFA addition of SBU-D approved by the Commission is much less than the same claimed by KSEB Ltd. This has impact on the depreciation claimed by KSEB Ltd and the same approved by the Commission.
- 6.181 The Regulation 27 of the Tariff Regulations 2021 provides for the methodology and the Annexure-1 of the Tariff Regulations, 2021 specifies the rate to be adopted for approving the depreciation.
- 6.182 The Tariff Regulations, 2021 provides for accelerated depreciation for the assets for the first thirteen years from the date of COD. The remaining depreciable value after completion of thirteen years from the COD shall be spread over the balance useful life of the assets. Further, as per the provisions of the Tariff Regulations, 2021, land is a non-depreciable asset. Based on the past practice and to ensure consistency in accounting policy, wherever the value of land is not provided, it is taken 2.80% of the total GFA of KSEB Ltd.
- 6.183 The Commission, duly considering the mix of various assets of KSEB Ltd with different useful life, the Commission has been adopting the average rate of depreciation of assets having life less than 12 year @5.14% and the average depreciation rate of assets having life more than 12 years and up to 30 years is taken as 1.42%. All assets aged more than 30 years old is taken as fully depreciated assets and no further depreciation is provided.
- 6.184 As per the Order of the Commission dated 24.06.2022 in the matter of Truing up of accounts of KSEB Ltd for the year 2020-21, the total depreciable asset of SBU-D as on 01.04.2021 is Rs.5174.27 crore as detailed below.

Table 6.128
Depreciable asset as on 01.04.2021

Particulars	Amount	Remarks
	(Rs. Cr)	
Depreciable Asset as on 01.04.2020	4075.88	
Depreciable assets added during the year 2020-21	1098.39	
Total Depreciable assets as on 01.04.2021	5174.27	

6.185 In order to estimate the depreciable asset as on 01.04.2022, i.e., at the beginning of the MYT period 2022-23, the depreciable assets added during the year 2021-22 also has to be considered. As per the petition, KSEB Ltd has claimed the total GFA addition of 2021-22 as Rs.1208.00 crore, however, KSEB Ltd has not submitted the justification for the claim. Hence the Commission has adopted the average of the last three-year asset addition as per the orders of Truing up for the years 2018-19, 2019-20 and 2020-21 as the 'asset addition' for the year 2021-22 for the purposes of estimating the ARR for the MYT period 2022-23 to 2026-27. The details are given below.

Table 6.129

Depreciable assets provisionally considered for the Year 2021-22 for estimating ARR of SBU-D

Particulars	2018-19	2019-20	2020-21	2021-22 (Avg. 2018-19 to 2020-21)
	(Rs. Cr)	(Rs. Cr)	(Rs. Cr)	(Rs. Cr)
GFA addition eligible as per Regulation	1202.50	1642.19	1801.42	1548.70
Consumer contribution and grants	452.93	533.46	702.86	563.08
Net Asset addition (for Normative loan)	749.57	1108.73	1098.56	985.62
Less: Land value addition excluding the portion under part capitalization	0.24	0.35	0.17	0.25
GFA addition eligible for depreciation as per petition (Revised vide letter dated 30-7-2021)	749.33	1108.38	1098.39	985.37

6.186 The year wise details of the depreciable assets of SBU-D approved in the Chapter-3 of this order is extracted below.

Table 6.130

Depreciable asset addition of SBU-D for the MYT period

Year	GFA addition approved	Less `Consumer contribution/ grants'	Value of land (2.8% of GFA)	Net Depreciable assets added during the year
	(Rs. Cr)	(Rs. Cr)	(Rs. Cr)	(Rs. Cr)
2022-23	683.15	210.96	13.22	458.97
2023-24	667.68	200.00	13.10	454.59
2024-25	3514.97	1886.65	45.59	1582.73
2025-26	759.45	200.00	15.66	543.79
2026-27	695.55	200.00	13.88	481.68
Total	6320.81	2697.61	101.45	3521.75

6.187 Based on the above details, the depreciation of SBU-D provisionally approved for the purposes of ARR for the MYT period is given below.

Table 6.131

SBU-D. Depreciation provisionally approved for the MYT period from 2022-23 to 2026-27

Year	Particulars	2021-22	MYT period				
			2022-23	2023-24	2024-25	2025-26	2026-27
		(Rs.Cr)	(Rs.Cr)	(Rs.Cr)	(Rs.Cr)	(Rs.Cr)	(Rs.Cr)
1	Depreciable asset at the beginning of the Year	5174.27	6159.64	6618.60	7073.19	8655.92	9199.71
2	Depreciable asset added during the year	985.37	458.97	454.59	1582.73	543.79	481.68
3	Depreciable asset at the end of the year	6159.64	6618.60	7073.19	8655.92	9199.71	9681.39
4	Depreciation on the assets at the beginning of the year	188.91	254.30	273.32	287.36	362.36	371.51
5	Depreciation on the assets added during the year	25.32	11.80	11.68	40.68	13.98	12.38
6	Total depreciation allowable during the year	214.24	266.09	285.00	328.04	376.34	383.89

6.188 The comparison of the depreciation claimed and provisionally approved for SBU-D for the purposes of estimating the ARR during the MYT period is given below.

Table 6.132

Depreciation claimed by KSEB Ltd and provisionally approved by the Commission

Year	KSEB petition (Rs. Cr)	KSERC Provisional (Rs. Cr)
2022-23	289.35	266.09
2023-24	357.47	285.00
2024-25	431.00	328.04
2025-26	500.74	376.34
2026-27	583.68	383.89
Total	2162.24	1639.36

Interest and financing charges

6.189 In their petition, KSEB Ltd has claimed interest on capital liabilities, interest on working capital, interest on GPF, interest on security deposits and interest on Master Trust under interest and financing charges. Each of the item is examined below:

Interest on capital liabilities:

6.190 As per the petition, the Interest on normative loan is determined after considering asset addition excluding consumer contribution/ grant anticipated, allowable depreciation etc for each year of the control period. The normative interest thus computed for SBU-D for the control period is furnished in the table below.

Table : 6.133

KSEB petition - Interest on normative loan proposed by KSEB Ltd

Particulars	2020-21	2021-22	2022-23	2023-24	2024-25	2025-26	2026-27
	(Rs.Cr)	(Rs.Cr)	(Rs.Cr)	(Rs.Cr)	(Rs.Cr)	(Rs.Cr)	(Rs.Cr)
Opening Loan	3282.66	4202.19	4660.54	5083.09	5455.56	6968.87	7863.49
GFA addition	1801.42	1208.00	2351.83	4323.53	7120.60	1522.04	1415.03
Less: Consumer Contribution & Grants	702.86	520.00	1649.96	3645.00	5252.65	200.00	200.00
Less: Allowable Depreciation	179.04	229.65	279.32	306.05	354.65	427.42	472.82
Normative loan during the year	919.52	458.35	422.55	372.48	1513.30	894.62	742.21
Closing Normative loan	4202.19	4660.54	5083.09	5455.56	6968.87	7863.49	8605.69
Average normative loan	3742.43	4431.36	4871.81	5269.33	6212.22	7416.18	8234.59
Interest rate for the year	9.90	9.90	9.90	9.90	9.90	9.90	9.90
Interest for the year	370.42	438.61	482.20	521.55	614.87	734.04	815.04

Comments of stakeholders

6.191 The HT&EHT Association submitted that, the interest expenses projected by KSEB Ltd is exorbitantly high. Against the total interest of Rs.3167.70 crore claimed during the MYT period, the Association works out the interest on capital liabilities at Rs.1953.68 crore.

Provisions in the Regulations

6.192 The Regulation 26 and 29 of the Tariff Regulations, 2021 specified the 'interest and finance charges and related issues' in detail. The relevant Regulations are extracted below.

26. Debt - Equity ratio –

(1) *For the purpose of determination of tariff, the debt equity ratio as on the date of commercial operation in the case of a new generating station, transmission line and distribution line/ equipment/ accessories or substation commissioned or capacity expanded on or after the first day of April, 2022, shall continue to be 70:30 of the capital cost as approved by the Commission:*

Provided that the debt-equity ratio shall be applied only to the balance of such approved capital cost after deducting the financial support provided through consumer contribution, deposit work, capital subsidy or grant, if any.

(2) *Where equity employed is more than thirty percent of the approved capital cost, the amount of equity for the purpose of tariff shall be limited to thirty percent and the balance amount shall be considered as normative loan and interest on the same may be allowed at the weighted average rate of interest of the actual loan portfolio.*

(3) *Where actual equity employed is less than thirty percent of the capital cost, the actual equity shall be considered and the balance of the Commission approved capital cost after adjusting for grants and/ or contribution shall be treated as normative loan.*

(4) *If any fixed asset is capitalized on account of capital expenditure incurred prior to the first day of April, 2022, the debt-equity ratio allowed by the Commission*

for determination of tariff for the period ending on the thirty first day of March, 2022, shall be considered.

- (5) The equity invested in foreign currency, if any, or any loan in foreign currency, shall be designated in equivalent Indian rupees, at the exchange rate specified by the Reserve Bank of India as on the date of each such investment.
- (6) In the case of retirement or replacement of assets, the equity capital approved as mentioned above, shall be reduced to the extent of thirty percent or the actual equity component for the asset, if it is lower than thirty percent of the original cost of the retired or replaced asset based on documentary evidence.
- (7) Swapping of foreign currency loans shall be permitted provided:
 - (i) it does not have the effect of increasing the tariff;
 - (ii) the cost of swapping and interest expenses thereon, shall be allowed by the Commission only after prudence check;
 - (iii) The generating business/ company or transmission business/ licensee or distribution business/ licensee shall provide full particulars of the swapped loans;
 - (iv) Prior approval of the Commission shall be obtained before entering into any foreign currency swap.
- (8) Restructuring of capital in terms of the relative share of loan and equity is subject to the maximum equity of 30 percentage and shall be permitted during the useful life of the project provided:
 - (i) It does not have the effect of increasing the tariff;
 - (ii) any benefit from such restructuring shall be shared in the ratio 2:1 among,-
 - a) the generating business/ company and the persons sharing the capacity charge; or
 - b) the transmission business/ licensee and the long-term intra-state open access customers including the distribution business/ licensee; or
 - c) The distribution business/ licensee and consumers.

29. Interest, Finance charges and Carrying cost. –

- (1) The loans arrived at in the manner indicated in Regulation 26 shall be considered as gross normative loan for calculation of interest on the loans:

Provided that the interest and finance charges on capital works in progress shall be excluded from such consideration and will not be considered in the ARR and truing up processes:

Provided further that in case of retirement or replacement of the assets, the normative loan amount approved by the Commission shall be reduced to the extent of outstanding loan component of the original value of the retired or replaced assets; based on documentary evidence.

- (2) The normative loan outstanding as on the first day of April, 2022, shall be worked out by deducting the amount of cumulative repayment as approved by the Commission upto the thirty first day of March, 2022, 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 the declaration of the commercial operation date 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 rate of interest on the last available loan shall be considered:

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

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

(6) *The generating business/ company or the transmission business/ licensee or the distribution business/ licensee or the State Load Despatch Centre, as the case may be, shall make every effort to re-finance the loan so as to reduce the interest costs and to effect net savings on interest. In that event the costs associated with such re-financing shall be borne by the borrower and any benefit from such refinancing shall be shared in the ratio 2:1 among,-*

(i) *the generating business/ company and the persons sharing the capacity charge; or*

(ii) *the transmission business/ licensee and long-term intra-state open access customers including distribution business/ licensee; or*

(iii) *The distribution business/ licensee and its consumers.*

(7) *The changes to the terms and conditions of the loans during the financial year, if any, shall be effective from the date of coming into force of such changes.*

(8) *Interest shall be allowed on the amount collected as security deposit in cash from the users of the transmission system or distribution system and the consumers, at the bank rate as on the first day of April of the financial year in which the petition is filed:*

Provided that only the 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

- (9) *The Commission shall allow Carrying Cost on the admissible amounts, with simple interest, at the weighted average rate of interest on the licensee's loans prevailing during the relevant year:*

Provided that, in case the distribution licensee is holding security deposit over and above their working capital requirement, no carrying cost on such excess security deposit shall be allowed.

Analysis and decision of the Commission

6.193 The Commission has examined the details furnished by KSEB Ltd. KSEB Ltd has estimated the normative opening loan as on 01.04.2021 as per the Truing Up petition for the year 2020-21. However, the Commission vide the Order dated 24.06.2022 in Petition OP No.23/2022 has approved the normative loan of SBU-D as on 01.04.2021 at Rs.4001.02 crore.

6.194 For arriving the normative loan as on 31.03.2022, i.e., at the beginning of the MYT period 2022-23, the GFA addition eligible for normative loan for the year 2021-22 has to be estimated. The Commission has decided to adopt the GFA addition of 2021-22 at average of the actual asset addition approved as per the Truing Up orders of the years 2018-19 to 2020-21. The details are given below.

Table 6.134

GFA addition considered for the Year 2021-22 for estimating normative loan

Particulars	2018-19	2019-20	2020-21	2021-22 (avg. 2018-19 to 2020-21)
	(Rs. Cr)	(Rs. Cr)	(Rs. Cr)	(Rs. Cr)
GFA addition eligible as per Regulation	1202.50	1642.19	1801.42	1548.70
Consumer contribution and grants	452.93	533.46	702.86	563.08
Net Asset addition (for Normative loan)	749.57	1108.73	1098.56	985.62

6.195 The GFA addition of SBU-D approved during the MYT period 2022-23 to 2026-27, eligible for normative loan as per Chapter-3 of this order is given below.

Table 6.135

GFA addition provisionally considered for estimating normative loan

Year	GFA addition approved	Less 'Consumer contribution of grants'	GFA addition eligible for loan
	(Rs. Cr)	(Rs. Cr)	(Rs. Cr)
2022-23	683.15	210.96	472.19
2023-24	667.68	200.00	467.68
2024-25	3514.97	1886.65	1628.32
2025-26	759.45	200.00	559.45
2026-27	695.55	200.00	495.55
Total	6320.81	2697.61	3623.20

6.196 The average interest rate of loan of SBU-D claimed by KSEB Ltd is 9.90%. Based on the above, the Commission has estimated the normative loan and interest for the SBU-D as in the Table below.

Table 6.136

Normative loan and interest provisionally approved for the MYT period

Particulars	2021-22	MYT Period				
		2022-23	2023-24	2024-25	2025-26	2026-27
	(Rs. Cr)	(Rs. Cr)	(Rs. Cr)	(Rs. Cr)	(Rs. Cr)	(Rs. Cr)
Opening Loan at the beginning of the year	4001.02	4772.40	4978.50	5161.18	6461.46	6644.58
GFA addition during the year	1548.70	683.15	667.68	3514.97	759.45	695.55
Less: Consumer Contribution & Grants received	563.08	210.96	200.00	1886.65	200.00	200.00
Less: Depreciation allowed for the year	214.24	266.09	285.00	328.04	376.34	383.89
Normative loan added during the year	771.38	206.10	182.68	1300.28	183.12	111.66
Closing Normative loan at the end of the year	4772.40	4978.50	5161.18	6461.46	6644.58	6756.24
Average normative loan during the year	4386.71	4875.45	5069.84	5811.32	6553.02	6700.41
Interest rate for the year (%) claimed by KSEB Ltd	9.90%	9.90%	9.90%	9.90%	9.90%	9.90%
Interest allowed for the year (provisionally) for estimating the ARR	434.28	482.67	501.91	575.32	648.75	663.34

6.197 The summary of the normative loan and interest claimed by KSEB Ltd in their petition and provisionally approved by the Commission for the purposes of ARR is given in the Table below.

Table 6.137

Summary of the normative loan and interest- claimed by KSEB Ltd and provisionally approved by KSERC

Year	KSEB Ltd claim	KSERC provisional Approval
	(Rs.Cr)	(Rs.Cr)
2022-23	482.20	482.67
2023-24	521.55	501.91
2024-25	614.87	575.32
2025-26	734.04	648.75
2026-27	815.04	663.34
Total	3167.70	2871.99

Interest on security deposit

6.198 The security deposit as on 31st March 2021 has been Rs 3207.24 crore. Considering an addition of Rs 100 Cr per annum and at a provisional interest

of 4.65 %, the interest on security deposit for next control period proposed by KSEB Ltd is given in table below.

Table :6.138
Interest on Security Deposits for the MYT period

No	Particulars	2022-23	2023-24	2024-25	2025-26	2026-27
		Rs.crore	Rs.crore	Rs.crore	Rs.crore	Rs.crore
1	Opening: SD as on 1 st April	3307.24	3407.24	3507.24	3607.24	3707.24
2	Addition during the Financial Year	100.00	100.00	100.00	100.00	100.00
3	Closing SD as on 31 st March	3407.24	3507.24	3607.24	3707.24	3807.24
4	Average SD during the Financial Year	3357.24	3457.24	3557.24	3657.24	3757.24
5	Average interest rate (%)	4.65%	4.65%	4.65%	4.65%	4.65%
6	Interest Charges	156.11	160.76	165.41	170.06	174.71

KSEB Ltd has further stated that as per the Regulation 32(v) of the Tariff Regulations, 2021 interest on security shall not be allowed in the case of consumers with prepaid metering system. KSEB Ltd submitted that even though prepaid smart metering is being envisaged during the control period, the funding plan of the expenditure excluding grant has not yet been finalized. Hence if prepaid meters are implemented by utilizing own fund, Meter security can be retained by KSEB Ltd otherwise the security deposit is to be refunded to the consumer. Hence for the purpose of estimation of ARR, interest on security deposit is claimed in this petition as per the prevailing practice. Since interest on security deposit is approved on actual disbursement basis, actual disbursement during the year alone may also be trued up in the respective year.

Comments of stakeholders

6.199 The HT&EHT Association, requested to allow interest on security deposit @4.25% instead of 4.65% claimed by KSEB Ltd.

Analysis and decision of the Commission

6.200 KSEB Ltd has estimated the interest on security deposit based on the actual level of security deposit as per the accounts at the end of the year 2020-21. The addition to Security deposit is proposed as Rs100 crore for the period from 2021-22 till 2026-27. The rate of interest applicable for the interest is the bank rate applicable for the respective period. The Commission allows the interest on security deposits for each year based on the actual disbursements. ***With this observation, the Commission provisionally allow the interest on security deposit as estimated by KSEB Ltd for the MYT period as detailed in the Table 6.138 above.***

Interest on GPF

6.201 KSEB Ltd in their MYT petition has estimated the interest on GPF for the control period is estimated @7.10% on the average anticipated balance of GPF. KSEB

Ltd submitted that the pay revision arrears are ordered to be credited to the PF account of employees in 2021-22 and 2022-23. The details are given below:

Table : 6.139

KSEB Ltd petition- Estimation of interest on provident fund as per petition

Particulars	Actuals	Estimate	Projection				
	2020-21	2021-22	2022-23	2023-24	2024-25	2025-26	2026-27
	(RS.Cr)	(RS.Cr)	(RS.Cr)	(RS.Cr)	(RS.Cr)	(RS.Cr)	(RS.Cr)
Opening: Provident Fund as on 1 st April - Rs. Cr	2342.96	2430.72	2852.52	3274.31	3364.31	3454.31	3544.31
Addition (net) during the Financial Year - Rs. Cr	87.76	421.80	421.80	90.00	90.00	90.00	90.00
Closing: Provident Fund as on 31 st March - Rs. Cr	2430.72	2852.52	3274.31	3364.31	3454.31	3544.31	3634.31
Average PF during the Financial Year- Rs. Cr	2386.84	2641.62	3063.41	3319.31	3409.31	3499.31	3589.31
Average interest rate (%)	7.10%	7.10%	7.10%	7.10%	7.10%	7.10%	7.10%
Interest Charges - Rs. Cr	160.69	187.55	217.50	235.67	242.06	248.45	254.84

6.202 KSEB Ltd had segregated the GPF balance among SBUs on the basis of the employee cost ratio in 2020-21. The share of SBU-D is shown in the table below:

Table :6.140

SBU wise interest on provident fund estimated by KSEB Ltd

Particulars	SBU G	SBU T	SBU D	Total
	(RS.Cr)	(RS.Cr)	(RS.Cr)	(RS.Cr)
Employee cost ratio (2020-21)	5.40	11.25	83.35	100.00
2021-22	10.13	21.09	156.34	187.55
2022-23	11.74	24.46	181.30	217.50
2023-24	12.72	26.50	196.44	235.67
2024-25	13.07	27.22	201.77	242.06
2025-26	13.41	27.94	207.10	248.45
2026-27	13.76	28.66	212.42	254.84

Objections of stakeholders

6.203 The HT&EHT Association and other stakeholders has not raised any objection on the interest on GPF balance claimed by KSEB Ltd.

Analysis and decision of the Commission

6.204 As per the Truing Up order dated 24.06.2022 for the year 2020-21, the closing balance of GPF as on 01.04.2021 is Rs.2430.72 crore. The interest on GPF approved in the same order is @7.10%. KSEB Ltd had adopted the same figures for estimating the interest on GPF for the MYT period.

6.205 KSEB Ltd has estimated the GPF addition of Rs 421.80 crore during the years 2021-22 and 2022-23 on account pay revision arrears. For the remaining years, the GPF addition is claimed @Rs 90.00 crore per annum.

6.206 Accordingly, the Commission computed the interest on GPF allowable for the MYT period from 2022-23 to 2026-27 as detailed below.

Table 6.141
Interest on GPF provisionally approved for the MYT period for KSEB L

Particulars	Estimate	KSERC provisional approval				
	2021-22	2022-23	2023-24	2024-25	2025-26	2026-27
	(RS.Cr)	(RS.Cr)	(RS.Cr)	(RS.Cr)	(RS.Cr)	(RS.Cr)
Opening: Provident Fund as on 1 st April - Rs. Cr	2430.72	2852.52	3274.32	3364.32	3454.32	3544.32
Addition (net) during the Financial Year - Rs. Cr	421.80	421.80	90.00	90.00	90.00	90.00
Closing: Provident Fund as on 31 st March - Rs. Cr	2852.52	3274.32	3364.32	3454.32	3544.32	3634.32
Average PF during the Financial Year- Rs. Cr	2641.62	3063.42	3319.32	3409.32	3499.32	3589.32
Average interest rate (%)	7.10%	7.10%	7.10%	7.10%	7.10%	7.10%
Interest Charges - Rs. Cr	187.56	217.50	235.67	242.06	248.45	254.84

6.207 Interest on GPF approved for the SBU-D of KSEB Ltd during the MYT period is as given below.

Table 6.142
Interest on GPF balance of SBU-D provisionally approved for the MYT 2022-23 to 2026-27

Particulars	KSERC provisional				
	2022-23	2023-24	2024-25	2025-26	2026-27
	(RS.Cr)	(RS.Cr)	(RS.Cr)	(RS.Cr)	(RS.Cr)
Interest on GPF balance for KSEB Ltd	217.50	235.67	242.06	248.45	254.84
Interest on GPF balance for SBU-D (83.35% of the total)	181.30	196.44	201.77	207.09	212.42

Interest on working capital

6.208 KSEB Ltd submitted that, the Normative Working Capital for SBU-D, as per Regulation 32, includes O&M Cost for one month, cost of maintenance spares as one twelfth of average of the book value of stores for that financial year, receivables for two months excluding security deposits. KSEB Ltd has computed the Interest on Working Capital in their petition at a rate of 10.70% (8.70% as on 1-4-2018 + 2%) as per Regulation 32(2). The parameters adopted by KSEB Ltd for computation of Interest on Working capital for the control period are furnished below.

Table: 6.143
Parameters for estimation of interest on working capital as per petition

Item	2022-23	2023-24	2024-25	2025-26	2026-27
	Rs.crore	Rs.crore	Rs.crore	Rs.crore	Rs.crore
Opening GFA	14084.06	16435.89	20759.42	27880.02	29402.06
Cost of maintenance spares	63.70	64.97	66.27	67.59	68.95
O&M Cost	3391.14	3643.28	3893.67	4276.77	4588.22
Expected Revenue	15354.70	15916.80	16654.51	17424.55	18246.9

6.209 As per the estimation of KSEB Ltd, the Interest on Working Capital for the control period 2022-23 to 2026-27 for SBU-D is as shown below:

Table: 6.144

Interest on working capital of SBU-D proposed by KSEB Ltd

No	Item	2022-23	2023-24	2024-25	2025-26	2026-27
		Rs.crore	Rs.crore	Rs.crore	Rs.crore	Rs.crore
1	O&M expenses	282.595	303.61	324.47	356.40	382.35
2	Cost of Mace spares	63.7	64.97	66.27	67.59	68.95
3	Receivables for two months	2558.74	2652.81	2775.75	2904.09	3041.15
4	Total Working Capital	2905.04	3021.38	3166.49	3328.08	3492.45
4	Less: Security Deposits	3307.24	3407.24	3507.24	3607.24	3707.24
5	Net Working Capital	-402.20	-385.86	-340.75	-279.16	-214.79

6.210 Since the Working Capital requirement is less than the security deposit held at the beginning of the year, KSEB Ltd has not claimed any interest on working capital for the next control period. It is further submitted that even though prepaid smart metering is being envisaged by KSEB Ltd during the control period, the funding plan of the expenditure excluding grant is not finalized yet. Hence security deposit is fully considered to arrive at working capital. If prepaid meters are implemented by utilizing own fund, Meter security deposit can be retained by KSEB Ltd otherwise the security deposit is to be refunded to the consumer. Hence for the purpose of estimation in ARR, security deposit is considered in this petition as per the prevailing practice.

Provisions in the Regulations

6.211 Regulation 32 of the Tariff Regulations, 2021 provide as follows.

“ 32. *Interest on Working capital.*–

(3) *The generation business/ company or transmission business/ licensee or distribution business/ licensee or the State Load Despatch Centre shall be allowed interest on the normative level of working capital for the financial year, computed as under,-*

.....

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

1. *operation and maintenance expenses for one month; plus*
2. *cost of maintenance spares equivalent to one-twelfth of the average of the book value of stores, materials and supplies at the beginning and end of the financial year; plus*
3. *receivables equivalent to the expected revenue from sale of electricity for twomonths at the prevailing tariff:*

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

Provided further that, in the case of distribution business/ licensees, who are supplying electricity to their consumers on prepaid metering system, interest on working capital shall not be allowed.”

Analysis and decision of the Commission

6.212 As mentioned in the petition, SBU-D is holding substantial security deposits much above the norms. Hence, interest on working capital is not allowable for SBU-D. However, the estimation of working capital for SBU-D is as shown below:

Table :6.145
Estimation of normative Working capital requirements for SBU-D

No	Item	2022-23	2023-24	2024-25	2025-26	2026-27
1	O&M expenses	3345.053	3605.396	3830.591	4074.969	4444.123
2	Receivables from sale of power	15976.98	16217.8	16787.28	17381.63	18203.38
2	Cost of Mace spares	63.70	64.97	66.27	67.59	68.95
	O&M cost for one month	278.75	300.45	319.22	339.58	370.34
3	Receivables for two months	2662.83	2702.97	2797.88	2896.94	3033.90
4	Total Working Capital	3005.28	3068.39	3183.37	3304.11	3473.19
4	Less: Security Deposits	3357.24	3457.24	3557.24	3657.24	3757.24
5	Net Working Capital	-351.96	-388.85	-373.87	-353.13	-284.05

6.213 ***As shown above, normative working capital requirement for SBU-D is negative, hence no interest on working capital on normative basis is allowed.***

Interest on bonds issued to Master Trust

6.214 KSEB Ltd submitted that Government of Kerala, as per notifications dated 31.10.2013 and 28.01.2015, ordered to establish a scheme for the creation of a Master Trust to meet the unfunded liability of pension, gratuity and leave surrender as on 31.10.2013, in respect of the personnel transferred from the erstwhile KSEB to KSEB Ltd. The total additional estimates of liability as on 31.10.2013 was estimated by KSEB Ltd appointed Actuaries at Rs.12418.72 Crore. Further, necessary funding arrangements were put in place through issue of 2 series of Bonds. According to KSEB Ltd, the Commission had recognized the unfunded pension liabilities as above and approved recovery of interest on KSEB Ltd share of Bonds as per Regulation 34(iv) of Tariff Regulations, 2021. Accordingly, KSEB Ltd claimed interest on the bond issued by KSEB Ltd (Rs 8144.00 Crore) along with principal repayment in the present control period. The repayment has started from 2017-18 and the interest and principal due for the control period and its SBU wise segregation are furnished below:

Table : 6.146
Interest on Master Trust Bonds (Rs.Cr)

Existing Bonds (Rs. 8144 Cr)	Bond	Repayment	Interest	Balance
	8144.00			
2017-18		407.20	814.40	7736.80
2018-19	7736.80	407.20	773.68	7329.60
2019-20	7329.60	407.20	732.96	6922.40
2020-21	6922.40	407.20	692.24	6515.20
2021-22	6515.20	407.20	651.52	6108.00
2022-23	6108.00	407.20	610.80	5700.80
2023-24	5700.80	407.20	570.08	5293.60
2024-25	5293.60	407.20	529.36	4886.40
2025-26	4886.40	407.20	488.64	4479.20
2026-27	4479.20	407.20	447.92	4072.00

Table :6.147
SBU wise Interest on Master Trust Bonds (Rs. Cr)

Particulars	SBU G	SBU T	SBU D	Total
Employee cost ratio 2020-21	5.40	11.25	83.35	100.00
2022-23	32.98	68.69	509.13	610.80
2023-24	30.78	64.11	475.19	570.08
2024-25	28.58	59.53	441.25	529.36
2025-26	26.38	54.95	407.31	488.64
2026-27	24.19	50.37	373.36	447.92

Comments of the Stakeholders

6.215 The HT-EHT Association requested that the principal repayment to Master Trust may be dis-allowed.

Provisions in the Tariff Regulations, 2021

6.216 Regulation 30 and 34 of the Tariff Regulations, 2021 deals with 'interest on Master Trust bonds and related issues. The relevant Regulations is extracted below.

“Regulations 30.

Interest on bonds issued by KSEB Limited to service the terminal liabilities of its employees. –

The interest on the bonds issued by KSEB Limited to service the terminal liabilities of its employees shall be allowed for recovery through tariffs, at the rates stipulated in the relevant orders issued by the Government of Kerala.

The bonds shall be amortized at the same rate as prescribed in the Transfer Scheme notified by the Government of Kerala.

KSEB Ltd shall determine the up-to-date actuarial liability, draw up a proposal regarding how to fund the liability/uncovered liability and after its approval by the KSEB

Board of Directors, shall submit to the Government for consideration. Once the Government has accorded approval in this regard, KSEB Ltd shall submit a petition in line with the Government approval to the Commission with the complete details indicating the assessed and approved actuarial liability and the proposal to fund this liability. The Commission shall consider this petition at the time of truing up of the accounts. Till such time, the Commission may based on a petition by KSEB Ltd consider approving a provisional amount towards the discharge of this liability.”

“Regulations 34

Principles for adoption of Transfer Scheme for KSEB under Section 131 of the Act. -

The Commission may, for the purpose of approval of the Aggregate Revenue Requirements and determination of tariff, adopt the changes in the balance sheet, due to the re-organization of the erstwhile Kerala State Electricity Board, as per the provisions of the Transfer Scheme published by the Kerala State Government under Section 131 of the Act, subject to the following principles:-

- I. Increase in the value of assets consequent to the revaluation of assets shall not qualify for computation of depreciation or for return on net fixed assets;*
- II. The equity of the Government of Kerala as per the above Transfer Scheme published vide Government Order No. GO(P) 46/2013/PD dated 31.10.2013 and GO(P) No. 3/2015/PD dated 28.01.2015 under Section 131 of the Act will be considered for computation of return on equity;*
- III. The reduction of the contribution received from the consumers, grants and such other subventions for creation of assets, made as part of Transfer Scheme, shall not be considered while computing the depreciation;*
- IV. The amounts required for the payment of interest on the bonds issued to the Master Trust and for the principal repayment of such bonds shall be reckoned for computation of Aggregate Revenue Requirement and for truing up of accounts;*
- V. The Commission will subject to the petition by KSEB Ltd may take appropriate decision on the other issues relating to the Transfer Scheme and its implementation, on case to case basis.”*

Analysis and decision of the Commission

6.217 The Commission has examined the submissions of KSEB Ltd regarding interest on bonds issued to Master Trust. As per the details submitted by KSEB Ltd, the Master Trust is operational only from the FY 2017-18.

6.218 The Commission also noted that as per the Kerala Electricity Second Transfer (Amendment) Scheme (Re-vesting) 2015 dated 28.01.2015, the actuarial liability as on 31-10-2013 was assessed at Rs.12418.72 crore. The paragraphs 6(8) and 6(9) of the Kerala Electricity Second Transfer (Amendment) Scheme (Re-vesting) 2015, provides the following regarding the funding of pension and terminal liabilities of personnel transferred to KSEB Ltd. The relevant paragraphs is extracted below.

“6(8) The State Government shall make appropriate arrangements in respect of funding of the terminal liabilities to the extent they are unfunded on the date of transfer of the personnel from the erstwhile Board or KSEB, as

mentioned in subclause (9) of clause 6 of this Scheme. As per the actuarial valuation carried out by the registered valuer, the net present value of unfunded liability is approximately 12419.00 crore as on the date of re-vesting i.e. 31st October 2013. Till such time arrangements are made, the transferee and State Government shall be jointly and severally responsible to duly make such arrangements to the existing pensioners as well as the personnel who retire after the date of transfer but before the arrangement are put in place. The State Government, Kerala State Electricity Board Limited, and Employee Unions have entered into a tripartite agreement on 1st August 2014, in consideration of the promises and mutual conditions set forth therein. The Tripartite Agreement which forms part of this Scheme is appended as Schedule C.”

“ 6(9) The State Government will fund Rs 5861 crore (Rupees Five thousand eight hundred and sixty one crores) over a period of next 10 years from the date of transfer to the KSEB Ltd on annual basis for meeting the unfunded liabilities by way of retention of electricity duty.

- (a) Kerala State Electricity Board Ltd will issue two series of bonds to a Master Trust:
- 20 year bond with a coupon rate of 10% p.a. for Rs.8144 Cr (Rupees eight thousand one hundred and forty four crores)
 - 10 year bond with a coupon rate of 9% p.a. for Rs. 3751 Cr (Rupees three thousand seven hundred and fifty one crores).
- (b) Bonds will be issued to the trust shall meet the liability of pension etc. in future from the interest and principal repayment from KSEB Ltd against the bonds issued in favour of the trust. With these arrangements the net present value of the fund towards pension etc. shall be Rs 12419.00 crores (approx) as on 31st October 2013 with matching investments in securities issued by the KSEB Ltd for Rs 11895.00 crore on net present value basis.
- (c) Another, Rs 524 crore will be funded by the State Government through budgetary provision over a period of 10 years in equal installments as per G.O (Ms) No. 43/2011/PD dated 3rd November 2011. Accordingly an amount of Rs 52.4 crore is being provided in the budget from the FY 2012-13 onwards.
- (d) State Government will permit the electricity duty collected by KSEB for the period from 01.04.2008 to 31.03.2012 to be retained by the KSEB Ltd as its contribution for funding the terminal liability.
- (e) In addition to the interest on bonds and repayment of principal, KSEB Ltd will be paying the annual pension contribution based on actuarial valuation to the master trust in respect of the personnel transferred to KSEB Ltd.”

6.219 Based on the above KSEB Ltd had issued two sets of bonds to the Master Trust on 01.04.2017.

- 20 year bond with a coupon rate of 10% p.a. for Rs.8144 Cr (Rupees eight thousand one hundred and forty four crores)
- 10 year bond with a coupon rate of 9% p.a. for Rs. 3751 Cr (Rupees three thousand seven hundred and fifty one crores).

Out of the above, the interest and repayment of the 10 year bond for the amount of Rs 3751.00 crore is being borne by the State Government as envisaged in the Scheme.

6.220 However, as per the re-vesting notifications, the interest and repayment of the bond for Rs 8144.00 crore to the pension has to be borne by KSEB Ltd. The year wise details of the principal and repayment of the 20-year bond of KSEB Ltd is given below.

Table-6.148

Principal and interest to be paid by KSEB Ltd to the Trust as per the bond certificate issued for Rs 8144.00 crore

Year	Principal repayment (Rs. Cr)	Interest (Rs. Cr)	Total (Rs.Cr)	Year	Principal repayment (Rs. Cr)	Interest (Rs. Cr)	Total (Rs.Cr)
1	407.20	814.40	1221.60	11	407.20	407.20	814.40
2	407.20	773.68	1180.88	12	407.20	366.48	773.68
3	407.20	732.96	1140.16	13	407.20	325.76	732.96
4	407.20	692.24	1099.44	14	407.20	285.04	692.24
5	407.20	651.52	1058.72	15	407.20	244.32	651.52
6	407.20	610.80	1018.00	16	407.20	203.60	610.80
7	407.20	570.08	977.28	17	407.20	162.88	570.08
8	407.20	529.36	936.56	18	407.20	122.16	529.36
9	407.20	488.64	895.84	19	407.20	81.44	488.64
10	407.20	447.92	855.12	20	407.20	40.72	447.92

6.221 The financial year 2022-23 is the 6th year of operation of the Master Trust. Hence the principal repayment of the KSEB Ltd bond of Rs 8144.00 crore with the interest rate @10% is given in the Table below.

Table 6.149

Principal repayment and interest on KSEB Ltd bond to the Master trust during MYT period

Year	Principal repayment (Rs. Cr)	Interest (Rs. Cr)	Total (Rs.Cr)
2022-23	407.20	610.80	1018.00
2023-24	407.20	570.08	977.28
2024-25	407.20	529.36	936.56
2025-26	407.20	488.64	895.84
2026-27	407.20	447.92	855.12

6.222 As extracted under paragraph 6.216 above, as per the Regulations 30 and 34 of the Tariff Regulations, 2021, KSEB Ltd is eligible to claim 'interest on the Master Trust bond and its repayment' through the ARR of the respective years considered. Hence, as per the provisions of the Tariff Regulations, 2021, the Commission hereby approves the 'repayment of the principal and interest on

the KSEB Ltd bond of Rs 8144.00 crore issued to the Master Trust created for discharging the pension liabilities.

6.223 KSEB Ltd apportioned the total 'repayment of principal and interest' in the ratio of employee cost. The Commission also decided to apportion the same in the same ratio used by KSEB Ltd in the ARR petition. Accordingly, the SBU wise details of the 'repayment of principal and interest to the Master Trust bond' approved for the MYT period from 2022-23 to 2026-27 is given below.

Table 6.150

SBU wise details of the 'interest on Master trust bond' approved during the MYT period 2022-23 to 2026-27

SBUs	Emp Ratio	2022-23	2023-24	2024-25	2025-26	2026-27
	(%)	(Rs.Cr)	(Rs.Cr)	(Rs.Cr)	(Rs.Cr)	(Rs.Cr)
SBU-G	5.40%	32.98	30.78	28.59	26.39	24.19
SBU-T	11.25%	68.72	64.13	59.55	54.97	50.39
SBU-D	83.35%	509.10	475.16	441.22	407.28	373.34
Total	100.00%	610.80	570.08	529.36	488.64	447.92

6.224 The 'repayment of principal' is also apportioned among the SBUs in the ratio of employee expenses' as adopted by KSEB Ltd. The details are given below.

Table 6.151

SBU wise details of the 'repayment of principal' approved during the MYT period 2022-23 to 2026-27

SBUs	Emp Ratio	2022-23	2023-24	2024-25	2025-26	2026-27
	(%)	(Rs.Cr)	(Rs.Cr)	(Rs.Cr)	(Rs.Cr)	(Rs.Cr)
SBU-G	5.40%	21.99	21.99	21.99	21.99	21.99
SBU-T	11.25%	45.81	45.81	45.81	45.81	45.81
SBU-D	83.35%	339.40	339.40	339.40	339.40	339.40
Total	100.00%	407.20	407.20	407.20	407.20	407.20

6.225 ***The Commission allow to treat the SBU wise details of the 'repayment of principal and interest on master trust bond' as above to as expenses as part of ARR for the MYT period from 2022-23 to 2026-27.***

6.226 However, the Commission has serious reservations regarding the laxity from the part of KSEB Ltd for not operationalizing the Master Trust till 31.03.2017. KSEB Ltd in their submission before the Commission has stated that the Master Trust could not be operationalised as anticipated in the scheme due to non receipt of exemptions from the Income Tax Department. The Commission rejects this justification of KSEB Ltd and is of the strong view that the contribution to the Master Trust could have been made in anticipation of receipt of income tax exemptions. The Commission also place on record that payment of pension and other retirement benefits is the right of every employee of KSEB Ltd. Such a lackadaisical attitude on the part of the KSEB Ltd Management has already altered the funding liability of the Master Trust and no provision whatso

ever has been proposed to ensure receipt of pension to the retired employees in their twilight years.

6.227 The Commission also notes that at present KSEB Ltd has been operating the Trust Accounts like a “Current Account” by remitting money into the account on requirement basis for dispersal and fulfilment of retirement benefits. Hence, the payments into the Trust account by KSEB Ltd is not as per the original scheme envisaged but only as per the fund requirements to disburse the pension. This is highly objectionable and contrary to the very intent of setting up of the Master Trust. **The Commission directs KSEB Ltd to take urgent corrective action to overcome this serious deviation from the Scheme. The Commission warns that, if KSEB Ltd does not urgently take corrective action, the very payment of the pension will be jeopardized and the retirement financial security of the retirees of KSEB Ltd shall be compromised.**

The Commission further direct that, if KSEB Ltd fails to transfer the ‘repayment of principal and interest on bond to the Master Trust’ as approved above, the Commission shall not allow this provision to be accounted for at the stage of Truing Up of Accounts of the relevant years concerned. With this observation, the Commission hereby approve the ‘repayment of principal and interest on Master Trust bond’ as per the Table 6.150 and 6.151 above.

Carrying cost for the past approved revenue gap

6.228 KSEB Ltd submitted that, as per the Commission’s estimate, the total trued up revenue gap was Rs 6864.13 crores.

Table 6.152

KSEB Ltd petition-Approved and unbridged Revenue gap as shown in the Petition

	Order reference	Amount
1	Total un bridged revenue gap as on 31-03-2011	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	Remand order dated 09.05.17-2009-10	107.90
5	Remand order dated 19.05.17-2010-11	204.70
6	True up order 2013-14 dated 20.06.2017	195.50
7	RP 2/2017 dated 07.09.2017 on TU 2011-12	4.96
8	True up order 2015-16 dated 21.08.2018	202.97
9	True up order 2016-17 dated 14.09.2018	1031.06
10	RP 3/2019 on TU 2016-17 dated 16.05.2019	47.99
11	TU 2016-17-OA 64/2019 dated 12.10.2020	39.61
11	OA 9/2020 on True up 2017-18 dated 25.06.2021	84.13
12	RP 1/2021 TU 2016-17 dated 21.07.2021	1.26
12	Total trued up revenue gap	6864.13

6.229 KSEB Ltd in their petition submitted that:

- (i) The approved and unbridged revenue gap is proposed to be amortized in 7 years @ Rs.980.59 Cr per year.
- (ii) KSEB Ltd has also requested for allowing carrying cost considering the cost of funds actually incurred by the entity for funding the approved revenue gap.
- (iii) The carrying cost for the accumulated revenue gap proposed by KSEB Ltd is as given below:

Table 6.153

Carrying cost for the past revenue gaps proposed by KSEB Ltd

No	Particulars	2022-23	2023-24	2024-25	2025-26	2026-27
		Rs. crore	Rs. crore	Rs. crore	Rs. crore	Rs. crore
1	Opening revenue gap (approved)	6864.13	5883.54	4902.95	3922.36	2941.77
2	Recovery proposed to be amortized	980.59	980.59	980.59	980.59	980.59
3	Balance gap	5883.54	4902.95	3922.36	2941.77	1961.18
4	Av revenue gap	6373.84	5393.25	4412.66	3432.07	2451.48
5	Av GPF balance for the year	3063.41	3319.31	3409.31	3499.31	3589.31
6	Balance	3310.42	2073.93	1003.34	-67.25	-
7	Interest rate (%)	9.90	9.90	9.90	9.90	9.90
8	Carrying cost	327.73	205.32	99.33	-6.66	-112.65

6.230 KSEB Ltd further submitted that as per the judgement of the Hon'ble APTEL dated 8.4.2015 in appeal 160 of 2012, batch has laid down the principle based on which carrying cost is to be allowed which is reproduced as 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 crores 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 crores 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 crores 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.

6.231 The Carrying cost on revenue gap proposed by KSEB Ltd for the control period is as given below:

Table 6.154
Carrying cost on revenue gap sought from 2018-19 to 2020-21

No	Particulars	2022-23	2023-24	2024-25	2025-26	2026-27
1	On revenue gap sought for TU 2018-19 of Rs.759.88 Cr.	759.88	759.88	759.88	759.88	759.88
2	On revenue gap sought for TU 2019-20 of Rs.553.10 Cr.	553.10	553.10	553.10	553.10	553.10
3	On revenue gap sought for 2020-21- Rs.741.90 Cr	741.90	741.90	741.90	741.90	741.90
4	Total	2054.88	2054.88	2054.88	2054.88	2054.88
5	Interest rate (%)	9.90	9.90	9.90	9.90	9.90
6	Carrying cost	203.43	203.43	203.43	203.43	203.43
Carrying cost for the control period						
No	Particulars	2022-23	2023-24	2024-25	2025-26	2026-27
1	On approved revenue gap	327.73	205.32	99.33	-6.66	-112.65
2	On revenue gap as per truing up petition from 2018-19 to 2020-21.	203.43	203.43	203.43	203.43	203.43
3	Total	531.16	408.75	302.76	196.78	90.79

6.232 KSEB Ltd further submitted that,

- (i) Arrears of electricity charges (payment due after normative due date) are not covered by security deposit and therefore, KSEB Ltd has to raise working capital loans to meet the fall in revenue collection. Cost associated with it is not considered in ARR as per regulations. On the other hand, interest collected on arrears form part of ERC as other income.
- (ii) For making prompt payment to generators to earn rebate, higher working capital is required. The cost associated for ensuring prompt payment i.e., for making payment before due date is not recognized in ARR. On the other hand, rebate earned is recognized in ERC as other income.
- (iii) While income from these two heads is included in the ERC, the cost for higher working capital to take care of these eventualities are not included in ARR.
- (iv) The additional working capital requirement on account of arrears and additional working capital requirement to make prompt payment to generators exceeds the surplus security deposit assessed for the control period.

In view of the above, KSEB Ltd has requested to consider the cost associated with prompt payment to generators and holding accumulated arrears and not to consider surplus security deposit as funds available for meeting accumulated revenue gap.

Comments of stakeholders

6.233 The HT-EHT Association suggested that the recovery of the revenue gap should not be included in the ARR and but should be allowed as additional tariff directly against the approved revenue gap.

Provisions of the Tariff Regulations, 2021

6.234 The Regulation 76 of the Tariff Regulations, 2021 provides that, along with other components, the amortisation of the past revenue gap approved by the Commission also form part of the ARR. The relevant Regulations is extracted below.

“76 Components of Aggregate Revenue Requirement,-

- (1) *The Aggregate Revenue Requirement of the distribution business/ licensee shall comprise of the following items of expenditure:-*
 - (i) *cost of own power generation;*
 - (ii) *cost of power purchase;*
 - (iii) *transmission charges;*
 - (iv) *NLDC/ RLDC/ SLDC charges, if any;*
 - (v) *operation and maintenance expenses;*
 - (vi) *Contribution to the Master Trust for discharging the pension liability;*
 - (vii) *interest and finance charges;*
 - (viii) *depreciation;*
 - (ix) *interest on working capital and on the consumer security deposits and deposits from users of the distribution system;*
 - (x) *contribution to the contingency reserves, if any;*
 - (xi) *actual write off of bad debts, if any;*
 - (xii) *return on equity/ net fixed assets;*
 - (xiii) *Revenue surplus or revenue gap on account of truing up of accounts of previous years and the carrying cost, if any;*

Amortization, if any, approved by the Commission, based on the approved revenue gap of the previous years, as provided”

Analysis and decision of the Commission

6.235 The Commission has examined in detail the proposal for amortisation and the carrying cost claimed by KSEB Ltd. The Commission has allowed carrying cost for the unbridged revenue gaps in the truing up of accounts for 2015-16 to 2020-21. As per the order dated 24.06.2022 in the matter of Truing up of Accounts of KSEB Ltd for the year 2020-21, the accumulated provisional revenue gap as on 01.04.2020 is Rs 7205.52 crore. Further, the Commission has approved a provisional revenue surplus of Rs 81.86 crore for the year 2020-21.

Accordingly, the total revenue gap as 01.04.2021 is Rs 7123.66 crore. The details are given below.

Table 6.155
Accumulated revenue gap as on 01.04.2021

Sl No	Particulars	Amount (Rs.Cr)
1	Total provisional revenue gap till 01.04.2020	7205.52
2	Provisional revenue surplus approved for the year 2020-21	81.86
3	Total revenue gap as on 01.04.2021	7123.66

6.236 The Commission is allowing interest on the entire 'provident fund amount' retained by the licensee as part of interest and finance charges. This amount is available with the licensee for their cash requirements. Hence the Commission has been allowing carrying cost for the approved revenue gap excluding the GPF balance.

6.237 The Commission has also been allowing interest on security deposit as per accounts. Over the years, SBU-D has excess security deposit with them after meeting their working capital requirements. Since the excess amount held by KSEB Ltd and the Commission has already allowed interest on the entire amount held as Security Deposit, the Commission is required to deduct the excess security deposit held after meeting the working capital requirement also while allowing carrying cost for the approved revenue gap.

6.238 The average GPF balance estimated by the KSEB Ltd at the end of the MYT period, i.e., for the year 2026-27 is about Rs 3500.00 crore, and the average balance of security deposit at the end of the year 2026-27 is Rs 285.00 crore. Considering these, and also to avoid tariff shock, the Commission proposed to amortise the balance gap of about Rs.3350.00 crore in the following manner.

Table 6.156
Amortisation of the past revenue gap provisionally approved

Particulars	2022-23	2023-24	2024-25	2025-26	2026-27	Total
	(Rs. Cr)	(Rs. Cr)	(Rs. Cr)	(Rs. Cr)	(Rs. Cr)	(Rs. Cr)
Amortisation provisionally approved by the Commission	850.00	850.00	850.00	500.00	300.00	3350.00

Regarding the recovery of amortisation amount, the Commission will take a decision at an appropriate time.

6.239 Based on the above considerations, the carrying cost allowed for the accumulated provisionally approved revenue gap as on 01.04.2021 is as follows.

Table 6.157

Carrying cost for the past accumulated provisionally approved revenue gap as on 01.04.2021

No	Particulars	2022-23	2023-24	2024-25	2025-26	2026-27
1	Opening revenue gap (approved) (as on 01.04.2021)	7123.66	6273.66	5423.66	4573.66	4073.66
2	Recovery proposed to be amortized	850.00	850.00	850.00	500.00	300.00
3	Balance gap	6273.66	5423.66	4573.66	4073.66	3773.66
4	Avg revenue gap	6698.66	5848.66	4998.66	4323.66	3923.66
5	Avg GPF balance for the year	3063.41	3319.31	3409.31	3499.31	3589.31
6	Excess security deposit	351.96	388.85	373.87	353.13	284.05
7	Balance = (4)-(5)-(6)	3283.29	2140.50	1215.48	471.22	50.30
8	Interest rate (%)	9.90	9.90	9.90	9.90	9.90
9	Carrying cost	325.05	211.91	120.33	46.65	4.98

Summary of Interest and Finance charges

6.240 Based on the above considerations, the interest and finance charges claimed by KSEB Ltd and the same approved by the Commission is given below.

Table 6.158

Summary of the interest and finance charges- claimed and approved for SBU-D

Sl No	Item	KSEB Ltd					KSERC				
		2022-23	2023-24	2024-25	2025-26	2026-27	2022-23	2023-24	2024-25	2025-26	2026-27
		(Rs. Cr)	(Rs. Cr)	(Rs. Cr)	(Rs. Cr)	(Rs. Cr)	(Rs. Cr)	(Rs. Cr)	(Rs. Cr)	(Rs. Cr)	(Rs. Cr)
1	Interest on capital liabilities	482.20	521.55	614.87	734.04	815.04	482.67	501.91	575.32	648.75	663.34
2	Interest on security Deposit	151.46	156.11	160.76	165.41	170.06	151.46	156.11	160.76	165.41	170.06
3	Interest on GPF	181.30	196.44	201.77	207.10	212.42	181.30	196.44	201.77	207.10	212.42
4	Interest on MT Bonds	509.13	475.19	441.25	407.31	373.36	509.13	475.19	441.25	407.31	373.36
5	Carrying cost	531.16	408.75	302.76	196.78	90.79	325.05	211.91	120.33	46.65	4.98
6	Interest on working capital	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
7	Total Interest & Finance Charges	1855.26	1758.04	1721.41	1710.63	1661.68	1649.61	1541.56	1499.43	1475.22	1424.16

Unfunded actuarial liability

6.241 KSEB Ltd submitted that the actuarial liability from 31.10.2013 to 31.03.2021 has not been funded so far. As per the latest actuarial valuation report as on 31.03.2021, the total pension liabilities of the personnel transferred to the KSEB Ltd as on 31.03.2021 is estimated at Rs 23121.47 crore, as detailed below.

Table 6.159
Unfunded pension liabilities as on 31.03.2021

Particulars of unfunded liability of pensioners and personnel transferred to KSEB Ltd as on 31.10.2013	Unfunded liability as on 31.03.2021
	(Rs. Cr)
Pension liability	19640.50
Gratuity liability	2446.45
Leave liability	1034.52
Total	23121.47
Funded Liability	12419.00
Unfunded Liability	10702.47

6.242 KSEB Ltd further submitted that, out of the total unfunded liability of Rs 23121.47 crore, funding arrangement was provided for Rs 12419.00 crore only. KSEB Ltd further submitted that, this issue was duly addressed by the Hon'ble Commission in Regulation 30 (3) Tariff Regulation, 2021. KSEB Ltd also submitted that the Regulation 30 (3) of the Tariff Regulations, 2021, mandates KSEB Ltd to propose provisional amount in the MYT petition for the control period from 2022-23 to 2026-27 for approval. KSEB Ltd is filing the petition duly adhering the Regulation. In line with the stipulation in Tariff Regulations, till approval of funding arrangement of unfunded actuarial liability, KSEB Ltd is seeking provisional approval for discharge of unfunded liability.

6.243 KSEB Ltd also submitted that, the additional actuarial liability stems out of three factors viz. Current service cost, Actuarial gain / loss and Interest cost. Current service cost denotes the liability on account of service put in by the serving employee, who is a member of the Trust, during the valuation period. Thus, Current service cost represents the actual liability arising on account of the service put in by the employee for the added service. As per actuarial valuation for 2017-18, 2018-19 and 2019-20, current service cost has been valued at Rs.317.10 crore, Rs. 346.19 Cr and Rs.361.80 Cr respectively.

6.244 KSEB Ltd sought provisional approval of Rs.400 Cr annually in the control period to ensure prompt discharge of pension and other terminal liabilities. SBU wise break up is furnished below:

Table 6.160
Additional Contribution to Master Trust

Particulars	SBU G	SBU T	SBU D	Total
	(Rs. Cr)	(Rs. Cr)	(Rs. Cr)	(Rs. Cr)
Employee cost ratio 2020-21	5.40%	11.25%	83.35%	100.00%
2022-23	21.60	44.98	333.42	400.00

Particulars	SBU G	SBU T	SBU D	Total
	(Rs. Cr)	(Rs. Cr)	(Rs. Cr)	(Rs. Cr)
2023-24	21.60	44.98	333.42	400.00
2024-25	21.60	44.98	333.42	400.00
2025-26	21.60	44.98	333.42	400.00
2026-27	21.60	44.98	333.42	400.00

Comments of the stake holders

6.245 HT&EHT Association request before the Commission to dis-allow the KSEB Ltd's provisional claim towards unfunded actuarial liability and also request to advise the State Government to take care of this claim in order to avoid undue burden to the consumers.

Provisions of the Regulations

6.246 Regulation 30 (3) of the Tariff Regulations, 2021 provides for additional fund to the Master Trust based on the up-to-date actuarial liability. The relevant Regulation is extracted below.

“Regulation 30(3)

KSEB Ltd shall determine the up-to-date actuarial liability, draw up a proposal regarding how to fund the liability/uncovered liability and after its approval by the KSEB Board of Directors, shall submit to the Government for consideration. Once the Government has accorded approval in this regard, KSEB Ltd shall submit a petition in line with the Government approval to the Commission with the complete details indicating the assessed and approved actuarial liability and the proposal to fund this liability. The Commission shall consider this petition at the time of truing up of the accounts. Till such time, the Commission may, based on a petition by KSEB Ltd, consider approving a provisional amount towards the discharge of this liability.”

Analysis and Decision of the Commission

6.247 The Commission has examined the proposal of KSEB Ltd in detail. In addition to the “repayment of principal and interest on master trust bond” of KSEB Bond Rs.8144.00 crore, KSEB Ltd has also claimed Rs.400 crore as additional fund annually to the Master Trust for meeting the unfunded portion of the actuarial liability as on 31.03.2021. As per the details submitted by KSEB Ltd, the total unfunded actuarial liability as per the report of the actuary as on 31.03.2021 is Rs.23121.47 crore. Out of it, Rs.12419.00 crore is only funded till date by issuing two series of bonds as envisaged in Kerala Electricity Second Transfer (Amendment) Scheme (Revesting) 2015 dated 28.01.2015.

6.248 The Commission further noted that, KSEB Ltd is yet to take proper action plan to meet the unfunded liability based on the actuarial valuation of the pension and other liabilities of the employees and pensioners of erstwhile KSEB to the

KSEB Ltd as on 31.10.2013. The Commission, duly considering the huge unfunded liability, has provided lumpsum provision of Rs. 300 crore to the trust for meeting the unfunded liability in the earlier orders on Truing up from the year 2018-19 to 2020-21.

- 6.249 The Commission has also noted that, the Regulation 30 (3) of the Tariff Regulations, 2021, clearly provides for determining the up to date actuarial liability and to draw a suitable proposal regarding how to fund the liability /uncovered liability with the approval of the KSEB management and with the approval of the State Government. The Tariff Regulation also stipulates that KSEB Ltd shall file a petition in line with the Government approval to meet the unfunded terminal liabilities, with complete details to fund such liabilities. The Commission further stipulates in the Tariff Regulations, 2021, that the Commission shall consider this petition at the time of Truing up of accounts of the relevant years. It is also stipulated in the Tariff Regulations, 2021, that till such time, the Commission may, based on a petition by KSEB Ltd, consider approving a provisional amount towards the discharge of this unfunded liability.
- 6.250 However, KSEB Ltd has not filed such petitions for funding the unfunded liabilities based on the actuarial report before the Commission with the approval of the State Government. Instead, KSEB Ltd has claimed a provisional amount of Rs.400 crore per annum during the MYT period from 2022-23 to 2026-27.
- 6.251 The Commission has serious concern on the huge unfunded liability arising year after year based on the actuarial report. However, KSEB Ltd has not made serious attempt to fund the unfunded liabilities. As on date, the total unfunded liability of KSEB Ltd as on 31.03.2021 is Rs.10702.47 crore. This indicates a serious emerging financial crisis in discharging the pension and other retirement liabilities. The unfunded liability as on 31.03.2021 is about 46% of the total pension liability as on 31.03.2021. The Commission observed that, this is not at all an acceptable situation and urgent action is required to address the emerging catastrophe. Considering these aspects in detail, the Commission in the previous Orders on Truing up for the years 2018-19, 2019-20 and 2020-21 had provided Rs.300 crore to meet this unfunded liability.
- 6.252 The Commission after appraising the entire aspects in detail, has decided to provide an amount of Rs.400 crore provisionally as additional fund to the master trust for meeting the unfunded actuarial liability as on 31.03.2021. KSEB Ltd shall transfer this additional fund along with the additional fund approved in the earlier Orders on Truing up for the years 2017-18, 2018-19, 2019-20 and 2020-21 as specified in the relevant years of Truing up to the Trust as specified in that Order. If KSEB Ltd fails to transfer this amount, the Commission shall not approve the additional fund to master trust in future at the time of Truing up of

relevant years concerned. With the above directions, the Commission approves Rs.400 crore towards additional fund to the master trust.

6.253 Accordingly, the year wise details additional fund to the master trust of each SBUs of KSEB Ltd is given in the Table below.

Table 6.161

Additional fund to the Master Trust- provisionally approved for the MYT period 2022-23 to 2026-27

Particulars	SBU G	SBU T	SBU D	Total
	(Rs. Cr)	(Rs. Cr)	(Rs. Cr)	(Rs. Cr)
Employee cost apportionment ratio 2020-21	5.40%	11.25%	83.35%	100.00%
2022-23	21.60	44.98	333.42	400
2023-24	21.60	44.98	333.42	400
2024-25	21.60	44.98	333.42	400
2025-26	21.60	44.98	333.42	400
2026-27	21.60	44.98	333.42	400

Return on Equity

6.254 In the petition, KSEB Ltd has stated that as per Regulation 34(b), the equity of Government of Kerala as per the Second Transfer Scheme published under section 131 of the Act is to be considered, for the computation of return on equity. The Government equity in KSEB as per the second transfer scheme is Rs 3499 crore. The Regulation 28 allows a RoE of 14% per annum. Accordingly, the RoE of KSEB Ltd is proposed as Rs 489.86 crore (14% on the equity of Rs 3499 Crore). The SBU wise share of equity as per the annual accounts is given below.

Table: 6.162

SBU Wise Return on Equity proposed

SBU	Equity Share	% of Equity	RoE
	Rs. crore		Rs. Crore
SBU-G	831.27	23.76	116.38
SBU-T	857.05	24.49	119.99
SBU-D	1810.73	51.75	253.50

6.255 Thus, the ROE for SBU-D would be Rs. 253.50 crore each year during the Control Period.

Comments of the Stakeholders

6.256 The HT&EHT Association submitted that, the equity of KSEB Ltd is not Rs 3499.00 crore. The consultant appointed by the Commission recommended a lower value of Rs.283.91 crore or the most Rs 1553.00 crore as equity of KSEB

Ltd. Hence the Association requested to approve Rs 217.42 crore as RoE as against the total RoE of Rs.489.87 crore claimed by KSEB Ltd.

Provisions in the Regulation

6.257 The Regulation 28 of the Tariff Regulations, 2021, specifies the Return on Equity and related aspects. The relevant Regulations is extracted below.

“28. Return on Paid up Equity or Net Fixed Assets. –

- (5) *Return on equity shall be computed in rupee terms, on the paid up equity share capital and shall be allowed at the rate of fourteen percent (14%) per annum:*

Provided that in the case of increase in the equity share capital of the generating business/ company, transmission business/ licensee, distribution business/ licensee and State Load Despatch Centre, the additional amount of equity share capital infused into the generating business/ company, transmission business/ licensee, distribution business/ licensee and State Load Despatch Centre, and approved by the Commission for the assets put to its intended use shall be provided with ROE at 14% per annum on pro rata basis from the date of issuance of the equity shares:

Provided further that the generating business/ company, transmission business/ licensee, distribution business/ licensee and State Load Despatch Centre shall provide the complete details of the source of funding for such equity share capital.

- (6) *If there is no equity share capital invested in the business or the equity invested in the regulated business of the generating business/ company or transmission business/ licensee or distribution business/ licensee or State Load Despatch Centre or such equity share capital is not clearly identifiable, return at the rate of 5.50 percent shall be allowed on the net fixed assets at the beginning of the financial year for such regulated business:*

Provided that the net fixed assets shall be exclusive of the assets created out of consumer contribution, deposit works, capital subsidy or grants..”

Further, the Regulation 34 provides as follows:

“34. Principles for adoption of Transfer Scheme for KSEB under Section 131 of the Act.-

The Commission may, for the purpose of approval of the Aggregate Revenue Requirements and determination of tariff, adopt the changes in the balance sheet, due to the re-organization of the erstwhile Kerala State Electricity Board, as per the provisions of the Transfer Scheme published by the Kerala

State Government under Section 131 of the Act, subject to the following principles:-

- (i) Increase in the value of assets consequent to the revaluation of assets shall not qualify for computation of depreciation or for return on net fixed assets;*
- (ii) The equity of the Government of Kerala as per the above Transfer Scheme published vide Government Order No. GO(P) 46/2013/PD dated 31.10.2013 and GO(P) No. 3/2015/PD dated 28.01.2015 under Section 131 of the Act will be considered for computation of return on equity;*
- (iii) The reduction of the contribution received from the consumers, grants and such other subventions for creation of assets, made as part of Transfer Scheme, shall not be considered while computing the depreciation;*
- (iv) The amounts required for the payment of interest on the bonds issued to the Master Trust and for the principal repayment of such bonds shall be reckoned for computation of Aggregate Revenue Requirement and for truing up of accounts;*
- (v) The Commission will subject to the petition by KSEB Ltd may take appropriate decision on the other issues relating to the Transfer Scheme and its implementation, on case-to-case basis.”*

Analysis and decision of the Commission

6.258 The Commission has carefully considered the issue of equity especially with regard to the amount that is required to be considered for its calculations. KSEB Ltd in their submission has claimed RoE at the rate of 14% per annum for an equity amount of Rs.3499.00 crore. KSEB Ltd has submitted that Regulation 34(b) provides that equity of the Government of Kerala as per the transfer scheme published under section 131 of the Act will be considered for computation of return on equity. As per clause 5 of the second transfer scheme “Kerala Electricity Second Transfer Scheme (Revesting) 2013” notified by Government of Kerala vide G.O.(P) No.46/2013/PD dated 13-10-2013, asset and liabilities of the erstwhile KSEB, which was vested into Government of Kerala, has been revested into the Company namely Kerala State Electricity Board Limited and opening balance sheet has been notified as part II of Schedule A of the said G.O, with and Equity amount of Rs.3499.00 crore.

6.259 The HT & EHT Association has drawn attention of the Commission to the Order of the Hon’ble APTEL wherein, the Commission was directed to determine the recommendation of the consultant. In this context, the Commission notes that the Government of Kerala subsequent to the G.O dated 13-10-2013 had issued G.O. (P) NO.3/2015/PD dated 28-1-2015 and G.O. (Ms) No.17/2015/PD dated 13-5-2015. The G.O. dated 28-1-2015 pertains to the amendments to Kerala Electricity Transfer Scheme (Revesting) 2013 and G.O dated 13-5-2015 pertains to the netting off of dues between Government and KSEB as on 13-10-2013 ie., the date of revesting. In the G.O dated 13-5-2013, it is stated that

“.....Taking into consideration that netting off of dues between KSEB Ltd and Government forms an integral part of re-structuring of KSEB along with cleaning up of KSEB Limited’s Balance sheet, a part of the duty collected ie., Rs.1946 crore stands converted into the increased portion of equity (3499-1553) so as to ensure that the increase equity is a result of cash infusion to KSEB Ltd by Government thereby enabling the Government to participate in the increased return on equity in future years...”.

- 6.260 The Commission also notes that in compliance to the above GO, KSEB Ltd has issued 349,92,00,000 equity shares of Rs.10 each in favour of Government Kerala for Rs.3499 crore as per the provisions of the Companies Act, 2013, deals with the issue of equity shares and its allotments. In this regard the Commission is satisfied that the allotment of equity shares for Rs.3499.20 crore in compliance to the GO conforms to the requirement for allotment of equity shares as per the provisions of the Companies Act, 2013. It was on this basis that, the Commission while considering the truing up petitions of KSEB Ltd for 2015-16, 2016-17, 2017-18, 2018-19, 2019-20 and 2020-21 had recognized the equity amount as Rs. 3499 crore and allowed RoE @ of 14% per annum.
- 6.261 Considering the above facts, the Commission is of the considered view that the claim of KSEB Ltd for an RoE @ 14% per annum for an amount of Rs.3499.00 crore is established and justified. Therefore, the Commission allows Rs.253.50 crore as the RoE in the ARR of SBU-D.
- 6.262 As per the provisions of the Regulation 34 of the Tariff Regulations,2021, the Commission is allowing the amount of equity as per the provisions of the Transfer Scheme published vide Government Order No. GO(P) 46/2013/PD dated 31.10.2013 andGO(P) No. 3/2015/PD dated 28.01.2015 under *Section 131* of the Act-2003.
- 6.263 The Regulations were finalised by the Commission after following the due process such as previous publication, public hearing etc., Once the Regulation has been finalised and notified after following the due procedure, it is binding on all the parties concerned and there is no scope for any deviation what so ever. Therefore, the arguments of the Association cannot be accepted. ***Accordingly, the share of RoE for SBU-D amounting to Rs. 253.50 crore at the rate of 14% is allowed yearly during the MYT period from 2022-23 to 2026-27.***

Summary of Gross ARR

6.264 The summary of the total Aggregate Revenue Requirement of SBU-D estimated by KSEB Ltd for the MYT period from 2022-23 to 2026-27 is given below:

Table 6.163
Summary of the Gross ARR of SBU-D claimed by KSEB Ltd

No	Particulars	2022-23	2023-24	2024-25	2025-26	2026-27
		(Rs.Cr)	(Rs.Cr)	(Rs.Cr)	(Rs.Cr)	(Rs.Cr)
1	Cost of Generation	705.18	850.67	911.46	989.63	1183.89
2	Cost of Power Purchase	10012.35	10819.99	10998.45	11346.27	11945.71
3	Cost of Intra State Transmission	1508.42	1763.3	2022.31	2274.02	2550.98
4	O&M Expenses	3391.14	3643.28	3893.67	4276.77	4588.22
5	I&F charges	1855.26	1758.04	1721.41	1710.63	1661.68
7	Additional contribution to Master Trust	333.42	333.42	333.42	333.42	333.42
12	Depreciation	279.32	306.05	354.65	427.42	472.82
13	Recovery of previous gap	980.59	980.59	980.59	980.59	980.59
14	Repayment of Bond	339.42	339.42	339.42	339.42	339.42
15	Total Revenue Expenditure	19405.1	20794.76	21555.38	22678.17	24056.74
16	Return on Equity	253.5	253.5	253.5	253.5	253.5
17	Aggregate Revenue Requirement	19658.6	21048.26	21808.88	22931.67	24310.24

6.265 Based on the discussions in the preceding paragraphs, the summary of the ARR of SBU-D provisionally approved by the Commission is given below.

Table 6.164
KSERC- Summary of the Gross ARR of SBU-D provisionally approved

No	Particulars	2022-23	2023-24	2024-25	2025-26	2026-27
		(Rs.Cr)	(Rs.Cr)	(Rs.Cr)	(Rs.Cr)	(Rs.Cr)
1	Cost of Generation	613.86	690.46	734.63	767.00	803.69
2	Cost of Power Purchase	9833.64	10564.23	10716.26	11130.01	11747.83
3	Cost of Intra State Transmission	1310.51	1533.34	1706.12	1852.41	1983.01
4	O&M Expenses	3345.05	3605.40	3830.59	4074.97	4444.12
5	I&F charges	1649.61	1541.56	1499.43	1475.22	1424.16
7	Additional contribution to Master Trust	333.42	333.42	333.42	333.42	333.42
12	Depreciation	266.09	285.00	328.04	376.34	383.89
13	Recovery of previous gap	850.00	850.00	850.00	500.00	300.00
14	Repayment of Bond	339.42	339.42	339.42	339.42	339.42
15	Total Revenue Expenditure	18541.61	19742.82	20337.91	20848.79	21759.54
16	Return on Equity	253.5	253.5	253.5	253.5	253.5
17	Aggregate Revenue Requirement	18795.11	19996.32	20591.41	21102.29	22013.04

Non-Tariff income

6.266 KSEB Ltd submitted that, the non-tariff income of regulated business includes income other than those obtained from tariff such as income from wheeling, receipts on account of cross-subsidy surcharge and additional surcharge on charges of wheeling, reactive energy charges, meter rent, rental from electric plants or lines, testing fee, late payment surcharge, prompt payment incentives, recovery from theft and pilferage of energy or such other charges.

6.267 The Non-Tariff income claimed by KSEB Ltd for the MYT period is given below.

Table : 6.165
Non-Tariff Income projected by KSEB Ltd for the control period

No	Other Income	2022-23	2023-24	2024-25	2025-26	2026-27
1	Interest on staff loans etc	0.06	0.07	0.07	0.07	0.08
2	Income from statutory investments	0.01	0.02	0.02	0.02	0.02
3	Income from rent of land etc	1.54	1.61	1.69	1.78	1.87
4	Income from sale of scrap	43.4	45.57	47.85	50.24	52.76
5	Rental from staff quarters	0.14	0.15	0.16	0.17	0.17
6	Excess found on physical verification	0.06	0.07	0.07	0.07	0.08
7	Interest on investments Etc	4.21	4.42	4.64	4.87	5.11
8	Interest on advances suppliers etc	0.21	0.22	0.23	0.25	0.26
9	Income by ROW for FO Cables etc	56.35	59.17	62.13	65.24	68.5
10	Miscellaneous receipts	100.59	105.62	110.9	116.44	122.27
11	LE/SC Minimum	0.06	0.06	0.06	0.07	0.07
12	Processing Fee for Allocation of Power	2.95	3.1	3.26	3.42	3.59
13	Rebate from CGS	164.99	173.24	181.9	191	200.55
14	Income from wheeling	3.19	3.35	3.52	3.69	3.88
15	STOA - Registration and Application fee	0.23	0.24	0.26	0.27	0.28
16	STOA - Open Access charges	24.03	25.23	26.49	27.82	29.21
17	Application fee & registration fee for grid connectivity of solar panels	7.51	7.89	8.28	8.69	9.13
18	Meter Rent	109.67	115.16	120.92	126.96	133.31
19	Testing Fee	7.03	7.38	7.75	8.14	8.55
20	Late payment from surcharge	152.27	90.65	95.18	99.95	104.95
21	Others	83.56	87.73	92.12	96.73	101.56
22	Recovery on Theft and Pilferage	11.16	11.71	12.3	12.91	13.56
23	Power factor Penalty	55.81	58.6	61.53	64.61	67.84
	Total Non-Tariff Income (Rs Cr)	829.04	801.27	841.33	883.4	927.57

Analysis of the Commission

6.268 The Commission has examined the Non-tariff income claimed with same approved in Truing up of accounts for the previous years from 2018-19 to 2020-21 amounting to Rs 601.61 crore, Rs 557.54 crore and Rs 880.75 crore

respectively. The Non-tariff claimed by KSEB Ltd for the MYT period ranges from Rs.829.04 crore to Rs 927.57 crore. The projections are comparable with the Non Tariff Income as per the approved Truing up of accounts.

With this observation, the Commission provisionally approves the Non-Tariff income as estimated by KSEB Ltd in the Table 6.165 above, with the conditions that the actuals after prudence check shall only be allowed at the time of Truing up of Accounts.

Net ARR of KSEB Ltd during the MYT period 2022-23 to 2026-27

6.269 After accounting the Non-Tariff Income, the net ARR to be passed on to the consumers is given below.

Table : 6.166
KSERC- Net ARR of SBU-D estimated for the MYT period

No	Particulars	2022-23	2023-24	2024-25	2025-26	2026-27
		(Rs.Cr)	(Rs.Cr)	(Rs.Cr)	(Rs.Cr)	(Rs.Cr)
1	Gross ARR	18795.11	19996.32	20591.41	21102.29	22013.04
2	Non Tariff Income	829.04	801.27	841.33	883.40	927.57
3	Net ARR	17966.07	19195.05	19750.08	20218.89	21085.47

Revenue from sale of power

6.270 The revenue from sale of power was estimated by KSEB Ltd based on the prevailing Tariff schedule of Tariff for energy sales without including the impact of solar penetration and e mobility. The average category wise energy charge per unit so obtained is considered for reduction in revenue on account of solar penetration and additional e mobility. The reduction in revenue on account of solar penetration is computed based on the energy charges per unit of domestic category. The revenue on account of increased consumption due to e mobility is computed by considering the average energy charges per unit for domestic category.

6.271 The revenue of remaining categories is computed based on the prevailing tariff rates for energy consumption computed without accounting impact of solar penetration. The revenue reduction on account of reduction in energy consumption due to solar penetration is computed based on the energy charges per unit of corresponding tariff category.

6.272 The revenue from sale of power estimated for the control period by KSEB Ltd for different categories is as shown below:

Table 6.167
KSEB Ltd petition- LT-Category- revenue from sale of power

SI No	Category	2022-23		2023-24		2024-25		2025-26		2026-27	
		Sales in MU	Revenue (Rs Cr)	Sales in MU	Revenue (Rs Cr)	Sales in MU	Revenue (Rs Cr)	Sales in MU	Revenue (Rs Cr)	Sales in MU	Revenue (Rs Cr)
1	LT I Domestic	13471.82	6459.09	13896.64	6694.34	14661.16	7078.84	15546.75	7519.72	16606.83	8041.37
2	LT II Colony	3.70	2.58	3.77	2.63	3.85	2.68	3.92	2.73	4.00	2.78
3	LT IV A Industrial	1107.12	820.02	1114.22	827.98	1119.86	835.19	1123.40	841.29	1124.52	846.07
4	LT IV B Industrial	9.36	7.20	9.14	7.09	8.79	6.89	8.26	6.59	7.53	6.16
5	LT V A Agriculture	326.28	88.59	344.78	93.15	364.32	97.97	384.97	103.04	406.79	108.39
6	LT V B Agriculture	63.21	18.65	66.40	19.57	69.64	20.50	72.87	21.43	76.07	22.35
7	LT VI A General	200.56	154.73	198.72	155.96	191.97	154.39	178.03	148.67	155.75	138.10
8	LT VI B General	124.56	102.57	125.42	104.48	124.17	105.07	119.78	103.67	111.74	99.94
9	LT VI C General	248.31	272.34	259.93	286.74	271.28	301.29	281.97	315.70	291.81	329.84
10	LT VI D General	21.58	6.01	22.20	6.21	22.63	6.36	22.74	6.46	22.50	6.48
11	LT VI E General	3.06	1.86	3.19	1.95	3.32	2.02	3.42	2.10	3.51	2.16
12	LT VI F General	957.21	962.56	1006.34	1014.83	1056.12	1068.46	1105.72	1122.76	1154.77	1177.51
13	LT VI G General	75.06	74.16	76.05	76.28	75.96	77.79	74.26	78.26	70.68	77.53
14	LT VII A Commercial	1562.62	1591.96	1625.74	1666.85	1683.26	1739.14	1731.01	1805.67	1767.02	1865.05
15	LT VII B Commercial	202.23	144.22	213.91	152.08	226.27	160.37	239.33	169.12	253.14	178.34
16	LT VII C Commercial	22.03	17.65	22.92	18.45	23.73	19.22	24.40	19.91	24.91	20.51
17	LT VIII A Public Lighting	196.25	97.14	198.40	98.21	200.58	99.29	202.78	100.38	205.01	101.48
18	LT VIII B Public Lighting	107.65	49.61	108.83	50.39	110.03	51.19	111.24	52.02	112.46	52.88
19	LT IX Advertisements and Hoardings	1.15	3.11	1.08	3.05	0.97	2.96	0.81	2.79	0.60	2.56
20	LT X Electric vehicle charging stations	0.55	0.50	0.55	0.50	0.55	0.50	0.53	0.50	0.50	0.49
	LT Subtotal	18704.32	10874.56	19298.24	11280.75	20218.46	11830.11	21236.21	12422.79	22400.15	13079.98

Table 6.168
KSEB Ltd petition- HT-Category- revenue from sale of power

SI No	Category	2022-23		2023-24		2024-25		2025-26		2026-27	
		Sales in MU	Revenue (Rs Cr)	Sales in MU	Revenue (Rs Cr)	Sales in MU	Revenue (Rs Cr)	Sales in MU	Revenue (Rs Cr)	Sales in MU	Revenue (Rs Cr)
1	HT I A Industrial	2323.12	1657.41	2407.52	1718.99	2493.16	1781.82	2579.26	1845.49	2665.46	1909.81
2	HT I B Industrial	14.96	11.24	15.13	11.39	15.15	11.44	14.97	11.37	14.54	11.15
3	HT II A General	204.22	150.77	208.02	153.01	209.31	153.84	206.80	152.52	199.86	148.69
4	HT II B General	636.13	539.27	646.75	552.13	649.00	559.44	638.68	558.26	613.68	547.14
5	HT III A Agriculture	7.96	4.67	8.77	4.92	9.67	5.19	10.66	5.49	11.75	5.83
6	HT III B Agriculture	2.14	1.05	2.32	1.13	2.50	1.22	2.69	1.31	2.88	1.40
7	HT IV A Commercial	344.87	325.99	360.64	340.74	375.44	354.93	388.36	367.94	399.02	379.46
8	HT IV B Commercial	326.67	332.58	344.76	350.00	363.16	367.81	381.54	385.78	399.79	403.83
9	HT V Domestic	21.94	17.27	24.72	19.13	27.75	21.14	31.00	23.30	34.51	25.63
10	HT VI Electric Vehicle Charging Stations	31.81	18.91	48.27	27.73	127.86	70.77	210.24	113.33	289.98	154.84
	HT Sub Total	3913.81	3059.16	4066.88	3179.17	4272.99	3327.61	4464.19	3464.79	4631.47	3587.77

Table 6.169
KSEB Ltd petition- EHT-Category- revenue from sale of power

Sl No	Category	2022-23		2023-24		2024-25		2025-26		2026-27	
		Sales in MU	Revenue (Rs Cr)	Sales in MU	Revenue (Rs Cr)	Sales in MU	Revenue (Rs Cr)	Sales in MU	Revenue (Rs Cr)	Sales in MU	Revenue (Rs Cr)
1	EHT (General) A	12.92	7.86	13.18	8.02	13.45	8.18	13.72	8.35	13.99	8.51
2	EHT (General) B	43.84	40.12	44.72	40.83	45.61	41.64	46.53	42.47	47.46	43.32
3	EHT I (66 kV) Industrial	316.92	195.00	321.22	197.84	325.58	200.72	329.99	203.65	334.47	206.62
4	EHT II (110 kV) Industrial	762.54	446.49	773.24	453.14	782.43	459.04	789.36	463.84	793.66	467.33
5	EHT II (110 kV) Railway Traction	321.49	203.20	351.82	219.45	385.00	237.17	421.31	256.51	461.04	277.61
6	EHT III (220 kV) Industrial	132.80	82.14	140.77	86.15	149.22	90.40	158.17	94.90	167.66	99.67
7	KMRL	9.76	6.30	10.25	6.57	10.75	6.85	11.29	7.14	11.85	7.44
8	EHT Sub Total	1600.28	981.13	1655.20	1012.00	1712.04	1044.01	1770.37	1076.85	1830.13	1110.50

Table 6.170
KSEB Ltd petition- Licensees - revenue from sale of power

Sl No	Category	2022-23		2023-24		2024-25		2025-26		2026-27	
		Sales in MU	Revenue (Rs Cr)	Sales in MU	Revenue (Rs Cr)	Sales in MU	Revenue (Rs Cr)	Sales in MU	Revenue (Rs Cr)	Sales in MU	Revenue (Rs Cr)
1	Licensee: Other State 11KV- Karnataka	0.83	0.62	0.84	0.63	0.85	0.63	0.85	0.63	0.86	0.64
2	Licensee: CPT	38.65	26.90	39.06	27.15	39.48	27.41	39.90	27.67	40.33	27.93
3	Licensee: CSEZ	57.09	36.45	57.26	36.54	57.43	36.64	57.60	36.74	57.77	36.83
4	Licensee: KDHPCL	70.94	37.99	73.77	39.35	76.73	40.77	79.79	42.24	82.99	43.77
5	Licensee: KPUPL	108.39	71.01	113.65	74.09	119.17	77.31	124.95	80.69	131.01	84.24
6	Licensee: MES	74.20	52.03	74.85	52.42	75.51	52.80	76.18	53.19	76.85	53.59
7	Licensee: RPL	27.00	15.53	27.27	15.66	27.55	15.79	27.82	15.92	28.10	16.05
8	Licensee: Technopark	93.96	52.15	95.30	52.89	96.67	53.64	98.05	54.40	99.45	55.17
9	Licensee: Thrissur Corporation	172.06	117.82	175.61	119.97	179.23	122.16	182.93	124.40	186.70	126.68
10	Licensee: Infopark, Cherthala	14.14	9.14	14.84	9.54	15.59	9.96	16.36	10.40	17.18	10.86
	Licensee: Smart City	4.71	3.15	4.81	3.20	4.90	3.26	5.00	3.31	5.10	3.37
	Subtotal	661.96	422.79	677.27	431.43	693.09	440.36	709.44	449.59	726.35	459.13
V	Grand Total(I+II+III+IV)	24880.38	15337.64	25697.59	15903.34	26896.58	16642.10	28180.22	17414.02	29588.10	18237.39

Analysis and decision of the Commission

6.273 The Commission has examined the revenue from existing tariff projected by KSEB Ltd in the preceding paragraphs. The average realisation from existing tariff as per the projections of KSEB Ltd is given below.

Table 6.171

LT- Category- Average revenue realisation from existing tariff

Year	Energy sale	Revenue from existing tariff	Avg tariff
	(MU)	(Rs.Cr)	(Rs/kWh)
2022-23	18704.32	10874.56	5.81
2023-24	19298.24	11280.75	5.85
2024-25	20218.46	11830.11	5.85
2025-26	21236.21	12422.79	5.85
2026-27	22400.15	13079.98	5.84

6.274 The average revenue from tariff from HT categories, EHT categories during the MYT period is given below.

Table 6.172

HT & EHT - Category- Average realisation from existing tariff

Year	HT Category			EHT category		
	Energy sale	Revenue from existing tariff	Avg tariff	Energy sale	Revenue from existing tariff	Avg tariff
	(MU)	(Rs.Cr)	(Rs/kWh)	(MU)	(Rs.Cr)	(Rs/kWh)
2022-23	3913.81	3059.16	7.82	1600.28	981.13	6.13
2023-24	4066.88	3179.17	7.82	1655.20	1012.00	6.11
2024-25	4272.99	3327.61	7.79	1712.04	1044.01	6.10
2025-26	4464.19	3464.79	7.76	1770.37	1076.85	6.08
2026-27	4631.47	3587.77	7.75	1830.13	1110.50	6.07

6.275 The over all revenue realisation from existing tariff projected by KSEB Ltd is given below.

Table 6.173

Overall- Average realisation from existing tariff

Year	Energy sale	Revenue from existing tariff	Avg tariff
	(MU)	(Rs.Cr)	(Rs/kWh)
2022-23	24880.38	15337.64	6.16
2023-24	25697.59	15903.34	6.19
2024-25	26896.58	16642.10	6.19
2025-26	28180.22	17414.02	6.18
2026-27	29588.10	18237.39	6.16

6.276 The above tables indicate that, the projected LT consumption as a percent of the total consumption ranges between 75.01% to 75.70%, whereas the average tariff realised from this category ranges from Rs 5.81/kWh to Rs 5.85/kWh. Compared to the projected average cost of supply which ranges from Rs 5.81/kWh to Rs 5.85/kWh, it is clear that over 75% of the consumption falls within the subsidised category. In addition, during 2021-22, out of 13142910 consumers, the number of subsidised consumers were as high as 13136449 consumers. i.e., 99.95%.

6.277 The Commission further notes that during the MYT period at the existing rates, the only increase in the average tariff is in the LT category where as in the HT & EHT categories, the average tariff is projected to decrease. After due consideration of all facts, figures and comments, ***the Commission provisionally approve the revenue from sale of power as estimated by KSEB Ltd for the MYT period on the condition that, the actuals only be allowed at the time of Truing up of accounts of the respective years.***

Power Factor Incentive

6.278 KSEB Ltd in the petition has stated that, based on the actual power factor incentive for the year 2020-21 as per the audited accounts, KSEB Ltd has estimated the power factor incentive for the control period on the basis of projected sales volume. The power factor incentive estimated by KSEB Ltd for the MYT period is given below.

Table 6.174
Power factor incentive claimed by KSEB Ltd for the MYT period

Year	Power factor incentive
	(Rs. Cr)
2022-23	28.60
2023-24	29.54
2024-25	30.91
2025-26	32.39
2026-27	34.01

Analysis and Decision of the Commission

6.279 The Commission examined the power factor incentive claimed for the MYT period as above with the power factor incentive as per the orders on Truing up of accounts for the year 2020-21. The actual power factor incentive as per the Truing up of accounts for the year 2020-21 is Rs 25.76 crore. The PF incentive estimated for the MYT period is comparable with the actuals for the year 2020-21. The Commission provisionally approve the PF incentive as estimated by KSEB Ltd, on the condition that the actuals PF incentives disbursed during the relevant years concerned shall only be allowed at the time of Truing up of accounts.

Net Revenue from Sale of Power for the MYT period

6.280 Based on revenue from Sale of Power and power factor incentives as detailed in the preceding paragraphs, the net revenue from sale of power within the State during the MYT period is given below.

Table 6.175
Net Revenue from Sale of Power within the State for the MYT period

Particulars	2022-23	2023-24	2024-25	2025-26	2026-27
Energy sales in MU	24880.38	25697.59	26896.58	28180.22	29588.10
Revenue(Rs in Crores)	15337.64	15903.34	16642.10	17414.02	18237.39
Power factor incentive (Rs. Cr)	28.60	29.54	30.91	32.39	34.01
Revenue from tariff net of PF incentive (Rs. Cr)	15309.04	15873.80	16611.19	17381.63	18203.38

Revenue from external sales

6.281 As discussed under paragraph 6.149 of this order, there will be surplus energy during the MYT period as detailed below. KSEB Ltd proposed to sell the surplus energy at the average rate of Rs 3.50 per unit. However, the Commission is of the view that KSEB Ltd must take essential steps to ensure that at least the average power purchase cost estimated at Rs 3.75 / kWh is realised. Accordingly, the Commission has estimated the revenue from sale of surplus power outside the State as detailed below.

Table 6.176
Revenue from sale of surplus energy outside the State

Financial Year	KSEB Ltd			KSERC		
	Surplus Energy (MU)	Addl revenue (Rs Cr)	Avg rate (Rs/ kWh)	Surplus Energy (MU)	Addl revenue (Rs Cr)	Avg rate (Rs/ kWh)
2022-23	1908.40	667.94	3.50	1946.22	729.83	3.75
2023-24	982.85	344.00	3.50	1019.09	382.16	3.75
2024-25	503.22	176.09	3.50	316.23	118.59	3.75
2025-26						
2026-27						

Total estimate of revenue from sale of power during the Control period

6.282 The total revenue estimated for the next control period is given in the table below

Table: 6.177
Revenue from sale of power approved for the control period

Particulars	KSEB Ltd					KSERC				
	2022-23 (Rs.Cr)	2023-24 (Rs.Cr)	2024-25 (Rs.Cr)	2025-26 (Rs.Cr)	2026-27 (Rs.Cr)	2022-23 (Rs.Cr)	2023-24 (Rs.Cr)	2024-25 (Rs.Cr)	2025-26 (Rs.Cr)	2026-27 (Rs.Cr)
Net Revenue from Sale of Power	15309.04	15873.80	16611.19	17381.63	18203.38	15309.04	15873.80	16611.19	17381.63	18203.38
Revenue from external sale	667.940	344.000	176.090			729.83	382.16	118.59	0.00	0.00
Total revenue	15976.98	16217.80	16787.28	17381.63	18203.38	16038.87	16255.96	16729.78	17381.63	18203.38

Revenue gap for the Control Period

6.283 Based on the above, the revenue gap for the control period projected by KSEB Ltd is as given below:

Table: 6.178
KSEB Petition – Revenue gap estimated for the control period

Particulars	2022-23	2023-24	2024-25	2025-26	2026-27
	(Rs.Cr)	(Rs.Cr)	(Rs.Cr)	(Rs.Cr)	(Rs.Cr)
Net ARR	18829.56	20246.99	20967.55	22048.27	23382.67
Revenue from tariff	15309.04	15873.80	16611.19	17381.63	18203.38
External sale	667.94	344.00	176.09		
Total Revenue	15976.98	16217.80	16787.28	17381.63	18203.38
Revenue Gap	2852.58	4029.19	4180.26	4666.64	5179.29

6.284 Based on the facts and circumstances discussed in the preceding paragraphs, the revenue gap provisionally approved by the Commission for the MYT period is given below.

Table: 6.179
KSERC – Revenue gap provisionally approved for the MYT period

Particulars	2022-23	2023-24	2024-25	2025-26	2026-27
	(Rs.Cr)	(Rs.Cr)	(Rs.Cr)	(Rs.Cr)	(Rs.Cr)
Net ARR	17966.07	19195.05	19750.08	20218.89	21085.47
Revenue from tariff	15309.04	15873.80	16611.19	17381.63	18203.38
Revenue from external sale	729.83	382.16	118.59	0.00	0.00
Total revenue	16038.87	16255.96	16729.78	17381.63	18203.38
Revenue Gap	1927.20	2939.09	3020.30	2837.26	2882.09

Summary of the Approved ARR&ERC for the Control period

6.285 As detailed in the previous sections, the approved summary of the ARR&ERC for the Control period is as shown below:

Table: 6.180
Summary of Approved ARR&ERC for the control period

No	Particulars	2022-23	2023-24	2024-25	2025-26	2026-27
		(Rs.Cr)	(Rs.Cr)	(Rs.Cr)	(Rs.Cr)	(Rs.Cr)
1	Cost of Generation	613.86	690.46	734.63	767.00	803.69
2	Cost of Power Purchase	9833.64	10564.23	10716.26	11130.01	11747.83
3	Cost of Intra State Transmission	1310.51	1533.34	1706.12	1852.41	1983.01
4	O&M Expenses	3345.05	3605.40	3830.59	4074.97	4444.12
5	I&F charges	1649.61	1541.56	1499.43	1475.22	1424.16
7	Additional contribution to Master Trust	333.42	333.42	333.42	333.42	333.42
12	Depreciation	266.09	285.00	328.04	376.34	383.89
13	Recovery of previous gap	850.00	850.00	850.00	500.00	300.00
14	Repayment of Bond	339.42	339.42	339.42	339.42	339.42
15	Total Revenue Expenditure	18541.61	19742.82	20337.91	20848.79	21759.54

No	Particulars	2022-23	2023-24	2024-25	2025-26	2026-27
		(Rs.Cr)	(Rs.Cr)	(Rs.Cr)	(Rs.Cr)	(Rs.Cr)
16	Return on Equity	253.5	253.5	253.5	253.5	253.5
17	Aggregate Revenue Requirement	18795.11	19996.32	20591.41	21102.29	22013.04
18	Less Nontariff Income	829.04	801.27	841.33	883.40	927.57
19	Net ARR	17966.07	19195.05	19750.08	20218.89	21085.47
	Revenue					
20	Net revenue from tariff	15309.04	15873.80	16611.19	17381.63	18203.38
21	Revenue from sale of surplus power	729.83	382.16	118.59		
22	Total revenue from sale of Power	16038.87	16255.96	16729.78	17381.63	18203.38
	Revenue gap	1927.20	2939.09	3020.30	2837.26	2882.09

Average cost of supply

6.286 The average cost of supply based on the approved ARR is given below.

Table 6.181

Average cost of supply provisionally approved for the MYT period

Particulars	2022-23	2023-24	2024-25	2025-26	2026-27
Net ARR (Rs. Cr)	17966.07	19195.05	19750.08	20218.89	21085.47
Revenue from external sale (Rs. Cr)	729.83	382.16	118.59	0.00	0.00
Net ARR to be recovered through tariff	17236.24	18812.89	19631.49	20218.89	21085.47
Energy sale approved (MU)	24880.37	25697.59	26896.58	28180.21	29588.1
Average cost of supply (Rs/kWh)	6.93	7.32	7.30	7.17	7.13

CHAPTER – 7

TARIFF ORDER FOR THE YEARS 2022-23 TO 2026-27

7.1 Kerala State Electricity Board Limited (KSEB Ltd), on 10.02.2022, has submitted the proposal for revision of retail tariff for supplying electricity to the consumers, transmission charges, wheeling charges, cross subsidy surcharge applicable to open access consumers, power factor incentive and low voltage surcharge for the MYT period from 2022-23 to 2026-27. The summary of the tariff revision proposed by KSEB Ltd is given below.

Tariff Revision Proposals of KSEB Ltd:

A - LT CATEGORY

1. LT I Domestic

Energy Charge - Single /Three phase (Rs./unit)

Monthly Slab / Units	Present	Proposed					
		2022-23	2023-24	2024-25	2025-26	2026-27	
NPG	1.50	1.50	1.50	1.50	1.50	1.50	Telescopic
0-40	1.50	1.50	1.70	1.70	1.90	1.90	
0-50	3.15	3.50	3.70	3.80	3.90	3.90	
51-100	3.70	4.10	4.30	4.40	4.50	4.60	
101-150	4.80	5.50	5.50	5.60	5.70	5.80	
151-200	6.40	7.00	7.20	7.30	7.40	7.50	
201-250	7.60	8.00	8.00	8.00	8.20	8.30	
0 to 300	5.80	6.50	6.70	6.80	6.90	7.00	Non-Telescopic
0 to 350	6.60	7.20	7.40	7.50	7.60	7.70	
0 to 400	6.90	7.40	7.60	7.70	7.80	7.90	
0 to 500	7.10	7.60	7.80	7.90	8.10	8.20	
above 500	7.90	8.30	8.40	8.50	8.70	8.80	

Fixed Charges (Rs/consumer/month)

Monthly Slab / Units	Single Phase						Three Phase					
	Present	Proposed					Present	Proposed				
		2022-23	2023-24	2024-25	2025-26	2026-27		2022-23	2023-24	2024-25	2025-26	2026-27
NPG	0	0	0	0	0	0	-	-	-	-	-	-
0-40	0	0	0	0	0	0	-	-	-	-	-	-
0-50	35	50	70	80	90	90	90	180	200	210	210	220
51-100	45	70	110	120	130	140	90	180	200	220	230	240
101-150	55	110	130	130	150	160	100	200	220	230	240	250
151-200	70	140	140	150	160	170	100	200	220	240	250	260
201-250	80	160	160	180	190	190	100	200	240	260	270	280
0 to 300	100	200	220	230	240	250	110	220	260	270	280	290
0 to 350	110	220	240	250	260	270	110	250	270	280	290	300
0 to 400	120	240	260	270	280	290	120	300	300	300	310	320
0 to 500	130	260	280	290	290	300	130	350	350	360	360	380
above 500	150	300	310	340	340	350	150	400	410	440	440	500

2. LT II Colonies

Energy Charge in Rs/unit - Energy charge applicable to the respective industry or plantation or organization which maintains the colony

Particulars	Present Tariff	Proposed tariff				
		2022-23	2023-24	2024-25	2025-26	2026-27
Fixed charge (Rs/month/domestic connection)						
Single phase	50	80	120	125	135	145
Three phase	100	160	240	250	270	290

3. LT III Temp. Service including Temp. connection and Extension

LT III (A) Temporary connections

Present Tariff		Proposed tariff
Energy Charge (Rs. /kWh)	15.00 OR	No rate revision is proposed throughout the control period
Daily minimum of Rs. 150/kW or part thereof of the connected load whichever is higher		

LT III (B) Temporary Extensions

Present Tariff	Proposed tariff
Fixed charges day – Rs.65/ kW or part thereof	No rate revision is proposed throughout the control period

4. LT IV Industry

Category	Present Tariff		Proposed Tariff (in Rs)									
			2022-23		2023-24		2024-25		2025-26		2026-27	
	Energy Charge	Demand/ Fixed charge	Energy Charge	Demand/ Fixed charge	Energy Charge	Demand/ Fixed charge	Energy Charge	Demand/ Fixed charge	Energy Charge	Demand/ Fixed charge	Energy Charge	Demand/ Fixed charge
LT IV (A) Industry												
CL <10 kW	5.65	120	6.15	160	6.20	180	6.20	190	6.40	190	6.40	190
10 - 20 kW	5.65	75	6.15	110	6.20	130	6.20	140	6.40	140	6.40	140
≥ 20 kW	5.75	170	6.15	210	6.20	220	6.20	230	6.40	230	6.40	230
LT IV (B) IT and IT Enabled Industries												
CL <10 kW	6.20	150	6.70	200	6.75	220	6.75	220	6.75	220	6.80	220
10 - 20 kW	6.20	100	6.70	140	6.75	150	6.75	150	6.75	150	6.80	150
≥ 20 kW	6.25	170	6.70	220	6.75	230	6.75	230	6.75	230	6.80	230

For connected load upto 10 kW- fixed charge in Rs. /connection /month

For connected load above 10kW and upto 20kW - fixed charge in Rs. /kW or part thereof

For connected load of and above 20kW - Demand charge in Rs. /kVA or part thereof

5. LT V Agriculture (Fixed charge in Rs. /kW or part thereof)

Sub Category	Present Tariff		Proposed Tariff									
			2022-23		2023-24		2024-25		2025-26		2026-27	
	Energy Charge	Demand/ Fixed charge	Energy Charge	Demand / Fixed charge	Energy Charge	Demand / Fixed charge	Energy Charge	Demand/ Fixed charge	Energy Charge	Demand / Fixed charge	Energy Charge	Demand / Fixed charge
LT V (A)	2.30	10	2.80	20	3.00	30	3.00	40	3.250	45	3.25	50
LT V (B)	2.80	10	3.30	25	3.50	35	3.50	50	3.500	50	3.50	50

6. LT VI General

LT- VI (E)

General

Fixed charge (Rs./ connection/ month)	Present	2022-23	2023-24	2024-25	2025-26	2026-27
Single Phase	40	90	100	110	120	120
Three Phase	100	200	210	220	230	230

Energy Charge (Rs./unit)	Present	2022-23	2023-24	2024-25	2025-26	2026-27
1 to 50	3.40	3.80	4.00	4.00	4.10	4.10
51 -100	4.40	4.80	5.00	5.00	5.10	5.10
101 -200	5.10	5.50	5.70	5.70	5.80	5.80
Above 200 (all units)	6.80	7.20	7.20	7.20	7.30	7.30

LT VI(F)

General

Fixed charge (Rs./kW or part thereof/month)	Present	2022-23	2023-24	2024-25	2025-26	2026-27
Single Phase	70	120	140	140	140	140
Three Phase	140	210	220	220	220	220

Energy Charge (Rs./unit)	Present	2022-23	2023-24	2024-25	2025-26	2026-27
0-100	5.80	6.00	6.00	6.10	6.10	6.10
0 -200	6.50	6.70	6.70	6.80	6.80	6.80
0- 300	7.20	7.40	7.40	7.50	7.50	7.50
0 - 500	7.80	8.00	8.00	8.10	8.10	8.10
above500 U	9.00	9.00	9.00	9.10	9.20	9.20

LT VI(G) General

Fixed charge (Rs./kW or part thereof/month)	Present	2022-23	2023-24	2024-25	2025-26	2026-27
Single Phase	70	120	130	140	140	140
Three Phase	140	210	220	220	220	220

Energy Charge (Rs./unit)	Present	2022-23	2023-24	2024-25	2025-26	2026-27
0 -500	5.70	6.00	6.00	6.10	6.30	6.30
0 -1000	6.50	6.70	6.70	6.80	7.00	7.00
0 - 2000	7.50	7.70	7.70	7.80	8.00	8.00
above 2000 units	8.50	8.70	8.70	8.80	8.90	8.90

For all categories mentioned in the Table above, fixed charge in Rs/kW or part thereof / month whereas LT VI(D) & LT VI(E) fixed charge in Rs/connection / month.

7. LT VII Commercial

LT VII (A) Commercial

Fixed charge (Rs./kW or part thereof/month)	Present	2022-23	2023-24	2024-25	2025-26	2026-27
Single Phase	70	120	140	140	140	140
Three Phase	140	210	220	220	220	220

Energy Charge (Rs./unit)	Present	2022-23	2023-24	2024-25	2025-26	2026-27
0-100	6.00	6.10	6.10	6.10	6.10	6.10
0 -200	6.70	6.80	6.80	6.80	6.80	6.80
0- 300	7.40	7.50	7.50	7.50	7.50	7.50
0 - 500	8.00	8.10	8.10	8.10	8.10	8.10
above500 U	9.30	9.30	9.30	9.30	9.30	9.30

Slab / Units	Present Tariff		Proposed Tariff									
			2022-23		2023-24		2024-25		2025-26		2026-27	
	Energy Charge	Demand/ Fixed charge	Energy Charge	Demand/ Fixed charge	Energy Charge	Demand/ Fixed charge	Energy Charge	Demand/ Fixed charge	Energy Charge	Demand/ Fixed charge	Energy Charge	Demand/ Fixed charge
LT VII (B) Commercial												
0 to 100 units	5.20	50	5.30	100	5.30	110	5.30	120	5.50	120	5.50	120
0 to 200 units	6.00	50	6.30	100	6.30	110	6.30	120	6.50	120	6.50	120
0 to 300 units	6.60	50	7.00	100	7.00	110	7.00	120	7.20	120	7.20	120

Slab / Units	Present Tariff		Proposed Tariff									
			2022-23		2023-24		2024-25		2025-26		2026-27	
	Energy Charge	Demand/Fixed charge	Energy Charge	Demand/Fixed charge	Energy Charge	Demand/Fixed charge	Energy Charge	Demand/Fixed charge	Energy Charge	Demand/Fixed charge	Energy Charge	Demand/Fixed charge
LT VII (C) Commercial												
0 - 1000 units	6.00	100	6.30	200	6.30	210	6.30	220	6.50	220	6.50	220
> 1000 units	7.40	100	7.70	200	7.70	210	7.70	220	7.90	220	7.90	220

8. VIII Public Lighting

LT – VIII (A) – Composite Tariff for Unmetered Street Lights (burning hours -4 & 6 hrs)

TYPE OF LAMP	Watts (W)	Rs/Lamp/Month												
		Burning Hours per day - 4 Hours						Burning Hours per day - 6 Hours						
		Existing Tariff	Proposed Tariff					Existing Tariff	Proposed Tariff					
2022-23	2023-24		2024-25	2025-26	2026-27	2022-23	2023-24		2024-25	2025-26	2026-27			
Ordinary	40	24	26	27	28	29	No rate revision	36	39	40	42	43	No rate revision	
Ordinary	60	36	39	41	42	44		55	58	60	62	64		
Ordinary	100	61	65	67	70	72		92	97	99	103	107		
Fluo tube	40	24	26	27	28	29		36	39	40	42	43		
Fluo tube	80	48	52	54	56	58		73	77	80	83	86		
Floodlight	1000	615	645	667	692	718		922	961	990	1026	1065		
MV Lamp	80	56	60	64	68	70		77	83	89	95	98		
MV Lamp	125	83	89	95	101	104		123	132	141	150	155		
MV Lamp	160	106	114	122	130	134		157	169	181	193	199		
MV Lamp	250	164	176	188	200	206		244	262	280	298	307		
MV Lamp	400	263	282	301	320	330		392	420	448	476	490		
SV Lamp	70	46	50	54	58	60		70	75	80	85	88		
SV Lamp	80	53	57	61	65	67		77	83	89	95	98		
SV Lamp	100	65	70	75	80	83		98	105	112	119	123		
SV Lamp	125	83	89	95	101	104		123	132	141	150	155		
SV Lamp	150	98	105	112	119	123		147	158	169	180	186		
SV Lamp	250	164	176	188	200	206		244	262	280	298	307		
CFL	11	6	8	8	8	8		9	11	11	12	12		
CFL (NEW)	14		10	10	10	11			14	14	15	15		
CFL	15	8	10	11	11	11		12	15	15	16	16		
CFL	18	10	12	13	13	13		14	18	18	19	20		
CFL	22	12	15	15	16	16		18	22	22	23	24		
CFL	30	17	20	21	21	22		24	29	30	31	32		
CFL	36	19	24	25	25	26		29	35	36	37	39		
CFL	44	23	29	30	31	32		35	43	44	46	47		
CFL	72	39	47	49	50	52		58	70	72	74	77		
CFL	144	77	93	97	100	104		116	139	143	148	154		
LED (NEW)	9		3	4	4	4			5	5	5	5		
LED	12	3	4	5	5	5		4	6	6	7	7		
LED (NEW)	15		5	6	6	6			8	8	8	8		
LED	18	4	6	7	7	7	8	9	9	10	10			
LED	20	6	7	7	7	8	8	10	10	11	11			

TYPE OF LAMP	Watts (W)	Rs/Lamp/Month										
		Burning Hours per day - 4 Hours					Burning Hours per day - 6 Hours					
		Existing Tariff	Proposed Tariff					Existing Tariff	Proposed Tariff			
2022-23	2023-24		2024-25	2025-26	2026-27	2022-23	2023-24		2024-25	2025-26	2026-27	
LED	24	7	8	9	9	9	10	12	12	13	13	
LED (NEW)	25		9	9	9	9		13	13	13	14	
LED	30	8	10	11	11	11	12	15	15	16	16	
LED(NILAVU)	35	10	12	12	13	13	15	17	18	18	19	
LED	40	11	13	14	14	15	17	20	20	21	22	
LED	45	12	15	16	16	17	18	22	23	24	24	
LED(NILAVU)	70	19	23	24	25	26	29	34	35	36	38	
LED (NEW)	80		26	27	28	29		39	40	42	43	
LED (NILAVU)	110	30	36	37	39	40	47	53	55	57	59	
LED(NEW)	150		49	51	52	54		73	75	77	80	

LT – VIII (A) – Composite Tariff for Unmetered Street Lights (burning hours -12 hrs)

TYPE OF LAMP	Watts (W)	Rs/Lamp/Month					
		Burning Hours per day - 12 Hours					
		Existing Tariff	Proposed Tariff				
2022-23	2023-24		2024-25	2025-26	2026-27		
Ordinary	40	73	77	79	82	85	No rate revision
Ordinary	60	112	115	118	122	127	
Ordinary	100	184	191	196	203	211	
Fluo tube	40	73	77	79	82	85	
Fluo tube	80	147	153	157	163	169	
Floodlight	1000	1845	1910	1957	2030	2105	
MV Lamp	80	157	169	180	192	198	
MV Lamp	125	244	262	280	298	307	
MV Lamp	160	315	338	360	383	395	
MV Lamp	250	492	528	563	599	617	
MV Lamp	400	785	842	897	954	983	
SV Lamp	70	138	148	158	168	173	
SV Lamp	80	157	169	180	192	198	
SV Lamp	100	196	210	224	238	245	
SV Lamp	125	244	262	280	298	307	
SV Lamp	150	294	315	336	357	368	
SV Lamp	250	492	528	563	599	617	
CFL	11	18	22	22	23	24	
CFL (NEW)	14		27	28	29	30	
CFL	15	24	29	30	31	32	
CFL	18	29	35	36	37	38	
CFL	22	35	43	44	45	47	
CFL	30	48	58	59	61	64	
CFL	36	58	69	71	74	76	
CFL	44	70	85	87	90	93	
CFL	72	116	138	141	147	152	
CFL	144	231	276	282	293	304	
LED (NEW)	9		9	9	10	10	
LED	12	10	12	12	13	13	
LED (NEW)	15		15	15	16	16	
LED	18	15	18	18	19	19	

TYPE OF LAMP	Watts (W)	Rs/Lamp/Month				
		Burning Hours per day - 12 Hours				
		Existing Tariff	Proposed Tariff			
2022-23	2023-24		2024-25	2025-26	2026-27	
LED	20	17	20	20	21	21
LED	24	22	23	24	25	25
LED (NEW)	25		24	25	26	26
LED	30	28	29	30	31	31
LED(NILAVU)	35	29	34	35	36	36
LED	40	33	39	40	41	41
LED	45	39	43	45	46	46
LED(NILAVU)	70	58	67	69	72	72
LED (NEW)	80		77	79	82	82
LED (NILAVU)	110	91	106	108	112	112
LED(NEW)	150		144	147	153	153
MV Lamp on semi high mast only for 12 hrs burning per day	1200	2376	2550	2720	2900	2990
SV Lamp on semi high mast only for 12 hrs burning per day	250	495	530	570	610	630

LT VIII B METERED STREET LIGHTS AND TRAFFIC SIGNAL LIGHTS

Present Tariff		Proposed Tariff									
		2022-23		2023-24		2024-25		2025-26		2026-27	
Energy Charge	Demand/ Fixed charge	Energy Charge	Demand / Fixed charge	Energy Charge	Demand/ Fixed charge	Energy Charge	Demand/ Fixed charge	Energy Charge	Demand/ Fixed charge	Energy Charge	Demand/ Fixed charge
4.30	50.00	5.20	100.00	5.30	110.00	5.50	110.00	5.70	120.00	5.70	120.00

9. LT IX DISPLAY LIGHTING AND HOARDINGS

SI No	Particulars	Existing tariff	Proposed tariff				
			2022-23	2023-24	2024-25	2025-26	2026-27
	(a) Fixed Charge (Rs. per Connection per month)	550.00	No rate revision				
	(b) Energy Charge (Rs per unit)	12.50					

10. LT X Electric Vehicles Charging Stations

SI No	Particulars	Existing tariff	Proposed tariff				
			2022-23	2023-24	2024-25	2025-26	2026-27
	(a) Fixed Charge (Rs. per KW per month)	75.00	Nil				
	(b) Energy Charge (Rs per unit)	5.00	7.30	7.75	7.73	7.82	7.90

Single part tariff is proposed at average cost of supply

B - HT CATEGORY

Sub category/ unit	Present Tariff		Proposed Tariff									
			2022-23		2023-24		2024-25		2025-26		2026-27	
	Energy Charge	Demand/ Fixed charge	Energy Charge	Demand/ Fixed charge	Energy Charge	Demand/ Fixed charge	Energy Charge	Demand/ Fixed charge	Energy Charge	Demand/ Fixed charge	Energy Charge	Demand/ Fixed charge
HT-I A	5.75	340.00	6.10	450.00	6.20	450.00	6.30	450.00	6.50	450.00	6.50	450.00
HT -IB	6.05	340.00	6.60	450.00	6.70	450.00	6.70	450.00	6.70	450.00	6.50	450.00
HT IIA	5.60	370.00	6.10	470.00	6.20	480.00	6.30	490.00	6.30	490.00	6.60	500.00
HT IIB ≤30000 U	6.20	440.00	6.60	500.00	6.60	500.00	6.60	500.00	6.60	500.00	6.60	500.00
HT IIB >30000 U	7.20	440.00	7.60	500.00	7.60	500.00	7.60	500.00	7.70	500.00	7.70	500.00
HT IIIA	3.10	190.00	3.50	250.00	3.60	260.00	3.70	270.00	3.80	290.00	4.00	290.00
HT III B	3.60	200.00	4.00	270.00	4.00	280.00	4.00	290.00	4.00	290.00	4.00	290.00
HT IVA ≥30000 U	6.30	440.00	6.60	500.00	6.60	500.00	6.70	500.00	6.80	500.00	6.80	500.00
HT IVA > 30000	7.30	440.00	7.60	500.00	7.60	500.00	7.70	500.00	7.80	500.00	7.80	500.00
HT IVB ≤ 30000 units	6.60	440.00	6.80	500.00	6.80	500.00	6.80	500.00	6.80	500.00	6.80	500.00
HT IVB >30000 units	7.60	440.00	7.80	500.00	7.80	500.00	7.80	500.00	7.80	500.00	7.80	500.00
HTV	5.80	390.00	6.20	450.00	6.30	470.00	6.30	480.00	6.40	490.00	6.50	500.00
HTVI	5.00	250.00	7.30	-	7.75	-	7.73	-	7.82	-	7.9	-

C - EHT CATEGORY

Sub category/ unit	Present Tariff		Proposed Tariff									
			2022-23		2023-24		2024-25		2025-26		2026-27	
	Energy Charge	Demand/ Fixed charge	Energy Charge	Demand / Fixed charge	Energy Charge	Demand / Fixed charge	Energy Charge	Demand/ Fixed charge	Energy Charge	Demand/ Fixed charge	Energy Charge	Demand / Fixed charge
EHT 66 kV	5.50	340.00	6.00	400.00	6.00	420.00	6.00	420.00	6.00	420.00	6.00	420.00
EHT 110 kV	5.40	330.00	5.90	390.00	5.90	400.00	5.90	410.00	5.95	415.00	6.00	420.00

Sub category/ unit	Present Tariff		Proposed Tariff									
			2022-23		2023-24		2024-25		2025-26		2026-27	
	Energy Charge	Demand/ Fixed charge	Ener gy Charge	Demand / Fixed charge	Energy Charge	Demand / Fixed charge	Ener gy Charge	Deman d/ Fixed charge	Energ y Charge	Deman d/ Fixed charge	Ener gy Charge	Demand / Fixed charge
EHT 220 kv	5.00	320.00	5.50	380.00	5.50	400.00	5.60	400.00	5.80	410.00	6.00	420.00
EHT Commercial ≤ 60,000 units	6.10	440.00	6.50	500.00	6.50	500.00	6.50	500.00	6.50	500.00	6.30	480.00
EHT Commercial > 60,000 units	7.10	440.00	7.50	500.00	7.50	500.00	7.50	500.00	7.50	500.00	7.30	480.00
EHT General-A	5.30	340.00	5.80	420.00	5.90	430.00	6.10	450.00	6.20	470.00	6.30	480.00
EHT General-B ≤60,000 units	5.80	410.00	6.25	460.00	6.30	480.00	6.30	480.00	6.30	480.00	6.30	480.00
EHT General-B > 60,000 units	6.80	410.00	7.25	460.00	7.30	480.00	7.30	480.00	7.30	480.00	7.30	480.00
Railway Traction 110 kv	5.10	300.00	5.60	360.00	5.60	380.00	5.60	380.00	5.60	380.00	5.60	380.00
KMRL 110 kv	4.80	275.00	5.25	320.00	5.30	325.00	5.40	345.00	5.50	360.00	5.60	380.00

D – Bulk Supply Tariff to other licensees

	Present Tariff		Proposed Tariff									
			2022-23		2023-24		2024-25		2025-26		2026-27	
	Ener gy Charge	Deman d/ Fixed charge	Ener gy Charge	Demand/ Fixed charge	Ener gy Charge	Demand/ Fixed charge	Ener gy Charge	Demand/ Fixed charge	Ener gy Charge	Demand/ Fixed charge	Energy Charge	Deman d/ Fixed charge
KPUPL	5.85	340.00	6.35	450.00	6.45	480.00	6.45	490.00	6.50	500.00	6.50	525.00
CSEZ	5.60	340.00	6.10	450.00	6.20	480.00	6.20	490.00	6.40	500.00	6.40	525.00
RPL	4.75	340.00	5.25	450.00	5.35	480.00	5.60	490.00	5.70	500.00	5.70	525.00
Technopark	5.50	340.00	6.00	450.00	6.10	480.00	6.20	490.00	6.30	500.00	6.30	525.00
CPT	6.10	340.00	6.60	450.00	6.70	480.00	6.70	490.00	6.90	500.00	6.90	525.00
TSR Corp	6.05	340.00	6.50	450.00	6.60	480.00	6.60	490.00	6.80	500.00	6.80	525.00
Info Park	5.65	340.00	6.15	450.00	6.25	480.00	6.35	490.00	6.45	490.00	6.45	525.00
KDHPCL	4.80	340.00	5.30	450.00	5.40	480.00	5.40	490.00	5.50	500.00	5.50	525.00
MES	5.85	390.00	6.35	500.00	6.45	500.00	6.50	500.00	6.70	500.00	6.70	525.00
Smartcity	5.65	340.00	6.15	450.00	6.25	480.00	6.30	490.00	6.50	500.00	6.50	525.00
Karnataka	5.85	390.00	6.35	500.00	6.45	500.00	6.45	500.00	6.55	500.00	6.55	525.00

E. Transmission/SLDC/Wheeling charges

Item	2022-23	2023-24	2024-25	2025-26	2026-27
Transmission Charges (Rs./unit)	0.55	0.62	0.69	0.74	0.79
-do - STOA (Rs/MW/day)	12632	14280	15908	17374	18904
-do- (Rs/MW/month) - LTA and MTOA	384214	434340	483871	528471	574994
SLDC charges for LTA (Rs/MW/month)	2963	4905	5094	5199	5757
-do- STOA (Rs/MW/day)	97	161	167	171	189
Wheeling charges at HT level (Rs/unit)	0.69	0.69	0.68	0.69	0.68
Wheeling charges at LT level (Rs/unit)	2.65	2.65	2.61	2.63	2.58

F. Proposed Cross Subsidy Surcharge (Rs/Unit)					
category	2022-23	2023-24	2024-25	2025-26	2026-27
EHT Industrial (66 kV)	1.36	1.37	1.37	1.37	1.38
EHT- Industrial (110 kV)	1.29	1.30	1.30	1.31	1.33
EHT-Industrial (220 kV)	1.38	1.38	1.38	1.42	1.45
EHT-General A	1.35	1.38	1.43	1.45	1.48
EHT-General B	1.98	2.00	2.00	2.00	2.00
Railway	1.41	1.41	1.39	1.37	1.35
KMRL	1.44	1.44	1.47	1.50	1.53
HT-I(A) Industry	1.59	1.61	1.63	1.67	1.67
HT-I(B) Industry	1.70	1.71	1.71	1.70	1.66
HT-II(A) General	1.67	1.67	1.68	1.66	1.71
HT-II (B) General	1.81	1.81	1.81	1.83	1.83
HT-III(A) Agriculture	1.43	1.36	1.26	1.24	1.08
HT-III(B) Agriculture	0.49	0.00	0.11	0.00	0.00
HT-IV-A Commercial	2.01	2.00	2.01	2.03	2.02
HT-IV-B Commercial	2.15	2.14	2.13	2.12	2.11
HT-V Domestic	1.72	1.72	1.69	1.67	1.67
HT-VI Electric Vehicle charging Stations	1.46	1.55	1.55	1.56	1.58

G. Low Voltage Supply Surcharge						
Category	Existing	2022-23	2023-24	2024-25	2025-26	2026-27
LT IVA (Rs/kVA/month)	170	240	230	220	220	220
LT IVB (Rs/kVA/month)	170	230	220	220	220	220
LT V A (Rs/kW/month)	0	205	204	203	216	211
LT V B (Rs/kW/month)	0	218	217	211	211	211
LT VI A (Rs/kW/month)	268	303	292	291	271	280
LT VI B (Rs/kW/month)	253	263	252	251	260	250
LT VI C (Rs/kW/month)	216	200	200	200	210	210
LT VI F (Rs/kW/month)	256	240	230	230	230	230
LT VI G (Rs/kW/month)	256	240	230	230	230	230
LT VII A (Rs/kW/month)	256	240	230	230	230	230
LT VII C (Rs/kW/month)	296	250	240	230	230	230

7.2 As detailed in the preceding paragraphs, KSEB Ltd proposed to revise the tariff in all the years of the MYT period from 2022-23 to 2026-27. The summary of the additional revenue expected to recover through tariff revisions is given in the Table below.

Table- 7.1

Summary of the additional revenue expected through KSEBL's proposal

Year	Revenue at existing tariff	Revenue at proposed tariff	Additional revenue
	(Rs. Cr)	(Rs. Cr)	(Rs. Cr)
2022-23	15390.49	17639.60	2249.10
2023-24	18423.85	19209.98	786.13
2024-25	20140.10	20511.02	370.92
2025-26	21525.82	22013.54	487.72
2026-27	23083.06	23335.09	252.03

7.3 The Commission admitted the petition as OP No. 11 of 2022. As per the provisions of the Electricity Act, 2003 and KSERC (Conduct of Business) Regulations, 2003 and its amendments, the Commission uploaded the petition in its website and also directed the licensee to upload the same in its website for the information and comments of all stakeholders. The summary of the petition is also published in one issue each of two Malayalam dailies and one English daily as detailed below.

- Mathrubhoomi daily dated 13-03-2022
- Deshabimani daily dated 13-03-2022
- The Hindu daily dated 13-03-2022

The Commission also conducted public hearing on the ARR ERC and Tariff Revision petition at various places across the State as detailed below.

Date	Venue	Time
01.04.2022	Corporation Town Hall, Ernakulam	11:00 AM
06.04.2022	Jimmy George Indoor Stadium, Thiruvananthapuram	11:00 AM
11.04.2022	Nalanda Auditorium, Kozhikode	11:00 AM
13.04.2022	EMS Smaraka Hall, Jilla Panchyath, Palakkadu	11:00 AM

Further, the Commission accepted written comments on the petition till 13.04.2022. The summary of the comments, objections and suggestions on the petition is given in Chapter-2 of this order.

Revenue gap and average cost of supply approved by the Commission.

7.4 As detailed in the Chapter-6, the ARR, ERC and Revenue gap estimated by KSEB Ltd for the MYT period from 2022-23 to 2026-7 is given below.

Table 7.2
ARR, ERC and Revenue estimated by KSEB Ltd and approved by the Commission

Year	Net ARR (to be passed on through tariff)		Revenue from Tariff		Revenue gap	
	KSEB Ltd proposal	Approved by Commission	KSEBL proposal	Approved by Commission	KSEB Ltd proposal	Approved by Commission
	(Rs. Cr)	(Rs. Cr)	(Rs. Cr)	(Rs. Cr)	(Rs. Cr)	(Rs. Cr)
2022-23	18829.56	17966.07	15976.98	16038.87	2852.58	1927.20
2023-24	20246.99	19195.05	16217.80	16255.96	4029.19	2939.09
2024-25	20967.55	19750.08	16787.28	16729.78	4180.27	3020.30
2025-26	22048.27	20218.89	17381.63	17381.63	4666.64	2837.26
2026-27	23382.67	21085.47	18203.38	18203.38	5179.29	2882.09

The average cost of supply, as per the proposal of KSEB Ltd and the same approved by the Commission for the control period is given below.

Table 7.3
Average Cost of Supply proposed by KSEB Ltd and the same approved by the Commission for the control period 2022-23 to 2026-27

Year	Net ARR (excluding revenue from surplus sale)(to be passed on through tariff)		Energy sales within the State		Average Cost of Supply (ACoS)	
	KSEB Ltd proposal	Approved by Commission	KSEB Ltd proposal	Approved by Commission	KSEBL proposal	Approved by Commission
	(Rs. Cr)	(Rs. Cr)	(MU)	(MU)	(Rs/ kWh)	(Rs/ kWh)
2022-23	18161.62	17236.24	24880.38	24880.38	7.30	6.93
2023-24	19902.99	18812.89	25697.59	25697.59	7.75	7.32
2024-25	20791.46	19631.49	26896.58	26896.58	7.73	7.30
2025-26	22048.27	20218.89	28180.22	28180.22	7.82	7.17
2026-27	23382.67	21085.47	29588.10	29588.10	7.90	7.13

Rationale for Determination of Tariff for 2022-23 only instead of the Tariff Revision proposed by KSEB Ltd for each of the MYT period from 2022-23 to 2026-27.

7.5 The Commission has carefully examined the ARR and the revenue gap proposed by KSEB Ltd. The Commission approved the ARR, ERC, Average Cost of Supply and revenue gap for the MYT period from 2022-23 to 2026-27 as detailed in the Table 7.2 and 7.3 above.

7.6 KSEB Ltd in the petition had proposed revision of tariff in every year of the control period as detailed under paragraph 7.1 above. However, as detailed

under Table 7.2 above the revenue gap provisionally approved by the Commission for each year of the control period is much less than the same proposed by KSEB Ltd. As detailed in the subsequent paragraphs, the Commission in the year 2022-23 had proposed to enhance the tariff by about **Rs 1010.00 crore annually**. This would bridge a substantial portion of the revenue gap approved by the Commission for the MYT period from 2022-23 to 2026-27.

- 7.7 During the public hearings, KSEB Ltd submitted that, it had been taking various steps to control its O&M expenses after taking into confidence its employees and officers. KSEB Ltd also submitted that, it had taken number of initiatives to improve its performance and to control its various expenses including the cost of power purchase. Through these measures KSEB Ltd expected to reduce the overall revenue requirement during the MYT period from 2022-23 to 2026-27. This would result in reducing the cost of supply, its revenue expenditure and part of the revenue gap approved in this order. The Commission may appraise the performance of the licensee every year in the process of Truing up and also during the mid-term review.
- 7.8 Further, the Regulation 10(2) of the KSERC (Terms and Conditions of Determination of Tariff) Regulations, 2021 (herein after referred to as Tariff Regulations, 2021) provides for mandatory filings of Mid-term Performance Review (MPR) by all the licensee and for generating business on or before 30th November 2024. The relevant Regulations is extracted below.

“10(2) Every generating business/ company or transmission business/ licensee or distribution business/ licensee or State Load Despatch Centre shall file, on or before the thirtieth day of November 2024, the Mid-term Performance Review (MPR); which shall comprise of the truing up for the financial years upto 2023-24 and mid-year performance review for the year 2024-25 upto September 2024 and the revised forecast, for the years 2025-26 and 2026-27 on account of the unexpected variations, if any, on the controllable and uncontrollable parameters.”

The Mid-term Performance Review shall address the additional revenue requirement as per prudence check.

- 7.9 The Commission also noted the objections raised by various stake holders for the revision of tariff proposed by KSEB Ltd for the entire years of the MYT period.
- 7.10 Considering all these aspects in detail, the Commission decided to determine the tariff for the financial year 2022-23 based on the present petition filed by KSEB Ltd. The tariff approved for the year 2022-23 shall continue till 31.03.2023. The Commission may determine/ decide on the tariff applicable from 1st April-2023, based on a petition filed by KSEB Ltd as per the provisions of the Electricity Act, 2003 and Tariff Regulations, 2021.**

Inflation since the last tariff revision

7.11 The Commission issued the last revision on 08.07.2019 wherein the Commission duly considered the inflation upto the financial year 2018-19. The inflation during the last three years from 2019-20 to 2021-22 is given below.

Table 7.4
Inflation from 2018-19 to 2021-22

Year	WPI*		CPI*	
	Average WPI for the Year (%)	Cumulative increase over 2018-19 (%)	Average CPI for the Year (%)	Cumulative increase over 2018-19 (%)
2018-19	119.8		104.1	
2019-20	121.1	1.3	112.0	7.8
2020-21	123.4	3.6	117.6	13.5
2021-22	138.3	18.5	123.4	19.3
Increase over the year 2018-19		18.5		19.3
30%WPI + 70% CPI				19.05

Note

* Whole Sale Price Index published by O/o the Economic Advisor, Ministry of Commerce & Industry, Gol.

** Consumer Price Index published by Labour Bureau, Gol

As detailed above, the average increase in inflation (30% weightage for WPI and 70% weightage for CPI) over the last tariff revision on 08.07.2019 (inflationary parameters upto the FY 2018-19) is 19.05% upto the FY 2022-23.

7.12 The Average Cost of Supply approved by the Commission for the year 2022-23 is Rs 6.93/ unit, as against the average cost of supply of Rs 6.10/unit, determined by the Commission for the year 2019-20 in the last tariff revision order dated 08.07.2019. Thus the average cost of supply approved by the Commission has increased by about 13.60% as against inflationary increase of 19.50% during the last three years.

7.13 The Commission has also duly considered the provisions in the Electricity Act, 2003, Tariff Policy, 2016 notified by the Central Government in compliance of the Section-3 of the EA-2003, various Regulations notified by the Commission for tariff determination and other related issues, various judgments of the Hon'ble Appellate Tribunal for Electricity and Hon'ble Supreme Court. The process and procedure adopted by the Commission for tariff determination is discussed in the following paragraphs.

Principles adopted for Tariff determination

7.14 As per the Section 86 of the Electricity Act, 2003, determination of electricity tariff is one of the statutory functions of the Electricity Act, 2003. The Electricity Act 2003 prescribes the various principles and procedures to be adopted by the

State Electricity Regulatory Commissions for tariff determination which are discussed below.

- (1) Section 61 of the Electricity Act, 2003 provide as follows.

“61. The Appropriate Commission shall, subject to the provisions of this Act, specify the terms and conditions for the determination of tariff, and in doing so, shall be guided by the following, namely:-

(a) the principles and methodologies specified by the Central Commission for determination of the tariff applicable to generating companies and transmission licensees;

(b) the generation, transmission, distribution and supply of electricity are conducted on commercial principles;

(c) the factors which would encourage competition, efficiency, economical use of the resources, good performance and optimum investments;

(d) safeguarding of consumers' interest and at the same time, recovery of the cost of electricity in a reasonable manner;

(e) the principles rewarding efficiency in performance; (f) multi year tariff principles;

(g) that the tariff progressively reflects the cost of supply of electricity and also, reduces cross-subsidies within the period to be specified by the Appropriate Commission;

(h) the promotion of co-generation and generation of electricity from renewable sources of energy;

(i) the National Electricity Policy and tariff policy”

- (2) Section 62(3) of the Electricity Act, 2003 empower the State Commission to differentiate the retail tariff of the consumers according to the consumer's load factor, power factor, voltage, time at which the supply is required, the geographical position of the area, the nature of supply and the purpose for which the supply is required. The relevant section of the EA-2003 is extracted below.

“ 62(3) The Appropriate Commission shall not, while determining the tariff under this Act, show undue preference to any consumer of electricity but may differentiate according to the consumer' s load factor, power factor, voltage, total consumption of electricity during any specified period or the time at which the supply is required or the geographical position of any area, the nature of supply and the purpose for which the supply is required.”

- (3) Section 86(4) of the Electricity Act, 2003, provides that, while discharging its statutory functions under Section 86 of the Electricity Act, 2003, it shall be guided by National Electricity Policy, National Electricity Plan and Tariff Policy notified by the Central Government under Section-3 of the Electricity Act, 2003. The relevant section is extracted below for ready reference.

86. (1) The State Commission shall discharge the following functions, namely:

(a) determine the tariff for generation, supply, transmission and wheeling of electricity, wholesale, bulk or retail, as the case may be, within the State:

.....

“86 (4) In discharge of its functions the State Commission shall be guided by the National Electricity Policy, National Electricity Plan and tariff policy published under section 3.”

- (4) In compliance of the Section-3 of the Electricity Act, 2003, the Central Government, notified the revised ‘Tariff Policy 2016’ on 28th January 2016. Paragraph 8.3 of the Tariff Policy 2016, deals with ‘tariff design’, which specify the following:

“

- (i) *The State Commission shall be guided by the objective that the tariff progressively reflect the efficient and prudent cost of supply of electricity.*
- (ii) *The retail tariff are brought within +_20% of the average cost of supply.*
- (iii) *The tariff of the BPL category shall at least be 50 percent of the average cost of supply.”*

- 7.15 The Commission, has been bringing down the cross-subsidy level of the subsidising categories of consumers and also increasing the cost coverage of the subsidised categories as detailed below.

Table 7.5

Cost coverage as per the previous tariff orders issued by the Commission

Tariff category	Cost coverage				
	2012-13	2013-14	2014-15	2017-18	2019-20
Domestic	60.50%	61.20%	71.00%	73.60%	75.70%
Agriculture	38.00%	37.00%	45.00%	43.20%	45.30%
Street Light	59.00%	60.00%	68.00%	73.20%	82.10%
LT Commercial	171.00%	166.70%	161.00%	159.10%	157.80%
HT Commercial	169.20%	166.30%	160.80%	153.50%	141.30%
HT Industry	112.00%	113.00%	117.00%	117.00%	115.00%
EHT- Industry 66kV	107.00%	106.00%	112.00%	111.90%	98.10%
EHT-Industry-110 kV	101.00%	102.00%	106.00%	104.70%	102.60%

As detailed above, in the case of subsidised consumers such as domestic, agriculture, street lights etc, the Commission has been gradually moving towards 80% of the average cost of supply through tariff. Further, in the case of the cross subsidising consumers such as LT commercial and HT commercial, the Commission has been gradually reducing the cross subsidy level and targeted to bring down the cost coverage to 120% of the average cost of supply.

- 7.16 The Commission, by invoking the statutory powers conferred on it under Section 181 (zd) of the Electricity Act, 2003 along with the Section 61 of the Electricity Act, 2003 had notified the KSERC (Terms and Conditions for Determination of Tariff) Regulations, 2021. Regulation 85 of the Tariff Regulations, 2021 is extracted below for ready reference.

“85. Determination of Tariff.– (1) The bulk supply tariff and retail supply tariff of the distribution licensees, and the wheeling charges for use of the distribution system shall be determined by the Commission, on the basis of a petition for determination of tariff made by the distribution licensee in accordance with the provisions under Chapter III of these Regulations.

(2) The retail supply tariff shall be uniform for the same tariff category of consumers of all the distribution business/licensees in the State of Kerala and shall be the same as the retail supply tariff category wise as determined by the Commission from time to time for the distribution business of KSEB Limited.

(3) The bulk supply tariff for supply of electricity by KSEB Limited to other distribution licensees in the State of Kerala shall be determined by the Commission, in accordance with the principles laid down from time to time, in the orders of the Commission with regard to such distribution licensees.

(4) The Commission may categorize consumers on the basis of their load factor, power factor, voltage, total consumption of electricity during any specified period or the time at which the supply is required, the geographical position of any area, whether it is a certified green building, the nature of supply and the purpose for which the supply is required.

(5) The retail supply tariff for different consumer categories shall be determined after considering the estimated average cost of supply. The estimated average cost of supply shall be computed as the ratio of the approved aggregate revenue requirements of the distribution business/ licensee for each financial year of the Control Period and calculated in accordance with Regulation 76, to the total sale of the distribution business/ licensee for the respective financial year.

(6) The Commission shall endeavour to reduce gradually, the cross-subsidy among consumer categories with respect to the average cost of supply, in accordance with the provisions of the Act and the provisions of the Kerala State Electricity Regulatory Commission (Principles for Determination of Roadmap for Cross-subsidy Reduction for Distribution Licensees) Regulations, 2012.

(7) The wheeling charges may be denominated in terms of Rupees/ kWh or Rupees/ kW/ month, or Rupees/ kW/ day or as the case may be; for the purpose of recovery from the user of the distribution system, as stipulated by the Commission from time to time.

(8) Any revenue subsidy/ grant received from the State Government, other than the subsidy under Section 65 of the Act, shall be treated in the manner as indicated by the State Government: Provided that if no such manner is indicated, the subsidy/ grant shall be used to reduce the overall revenue gap between Aggregate Revenue Requirement and the actual revenue of the distribution business/ licensee approved by the Commission.

(9) While determining the tariff, the Commission shall also consider the cost of supply at different voltage levels and the need to minimize the tariff shock to any category of consumers.

(10) Distribution licensee shall purchase the excess energy injected into the system by a renewable energy prosumer, as provided in sub regulation 5 of Regulation 21 of KSERC (Renewable and Net Metering) Regulations, 2020 at the Average Power Purchase Cost. The Commission shall determine the APPC every financial year based on a petition filed by the distribution licensee not later than 31st July of the succeeding year.

(11) The Commission shall prescribe in the Tariff Order, appropriate incentive/disincentive for maintaining the power factor of the distribution system, at a level between 0.95 lag and 0.95 lead as specified in the Central Electricity Authority (Technical Standards for Connectivity to the Grid) Regulations 2007, as amended from time to time, to certain category of consumers including Bulk consumers/ distribution licensees in the State.

(12) The distribution licensee/ bulk consumer shall be responsible for maintaining the power factor of their distribution system, at a level between 0.95 lag and 0.95 lead, as specified in the Central Electricity Authority (Technical Standards for Connectivity to the Grid) Regulations 2007 as amended from time to time.”

- 7.17** As discussed in the preceding paragraphs, as per the provisions of the Electricity Act, 2003, Tariff Policy, 2016 and KSERC (Terms and Conditions for Determination of Tariff) Regulations, 2021, the ‘retail tariff for different consumer categories during the current MYT period from 2022-23 to 2026-07 has to be determined on the basis of the average cost of supply’.

Assessment of the average cost of supply at different voltage levels

- 7.18** The Hon’ble APTEL has, vide judgment dated 31.05.2013 in Appeal No. 179/2012 (filed by Kerala HT and EHT Industrial Electricity Consumers Association against the Tariff Order dated 25.07.2012 for the year 2012-13), directed the Commission to determine the voltage wise cost of supply for various categories of consumers within six months of passing of the Order and to determine the cross subsidy and tariff in future as per the direction laid down by the Hon’ble APTEL. 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 for determination of voltage-wise cost of supply 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.

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".

7.19 Thus, as per the directions issued by the Hon APTEL, the Commission is required to determine the cost of supply at different voltage levels based on the ARR approved by the Commission as per the provisions of the Tariff Regulations, 2021. In order to arrive at the cost of supply at different voltage levels, the following details have to be estimated based on the norms approved by the Commission.

- (i) Total energy input into the SBU-D of KSEB Ltd
- (ii) Total cost of energy input into SBU-D of KSEB Ltd., comprising of the cost of generation by SBU-G, the cost of power purchase and the transmission charges payable to SBU-T.
- (iii) Total distribution cost of the SBU-D of KSEB Ltd.
- (iv) Details of energy sale at different voltage level (EHT, HT and LT levels) by SBU-D of KSEB Ltd.
- (v) Allocation of distribution loss among EHT, HT and LT levels.

7.20 The energy input into the SBU-D of the KSEB Ltd includes the following, -

- (i) Generation from hydel and thermal plants owned and operated by SBU-G of KSEB Ltd.,
- (ii) Power purchase from various sources including CGS, power purchase from IPPs within the State, power purchase through traders/generators from outside the State, power purchase from short-term market including power exchanges, less
- (iii) The transmission losses in the transmission network of SBU-T of KSEB Ltd.

7.21 Based on the approved ARR of SBU-G, SBU-T and SBU-D, as detailed in Chapter-4, 5 and 6 of this Order, the various input parameters adopted for determining the cost at different voltage levels is given below.

Table 7.6
Parameters adopted for determining cost at different voltage level

Sl No	Particulars	For the FY 2022-23
1	Energy sales (MU)	
	(a) LT	18704.32
	(b) HT	3913.81
	(c) EHT	2262.24
	Total	24880.37
2	T&D loss (%)	
	(a) Loss in HT System	4.15%
	(b) Loss in LT system	5.85%
3	Cost of Generation and Power purchase (excluding the revenue from surplus sale) (Rs. Crore)	9717.67
4	Intra-state transmission charges	1310.51
5	Distribution Cost less Non Tariff Income (Rs. Crore)	6208.05

7.22 Based on the above methodology, the Cost of Supply at different voltage levels estimated by the Commission for the year 2022-23 is estimated and the details are given below.

Table 7.7

Cost of supply at different voltage level for the year 2022-23

	Particulars		EHT	HT	LT	Total
1	Energy sale at different voltage level (as per chapter-4)	(MU)	2262.24	3913.81	18704.32	24880.37
2	T&D loss associated with energy sale at different voltage level (Table-5)	(%)	0.00	4.15	9.76	
		MU	0.00	169.46	2022.09	2191.55
3	Energy input for the sale at different voltage level = (1)+(2)	(MU)	2262.24	4083.27	20726.41	27071.92
4	Power purchase cost including intra-state transmission charges (apportioned at different voltage level in the ratio of energy input)	Rs. Cr	921.56	1663.38	8443.24	11028.19
5	Distribution cost (apportioned in the ratio of energy input)	Rs. Cr	518.77	936.36	4752.92	6208.05
6	Total cost = (4)+(5)	Rs. Cr	1440.33	2599.75	13196.16	17236.24
7	Cost per unit	Rs/ kWh	6.37	6.64	7.06	6.93

The Commission has duly considered the cost at different voltage levels as above, while determining the retail tariff of different categories of consumers.

Determination of Retail Tariff

7.23 As per the last tariff order dated 08.07.2019, the average cost of supply including part of the past unbridged revenue gap approved was Rs 6.10/unit. As against the same, the average cost approved by the Commission for the year 2022-23 is Rs 6.93/unit. Thus, since the last tariff revision on 08.07.2019, the cost of supply of electricity has increased by about 13.60%. The Commission has attempted to revise the tariff for each category of consumers, in proportion to the increase in the approved average cost of supply (ACoS), so that, the tariff of maximum categories of consumers are close to or within +-20% of the average cost of supply. However, the Commission is also required to ensure that, the increase in tariff of the subsidised consumers shall not result in 'tariff shock' to them.

7.24 The Commission has examined in detail, the approved revenue gap in the MYT period from 2022-23 to 2026-27, the prevailing tariff of the various categories of consumers and also the cost coverage at the prevailing tariff. As per the provisions of the Electricity Act, 2003, Tariff Policy 2016, the Tariff Regulations 2021 and also as per the various judgements of the Hon'ble APTEL, the Commission has to ensure the following while determining the retail tariff.

- (i) The tariff of the subsidised categories such as domestic categories, agriculture and public lighting etc has to be increased so as to bring it at least to the level of 80% of the average cost of supply, while avoiding tariff shock.
- (ii) The cross subsidy level of the subsidising categories such as commercial categories is to be gradually reduced.
- (iii) The tariff of the industrial consumers is already within $\pm 20\%$ of the average cost of supply. The Commission may increase the tariff for the industrial categories in proportion to the increase in average cost of supply compared to the previous revision, such that, the cross-subsidy levels of industrial consumers continue to be within the $\pm 20\%$ band.
- (iv) The Commission has also taken care to ensure that, the cross-subsidy levels of consumers with cross subsidy above 120% has not increased, as far as possible.

7.25 The Commission notes that, KSEB Ltd has revised the tariff with the estimated 'average cost of supply' of Rs 7.30/unit and the overall average increase in tariff proposed by KSEB Ltd is about 14.61% from the present level. Since the Commission approved revenue gap and average cost of supply are less than the same proposed by KSEB Ltd, the tariff increase approved by the Commission is much less than the same proposed by KSEB Ltd.

7.26 Based on the above considerations, the Commission hereby approves the following tariff for each consumer categories as shown in the following paragraphs.

Low Tension-I – DOMESTIC (LT-1)

7.27 The domestic category constitutes 77% of the total electricity consumers of the State. The annual consumption of the domestic category is about 54% of the overall energy consumption of the State. However, the revenue contribution from the domestic category at the existing tariff is only 42% of the overall revenue. Further, the average tariff of the domestic category at the existing tariff is Rs 4.79/unit only as against the ACoS of Rs 6.77/unit. The cost coverage of the domestic category at the existing tariff is only 71% of ACoS.

7.28 The consumer strength, annual consumption and the revenue at the existing pre-revised tariff of domestic categories for the year 2022-23 is given below.

Table 7.8
Details of 'domestic consumers'

Consumer strength and consumption details					Existing Tariff				
Monthly consumption Slab	No of consumers (Nos)			Consumption	Fixed cost (Rs/ consumer/ month)			Energy Charge	
	Single Phase	Three phase	Total		Single Phase	Three Phase	Amount	Rate (Rs/ kWh)	Amount (Rs.Cr)
NPG	12206		12206	0.63					
0-40	19423		19423	4.28				1.50	0.64
0-50	2412386	108329	2520715	640.16	35	90	113.02	3.15	201.65
51-100	2960959	55816	3016775	2870.10	45	90	165.92	3.70	962.38
101-150	2461464	87424	2548887	3886.03	55	100	172.95	4.80	1444.73
151-200	1129298	100850	1230148	2589.49	70	100	106.96	6.40	1100.02
201-250	449714	85663	535378	1435.28	80	100	53.45	7.60	694.10
0 to 300	171062	58042	229104	726.53	100	110	28.19	5.80	421.38
0 to 350	58790	37950	96740	393.97	110	110	12.77	6.60	260.02
0 to 400	31233	25038	56272	255.36	120	120	8.10	6.90	176.20
0 to 500	20731	30928	51659	269.48	130	130	8.06	7.10	191.33
>500	10170	34133	44303	435.84	150	150	7.97	7.90	344.31
	9737435	624172	10361608	13507.13			677.40		5796.76
Total (FC+EC) in Rs. Cr					6474.16				

7.29 The Commission has examined the details of the domestic consumers as above. It is noted that more than 80% of the domestic consumers having monthly consumption less than 150 units and 55% of the domestic consumption is being consumed by these groups.

7.30 The Commission notes that the cost coverage of the domestic category of consumers has steadily increased and it stood at 75.70% during 2019-20. Based on the comments received during the public hearings as well as with the written representations and after careful considerations of the present level of cost coverage, the Commission has decided the fixed charge and energy charge for monthly consumptions/slabs of the domestic category as explained hereafter.

Fixed charge

7.31 The existing fixed charge and the same proposed by KSEB Ltd for the MYT period from 2022-23 to 2026-27 is given below.

Table 7.9
Fixed charge- Existing rate and the same proposed by KSEB Ltd

Monthly Slab / Units	Single Phase						Three Phase					
	Present	Proposed					Present	Proposed				
		2022-23	2023-24	2024-25	2025-26	2026-27		2022-23	2023-24	2024-25	2025-26	2026-27
NPG	0	0	0	0	0	0	-	-	-	-	-	-
0-40	0	0	0	0	0	0	-	-	-	-	-	-
0-50	35	50	70	80	90	90	90	180	200	210	210	220
51-100	45	70	110	120	130	140	90	180	200	220	230	240
101-150	55	110	130	130	150	160	100	200	220	230	240	250
151-200	70	140	140	150	160	170	100	200	220	240	250	260
201-250	80	160	160	180	190	190	100	200	240	260	270	280
0 to 300	100	200	220	230	240	250	110	220	260	270	280	290
0 to 350	110	220	240	250	260	270	110	250	270	280	290	300
0 to 400	120	240	260	270	280	290	120	300	300	300	310	320
0 to 500	130	260	280	290	290	300	130	350	350	360	360	380
above 500	150	300	310	340	340	350	150	400	410	440	440	500

The fixed charge of the domestic consumers is not linked to connected load or contract demand, but linked to the monthly consumption levels. The basic philosophy behind the fixed charge/demand charge in two-part tariff is to recover a part of the permanent cost of the distribution licensee.

As already stated earlier, though KSEB Ltd had proposed to revise the tariff for the entire five years of the MYT period from 2022-23 to 2026-27, the Commission has taken the considered decision to revise the tariff for the year 2022-23 only through these proceedings.

The fixed charge proposed by KSEB Ltd and the same approved by the Commission for the year 2022-23 is given in the Table below.

Table 7.10
Fixed charge- Proposed by KSEB Ltd and approved by the Commission for the FY 2022-23

Monthly consumption Slab	Fixed charge (Rs/ consumer/month) for the FY 2022-23					
	Existing rate		Proposed by KSEB Ltd		Approved by the Commission	
	Single Phase	Three Phase	Single Phase	Three Phase	Single Phase	Three Phase
NPG						
0-40						
0-50	35	90	50.00	180	35.00	90.00
51-100	45	90	70.00	180	55.00	120.00
101-150	55	100	110.00	200	70.00	150.00
151-200	70	100	140.00	200	100.00	160.00
201-250	80	100	160.00	200	110.00	175.00
0 to 300	100	110	200.00	220	130.00	175.00
0 to 350	110	110	220.00	250	150.00	175.00
0 to 400	120	120	240.00	300	175.00	175.00
0 to 500	130	130	260.00	350	200.00	200.00
>500	150	150	300.00	400	225.00	225.00

Energy charge

7.32 The existing energy rate and the same proposed by KSEB Ltd for the MYT period from 2022-23 to 2026-27 is given below.

Table 7.11

Energy charge- Existing rate and the same proposed by KSEB Ltd

Monthly Slab / Units	Existing rate	Proposed					
		2022-23	2023-24	2024-25	2025-26	2026-27	
0-40	1.50	1.50	1.7	1.70	1.90	1.90	Telescopic
0-50	3.15	3.50	3.7	3.80	3.90	3.90	
51-100	3.70	4.10	4.3	4.40	4.50	4.60	
101-150	4.80	5.50	5.5	5.60	5.70	5.80	
151-200	6.40	7.00	7.2	7.30	7.40	7.50	
201-250	7.60	8.00	8.0	8.00	8.20	8.30	
0 to 300	5.80	6.50	6.7	6.80	6.90	7.00	Non-Telescopic
0 to 350	6.60	7.20	7.4	7.50	7.60	7.70	
0 to 400	6.90	7.40	7.6	7.70	7.80	7.90	
0 to 500	7.10	7.60	7.8	7.90	8.10	8.20	
above 500	7.90	8.30	8.4	8.50	8.70	8.80	

As given in the Table above, KSEB Ltd had proposed to enhance the energy charge of different consumption slabs upto Rs 1.20 per unit for the next MYT period starting from 2022-23 to 2026-27. The Commission has not agreeable for such drastic hike in the energy charges as proposed by the licence since it results in tariff shock to most of the domestic consumers. Considering these aspects in detail, the energy charge approved by the Commission for the year 2022-23 is given below.

Table 7.12

Energy charge- Approved by the Commission for the year 2022-23

Monthly Slab / Units	Energy Charge (Rs/ kWh) (for FY 2022-23)			Remarks
	Existing rate	KSEB proposal	Approved by the Commission	
0-40	1.50	1.50	1.50	Telescopic
0-50	3.15	3.50	3.15	
51-100	3.70	4.10	3.95	
101-150	4.80	5.50	5.00	
151-200	6.40	7.00	6.80	
201-250	7.60	8.00	8.00	
0 to 300	5.80	6.50	6.20	Non-Telescopic
0 to 350	6.60	7.20	7.00	
0 to 400	6.90	7.40	7.35	
0 to 500	7.10	7.60	7.60	
above 500	7.90	8.30	8.50	

7.33 The Commission has decided to continue the following concessional tariff approved in the Tariff Order dated 08.07.2019 in OP 15/2018.

- (i) Concessions granted to the families of the victims of Endosulfan tragedy in Hosdurg and Kasargod Taluks of Kasargod district, as follows.

‘ The tariff for domestic consumption by the families of the victims of Endosulfan tragedy in Hosdurg and Kasargod Taluks of Kasargod District shall be Rs.1.50 / unit for a monthly consumption up to 150 units. If the consumption of the consumer, who is eligible for the above concession exceeds 150 units per month, the consumption in excess of 150 units will be charged at the rates specified for the slabs 151-200 units or 201-250 units as the case may be. This concession will not be available for the consumers with monthly consumption above 250 units’.

- (ii) The Commission has also decided to allow the BPL family having cancer patients or permanently disabled persons as family members due to polio or accidents, and consume upto 100 units per month to be billed @Rs 1.50/unit, provided their connected load is of and below 1000 watts.

- (iii) The Commission has also decided to continue the domestic tariff to the following water supply schemes, approved by the Government, subject to the billing system as explained in the Schedule of tariff and terms of supply approved as part of this Order.

- (i) water supply schemes under Jananidhi, Jaladhara or Swajaladhara Projects;
- (ii) water supply schemes coming under water supply societies or under beneficiary committees;
- (iii) water supply schemes for Scheduled Caste (SC) and / or Scheduled Tribe (ST) colonies;
- (iv) water supply schemes for Laksham Veedu Settlements taken over and managed by Local Self Government Institutions;
- (v) social drinking water supply schemes established using local area development funds of Members of Legislative Assembly (MLA) and / or Members of Parliament (MP);
- (vi) social drinking water supply schemes established using funds of Local Self Government Institutions;
- (vii) social drinking water supply schemes under Peoples Participatory Schemes (PPS);
- (viii) Rajeev Gandhi Drinking Water Schemes managed by beneficiary groups.

Low Tension- II Colonies (LT-II)

7.34 KSEB Ltd, has requested to dispense with the LT-II Tariff category, applicable to colonies citing the reason that the purpose of electricity usage of the residential colonies for domestic use only. The Commission examined the proposal of KSEB Ltd in detail.

The Commission also is of the view that, since the purpose of usage of residential colonies is also for domestic use only and hence there is no rationale for categorising the colonies under a different tariff category other than domestic.

Considering the proposal in detail, the Commission decided to dispense with the LT-II Colonies (LT-II) categories hence forth. All the consumers billed under LT-II colonies shall be billed under LT-I domestic category from the date of this tariff order.

Low Tension- III (A) Temporary Connections (LT-III(A))

7.35 The LT-III (A) tariff is applicable for single or three phase temporary connections for the purposes such as illumination, exhibition, festivals, public meeting and fairs. The existing tariff of LT-III(A) category is given below.

Table 7.13
Existing tariff for LT-III (A)

LT – III (A) Temporary connections	
Energy Charge (Rs/kWh)	15.00
OR	
Daily minimum of Rs.150 /kW or part thereof of the connected load, whichever is higher	

Note: 40% concession in the rates shall be allowed if the connection is for;

- (a) the exhibitions conducted or sponsored by the Government or Local Self-Government institutions or by Government educational institutions or by Public Sector Undertakings and the exhibitions conducted by recognized private educational institutions;
- (b) festivals of religious worship centres for the illumination, public address system and security lighting. (This concession is limited to the energy availed by the religious worship centres and not by other agencies who function in the premises of religious worship centres where festival is being organized).

7.36 KSEB Ltd has not proposed any tariff revision for LT-III(A) Tariff category. Hence the Commission hereby orders to continue the existing tariff of LT-III(A) for the year 2022-23.

Low Tension – III(B)- Temporary Extensions [LT- III(B)]

7.37 LT-III(B) tariff is applicable to temporary extension taken from the premises of the existing consumers.

The existing tariff of LT-III(B) Category is given below.

Table 7.14
Existing tariff for LT-III (A)

LT - III(B) Temporary extensions
Fixed charges per day - Rs.65/kW or part thereof of, the temporarily connected load plus the application fee, test fee etc. Energy charges shall be recovered from the consumer wherefrom extension is availed, at the tariff applicable to him.

Note: Temporary extension shall be allowed only for a maximum period of 15 days at a time.

KSEB Ltd has not proposed tariff revision for this category also. Hence the Commission hereby orders to continue the existing tariff of LT-III(B) for the year 2022-23.

LT-IV (A) Industry

7.38 As per the prevailing tariff order, the LT-IV (A) Industrial tariff is applicable for the general purpose industrial loads (single phase or three phase) which include

- (i) manufacturing units,
- (ii) grinding mills, flour mills, oil mills, rice mills,
- (iii) saw mills, units using electric hydraulic axe machine to break down logs into small pieces.
- (iv) ice factories,
- (v) rubber smoke houses, tyre vulcanizing/re-treading units manufacturing rubber sheets from latex,
- (vi) workshops using power mainly for production and/or repair,
- (vii) public waterworks, drinking water pumping for public by Kerala Water Authority, corporations, municipalities and panchayats, telemetry stations of KWA, pumping water for non- agricultural purposes, sewage pumping units,
- (viii) power laundries,
- (ix) screen printing of glass ware or ceramic, SSI units engaged in computerized colour printing, except photo studio/ colour lab,
- (x) audio/video cassette/CD manufacturing units,
- (xi) printing presses including presses engaged in printing dailies,
- (xii) bakeries (where manufacturing process and sales are carried out in the same premises)
- (xiii) diamond- cutting units, stone crushing units,
- (xiv) book binding units with allied activities,
- (xv) garment making units,

- (xvi) seafood processing units, prawn peeling and processing units, granite cutting units (where large granite blocks are cut into sheets in the same premises),
- (xvii) plantations of cash crops, tea factories, cardamom drying and curing units,
- (xviii) units carrying out extraction of oil in addition to the filtering and packing activities carrying out in the same premise under the same service connection,
- (xix) dairy, processing of milk by pasteurization and its storage and packing,
- (xx) soda and drinking water manufacturing units,
- (xxi) electric crematoria.

7.39 The existing tariff applicable to LT IV A Industrial consumers is given below.

Table 7.15
LT-IV (A)- Industry. Existing tariff and Tariff proposed by KSEB Ltd

Category	Present Tariff		Proposed Tariff									
			2022-23		2023-24		2024-25		2025-26		2026-27	
	Energy Charge	Demand/ Fixed charge	Energy Charge	Demand/ Fixed charge	Energy Charge	Demand/ Fixed charge	Energy Charge	Demand/ Fixed charge	Energy Charge	Demand/ Fixed charge	Energy Charge	Demand/ Fixed charge
LT IV (A) Industry												
CL <10 kW	5.65	120	6.15	160	6.2	180	6.2	190	6.4	190	6.4	190
10 - 20 kW	5.65	75	6.15	110	6.2	130	6.2	140	6.4	140	6.4	140
≥ 20 kW	5.75	170	6.15	210	6.2	220	6.2	230	6.4	230	6.4	230

The Commission has examined the proposals in detail. During the public hearings on the tariff petitions, many stakeholders including Small Scale Industries Associations, Rice and Flour mills owner's associations etc raised serious concern on the excessive tariff increase proposed by KSEB Ltd and requested not to increase the tariff of this category.

The Commission has carefully examined the proposals of KSEB Ltd and the objections raised by the stakeholders. The Commission has noted that, the cost coverage of the LT-IV (A) Industries is within +_20% of the average cost of supply. The Commission also noted the fact that, the average cost of supply (ACoS) for the year 2022-23 has increased by 13.60% since the last tariff revision.

As stated earlier, though the KSEB Ltd has proposed to enhance the tariff for each year of the MYT period from 2022-23 to 2026-27, the Commission has proposed to enhance the tariff for the year 2022-23 for the time being.

The existing tariff, tariff proposed by KSEB Ltd and the same approved by the Commission for the year 2022-23 is given below.

Table 7.17

Existing tariff and the Tariff approved by the Commission for the year 2022-23

SlNo	Particulars	Existing	Proposed by KSEB Ltd	Approved by the Commission
1	Fixed charges			
	<10 KW (Rs/consumer)	120	160	120
	10-20 kW (Rs/kW/month)	75	110	80
	>20 kW (Rs/kVA/month)	170	210	185
2	Energy charge (Rs/ kWh)			
	<10 KW	5.65	6.15	5.80
	10-20 kW	5.65	6.15	5.80
	>20kW	5.75	6.15	5.85

KSEB Ltd requested to include the following consumer groups also under LT-IV(A) Industrial tariff.

- (i) Dewatering of agriculture land
- (ii) Dewatering of water logged areas and
- (iii) Crematoria.

The Commission noted the proposal of KSEB Ltd. The electric crematoria is already included under LT-IV (A) tariff. The electricity consumption of the other type of crematoria shall also be grouped under LT-IV (A) Industrial category. As proposed by KSEB Ltd, the Commission hereby orders to include the 'dewatering of agriculture land and dewatering of water logged areas' also under LT-IV (A) Industrial category.

Low Tension- IV (B)- IT and IT Enabled Services [LT- IV (B)]

7.40 The LT IV -B tariff is applicable to Information Technology (IT) and IT enabled services including Akshaya-e-centres, computer consultancy services units, call centres, software services, data processing activities, desktop publishing (DTP), software development units and such other IT enabled services.

7.41 The existing and the tariff proposed by KSEB Ltd for LT-IV (B) category is given below.

Table 7.18

Existing Tariff and the Tariff proposed by KSEB Ltd for LT-IV (B) Category

Category	Present Tariff		Proposed Tariff									
			2022-23		2023-24		2024-25		2025-26		2026-27	
	Energy Charge	Demand/ Fixed charge	Energy Charge	Demand/ Fixed charge	Energy Charge	Demand/ Fixed charge	Energy Charge	Demand/ Fixed charge	Energy Charge	Demand/ Fixed charge	Energy Charge	Demand/ Fixed charge
CL<10 kW	6.2	150	6.7	200	6.75	220	6.75	220	6.75	220	6.8	220
10 - 20 kW	6.2	100	6.7	140	6.75	150	6.75	150	6.75	150	6.8	150
≥ 20 kW	6.25	170	6.7	220	6.75	230	6.75	230	6.75	230	6.8	230

The Commission has examined the proposals in detail. The Commission has noted that, the cost coverage of the LT-IV (B) Industrial category also within +_20% of the average cost of supply. The Commission also noted the fact that, the average cost of supply (ACoS) for the year 2022-23 has increased by 13.61% since the last tariff revision. Duly considering all these factors, the Commission hereby approves the tariff of LT-IV (B) category as below.

Table 7.19
Existing tariff and the Tariff approved by the Commission for LT IV B for the year 2022-23

SlNo	Particulars	Existing	Proposed by KSEB Ltd	Approved by the Commission
1	Fixed charges			
	<10 KW (Rs/consumer	150	200	165
	10-20 kW (Rs/kW/month)	100	140	120
	>20 kW (Rs/kVA/month)	170	220	200
2	Energy charge (Rs/ kWh)			
	<10 KW	6.20	6.70	6.50
	10-20 kW	6.20	6.70	6.50
	>20kW	6.20	6.70	6.60

LT-V- Agriculture (A)- [LT – V(A)]

7.42 The tariff in this category is applicable to the use of electricity for:

- (1) pumping, dewatering and lift irrigation for cultivation of food crops, fruits and vegetables.
- (2) pumping, dewatering and lift irrigation for the cultivation of cash crops such as cardamom and coffee and for the cultivation of crops such as coconut, areca nut, pepper, nutmeg, cloves, cocoa and betel leaves as pure crops or as inter crops.

The tariff for agriculture category in the State is highly subsidised in view of its acute socio-economic profile, labour intensiveness with high costs and non-availability of sufficient land for farming purposes due to the high population density among other problems faced by the agriculture sector. The cost coverage of this category at the prevailing tariff is only about 45% of the average cost of supply.

The existing tariff and the tariff proposed by KSEB Ltd for LT-V(A) Agriculture category is given below.

Table 7.20
Existing tariff and the tariff proposed by KSEB Ltd for LT-V(A) category

Particulars	Existing	KSEBL proposal				
		2022-23	2023-24	2024-25	2025-26	2026-27
Demand charge (Rs/ kW/ month)	10	20	30	40	45	50
Energy charge (Rs/ kWh)	2.30	2.80	3.00	3.00	3.25	3.25

The Commission examined the tariff rate proposed by KSEB Ltd. Agriculture being a primary sector, and also considering the socio-economic reasons, the electricity tariff of the LT-V(A) category is highly subsidized in this State. However, considering the overall of increase of inflation and the increase in average cost of supply, the Commission decided to enhance the fixed charge by Rs 5.00 per kW per month. No increase is approved for energy charges.

The existing tariff, proposal of KSEB Ltd and the tariff approved by the Commission for LT-V (A) category for the year 2022-23 is given below.

Table 7.21
Existing tariff and KSEB Ltd proposal and the tariff approved by the Commission for the FY 2022-23

Particulars	Existing	Proposed by KSEB Ltd	Approved by the Commission
Fixed charge (Rs/kW)	10	20	15
Energy charges	2.30	2.80	2.30

LT-V – Agriculture (B) [LT- V (B)]

7.43 The LT- V (B) tariff is applicable to the supply of electricity for the use of the activities such as,-

- (i) livestock farms, combination of livestock farms with dairy, poultry farms, rabbit farms, piggery farms, hatcheries,
- (ii) silk worm breeding units, sericulture,
- (iii) floriculture, tissue culture, agricultural and floricultural nurseries, mushroom culture,
- (iv) aquaculture, fish farms including ornamental fish farms, prawn farms, other aqua farms, aquarium run by the Agency for Development of Aquaculture, Kerala, and
- (v) cheenavala without fish farming and egger nurseries.

The existing tariff and the tariff proposed by KSEB Ltd for LT-V(B) categories is given below.

Table-7.22
Existing tariff and the tariff proposed by KSEB Ltd

Particulars	Existing	KSEBL proposal				
		2022-23	2023-24	2024-25	2025-26	2026-27
Demand charge (Rs/ kW/ month)	10	25	35	50	50	50
Energy charge (Rs/ kWh)	2.80	3.30	3.50	3.50	3.50	3.50

KSEB Ltd vide the additional submission dated 25.02.2022 submitted that the electricity used by the LT-V(B) categories is generally for creating a conducive atmosphere by controlling light, temperature, humidity etc. KSEB Ltd submitted that, considering these activities, LT V(B) agriculture categories may also be considered as primary sector, and these categories are also eligible to get the highly subsidised tariff of LT-V (A) category. Hence KSEB Ltd proposed to merge the LT-V(B) category with the LT-V(A) Agriculture tariff.

The Commission has examined the proposal in detail. The LT-V(B) Agriculture tariff also highly subsidised and the cost coverage of these group is just 46% of the average cost of supply. Further, the electricity used for pumping water for agriculture cannot be compared with the electricity used in LT-V(B) category for creating conducive environment. Considering these reasons, the Commission rejected the proposal of KSEB Ltd to merge the LT-V(B) tariff with the LT-V(A) tariff.

However, considering the overall of increase of inflation and the increase in average cost of supply, the Commission decided to enhance the fixed charge by Rs 5.00 per kW per month and energy charge by Rs 0.50/unit.

The existing tariff, proposal of KSEB Ltd and the tariff approved by the Commission for LT-V (B) category for the year 2022-23 is given below.

Table 7.23
Existing tariff and KSEBL proposal and the tariff approved by the Commission for the LT- V(B) category for the FY 2022-23

Particulars	Existing	Proposed by KSEB Ltd	Approved by the Commission
Fixed charge (Rs/kW)	10	25	15
Energy charges	2.80	3.30	3.30

The Commission has also received complaint from consumers in categorising the milk chilling carried out by the societies for onward transmission to milk plants. It was submitted that this activity is essential to keep the milk without damage till it is collected by units like that of MILMA and no commercial activity is taking place. The Commission considered the request in detail and decides

that if milk chilling is used to chill milk to keep it not damaged till collected for transfer to processing units under LT V B and the milk chilling plants for the purpose of marketing under LT VII A.

Low Tension –VI-General (A) [LT-VI(A)]

- 7.44 The tariff under LT-VI (A) category is applicable to
- (i) Government or aided educational institutions; libraries and reading rooms of Government or Government aided educational institutions.
 - (ii) Government hospitals; X-Ray units, laboratories, blood banks, mortuaries and such other units attached to the government hospitals; blood banks of IMA or of local self-government institutions; poly clinics under Ex-servicemen Contributory Health Scheme (ECHS).
 - (iii) Centres for religious worship such as temples, mosques and churches; institutions imparting religious education, monasteries and convents;

Table 7.24
Existing and Tariff proposed by KSEB Ltd

Particulars	Existing Tariff	KSEBL proposal				
		2022-23	2023-24	2024-25	2025-26	2026-27
Demand charge (Rs/ kW/ month)	65	120	140	150	170	170
Energy charge (Rs/ kWh)						
(i) Monthly consumption of and below 500 units (all units)	5.70	6.30	6.40	6.50	6.70	6.75
(ii) Monthly consumption above 500 units (all units)	6.50	7.10	7.40	7.50	7.50	7.50

The Commission carefully examined the tariff proposed by KSEB Ltd for LT-VI(A) category as above. Considering the overall of increase of inflation and the increase in average cost of supply, the Commission decides to enhance the tariff of the LT-VI(A) categories for the year 2022-23 as below.

Table 7.25
Existing tariff, proposed tariff and approved tariff for LT-VI(A) category for the year 2022-23

Sl No	Particulars	Existing Tariff	Proposed by KSEB Ltd	Approved by the Commission
1	Fixed charges (Rs/per kW or part thereof per month)	65	120	70
2	Energy charge (Rs/ kWh)			
	(i) Monthly consumption of and below 500 units (all units)	5.70	6.30	5.80
	(ii) Monthly consumption above 500 units (all units)	6.50	7.10	6.65

Low Tension- VI – General (B) – [LT – VI (B)]

- 7.45 As per the Tariff order dated 08.07.2019, LT- VI (B) tariff is applicable to,-
- (i) offices and institutions under the State or Central Governments or under the Local Self Government Institutions, except those which are included in the category LT-VI General (C); village offices; Government Treasuries.
 - (ii) offices of the Corporations, Boards and other Public Sector Undertakings under State or Central Governments, administrative/office buildings of BSNL;
 - (iii) offices of the Kerala Water Authority (KWA), Kerala State Road Transport Corporation (KSRTC) and Kerala State Water Transport Corporation (KSWTC);
 - (iv) museum and / or zoo;
 - (v) hostels of educational institutions affiliated to Universities, hostels under the control of the Director of Technical Education or the Director of Medical Education or the Director of Public Instruction or such other institutions of government, hostels run by the State or Central Government, hostels run by State Social Welfare Board, hostels run by institutions registered under the Travancore - Cochin Literary, Scientific and Charitable Societies Registration Act, 1955 (12 of 1955) or under the Societies Registration Act, 1860 (21 of 1860) or under Indian Trust Act, 1882, the donations to which are exempted from payment of Income Tax; Working women hostels operating under the scheme approved by the Ministry of Women and Child Development, Government of India, hostels under the supervision and monitoring of Department of Social Welfare, Government of Kerala;
 - (vi) Pay wards and institutions of Kerala Health Research and Welfare Society (KHRWS);
 - (vii) travellers bungalows, rest houses and guest houses under government; Police Clubs,
 - (viii) type writing institutes;
 - (ix) offices of advocates or chartered accountants or company secretary or consulting engineers or tax consultants or architects or cost accountants or of management consultants;
 - (x) offices of social service organizations, offices of service pensioners' associations.
 - (xi) offices of political parties not approved by the Election Commission of India;
 - (xii) collection centres of 'FRIENDS'; single window service centres under Department of Information Technology;
 - (xiii) offices of Department of Posts, all post offices including extra departmental (ED) post offices;
 - (xiv) micro financing institutions registered and functioning as per the guidelines issued by Reserve Bank of India;
 - (xv) cameras at traffic signal points, surveillance cameras installed by the Local Self Government Institutions (LSGI).

- (xvi) offices of KMRL
- (xvii) Religious organisations.
- (xviii) Old age homes which charge the inmates for boarding and lodging.

Table 7.26
The existing and the tariff proposed by KSEB Ltd for LT-VI (B) categories

Particulars	Existing Tariff	KSEBL proposal				
		2022-23	2023-24	2024-25	2025-26	2026-27
Demand charge (Rs/ kW/ month)	80	160	180	190	190	200
Energy charge (Rs/ kWh)						
(i) Monthly consumption of and below 500 units (all units)	6.30	6.80	6.90	6.90	6.90	7.00
(ii) Monthly consumption above 500 units (all units)	7.00	7.50	7.60	7.60	7.60	7.60

The Commission carefully examined the tariff proposed by KSEB Ltd for LT-VI(B) category as above. Considering the overall of increase of inflation and the increase in average cost of supply, the Commission decided to enhance the tariff of the LT-VI(B) categories for the year 2022-23 as above

Table 7.27
Existing tariff and proposed tariff and approved tariff for LT-VI(B) category

Sl No	Particulars	Existing Tariff	Proposed by KSEB L	Approved by the Commission
1	Fixed charges (Rs/per kW or part thereof per month)	80	160	90
2	Energy charge (Rs/ kWh)			
	(i) Monthly consumption of and below 500 units (all units)	6.30	6.80	6.50
	(ii) Monthly consumption above 500 units (all units)	7.00	7.50	7.15

KSEB Ltd vide the additional submission dated 25.02.2022 proposed the following re-categorisation under LT-VI(B) Categories.

- (i) Light houses presently categorised under LT-VI(C) category was proposed to categorise under LT-VI(B) category duly considering its modes of operandi at par with museum and zoo, which is now categorised under LT-VI(B) category.
- (ii) Microfinancing institutions, which are presently categorised under LT-VI(B) is proposed to categorise under LT-VI(C) along with banks.
- (iii) KSEB Ltd also proposed to include the offices of the 'document writers' under LT-VI(B) categories.

- (iv) Offices of the or chartered accountants or company secretary or consulting engineers or tax consultants or architects or cost accountants or of management consultants:

At present these consulting firms are categorised under LT-VI(B) category. KSEB Ltd suggested that, there is no rationale in charging these categories along with the State and Central Government offices. Hence KSEB Ltd requested to categorise them under LT-VI(F) categories.

- (v) Offices of Railways including Railway Stations.

At present offices of Railways including Railway Stations are categorised under LT-VI(C) category along with banks and other tax earning departments. Considering the service rendered by the railways and being a public sector undertaking, KSEB Ltd proposed to include the offices of Railways including Railway Stations under LT-VI(B) category along with KSERTC, KSWTC and KMRL.

The Commission carefully examined the proposal of KSEB Ltd in detail and orders to approve the recategorization as proposed above.

Accordingly, with effect from the date of this order, LT-VI(B) tariff is applicable to:

- (i) offices and institutions under the State or Central Governments or under the Local Self Government Institutions, except those which are included in the category LT-VI General (C); village offices; Government Treasuries.
- (ii) offices of the Corporations, Boards and other Public Sector Undertakings under State or Central Governments; administrative/office buildings of BSNL;
- (iii) offices of the Kerala Water Authority (KWA), Kerala State Road Transport Corporation (KSRTC) and Kerala State Water Transport Corporation (KSWTC);
- (iv) museum and / or zoo;
- (v) hostels of educational institutions affiliated to Universities, hostels under the control of the Director of Technical Education or the Director of Medical Education or the Director of Public Instruction or such other institutions of Government, hostels run by the State or Central Government, hostels run by State Social Welfare Board, hostels run by institutions registered under the Travancore - Cochin Literary, Scientific and Charitable Societies Registration Act, 1955 (12 of 1955) or under the Societies Registration Act, 1860 (21 of 1860) or under Indian Trust Act, 1882, the donations to which are exempted from payment of

Income Tax; Working women hostels operating under the scheme approved by the Ministry of Women and Child Development, Government of India, hostels under the supervision and monitoring of Department of Social Welfare, Government of Kerala;

- (vi) Pay wards and institutions of Kerala Health Research and Welfare Society (KHRWS);
- (vii) travellers' bungalows, rest houses and guest houses under government; Police Clubs,
- (viii) type writing institutes;
- (ix) offices of social service organizations, offices of service pensioners' associations.
- (x) offices of political parties not approved by the Election Commission of India;
- (xi) collection centres of 'FRIENDS'; single window service centres under Department of Information Technology;
- (xii) offices of Department of Posts, all post offices including extra departmental (ED) post offices;
- (xiii) cameras at traffic signal points, surveillance cameras installed by the Local Self Government Institutions.
- (xiv) offices of KMRL
- (xv) Old age homes which charge the inmates for boarding and lodging.
- (xvi) Offices of Railways including Railway Stations,
- (xvii) Light houses
- (xviii) Offices of the document writers.

Low Tension –VI-General (C) [LT-VI(C)]

7.46 As per the prevailing tariff order dated 08.07.2019, the tariff under this category is applicable to

- (i) offices or institutions under Income Tax or Central Excise and Customs Departments,
- (ii) offices under Motor Vehicles Department or Sales Tax department or Excise Department; Sub-Registry offices; and such other tax earning departments under State or Central Government (other than Local Self Government Institutions);
- (iii) light houses
- (iv) banking and / or financing institutions (excluding micro financing institutions registered and functioning as per the guidelines issued by Reserve Bank of India);
- (v) ATM counters including the ATM counters of post offices;
- (vi) offices of Railways including railway stations
- (vii) offices of Airport Authority of India except airport;

- (viii) Insurance companies,
- (ix) any other LT categories not included in this schedule.

KSEB Ltd has proposed to include the following consumer groups under LT-VI(C) categories.

- (i) Offices of the Goods and Service Tax (GST)
- (ii) Microfinancing Institutions,
- (iii) Offices of the LIC Agents
- (iv) Offices of the pawn brokers

The existing tariff and the tariff proposed by KSEB Ltd for this category is given below.

Table 7.28
The existing and the tariff proposed by KSEB Ltd for LT-VI (C) categories

Particulars	Existing Tariff	KSEBL proposal				
		2022-23	2023-24	2024-25	2025-26	2026-27
Demand charge (Rs/ kW/ month)	180	250	250	250	240	240
Energy charge (Rs/ kWh)						
(i) Monthly consumption of and below 500 units (all units)	7.00	7.30	7.40	7.40	7.70	7.70
(ii) Monthly consumption above 500 units (all units)	8.50	8.60	8.70	8.70	8.90	8.90

The Commission has examined the existing tariff and the tariff proposed by KSEB Ltd for LT-VI(C) category. This category is one of the subsidising category with cost coverage more than 120%. Considering all these factors, the Commission approves a meagre increase in tariff only to this category.

The existing tariff, proposed tariff and approved tariff of this category for the FY 2022-23 is given below.

Table 7.29
Existing tariff and proposed tariff and approved tariff for LT-VI(C) category for the year 2022-23

SI No	Particulars	Existing Tariff	Proposed by KSEB L	Approved by the Commission
1	Fixed charges (Rs/per kW or part thereof per month)	180	250	180
2	Energy charge (Rs/ kWh)			
	(i) Monthly consumption of and below 500 units (all units)	7.00	7.30	7.15
	(ii) Monthly consumption above 500 units (all uits)	8.50	8.60	8.65

The Commission also approve the proposals of KSEB Ltd to include the following consumer groups under LT-VI (C) category.

- (i) Offices of the Goods and Service Tax (GST)
- (ii) Microfinancing Institutions,
- (iii) Offices of the LIC Agents
- (iv) Offices of the pawn brokers

Low Tension –VI-General (D) [LT-VI(D)]

7.47 As per the tariff order dated 08.07.2019, the tariff under LT-VI (D) category is applicable to

- (i) orphanages;
- (ii) anganwadis; schools and hostels for differently abled or physically challenged persons (including mentally retarded students, deaf/dumb/blind persons),
- (iii) old age homes where no charges are levied for the boarding and lodging of inmates,
- (iv) Cheshire homes; polio homes; SoS Childrens' Villages,
- (v) charitable centres for cancer care, pain and palliative care and HIV rehabilitation,
- (vi) charitable hospital guidance centres registered under the Travancore - Cochin Literary, Scientific and Charitable Societies Registration Act, 1955 (12 of 1955) or under the Societies Registration Act, 1860 (21 of 1860) or under Indian Trust Act, 1882, donations to which are exempted from payment of Income Tax,
- (vii) charitable institutions recognized by the Government for the care and maintenance of the destitute and differently abled or physically challenged persons including mentally retarded persons and deaf/dumb/blind persons,
- (viii) shelters exclusively for orphaned animals and birds run by charitable institutions registered under the Travancore - Cochin Literary, Scientific and Charitable Societies Registration Act, 1955 (12 of 1955) or under the Societies Registration Act, 1860 (21 of 1860) or under Indian Trust Act, 1882;
- (ix) libraries and reading rooms with connected load of and below 2000 watts and monthly consumption of and below 100 units.
- (x) e-toilet and public comfort stations, where no charges are levied for the use.

The existing tariff and the tariff proposed by KSEB Ltd for LT-VI (D) category is given below.

Table 7.30
Existing tariff and the tariff proposed by KSEB Ltd

Particulars	Existing	KSEBL proposal				
		2022-23	2023-24	2024-25	2025-26	2026-27
Fixed charge (Rs/ consumer per month)	35	60	70	80	90	100
Energy charge (Rs/ kWh)	2.10	2.50	2.70	2.80	2.90	3.00

The Commission has examined the tariff revision proposed by KSEB Ltd. Considering the social considerations and the need to promote such institutions run for the care and maintenance of the destitute, deprived, differently abled and such other persons, the tariff of the LT-VI (D) category is highly subsidised. However, the total energy consumed by the LT-VI (D) is very meagre and only about 0.10% of the total energy consumption of the State. Considering these facts in detail, the Commission decided to not to revise the tariff of LT-VI(D) category. Further, based on several requests received by the Commission, the Commission includes dialysis centres providing free dialysis to the poor also under LT VI D category.

The existing tariff, proposed tariff and approved tariff of LT-VI (D) category for the year 2022-23 given below.

Table 7.31

Existing tariff, proposed tariff and approved tariff for LT- VI (D) category for the year 2022-23

Particulars	Existing tariff	Proposed by KSEB Ltd	Approved by the Commission
Fixed charge (Rs/ consumer/month)	35	60	35
Energy charges (Rs/ kWh)	2.10	2.50	2.10

Low Tension –VI-General (E) [LT-VI(E)]

7.48 As per the prevailing tariff order dated 08.07.2019, the tariff under LT-VI(E) category is applicable to

- (i) sports and / or arts clubs (with connected load not exceeding 2000 W);
- (ii) sailing and / or swimming clubs (with connected load not exceeding 2000 W);
- (iii) gymnasium (with connected load not exceeding 2000 W);
- (iv) libraries and reading rooms excluding those which are included in LT VI-A and LT VI-D categories,
- (v) press clubs;
- (vi) offices of political parties approved by Election Commission of India;
- (vii) e-toilet and public comfort stations, where charges are levied for the use.

7.49 The existing tariff and the tariff proposed by KSEB Ltd for this category is given below.

Table 7.32
Existing tariff and proposed tariff for LT-VI(E) Category

Particulars	Existing Tariff	2022-23	2023-24	2024-25	2025-26	2026-27
Fixed charge (Rs./ connection/ month)						
Single Phase	40	90	100	110	120	120
Three Phase	100	200	210	220	230	230
Energy Charge (Rs./unit)						
Monthly consumption slab						
1 to 50	3.40	3.80	4.00	4.00	4.10	4.10
51 -100	4.40	4.80	5.00	5.00	5.10	5.10
101 -200	5.10	5.50	5.70	5.70	5.80	5.80
Above 200	6.80	7.20	7.20	7.20	7.30	7.30

The Commission carefully examined the tariff proposed by KSEB Ltd for LT-VI(E) category as above. Considering the overall of increase of inflation and the increase in average cost of supply, the Commission decided to enhance the tariff of the LT-VI(E) category for the year 2022-23 as below.

Table 7.33
Existing tariff, proposed tariff and approved tariff for LT-VI(E) Category for the year 2022-23

Particulars	Existing tariff	Proposed by KSEB Ltd	Approved by the Commission
Fixed charge (Rs/consumer/ month)			
(a) Single phase	40	90	40
(b) Three phase	100	200	100
Energy Charge (Rs/kWh)			
Upto 50 units	3.40	3.80	3.65
Up to 100 units	4.40	4.80	4.65
Upto 200 units	5.10	5.50	5.35
Above 200 units	6.80	7.20	7.05

Low Tension –VI-General (F) [LT-VI(F)]

7.50 As per the Tariff order dated 08.07.2019, the tariff under LT- VI (F) is applicable to the following consumer groups.:

- (i) computer training institutes, private coaching or tuition centres, self-financing educational institutions including the hostels run by them,

- (ii) cinema studios, audio/video cassette recording/duplication units, CD recording units, cinema dubbing and animation studios,
- (iii) all construction works,
- (iv) installations of cellular mobile communications, satellite communications, offices and / or exchanges of telecom companies,
- (v) offices or institutions of All India Radio (AIR), Doordarshan and other television broadcasting companies, cable TV networks, radio stations,
- (vi) hall marking centres.

Further KSEB Ltd vide the additional submission dated 25.02.2022 has proposed to include the following consumer groups also under LT-VI (F) category.

- (i) Offices of the advocates or chartered accountants or company secretary or consulting engineers or tax consultants or architects or cost accountants or of management consultants.
- (ii) Offices of the 'on line news channels and on line portals'.
- (iii) Lending library.
- (iv) Printing press engaged in printing dailies along with online media channels.

The existing and proposed tariff for LT-VI (F) category is given below.

Table 7.34
Existing tariff and the tariff proposed by KSEB Ltd

Particulars	Present	2022-23	2023-24	2024-25	2025-26	2026-27
Fixed charge (Rs./kW or part thereof/month)						
Single Phase	70	120	140	140	140	140
Three Phase	140	210	220	220	220	220
Energy Charge (Rs./unit)						
0-100	5.80	6.00	6.00	6.10	6.10	6.10
0 -200	6.50	6.70	6.70	6.80	6.80	6.80
0- 300	7.20	7.40	7.40	7.50	7.50	7.50
0 - 500	7.80	8.00	8.00	8.10	8.10	8.10
above500 U	9.00	9.00	9.00	9.10	9.20	9.20

The Commission has examined the proposals of KSEB Ltd in detail. LT- VI (F) category is subsidising category with cost coverage of 165%. Keeping in view of the Tariff Policy guidelines of bringing down the tariff at +_20% of the average cost of supply, the cross subsidy level cannot be increased any further. Instead, it has to be brought down stage wise so as to achieve the 120% of the average cost of supply. However, considering the overall increase in average cost of supply from previous tariff order dated 08.07.2019, the Commission has to approve a meagre increase in fixed charge and energy charge as detailed below for the year 2022-23. The details are given below.

Table 7.35
Existing tariff, proposed tariff and approved tariff for LT-VI(F) category
for the year 2022-23

Particulars	Existing tariff	Proposed by KSEB Ltd	Approved by the Commission
Fixed charge (Rs/kW/month)			
(a) Single phase	70	120	85
(b) Three phase	140	210	170
Energy Charge (Rs/kWh)			
Monthly consumption slabs			
0 to 100	5.80	6.00	6.00
0 to 200	6.50	6.70	6.80
0 to 300	7.20	7.40	7.50
0 to 500	7.80	8.00	8.15
>500	9.00	9.00	9.25

The Commission has also examined the tariff re-categorisation proposals under LT-VI(F) categories as above. The Commission hereby clarify that, the printing press is categorised under LT-IV (A) Industrial tariff. However, if the printing press are engaged in online media channels, then they shall be categorised under LT-VI(F) tariff categories.

Other proposals of KSEB Ltd for tariff re-categorisation under LT-V(F) tariff category is hereby approved.

Accordingly, with effect from the date of this order, LT-VI(F) tariff is applicable to the following consumer groups.

- (i) Computer training institutes, private coaching or tuition centres, self-financing educational institutions including the hostels run by them,
- (ii) Cinema studios, audio/video cassette recording/duplication units, CD recording units, cinema dubbing and animation studios,
- (iii) All construction works,
- (iv) Installations of cellular mobile communications, satellite communications, offices and / or exchanges of telecom companies,
- (v) Offices or institutions of All India Radio (AIR), Doordarshan and other television broadcasting companies, cable TV networks, radio stations,
- (vi) Hall marking centres.
- (vii) Offices of the advocates or chartered accountants or company secretary or consulting engineers or tax consultants or architects or cost accountants or of management consultants.
- (viii) Offices of the 'on line news channels and on line portals'.
- (ix) Printing press engaged in printing dailies along with online media channels.

LT-VI- GENERAL (G)

7.51 As per the Tariff order dated 08.07.2019, LT-VI(G) tariff is applicable to all the private hospitals, private clinics, private clinical laboratories, private X-ray units, private mortuaries, private blood banks and private scanning centres and such other private institutions in health care sector.

7.52 The existing tariff and the proposed tariff for LT-VI (G) category is given below.

Table 7.36
Existing tariff and the tariff proposed by KSEB Ltd

Particulars	Present	2022-23	2023-24	2024-25	2025-26	2026-27
Fixed charge (Rs./kW or part thereof/month)						
Single Phase	70	120	130	140	140	140
Three Phase	140	210	220	220	220	220
Energy Charge (Rs./unit)						
0 -500	5.70	6.00	6.00	6.10	6.30	6.30
0 -1000	6.50	6.70	6.70	6.80	7.00	7.00
0 - 2000	7.50	7.70	7.70	7.80	8.00	8.00
above 2000 units	8.50	8.70	8.70	8.80	8.90	8.90

7.53 The Commission has examined the tariff proposals of LT-VI(G) category in detail. The LT-VI (G) category is also a subsidising tariff category with cost coverage more than 120%. Considering this, the Commission has proposed a meagre increase only for LT-VI(G) category. The existing tariff, proposed tariff and approved tariff for LT-VI(G) category is for the year 2022-23 is given below.

Table 7.37
Existing tariff, proposed tariff and approved tariff for LT-VI(G) category for the year 2022-23

Particulars	Existing tariff	Proposed by KSEB Ltd	Approved by the Commission
Fixed charge (Rs/kW/month)			
(a) Single phase	70	120	70
(b) Three phase	140	210	150
Energy Charge (Rs/kWh)			
Monthly consumption slabs			
0 to 500	5.70	6.00	5.85
0 to 1000	6.50	6.70	6.60
0 to 2000	7.50	7.70	7.70
>2000	8.50	8.70	8.60

LOW TENSION - VII – COMMERCIAL (A) [LT- VII (A)]

- 7.54** The tariff under LT-VII (A) category is applicable to commercial and trading establishment such as,
- (i) shops, showrooms, display outlets, business houses,
 - (ii) hotels and restaurants (having connected load exceeding 1000 W),
 - (iii) house boats
 - (iv) private lodges, private hostels, private guest houses, private rest houses, private travellers' bungalows,
 - (v) freezing plants, cold storages, milk chilling plants,
 - (vi) shops selling confectioneries, sweetmeat, breads and such other eatables without manufacturing process,
 - (vii) petrol/diesel/ LPG /CNG bunks, LPG bottling plants,
 - (viii) automobile service stations, computerized wheel alignment centres,
 - (ix) marble and granite cutting units,
 - (x) units carrying out filtering, packing and other associated activities of oil brought from outside,
 - (xi) share broking firms, stock broking firms, marketing firms,
 - (xii) godowns of Kerala State Beverages Corporations.
 - (xiii) photo studios/ colour labs

- 7.55** The existing tariff and the tariff proposed by KSEB Ltd for LT-VII (A) category is given below.

Table 7.38

Existing tariff and the tariff proposed by KSEB Ltd						
Particulars	Present	2022-23	2023-24	2024-25	2025-26	2026-27
Fixed charge (Rs./kW or part thereof/month)						
Single Phase	70	120	140	140	140	140
Three Phase	140	210	220	220	220	220
Energy Charge (Rs./unit)						
0-100	6.00	6.10	6.10	6.10	6.10	6.10
0 -200	6.70	6.80	6.80	6.80	6.80	6.80
0- 300	7.40	7.50	7.50	7.50	7.50	7.50
0 - 500	8.00	8.10	8.10	8.10	8.10	8.10
above500 U	9.30	9.30	9.30	9.30	9.30	9.30

- 7.56** The Commission has examined the tariff proposed by KSEB Ltd for LT-VII(A) category. The LT- VII (A) category is subsidising category, and hence its cross subsidy level cannot be increased from the cross subsidy level approved in the last revision. However, considering the overall increase in average cost of supply from the date of the previous tariff order dated 08.07.2019, and the over all increase of inflation during the last three years, the Commission has approved a meagre increase in fixed charge and energy charge of LT-VII (A) commercial categories as detailed below.

Table 7.39
Existing tariff, proposed tariff and approved tariff for LT-VII (A) Category

Particulars	Existing tariff	Proposed by KSEB Ltd	KSERC
Fixed charge (Rs/kW/month)			
(a) Single phase	70	120	80
(b) Three phase	140	210	160
Energy Charge (Rs/kWh)			
Monthly consumption slab			
0 to 100	6.00	6.10	6.05
0 to 200	6.70	6.80	6.80
0 to 300	7.40	7.50	7.50
0 to 500	8.00	8.10	8.15
>500	9.30	9.30	9.40

LT- VII – Commercial (B) [LT – VII – (B)]

7.57 As per the tariff order dated 08.07.2019, LT-VII (B) Tariff is applicable to commercial and trading establishments such as,-

- (i) shops, bunks, hotels, restaurants, having connected load of and below 1000 Watts
- (ii) telephone / fax / e-mail / photocopy booths and internet cafes having connected load of and below 1000 Watts.

When connected load of the above-mentioned consumers exceeds 1000 Watts, such consumers shall be charged under LT -VII (A) tariff. If monthly consumption of LT- VII (B) consumers having connected load of and below 1000 Watts exceeds 300 units, the energy charges shall be realized at the rate of energy charges applicable to LT - VII (A) consumers.

7.58 However, KSEB Ltd vide the additional submission dated 25.02.2022 submitted that, there are about 5 lakh consumers come under LT-VII(B) category. Most of them are small shops with one room with a fridge and mixer/juicer. The connected of these gadgets are usually more than 1000 watts. Considering the difficulties faced by these small shops for their livelihood, KSEB Ltd proposes to enhance the connected load of the LT-VII(B) category from 1000 watts to 2000 watts.

The Commission carefully examined the proposal of KSEB Ltd and hereby orders to enhance the connected load of the LT-VII(B) category from 1000 watts to 2000 watts. However, all the consumers with connected load above 2000 watts irrespective of the consumption shall be billed under LT-VII(A) commercial consumers. Further, all the commercial consumers with monthly consumption above 300 units irrespective of the connected load also categorised under LT-VII (A) tariff.

7.59 The existing tariff, proposed tariff of LT-VII(B) Commercial categories is given below.

Table 7.40
Existing tariff, proposed tariff for LT-VII (B) category

Particulars	Existing Tariff	KSEBL proposal				
		2022-23	2023-24	2024-25	2025-26	2026-27
Demand charge (Rs/ kW/ month)	50	100	110	120	120	120
Energy charge (Rs/ kWh)						
0 to 100 units	5.20	5.30	5.30	5.30	5.50	5.50
0 to 200 units	6.00	6.30	6.30	6.30	6.50	6.50
0 to 300 units	6.60	7.00	7.00	7.00	7.20	7.20

The Commission proposes a small increase in the tariff of LT-VII(B) category in line with the increase in average cost of supply and inflation since the last tariff revision dated 08.07.2019.

The tariff approved by the Commission for the financial year 2022-23 is given below.

Table 7.41
Existing tariff, proposed tariff and approved tariff for LT-VII (B) category for the year 2022-23

Particulars	Existing tariff	Proposed by KSEB Ltd	Approved by the Commission
Fixed charge			
Upto 1000 watts (Rs/consumer /month)			50
>1000 and upto 2000 watts (Rs/kW/ month)	50	100	60
Energy Charge (Rs/kWh)			
0 to 100 units	5.20	5.30	5.30
0 to 200 units	6.00	6.30	6.10
0 to 300 units	6.60	7.00	6.70

LT- VII COMMERCIAL (C) [LT VII (C)]

7.60 As per the tariff order dated 08.07.2019, the tariff under LT VII (C) is applicable to,-

- (i) cinema theatres;
- (ii) circus;
- (iii) sports and arts clubs, sailing or swimming clubs and gymnasium having connected load exceeding 2000W.

Further, KSEB Ltd vide the additional submission dated 25.02.2022 submitted to include the following tariff categories also under LT-VII (C) tariff category.

- (i) Stadiums, turf courts, and indoor courts.
- (ii) Multiplexes. The multiplexes under HT is categorised under HT-IV (B) tariff, however, the multiplexes under LT is not included in any of the tariff categories. Hence KSEB Ltd proposed to include the 'multiplexes' also under LT-VII(C) category at par with the cinema theatres.

7.61 The existing tariff and the tariff proposed by KSEB Ltd for LT-VII (C) Category is given below.

Table 7.42
Existing tariff and the tariff proposed by KSEB Ltd

Particulars	Existing Tariff	KSEBL proposal				
		2022-23	2023-24	2024-25	2025-26	2026-27
Demand charge (Rs/ kW/ month)	100	200	210	220	220	220
Energy charge (Rs/ kWh)						
0 - 1000 units	6.00	6.30	6.30	6.30	6.50	6.50
> 1000 units	7.40	7.70	7.70	7.70	7.90	7.90

7.62 The Commission has examined the proposals of KSEB Ltd in detail. The LT VII (C) category is also a subsidising category with cost coverage 131% at the existing tariff. Considering the increase in average cost of supply since the last revision order dated 08.07.2019, and the present level of cross subsidy of the LT-VII (C) category, the tariff approved by the Commission for this category for the year 2022-23 is given below.

Table 7.43
Existing tariff, proposed tariff and approved tariff for LT-VII(C) category for the year 2022-23

Particulars	Existing tariff	Proposed by KSEB Ltd	Approved by the Commission
Fixed charge (Rs/kW/month)	100	200	115
Energy Charge (Rs/kWh)			
Up to 1000 units	6.00	6.30	6.30
Above 1000 units	7.40	7.70	7.70

The Commission considered the categorisation suggested by KSEB Ltd and decides to approve the same.

LT- VIII (A) Unmetered street lights [LT – VIII (A)]

7.63 LT- VIII(A) tariff is applicable to un metered street lights/ public lighting system managed by Local Self Government Institutions in the State.

The existing and proposed tariff for unmetered street lights is given below.

Table 7.44

LT-VIII (A) Tariff proposal of KSEB Ltd for unmetered street lights (Burning hours per day- 4 hours & 6 hours)

TYPE OF LAMP	Watts (W)	Rs/Lamp/Month												
		Burning Hours per day - 4 Hours						Burning Hours per day - 6 Hours						
		Existing Tariff	Proposed Tariff					Existing Tariff	Proposed Tariff					
2022-23	2023-24		2024-25	2025-26	2026-27	2022-23	2023-24		2024-25	2025-26	2026-27			
Ordinary	40	24	26	27	28	29	No rate revision	36	39	40	42	43	No rate revision	
Ordinary	60	36	39	41	42	44		55	58	60	62	64		
Ordinary	100	61	65	67	70	72		92	97	99	103	107		
Fluo tube	40	24	26	27	28	29		36	39	40	42	43		
Fluo tube	80	48	52	54	56	58		73	77	80	83	86		
Floodlight	1000	615	645	667	692	718		922	961	990	1026	1065		
MV Lamp	80	56	60	64	68	70		77	83	89	95	98		
MV Lamp	125	83	89	95	101	104		123	132	141	150	155		
MV Lamp	160	106	114	122	130	134		157	169	181	193	199		
MV Lamp	250	164	176	188	200	206		244	262	280	298	307		
MV Lamp	400	263	282	301	320	330		392	420	448	476	490		
SV Lamp	70	46	50	54	58	60		70	75	80	85	88		
SV Lamp	80	53	57	61	65	67		77	83	89	95	98		
SV Lamp	100	65	70	75	80	83		98	105	112	119	123		
SV Lamp	125	83	89	95	101	104		123	132	141	150	155		
SV Lamp	150	98	105	112	119	123		147	158	169	180	186		
SV Lamp	250	164	176	188	200	206		244	262	280	298	307		
CFL	11	6	8	8	8	8		9	11	11	12	12		
CFL (NEW)	14		10	10	10	11			14	14	15	15		
CFL	15	8	10	11	11	11		12	15	15	16	16		
CFL	18	10	12	13	13	13		14	18	18	19	20		
CFL	22	12	15	15	16	16		18	22	22	23	24		
CFL	30	17	20	21	21	22		24	29	30	31	32		
CFL	36	19	24	25	25	26		29	35	36	37	39		
CFL	44	23	29	30	31	32		35	43	44	46	47		
CFL	72	39	47	49	50	52		58	70	72	74	77		
CFL	144	77	93	97	100	104		116	139	143	148	154		
LED (NEW)	9		3	4	4	4			5	5	5	5		
LED	12	3	4	5	5	5		4	6	6	7	7		
LED (NEW)	15		5	6	6	6			8	8	8	8		
LED	18	4	6	7	7	7		8	9	9	10	10		
LED	20	6	7	7	7	8		8	10	10	11	11		
LED	24	7	8	9	9	9		10	12	12	13	13		
LED (NEW)	25		9	9	9	9		13	13	13	14			
LED	30	8	10	11	11	11	12	15	15	16	16			
LED(NILAVU)	35	10	12	12	13	13	15	17	18	18	19			
LED	40	11	13	14	14	15	17	20	20	21	22			
LED	45	12	15	16	16	17	18	22	23	24	24			
LED(NILAVU)	70	19	23	24	25	26	29	34	35	36	38			
LED (NEW)	80		26	27	28	29		39	40	42	43			
LED (NILAVU)	110	30	36	37	39	40	47	53	55	57	59			
LED(NEW)	150		49	51	52	54		73	75	77	80			

Table 7.45
LT-VIII (A) Tariff proposal of KSEB Ltd for unmetered street lights
(Burning hours per day- 12 hours)

TYPE OF LAMP	Watts (W)	Rs/Lamp/Month				
		Burning Hours per day - 12 Hours				
		Existing Tariff	Proposed Tariff			
2022-23	2023-24		2024-25	2025-26	2026-27	
Ordinary	40	73	77	79	82	85
Ordinary	60	112	115	118	122	127
Ordinary	100	184	191	196	203	211
Fluo tube	40	73	77	79	82	85
Fluo tube	80	147	153	157	163	169
Floodlight	1000	1845	1910	1957	2030	2105
MV Lamp	80	157	169	180	192	198
MV Lamp	125	244	262	280	298	307
MV Lamp	160	315	338	360	383	395
MV Lamp	250	492	528	563	599	617
MV Lamp	400	785	842	897	954	983
SV Lamp	70	138	148	158	168	173
SV Lamp	80	157	169	180	192	198
SV Lamp	100	196	210	224	238	245
SV Lamp	125	244	262	280	298	307
SV Lamp	150	294	315	336	357	368
SV Lamp	250	492	528	563	599	617
CFL	11	18	22	22	23	24
CFL (NEW)	14		27	28	29	30
CFL	15	24	29	30	31	32
CFL	18	29	35	36	37	38
CFL	22	35	43	44	45	47
CFL	30	48	58	59	61	64
CFL	36	58	69	71	74	76
CFL	44	70	85	87	90	93
CFL	72	116	138	141	147	152
CFL	144	231	276	282	293	304
LED (NEW)	9		9	9	10	10
LED	12	10	12	12	13	13
LED (NEW)	15		15	15	16	16
LED	18	15	18	18	19	19
LED	20	17	20	20	21	21
LED	24	22	23	24	25	25
LED (NEW)	25		24	25	26	26
LED	30	28	29	30	31	31
LED(NILAVU)	35	29	34	35	36	36
LED	40	33	39	40	41	41
LED	45	39	43	45	46	46
LED(NILAVU)	70	58	67	69	72	72
LED (NEW)	80		77	79	82	82
LED (NILAVU)	110	91	106	108	112	112
LED(NEW)	150		144	147	153	153
MV Lamp on semi high mast only for 12 hrs burning per day	1200	2376	2550	2720	2900	2990
SV Lamp on semi high mast only for 12 hrs burning per day	250	495	530	570	610	630

No rate revision

The Commission noted the proposal of KSEB Ltd. The street light tariff in the State is also one of the subsidised tariff categories. Considering the inflation and increase in average cost of supply since the last tariff revision dated 08.07.2019, the Commission approves an overall increase of 8% for the year 2022-23 , over the prevailing tariff order dated 08.07.2019.

The composite tariff for unmetered street lights approved for the year 2022-23 is given below.

Table 7.46
Existing tariff and approved tariff for LT-VIII (A) unmetered street light for the year 2022-23

No	TYPE OF LAMP	Watts (W)	Existing Tariff			Approved tariff		
			Rs/Lamp/Month			Rs/Lamp/Month		
			Burning Hours per day			Burning Hours per day		
			4 Hours	6 Hours	12 Hours	4 Hours	6 Hours	12 Hours
1	Ordinary	40	24	36	73	26	39	79
2	Ordinary	60	36	55	112	39	59	121
3	Ordinary	100	61	92	184	66	99	199
4	Fluo tube	40	24	36	73	26	39	79
5	Fluo tube	80	48	73	147	52	79	159
6	Floodlight	1000	615	922	1845	664	996	1993
7	MV Lamp	80	56	77	157	60	83	170
8	MV Lamp	125	83	123	244	90	133	264
9	MV Lamp	160	106	157	315	114	170	340
10	MV Lamp	250	164	244	492	177	264	531
11	MV Lamp	400	263	392	785	284	423	848
12	SV Lamp	70	46	70	138	50	76	149
13	SV Lamp	80	53	77	157	57	83	170
14	SV Lamp	100	65	98	196	70	106	212
15	SV Lamp	125	83	123	244	90	133	264
16	SV Lamp	150	98	147	294	106	159	318
17	SV Lamp	250	164	244	492	177	264	531
18	CFL	11	6	9	18	6	10	19
19	CFL	14				8	12	25
20	CFL	15	8	12	24	9	13	26
21	CFL	18	10	14	29	11	15	31
22	CFL	22	12	18	35	13	19	38
23	CFL	30	17	24	48	18	26	52
24	CFL	36	19	29	58	21	31	63
25	CFL	44	23	35	70	25	38	76
26	CFL	72	39	58	116	42	63	125
27	CFL	144	77	116	231	83	125	249
28	LED (New)	9				2	3	8
29	LED	12	3	4	10	3	4	11
30	LED (New)	15				4	5	14
31	LED	18	4	8	15	4	9	16
32	LED	20	6	8	17	6	9	18
33	LED	24	7	10	22	8	11	24
34	LED (New)	25				8	11	25
35	LED	30	8	12	28	9	13	30
36	LED (Nilavu)	35	10	15	29	11	16	31
37	LED	40	11	17	33	12	18	36
38	LED	45	12	18	39	13	19	42

No	TYPE OF LAMP	Watts (W)	Existing Tariff			Approved tariff		
			Rs/Lamp/Month			Rs/Lamp/Month		
			Burning Hours per day			Burning Hours per day		
			4 Hours	6 Hours	12 Hours	4 Hours	6 Hours	12 Hours
39	LED (Nilavu)	70	19	29	58	21	31	63
40	LED (New)	80				23	36	72
41	LED (Nilavu)	110	30	47	91	32	51	98
42	LED (New)	150				44	69	134
43	MV Lamp on semi high mast only for 12 hrs burning per day	1200			2376			2566
44	SV Lamp on semi high mast only for 12 hrs burning per day	250			495			535

LT- VIII (B) Metered Street Lights and Traffic Signal Lights [LT- VIII (B)]

7.64 The existing tariff and the tariff proposed by KSEB Ltd for metered street lights is given below.

Table 7.47
Existing tariff and proposed tariff of LT-VIII (B) category

Particulars	Existing Tariff	KSEBL proposal				
		2022-23	2023-24	2024-25	2025-26	2026-27
Fixed charge (Rs/ meter/month)	50	100	110	110	120	120
Energy charge (Rs/ kWh)		4.30	5.20	5.30	5.50	5.70

The Commission examined the proposal of KSEB Ltd. The Commission propose to increase the fixed charge by Rs 25/meter/month and the energy charge by Rs 0.40/unit for the year 2022-23. The existing tariff, proposed tariff and approved tariff for LT-VIII(B), metered street light is given below.

Table 7.48
Existing tariff and proposed tariff and approved tariff of LT-VIII (B) category

Particulars	Existing tariff	KSEB Proposal	Approved by the Commission
Fixed charge (Rs/meter/ month)	50	100	75
Energy charge (Rs/kWh)	4.30	5.20	4.70

LT IX : DISPLAY LIGHTINGS AND HOARDINGS

7.65 As per the Tariff order dated 08.07.2019, the tariff under this category is applicable to display lightings, hoardings, external illumination of buildings for publicity and sales promotion purposes.

KSEB Ltd has not proposed tariff revision on this category. The Commission examined the proposal of KSEB Ltd in detail. LT-IX tariff is a highly subsidising

category, mainly to restrict the electricity usage for display lighting and hoardings, and also considering purpose of usage of this category is mainly for advertisements etc, which is not considered as an essential use. However, considering the higher tariff of this category, the Commission decided to allow to continue with the existing tariff for the year 2022-23. The existing tariff and the approved tariff for LT-IX category are given below.

Table- 7.49
Existing tariff and approved tariff for Display Board and Hoardings (LT-IX) for the FY 2022-23

Particulars	Existing Tariff	KSEB proposal	Approved by the Commission
Fixed charge (Rs/connection/ month) up to 1kW	550	550	700
For every additional kW above 1 kW (Rs/kW/month for additional load)			150
Energy charge (Rs/ kWh)	12.50	12.50	12.50

LT X- Electric Vehicle Charging stations

7.66 The Commission vide the tariff order dated 08.07.2019, has approved the tariff of Electric Charging Stations @fixed charge – Rs 75/kW/month and energy charge @Rs 5.00 per unit.

7.67 The tariff proposed by KSEB Ltd for LT-X Electric Vehicle charging stations is given below.

Table- 7.50
Existing tariff and Tariff proposed by KSEBL for LT-X EV charging stations

SI No	Particulars	Existing tariff	Proposed tariff				
			2022-23	2023-24	2024-25	2025-26	2026-27
	(a) Fixed Charge (Rs. per KW per month)	75	Nil				
	(b) Energy Charge (Rs per unit)	5.00	7.30	7.75	7.73	7.82	7.90
Single part tariff is proposed at average cost of supply							

7.68 As detailed above, KSEB Ltd proposed to dispense with the fixed charge for LT-X category and proposed single part tariff linked to the average cost of supply of the respective years.

7.69 The Commission is not agreeing with the proposal of KSEB Ltd to dispense with the fixed charge. The basic philosophy behind the fixed charge is to levy a part of the fixed cost liability of the licensee through tariff. Considering the importance of migration of the fossil fuel to the electricity for vehicles, the Commission proposes only a meagre increase only for EV stations as detailed below.

Table- 7.51
Existing tariff and the Approve tariff for LT-X EV charging stations

Tariff	Existing	Approved by the Commission
Fixed charge (Rs/kW or part thereof)	75	90
Energy charge (Rs/ kWh)	5	5.50
<p>Note. The above rate have been retained to promote the use of EV. The ceiling tariff that can be charged by EV charging stations / outlets shall be Rs 8.00/unit.</p>		

7.70 The Commission further noted that, though the electricity tariff of the EV Charging stations is approved as above, but these stations charging excessive rates from its users without any rationale. It is also noticed that, each stations charging different rates from its users across the State citing the reason that the cost of infrastructure created for each EV charging stations are different.

The Commission noticed this anomaly. The basic issue here is that the EV users are not getting the benefit of concessional electricity tariff approved for EV charging stations. The Commission is of the considered view that, it shall be passed to the EV users.

Considering these aspects in detail, the Commission here by fix the maximum retail tariff to be charged by EV Charging stations @ Rs 8.00/unit. The EV charging stations are not permitted to charge any excess amount towards electricity charges from its users. However, the EV charging stations may with the approval of the competent authority separately charge the cost of infrastructure as service charge if seems appropriate.

High Tension I - Industrial (A) [HT-I (A)]

7.71 As per the prevailing tariff order dated 08.07.2019, HT-I(A) tariff applicable to general purpose industrial load of all classes of consumers listed in LT-IV (A) category availing supply of electricity at high tension. The existing tariff and the tariff proposed by KSEB Ltd during the MYT period from 2022-23 to 2026-27 is given below.

Table 7.52
Existing tariff and the tariff proposed by KSEB Ltd

Particulars	Existing	KSEBL proposal				
		2022-23	2023-24	2024-25	2025-26	2026-27
Demand charge (Rs/ kVA/month)	340	450	450	450	450	450
Energy charge (Rs/ kWh)	5.75	6.10	6.20	6.30	6.50	6.50

The Commission has carefully examined the tariff proposed by KSEB Ltd for HT-1 (A) Industrial category. KSEB Ltd has proposed an increase of Rs 110/kVA /month in demand charge and Rs 0.35/unit to 0.75/unit in energy charge for this category.

During the public hearing on the tariff proposals, the HT&EHT Electricity Industrial Consumers Association and other stake holders objected the proposal.

The Commission examined the proposal in detail. Over the years, the Commission has brought down the average tariff for HT Industrial category well below the 120% of the average cost of supply. The last tariff revision was made in the State during the year 2019-20. As explained earlier, the inflation since the last tariff revision is 19.05%. The approved average cost of supply has also increased from Rs 6.10 per unit to Rs 6.93 per unit. Considering these factors, the Commission has decided to approve an increase of about 7.90% for this category for the FY 2022-23. Even with the approved revision, the cost coverage of this category still reduces from 116.92% to 113.60%.

7.72 The existing tariff, proposed tariff and approved tariff for HT-1 (A) category for the year 2022-23 is given below.

Table 7.53

Existing tariff, proposed tariff and approved tariff for HT-1(A) Category for the FY 2022-23

Tariff	Existing Tariff	Proposed by KSEB Ltd	Approved by the Commission
Demand charge (Rs/ kVA/ month)	340	450	390
Energy charges (Ruling) (Rs/ kWh)	5.75	6.10	6.10

High Tension - I Industrial (B) - IT and IT enabled services [HT- I (B)]

7.73 As per the Tariff order dated 08.07.2019, the tariff under this category is applicable to all classes of consumers listed in LT-IV (B) category availing supply of electricity at high tension. The existing tariff and the tariff proposed by KSEB Ltd for HT-1 (B) is given below.

Table 7.54

Existing tariff and the tariff proposed by KSEB Ltd

Particulars	Existing	KSEB Ltd proposal				
		2022-23	2023-24	2024-25	2025-26	2026-27
Demand charge (Rs/ kVA/month)	340	450	450	450	450	450
Energy charge (Rs/ kWh)	6.05	6.60	6.70	6.70	6.70	6.50

The Commission has examined the proposals of KSEB Ltd in detail. Duly considering the increase in average cost of supply over the same approved in the order dated 08.07.2019, and also the inflation since last tariff revision, the Commission has approved a moderate increase in tariff as given in the Table below for the year 2022-23.

Table 7.55
Existing tariff, proposed tariff and approved tariff for HT-1(B) Category for the year 2022-23

Tariff	Existing Tariff	Proposed by KSEB Ltd	Approved by the Commission
Demand charge (Rs/ kVA/ month)	340	450	410
Energy charges (Ruling) (Rs/ kWh)	6.05	6.60	6.60

High Tension – II- General (A) [HT-II (A)]

7.74 The tariff under this category is applicable to all classes of consumers listed in LT-VI (A), LT-VI (B), LT-VI(D) and LT-VI (E) categories availing supply of electricity at high tension.

KSEB Ltd proposed an average increase of about 13% for this category during the year 2022-23. The existing tariff and the same proposed by KSEB Ltd during the MYT period from 2022-23 to 2026-27 is given below.

Table 7.56
Existing tariff and the tariff proposed by KSEB Ltd for HT-II (A) category

Particulars	Existing	KSEBL proposal				
		2022-23	2023-24	2024-25	2025-26	2026-27
Demand charge (Rs/ kVA/month)	370	470	480	490	490	500
Energy charge (Rs/ kWh)	5.60	6.10	6.20	6.30	6.30	6.60

The Commission examined the proposals of KSEB Ltd. The cost coverage of this category at the prevailing tariff is about 120%. The Commission has approved a moderate increase in fixed charge and energy charge in proportion to the increase in Average Cost of Supply (ACoS) and also reduce the cost coverage from 120.83% to 116.10% of the (ACoS).

The existing tariff, the tariff proposed by KSEB Ltd and the approved tariff of this category is given below.

Table- 7.57
Existing tariff, proposed tariff and approved tariff for HT-II(A) category

Tariff	Existing Tariff	Proposed by KSEB L	KSERC option-1
Demand charge (Rs/ kVA/ month)	370	470	420
Energy charges (Ruling) (Rs/ kWh)	5.60	6.10	5.85

High Tension – II- General (B) [HT-II (B)]

7.75 The tariff under this category is applicable to all classes of consumers listed in LT-VI (C), LT-VI (F) and LT-VI (G) categories availing supply of electricity at high tension. The existing tariff, the tariff proposed by KSEB Ltd for HT-II (B) category is given below.

Table 7.58
Existing tariff and tariff proposed by KSEB Ltd for HT-II (B) category

Particulars	Existing	KSEBL proposal				
		2022-23	2023-24	2024-25	2025-26	2026-27
Demand charge (Rs/ kVA/month)	440	500	500	500	500	500
Energy charge (Rs/ kWh)						
(a) Monthly consumption upto 30000 units	6.20	6.60	6.60	6.60	6.60	6.60
(b) Monthly consumption above 30000 units	7.20	7.60	7.60	7.60	7.70	7.70

KSEB Ltd has also submitted that, the tariff category of airports under HT is not specified in the Tariff order dated 08.07.2019. Hence KSEB Ltd requested to include the same under HT-II (B).

The Commission has examined the proposals of KSEB Ltd in detail. The HT-II (B) category is subsidising category and its cost coverage was above 120% of the average cost of supply. Hence the Commission cannot increase the cross subsidy level of this category further.

The existing tariff, proposed tariff and the approved tariff of HT-II(B) category is given below.

Table- 7.59
Existing tariff, proposed tariff and approved tariff for HT-II(B) category

Particulars	Existing tariff	Proposed by KSEB L	KSERC
Demand charge (Rs/ kVA/ month)	440	500	500
Energy charges (Ruling) (Rs/ kWh)			
(a) Monthly consumption upto 30000 units	6.20	6.60	6.80
(b) Monthly consumption above 30000 units	7.20	7.60	7.80

The Commission also approve to include the 'airports' availing supply at HT under HT-II(B) category.

Agriculture Tariff under HT

(a) High Tension – III- Agriculture (A) [HT-III (A)]

7.76 The tariff under HT-III (A) this category is applicable to the classes of agricultural consumers listed in LT-V (A) category, availing supply of electricity at high tension. The existing tariff, proposed tariff and approved tariff for HT-III (A) category is given below.

Table- 7.60
Existing tariff and tariff proposed by KSEB Ltd for HT-III(A) category

Particulars	Existing	KSEBL proposal				
		2022-23	2023-24	2024-25	2025-26	2026-27
Demand charge (Rs/ kVA/month)	190	250	260	270	290	290
Energy charge (Rs/ kWh)	3.10	3.50	3.60	3.70	3.80	4.00

HT-III(A) category is a subsidised category with the cost coverage of about 95%. KSEB Ltd proposed an increase of about 21.80% for this category during the year 2022-23. Considering the increase in ACoS and inflation since the last tariff revision, the Commission approve a moderate increase in tariff for this category during the year 2022-23.

Table- 7.61
Existing tariff, proposed tariff and approved tariff for HT-III(A) category for the year 2022-23

Tariff	Existing Tariff	Proposed by KSEB L	Approved by the Commission
Demand charge (Rs/ kVA/ month)	190	250	220
Energy charges (Ruling) (Rs/ kWh)	3.10	3.50	3.40

(b) High Tension – III- Agriculture (B) [HT-III (B)]

7.77 The tariff under this category is applicable to classes of agricultural consumers listed in LT-V (B) category, availing supply of electricity at high tension. The existing tariff, tariff proposed by KSEB Ltd and the tariff approved by the Commission is given below.

Table-7.62
Existing tariff and proposed tariff for HT-III(B) category

Particulars	Existing	KSEBL proposal				
		2022-23	2023-24	2024-25	2025-26	2026-27
Demand charge (Rs/ kVA/month)	200	270	280	290	290	290
Energy charge (Rs/ kWh)	3.60	4.00	4.00	4.00	4.00	4.00

KSEB Ltd vide the additional submission dated 25.02.2022 submitted that, similar to LT-V(B) agriculture category, electricity availed by HT-III(B) categories is generally for creating a conducive atmosphere by controlling light, temperature, humidity etc. KSEB Ltd submitted that, considering these activities, HT-III(B) categories may be merged with HT-III (A) and re-name the merged category as HT-III Tariff, as similar to KSEB Ltd proposal to merge the LT-V(B) category with LT-V(A) category. KSEB Ltd proposed to charge the merged category at HT-III (B) tariff.

The Commission has examined the proposal in detail. The electricity usage of the HT-III(B) category cannot be compared with HT-III(A) category based on their purpose of usage. Considering these reasons, the Commission rejected the proposal of KSEB Ltd to merge the HT-III(B) with the HT-III(A) category.

However, considering the overall of increase of inflation and the increase in average cost of supply, the Commission decided to approve a moderate increase in tariff to this category as detailed below.

The existing tariff, proposed tariff and the approved tariff of HT-III(B) category is detailed below.

Table-7.63

Existing tariff and approved tariff for HT-III(B) category

Tariff	Existing Tariff	Proposed by KSEB L	Approved by the Commission
Demand charge (Rs/ kVA/ month)	200	270	240
Energy charges (Ruling) (Rs/ kWh)	3.60	4.00	3.90

High Tension –IV (A) – Commercial [HT-IV (A)]

7.78 The tariff under this category is applicable to all classes of commercial consumers listed in LT-VII (A) and LT-VII (C) categories (excluding those who included under HT-IV- (B) category), availing supply of electricity at high tension. The existing tariff, and proposed tariff of HT-IV (A) categories is given below.

Table 7.64

Existing tariff and the tariff proposed by KSEB Ltd

Particulars	Existing	KSEBL proposal				
		2022-23	2023-24	2024-25	2025-26	2026-27
Demand charge (Rs/ kVA/month)	440	500	500	500	500	500
Energy charge (Rs/ kWh)						
(a) Monthly consumption upto 30000 units	6.30	6.60	6.60	6.70	6.80	6.80
(b) Monthly consumption above 30000 units	7.30	7.60	7.60	7.70	7.80	7.80

The Commission has examined the proposal of KSEB Ltd in detail. At the prevailing tariff, HT-IV (A) category is a subsidising category and its cost coverage was above 120% of the average cost of supply. Hence the Commission cannot increase the cross subsidy level of this category further. However, considering the increase in average of supply and inflation since the last tariff revision on 08.07.2019, the Commission orders to approve the tariff of the HT-IV (A) category as follows.

Table-7.65
Existing tariff and approved tariff for HT-IV (A) category

Particulars	Existing tariff	Proposed by KSEB L	Approved by the Commission
Demand charge (Rs/ kVA/ month)	440	500	490
Energy charges (Ruling) (Rs/ kWh)			
(a) Monthly consumption upto 30000 units	6.30	6.60	6.75
(b) Monthly consumption above 30000 units	7.30	7.60	7.75

High Tension –IV (B) – Commercial [HT-IV (B)]

7.79 The Commission vide the tariff order dated 08.07.2019, had grouped the consumers under commercial category such as Hotels, marriage halls, convention centres, shopping malls, multiplexes etc under a separate tariff category HT-IV (B). The existing and proposed tariff of HT-IV (B) category is given below.

Table-7.66
Existing tariff and proposed tariff for HT-IV (B) category

Particulars	Existing	KSEBL proposal				
		2022-23	2023-24	2024-25	2025-26	2026-27
Demand charge (Rs/ kVA/month)	440	500	500	500	500	500
Energy charge (Rs/ kWh)						
(a) Monthly consumption upto 30000 units	6.60	6.80	6.80	6.80	6.80	6.80
(b) Monthly consumption above 30000 units	7.60	7.80	7.80	7.80	7.80	7.80

KSEB Ltd vide the additional submission dated 25.02.2022 submitted that, there is ambiguity in assigning HT-IV (B) tariff to shopping complexes, cinema theatre complexes having two or more screens and also shopping complexes

inside malls availing independent supply. Considering these aspects, KSEB Ltd requested to approve the HT-IV (B) Tariff to shopping complexes, cinema theatres having two or more screens in the same premises, hotels of any class, marriage halls convention centres, shopping malls and multiplexes.

The Commission examined the proposal of KSEB Ltd. HT-IV (B) also a subsidising category with cost coverage more than 120%. The Commission approve a moderate increase in tariff to this category, as detailed below.

Table-7.77
Existing tariff and approved tariff for HT-IV (B) category

Particulars	Existing tariff	Proposed by KSEB Ltd	Approved by the Commission
Demand charge (Rs/ kVA/ month)	440	500	490
Energy charges (Ruling) (Rs/ kWh)			
(a) Monthly consumption upto 30000 units	6.60	6.80	6.90
(b) Monthly consumption above 30000 units	7.60	7.80	7.90

As proposed by KSEB Ltd, the Commission approve to categorize shopping malls , multiplex theaters within the shopping malls with more than one screens, hotels, convention centers, marriage halls etc under HT-IV (B) category.

High Tension-V- Domestic (HT-V)

7.80 As per the tariff order dated 08.07.2019, the tariff under this category is applicable to the domestic consumers in LT I availing supply of electricity at high tension. The existing tariff and the tariff proposed by KSEB Ltd for HT-V domestic categories is given below.

Table 7.78
Existing tariff and the tariff proposed by KSEB for HT-V category

Particulars	Existing	KSEB Ltd proposal				
		2022-23	2023-24	2024-25	2025-26	2026-27
Demand charge (Rs/ kVA/month)	390	450	470	480	490	500
Energy charge (Rs/ kWh)	5.80	6.20	6.30	6.30	6.40	6.50

The Commission examined the proposal of KSEB Ltd in detail. Considering the increase in average cost of supply and inflation since the last tariff dated 08.07.2019, the Commission approve a moderate increase in tariff for HT-V category for the year 2022-23, as detailed below.

Table 7.79
Existing tariff and the approved tariff for HT-V category for the year 2022-23

Tariff	Existing Tariff	Proposed by KSEB Ltd	Approved by the Commission
Demand charge (Rs/ kVA/ month)	390	450	425
Energy charges (Ruling) (Rs/ kWh)	5.80	6.20	6.15

HT- VI Tariff applicable to charging stations for Electric Vehicles

7.81 The Commission vide the tariff order dated 08.07.2019 has approved demand charge @Rs 250/kVA/month and energy charge @Rs 5.00 per unit of HT-VI tariff applicable for EV charging stations availing supply at HT. The tariff proposed by KSEB Ltd for HT EV charging stations is given below.

Table 7.80
Existing tariff and the tariff proposed by KSEB Ltd for HT-VI category

Particulars	Existing	KSEBL proposal				
		2022-23	2023-24	2024-25	2025-26	2026-27
Demand charge (Rs/ kVA/month)	250	0	0	0	0	0
Energy charge (Rs/ kWh)	5.00	7.30	7.75	7.73	7.82	7.90

7.82 As detailed above, KSEB Ltd proposed to dispense with the demand charge for EV charging stations availing supply at HT and proposed single part tariff linked to the average cost of supply of the respective years.

7.83 The Commission is not agreeing with the proposal of KSEB Ltd to dispense with the demand charge. The basic philosophy behind the demand charge is to levy a part of the fixed cost liability of the licensee through tariff. Considering the importance of migration of the fossil fuel to the electricity for vehicles, the Commission proposes only a meagre increase for EV stations as detailed below.

Table- 7.81
Existing tariff and the Approved tariff for HT-VI EV charging stations

Tariff	Existing	KSEB proposal	Approved by the Commission
Fixed charge (Rs/kW or part thereof)	250		270
Energy charge (Rs/ kWh)	5.00	7.3	6.00

7.84 The Commission further noted that, though the electricity tariff of the EV Charging stations is approved as above, these stations charging excessive rates from its users without any rationale. It is also noticed that, each stations

charging different rates from its users across the State citing the reason that the cost of infrastructure created for each EV charging stations are different.

The Commission noticed this anomaly. The basic issue here is that the EV users are not getting the benefit of concessional electricity tariff approved by the Commission for EV charging stations. The Commission is of the considered view that, the benefit of concessional tariff approved shall be passed to the EV users.

Considering these aspects in detail, the Commission here by fix the maximum retail tariff to be charged by EV Charging stations @ Rs 8.00/unit. The EV charging stations are not permitted to charge any excess amount towards electricity charges from its users. However, the EV charging stations may with the approval of the competent authority separately charge the cost of infrastructure as service charge if seems appropriate.

HT-VII Temporary Connections at HT

7.85 As per the tariff order dated 08.07.2019, the tariff applicable for availing temporary connections at HT for the purposes such as illumination, exhibition, festivals, public meetings, fairs etc as follows.

Table- 7.82
Existing tariff for HT-VII Temporary connections

HT VII- Temporary connections	
<i>Energy charge</i>	Rs 11.00 per unit
OR	
<i>Daily minimum Rs/kW or part thereof of connected load whichever is higher</i>	Rs 110.00/KW

KSEB Ltd has not proposed to increase the tariff of HT-VII Temporary connections. The Commission hereby orders to continue the existing tariff of HT-VII Temporary connections for the year 2022-23.

Extra High Tension (EHT) Industrial – 66 kV tariff

7.86 The tariff under this category is applicable to the general-purpose industrial loads at 66kV. The existing tariff and the tariff proposed by KSEB Ltd for this category is given below.

Table 7.83
Existing tariff and the tariff proposed by KSEB Ltd

Particulars	Existing	KSEBL proposal				
		2022-23	2023-24	2024-25	2025-26	2026-27
Demand charge (Rs/ kVA/month)	340	400	420	420	420	420
Energy charge (Rs/ kWh)	5.50	6.00	6.00	6.00	6.00	6.00

The Commission has carefully examined the tariff proposed by KSEB Ltd for EHT 66 kV Industrial category. KSEB Ltd has proposed an overall increase in tariff of 10.4% on this category. During the public hearing on the tariff proposals, the HT&EHT Electricity Industrial Consumers Association and other stake holders has raised serious concern on the excessive increase in demand charges proposed by KSEB Ltd.

The Commission noted these aspects in detail. Over the years, the Commission has been bringing down the tariff of EHT-66kV category at the average cost of supply. As per the prevailing tariff, the cost coverage of the EHT-66kV category was 100.87%. The Commission also noted the increase in average cost of supply by 13.61% and inflation by 19.05% since the last tariff revision. Considering all these factors, the Commission approves a moderate increase in tariff for EHT-66 kV category for the year 2022-23. The details are give below.

Table 7.84
Existing tariff, proposed tariff and approved tariff for EHT 66 kV

Tariff	Existing Tariff	Proposed by KSEB L	Approved by the Commission
Demand charge (Rs/ kVA/ month)	340	400	400
Energy charges (Ruling) (Rs/ kWh)	5.50	6.00	6.00

Extra High Tension (EHT) Industrial – 110 kV tariff

7.87 The tariff under this category is applicable to the general purpose industrial loads at 110kV. The existing tariff and the tariff proposed by KSEB Ltd for EHT-110kV category are given below.

Table 7.85
Existing tariff and the tariff proposed by KSEB Ltd for EHT 110 kV category

Particulars	Existing	KSEBL proposal				
		2022-23	2023-24	2024-25	2025-26	2026-27
Demand charge (Rs/ kVA/month)	330	390	400	410	415	420
Energy charge (Rs/ kWh)	5.40	5.90	5.90	5.90	5.95	6.00

The existing tariff for the EHT 110 kV is below the average cost of supply with cost coverage at 95.90%. Considering the importance of promoting industrial consumption, maintaining the system stability, employment generation, the Commission does not approve the excessive increase in electricity tariff as proposed by KSEB Ltd. However, duly considering the increase in ACoS and overall increase in inflation since the last tariff revision, the Commission hereby approves a moderate increase in tariff for EHT 110 kV category for the year 2022-23. The details are given below.

Table 7.86

Existing tariff, proposed tariff and approved tariff of EHT 110 kV for the year 2022-23

Tariff	Existing Tariff	Proposed by KSEB L	Approved by the Commission
Demand charge (Rs/ kVA/ month)	330	390	390
Energy charges (Ruling) (Rs/ kWh)	5.40	5.90	5.90

Extra High Tension (EHT) Industrial – 220 kV tariff

7.88 The tariff under this category is applicable to the general purpose industrial loads at 220kV.

The existing tariff and the tariff proposed KSEB Ltd for this category is given below.

Table 7.87

Existing tariff and the tariff proposed by KSEB Ltd for EHT 220kV category

Particulars	Existing	KSEBL proposal				
		2022-23	2023-24	2024-25	2025-26	2026-27
Demand charge (Rs/ kVA/month)	320	380	400	400	410	420
Energy charge (Rs/ kWh)	5.00	5.50	5.50	5.60	5.80	6.00

The existing tariff for the EHT 220 kV category is near to the average cost of supply. The Commission after duly considering the increase in ACoS and overall increase in inflation since the last tariff revision, hereby approves a moderate increase in tariff for EHT 220 kV category for the year 2022-23. The details are given below.

Table 7.88
Existing tariff, proposed tariff and approved tariff of EHT 220 kV for the year 2022-23

Tariff	Existing Tariff	Proposed by KSEB L	Approved by the Commission
Demand charge (Rs/ kVA/ month)	320	380	360
Energy charges (Ruling) (Rs/ kWh)	5.00	5.50	5.30

Extra High Tension (EHT) Commercial – (66 kV, 110kV, 220 kV)

7.89 The tariff under this category is applicable to the general purpose EHT commercial at **66 kV, 110kV, 220 kV**. **At present no consumer is availing supply at EHT commercial tariff.**

The existing tariff and KSEB proposal for revising the tariff of this category is given below.

Table 7.89
Existing tariff and the tariff proposed by KSEB Ltd for EHT Commercial category

Particulars	Existing	KSEBL proposal				
		2022-23	2023-24	2024-25	2025-26	2026-27
Demand charge (Rs/ kVA/month)	440	500	500	500	500	480
Energy charge (Rs/ kWh)						
(a) Monthly consumption upto 60000 units	6.10	6.50	6.50	6.50	6.50	6.30
(b) Monthly consumption above 60000 units	7.10	7.50	7.50	7.50	7.50	7.30

After due deliberations and carefully considering the increase in average cost of supply approved since last tariff revision, the Commission decided to approve the tariff of EHT Commercial category for the year 2022-23 as follows.

Table 7.90
Tariff approved for EHT Commercial category

Particulars	Existing tariff	Proposed by KSEB L	Approved by the Commission
Demand charge (Rs/ kVA/ month)	440	500	460
Energy charges (Ruling) (Rs/ kWh)			
(a) Monthly consumption upto 60000 units	6.10	6.50	6.20
(b) Monthly consumption above 60000 units	7.10	7.50	7.20

Extra High Tension –General A (EHT-General-A) (66 kV, 110kV, 220 kV)

7.90 EHT- General-A, tariff is applicable to the consumers enumerated under LT-VI(A) category, availing supply at EHT level.

Existing tariff and the tariff proposed by KSEB Ltd for EHT-General-A category is given below.

Table 7.91

Existing tariff and the tariff proposed by KSEB Ltd for EHT- General-A category

Particulars	Existing	KSEBL proposal				
		2022-23	2023-24	2024-25	2025-26	2026-27
Demand charge (Rs/ kVA/month)	340	420	430	450	470	480
Energy charge (Rs/ kWh)	5.30	5.80	5.90	6.10	6.20	6.30

The Commission examined the proposal of KSEB Ltd in detail. The tariff of this category is below the ACoS. After due deliberations, and also considering the increase in ACoS and inflation since the last tariff revision since 08.07.2019, the Commission hereby approves the tariff of the EHT-General-A category as follows.

Table 7.92

Tariff approved for EHT- General-A category

Tariff	Existing Tariff	Proposed by KSEB L	Approved by the Commission
Demand charge (Rs/ kVA/ month)	340	420	390
Energy charges (Ruling) (Rs/ kWh)	5.30	5.80	5.60

Extra High Tension –General – B (EHT-General-B) (66 kV, 110kV, 220 kV)

7.91 The tariff under this category is applicable to Indian Space Research Organisation (ISRO), utility services such as Airport, Self-Financing Educational Institutions and any other EHT consumers not included elsewhere.

KSEB Ltd vide the additional submission dated 25.02.2022, proposed to introduce a new tariff category ' EHT- General-C' and proposed to include the Airport, Self-Financing Educational Institutions and any other EHT consumers not included elsewhere in the new category.

The existing tariff and the tariff proposed by KSEB Ltd for EHT-General- B is given below.

Table 7.93
Existing tariff and the tariff proposed by KSEB Ltd for EHT- General-B category

Particulars	Existing tariff (EHT- General-B)	KSEBL proposal				
		2022-23	2023-24	2024-25	2025-26	2026-27
Demand charge (Rs/ kVA/month)	410	440	460	460	475	480
Energy charge (Rs/ kWh)						
(a) Monthly consumption upto 60000 units	5.80	6.15	6.20	6.20	6.25	6.30
(b) Monthly consumption above 60000 units	6.80	7.15	7.20	7.20	7.20	7.20

The Commission examined the proposal of KSEB Ltd in detail. The cost coverage of this category at the present tariff is about 148%, and hence the Commission cannot increase the cost coverage further. After due deliberations and carefully considering the increase in average cost of supply approved since last tariff revision, the Commission revise the tariff of the EHT-General-B category as below.

Table 7.94
Existing tariff, proposed tariff and approved tariff for EHT General B

Particulars	Existing tariff	Proposed by KSEB L	Approved by the Commission
Demand charge (Rs/ kVA/ month)	410	440	425
Energy charges (Ruling) (Rs/ kWh)			
(a) Monthly consumption upto 60000 units	5.80	6.15	6.00
(b) Monthly consumption above 60000 units	6.80	7.15	7.00

As proposed by KSEB Ltd, the Commission approves EHT General B as the tariff applicable to ISRO and Government research institutions.

Extra High Tension –General – C (EHT-General-C) (66 kV, 110kV, 220 kV)

7.92 KSEB Ltd vide the additional submission dated 25.02.2022, submitted to include a separate tariff category for Airport, Self-Financing Educational Institutions etc availing supply at EHT. The tariff proposed by KSEB Ltd for this category is given below

Table 7.95
Tariff proposed for EHT General C category

Particulars	Existing tariff (EHT- General-B)	KSEBL proposal				
		2022-23	2023-24	2024-25	2025-26	2026-27
Demand charge (Rs/ kVA/month)	410	460	480	480	480	480
Energy charge (Rs/ kWh)						
(a) Monthly consumption upto 60000 units	5.80	6.25	6.30	6.30	6.30	6.30
(b) Monthly consumption above 60000 units	6.80	7.25	7.30	7.30	7.30	7.30

- 7.93 The Commission examined the proposal of KSEB Ltd in detail. After due deliberations, the Commission hereby approves the tariff of EHT-General-C tariff for the year 2022-23 as follows.

Table 7.96
Existing tariff, proposed tariff and approved tariff for EHT General C

Particulars	Existing tariff	Proposed by KSEB L	Approved by the Commission
Demand charge (Rs/ kVA/ month)	410	460	450
Energy charges (Ruling) (Rs/ kWh)			
(a) Monthly consumption upto 60000 units	5.80	6.25	6.30
(b) Monthly consumption above 60000 units	6.80	7.25	7.30

The Commission approves the new category EHT General C as applicable to utility services such as Airports, self-financing educational institutions and any other EHT consumers not included elsewhere.

Railway traction 110 kV and ‘defence installations’ excluding defence housing colonies.

- 7.94 The tariff under this category is applicable to the electricity for traction availed by Railways at 110 kV level.

Railway is an important national facility and a resource. Apart from mass transportation of people, it is a very critical instrument for movement of goods from outside and within the State. Any substantial increase in electricity tariff to this national infrastructure will lead to railway tariff increase resulting in price rise and inflation. Further increase in electricity price in Kerala may set the tone for such increase in other States and in a consumption-based economy such as Kerala will have disastrous consequences.

Further, Hon’ble Defence Minister, vide the letter dated 28.02.2022 to the State Government requested as follows.

“The Military Stations/ Cantonments have single and married living accommodations for the Armed Forces Personnel and their families. The other accommodations are for offices and training purposes. There is no commercial activity involved by which revenues are generated from the local population. However, the electricity tariff rates charged to Military Stations/ Cantonments are at Bulk consumer rates normally at par with Non-Domestic users, as a result, the Armed Forces are paying higher tariffs which have a direct bearing on their Revenue Budget.

The Military Engineer Services (MES) is responsible for supplying electricity to all Military Stations/ Cantonments in the Country. For this purpose, the MES purchases electricity from the State DISCOMS (Distribution Companies) at High Tension (HT) voltages which is further distributed to all consumers through Low Tension (LT) network after step down process at respective MES Main Receiving Stations (MRS). The metering is done at MRS by installing HT electric meter, hence even the transmission/ line losses of HT 11 KV distribution network is borne by the MES. In addition, the complete management of power after MRS which includes step down transformer, metering and billing is done by the MES establishment.

It is observed that if the Defence consumers had been occupying accommodation in civil areas, they would have been in the category of Individual Domestic Consumers and accordingly would have been charged at lower tariff rates. Hence, in order to address this anomaly, it is important that a special tariff slab at par or lower than that applicable to domestic consumers be created for the Indian Armed Forces. This will assist the Armed Forces to utilize the Defence Revenue Budget for reinforcing the security related infrastructure of the Country

I would, therefore, request you that necessary instructions may be issued to the State Electricity Regulatory Commissions to consider the aforementioned proposal for creation of a separate tariff slab for the Armed Forces at par or lower than that applicable to the domestic consumers to boost the morale of the Armed Forces Personnel.”

Considering the above, the Commission has decided to extend the tariff rates approved for Railway tractions to all ‘defence installations’ excluding defence housing colonies. The tariff applicable to ‘railway traction’ is much less than the domestic tariff for availing supply at HT level. The Commission further clarify that, the housing colonies of the defence establishments may be charged at the applicable domestic tariff.

The existing tariff and the tariff proposed by KSEB Ltd for Railway traction is given below.

Table 7.97
Tariff proposed by KSEB Ltd for Railway traction

Particulars	Existing	KSEBL proposal				
		2022-23	2023-24	2024-25	2025-26	2026-27
Demand charge (Rs/ kVA/month)	300	360	380	380	380	380
Energy charge (Rs/ kWh)	5.10	5.60	5.60	5.60	5.60	5.60

Commission examined the proposal of KSEB Ltd in detail. The cost coverage of the Railway Traction tariff is within +_20% of the average cost of supply. After due deliberations and carefully considering the increase in average cost of supply approved since last tariff revision, the Commission hereby the approves the tariff for Railway traction for the year 2022-23 as follows.

Table 7.98
Existing tariff, proposed tariff and approved tariff for Railway Traction

Tariff	Existing Tariff	Proposed by KSEB L	Approved by the Commission
Demand charge (Rs/ kVA/ month)	300	360	340
Energy charges (Ruling) (Rs/ kWh)	5.10	5.60	5.40

Kochi Metro Rail Corporation Ltd (KMRL)

7.95 This tariff is applicable for traction for Kochi Metro Rail Corporation Ltd (KMRL). KMRL is a new infrastructural mass rapid transport facility. Such a facility has been setup to ease the difficulties of the travelling public and with a social obligation to society at large. Steep tariff increase will drive the new venture to bankruptcy. Hence, the Commission is of the view that, a reasonable tariff has to be approved for KMRL even if it involves subsidy to certain extent.

Existing tariff and the tariff proposed by KSEB Ltd for KMRL is given below.

Table 7.99
Tariff proposed by KSEB Ltd for KMRL

Particulars	Existing	KSEBL proposal				
		2022-23	2023-24	2024-25	2025-26	2026-27
Demand charge (Rs/ kVA/month)	275	320	325	345	360	380
Energy charge (Rs/ kWh)	4.80	5.25	5.30	5.40	5.50	5.60

The cost coverage of the KMRL is within +_20% of the average cost of supply. After due deliberations and carefully considering the increase in average cost of supply approved since last tariff revision, the Commission hereby approves the tariff of KMRL as follows.

Table 7.100
Existing tariff, proposed tariff and approved tariff for KMRL

Tariff	Existing Tariff	Proposed by KSEB Ltd	Approved by the Commission
Demand charge (Rs/ kVA/ month)	275	320	290
Energy charges (Ruling) (Rs/ kWh)	4.80	5.25	5.10

REVISION OF BULK SUPPLY TARIFF

7.96 The details of contract demand and annual consumption of licensees procuring power from KSEB Ltd and distributing it within their area of jurisdiction for the year 2022-23 is given below.

Table- 7.101
Details of the bulk licensees/ license holders

Sl No	Licensee	Billing Demand	Annual consumption
		(MVA)	(MU)
1	KPUPL	12.68	108.39
2	CSEZ	10.03	57.09
3	RPL	6.26	27.00
4	Technopark	15.75	93.96

Sl No	Licensee	Billing Demand	Annual consumption
		(MVA)	(MU)
5	CPT	7.22	38.65
6	Thrissur Corporation	27.88	172.06
7	Infopark	2.10	14.14
8	KDHPCL	12.39	70.94
9	Smart city	2.25	4.71
	Total	96.56	586.94

7.97 In addition, KSEB Ltd has been supplying power to Military Engineer Services (MES) and Chamundeswari Electricity Supply Corporation, Karnataka (CESCK) to supply electricity in the nearby borders of Kerala, at the bulk supply tariff approved by the Commission from time to time. The contract demand and annual consumption of MES and CESEK estimated by KSEB Ltd is given below.

Table 7.102
Existing tariff and the tariff proposed by KSEB Ltd for 2022-23

Sl No	Bulk consumer	Contract Demand	Annual consumption
		(MVA)	(MU)
1	MES	15.27	74.20
2	Karnataka	0.23	0.83
	Total	15.50	75.03

Out of the above, duly considering the request of the 'defence authorities', the Commission ordered to extend the subsidised tariff applicable to the 'railway traction to the defence installations.

7.98 The Commission has been adopting uniform retail supply tariff (RST) and differential bulk supply tariff (BST) for the other licensees in the State, such as Thrissur Municipal Corporation; KDHPCL, Munnar; Cochin Port Trust; Technopark; Infopark; CSEZA; KPUPL and RPIL, who procure power from KSEB Ltd for distributing within their areas of distribution. Further, the Commission fixes the BST rates payable by the said licensees to KSEB Ltd, in such a way that, the excess of revenue collected from their consumers after meeting their approved distribution cost and RoE is allowed to be passed on to KSEB Ltd by way of differential BST.

7.99 The existing BST and the BST proposed by KSEB Ltd for these licensees are given below.

Table 7.103
Existing tariff and tariff proposed by KSEB Ltd for Bulk Supply

Licensee	Existing Tariff		Proposed Tariff									
			2022-23		2023-24		2024-25		2025-26		2026-27	
	DC *	EC*	DC *	EC*	DC *	EC*	DC *	EC**	DC *	EC*	DC *	EC*
KPUPL	340	5.85	450	6.35	480	6.45	490	6.45	500	6.50	525	6.50
CSEZ	340	5.60	450	6.10	480	6.20	490	6.20	500	6.40	525	6.40
RPL	340	4.75	450	5.25	480	5.35	490	5.60	500	5.70	525	5.70
Technopark	340	5.50	450	6.00	480	6.10	490	6.20	500	6.30	525	6.30
CPT	340	6.10	450	6.60	480	6.70	490	6.70	500	6.90	525	6.90
TSR Corp	340	6.05	450	6.50	480	6.60	490	6.60	500	6.80	525	6.80
Info Park	340	5.65	450	6.15	480	6.25	490	6.35	490	6.45	525	6.45
KDHPCL	340	4.80	450	5.30	480	5.40	490	5.40	500	5.50	525	5.50
Smartcity	340	5.65	450	6.15	480	6.25	490	6.30	500	6.50	525	6.50

* DC = Demand charge (Rs/kVA/month)

** EC= Energy charge- Rs/kWh

The Commission, as per this order, has decided to revise the retail supply tariff (RST) of all the consumers of the State including the consumers of these licensees, such as domestic, LT-IV A Industry, LT-IV (B) IT and IT enabled services, HT-I(A) Industry, HT-I(B) Industry, HT-II(A) General and public lighting etc . This will result in additional revenue inflows by way of the revision of the RST of the above categories. The additional revenue expected to the licensees due to revision of the RST for the year 2022-23 is given below.

Table 7.104
Additional revenue expected to the small licensees by way of revising the RST for the year 2022-23

Sl No	Licensee	Additional revenue expected through tariff revision annually (Rs. Cr)
1	KPUPL	6.30
2	CSEZA	3.06
3	RPL	1.26
4	Technopark	4.80
5	CPT	2.30
6	TCED	8.90
7	KDHPCL	2.40
8	Infopark	0.60

7.100 After duly considering the revenue requirements of these licenses including the additional revenue anticipated due to revision of RST of their consumers as detailed under Table above, and also the accumulated surplus approved by this Commission in the orders on Truing up, the Commission hereby approves the BST applicable to these licensees for the year 2022-23 as follows.

Table 7.105
BST approved for the year 2022-23

	Licensee	Existing tariff		Proposed by KSEB Ltd		Approved by the Commission	
		Demand charge	Energy charge	Demand charge	Energy charge	Demand charge	Energy charge
		(Rs/ kVA/ month)	(Rs/ kWh)	(Rs/ kVA/ month)	(Rs/ kWh)	(Rs/ kVA/ month)	(Rs/ kWh)
1	KPUPL	340	5.85	450	6.35	380	6.15
2	CSEZ	340	5.60	450	6.10	380	6.15
3	RPL	340	4.75	450	5.25	380	5.50
4	Technopark	340	5.50	450	6.00	380	6.00
5	CPT	340	6.10	450	6.60	380	6.25
6	Thrissur Corporation	340	6.05	450	6.50	380	6.50
7	Infopark	340	5.65	450	6.15	380	5.90
8	KDHPCL	340	4.80	450	5.30	380	5.30
9	Smart city	340	5.65	450	6.15	380	5.90

7.101 The Existing BST and the KSEB Ltd proposal and the BST approved by the Commission for bulk consumers availing power from KSEB Ltd other than licenses for the year 2022-23 is given below.

Table 7.106
Existing tariff and KSEB Ltd proposal and approved tariff for Bulk consumers other than licensees for the year 2022-23

	Licensee	Existing tariff		Proposed by KSEB Ltd		Approved by the Commission	
		Demand charge	Energy charge	Demand charge	Energy charge	Demand charge	Energy charge
		(Rs/ kVA/ month)	(Rs/ kWh)	(Rs/ kVA/ month)	(Rs/ kWh)	(Rs/ kVA/ month)	(Rs/ kWh)
1	Bulk consumers other licensees as per Table 7.105 above	390	5.85	500.00	6.35	400	6.10

Summary of the Tariff Revision

7.102 Based on the approved tariff as above, the average tariff increase and additional revenue realisation on yearly basis is given below.

Table 7.107
Revenue at existing tariff and Approved tariff

Tariff Category	Revenue expected for the FY 2022-23 at existing tariff	Revenue expected for the Year 2022-23 at tariff proposed by KSEB		Revenue at Commission approved tariff	
		Amount	Increase (annual)	Amount	Increase (annual)
	(Rs. Cr)	(Rs. Cr)	(Rs. Cr)	(Rs. Cr)	(Rs. Cr)
LT categories					
LT-I Domestic	6474.16	7653.55	1179.39	6920.33	446.17
LT Industries	825.24	941.47	116.23	854.38	29.14
LT-V Agriculture	104.93	136.56	31.64	114.17	9.24
LT-VI General	1584.69	1790.08	205.39	1658.20	73.51
LT-VII Commercial	1740.20	1977.60	237.40	1812.80	72.60
LT-VIII Public lighting	146.76	165.65	18.90	160.57	13.82
HT Categories					
HT-1 Industry	1670.73	1862.44	191.71	1802.27	131.54
HT-II	695.58	754.23	58.65	757.33	61.75
HT-III	5.71	6.91	1.20	6.41	0.71
HT-IV	666.95	706.97	40.02	712.16	45.21
HT-V	17.64	19.24	1.60	18.84	1.20
HT-VI EV	18.91	23.22	4.32	22.33	3.42
EHT category					
EHT-66 kV	195.00	215.31	20.31	215.31	20.31
EHT-110 kV	449.01	496.20	47.19	496.20	47.19
EHT 220 kV	82.14	91.70	9.56	88.07	5.93
EHT Gen	48.00	52.09	4.09	49.78	1.78
Railways & defense installations	203.20	227.12	23.92	218.08	14.88
KMRL	6.31	7.01	0.70	6.69	0.38
Licensees & Bulk consumers	422.80	469.83	47.03	454.95	32.15
Addl revenue			2239.25		1010.94

7.103 The cost coverage and the increase in tariff at the approved rate is given below.

Table 7.108
Cost coverage at approved tariff and increase in tariff

Tariff category	Cost coverage		Average tariff (Rs/ kWh)		Increase in tariff over previous revision
	At the tariff and ACoS as per the order dated 08.07.2019	Cost coverage at the approved tariff for 2022-23	At the tariff and ACoS as per the order dated 08.07.2019	At the approved tariff for 2022-23	
LT categories					
LT-I Domestic	78.58%	73.93%	4.79	5.12	6.89%
LT Industries	120.99%	117.60%	7.38	8.15	10.43%
LT-V Agriculture	44.15%	42.29%	2.69	2.93	8.81%
LT-VI General	156.71%	144.34%	9.56	10.00	4.64%
LT-VII Commercial	158.85%	145.65%	9.69	10.09	4.17%
LT-VIII Public lighting	79.17%	76.24%	4.83	5.28	9.42%
LT total	94.98%	88.56%	5.79	6.14	5.93%
HT Categories					
HT-1 Industry	116.96%	111.06%	7.13	7.70	7.87%
HT-II	134.34%	128.75%	8.19	8.92	8.88%
HT-III	92.69%	91.71%	5.65	6.36	12.40%
HT-IV	162.37%	152.61%	9.90	10.58	6.78%
HT-V	131.57%	123.68%	8.03	8.57	6.79%
HT EV	97.43%	101.28%	5.94	7.02	18.10%
EHT category					
EHT-66 kV	100.87%	98.04%	6.15	6.79	10.42%
EHT-110 kV	95.90%	93.29%	5.85	6.46	10.51%
EHT 220 kV	101.40%	95.69%	6.19	6.63	7.22%
EHT Gen	138.58%	126.51%	8.45	8.77	3.72%
Railways	103.62%	97.88%	6.32	6.78	7.32%
KMRL	105.90%	98.86%	6.46	6.85	6.05%
Licensees & Bulk consumers	104.70%	99.17%	6.39	6.87	7.60%

As above, the Commission made efforts to move closer towards the Tariff Policy Requirement of +-20% of the average cost of supply. This has done by enhancing the tariff of the subsidised category towards 80% of the average cost of supply, and by reduces the cost coverage and cross subsidy level of all subsidising categories in the approved tariff for the year 2022-23 as shown in the Table 7.108 above.

OTHER CHARGES

(Transmission charges, wheeling charges, cross subsidy surcharges, pooled cost of power purchase)

Transmission charges

7.104 The energy input, transmission losses, the energy handled by the Transmission system for the year 2022-23, as approved by the Commission in the preceding chapters is given below.

Table 7.109
Energy flow in the transmission system for the year 2022-23

Sl No	Particulars	
1	Energy injected into the system (MU)	28024.76
2	Transmission loss	3.40%
3	Loss of energy (MU)	952.84
4	Energy handled in transmission(MU)	27071.92

7.105 As detailed under Chapter-5, the total ARR of SBU-T of KSEB Ltd approved for the year 2022-23 is Rs 1310.51 crore. The peak demand expected to be met in 2022-23 is 4638 MW.

7.106 Based on the approved ARR of the SBU-T for the year 2022-23 and also based on the approved energy sales, the transmission charges approved for the year 2022-23 is given in the Table below.

Table 7.110
Transmission charges estimated for the year 2022-23

Particulars	Estimate of the Commission
Net ARR of SBU-T for the year 2022-23(Rs. Crore)	1310.51
Energy handled in Transmission system for the year 2022-23 (MU)	27071.92
Transmission charges (Rs/unit)	0.48
Peak demand for the year 2022-23(MW)	4638
Transmission charges (Rs/MW/day)	10751.90

7.107 However, considering various steps taken by the licensees to control its O&M expenses etc, the Commission decide to allow an increase of 13% on the transmission charges approved for the previous MYT period vide the order dated 08.07.2019.

Accordingly, the Commission approve the transmission charges for the year 2022-23 @Rs 0.44/unit. The transmission charges per MW per day is approved as Rs.9869/ MW/day for those who avail the transmission system of KSEB Ltd. The above rate is applicable upto 31.03.2023. The Commission may, through separate proceedings based on a petition filed by KSEB Ltd, determine the retail tariff including transmission charges w.e.f 01.04.2023.

7.108 The transmission charges as approved above shall be applicable to all consumers of the State, who are availing open access facility, irrespective of whether the consumers belong to the KSEB Ltd or other licensees availing power from KSEB Ltd.

SLDC charges

7.109 The net ARR of the SLDC for the year 2022-23 is Rs 12.71 crore. As stated earlier, the anticipated peak demand is 4638 MW. Based on the approved figures, the SLDC charges approved for the year 2022-23 is given below.

Table 7.111
SLDC charges approved for the year 2022-23

Particulars	Estimate of the Commission
Net ARR of SLDC for the year 2022-23(Rs. Crore)	12.71
Peak demand for the year 2022-23(MW)	4638
SLDC charges(Rs/MW/day)	104

However, the Commission decided to limit the SLDC charges payable @ Rs 95/MW/day for the year 2022-23. All the open access consumers and registered users of the intra-state transmission system of the State shall pay SLDC charges as approved by the Commission above.

Wheeling charges at HT level

7.110 As per the Regulation-86 of the Tariff Regulations, 2021, the wheeling charges of the distribution licensee may be determined on the basis of segregated accounts of the distribution wire business. The relevant provisions in the Tariff Regulations, 2021 is extracted below.

“86. Determination of Wheeling charges.–

(1) The wheeling charges of the distribution business/ licensee may be determined by the Commission on the basis of the segregated accounts filed by the licensee for distribution wires business.

(2) In case, the distribution business/ licensee is not able to file audited/ certified separate accounts for the distribution wires business and retail supply business,-

(i) The distribution business/ licensee shall file to the Commission for its approval, an allocation matrix for segregation of the expenses between the distribution wires business and the retail supply business with proper justification and certification by the statutory auditor;

(ii) The Commission may take appropriate decision on such allocation matrix for segregation of expenses between the distribution wires business and the retail supply business.

(3) The wheeling charges payable by a user of the distribution system of the distribution business/ licensee may comprise of the demand charges or variable charges or any combination thereof, as may be stipulated by the Commission in such order.”

7.111 KSEB Ltd has not submitted the details of the distribution wire business separately. However, KSEB Ltd in their petition submitted that, the ARR of the BU-D at HT level as 25% of the total ARR of the SBU-D. Accordingly, the distribution ARR at the SBU-D at HT level is adopted as 25% of the distribution ARR, excluding the cost of generation, power purchase and intra-state transmission charges for determining the wheeling charges.

7.112 The energy handled by the HT system of KSEB Ltd for the year 2022-23 is given below.

Table 7.112
Energy handled at HT level for FY 2022-23

SI No	Particulars	Quantity
1	Energy handled at Transmission system (MU)	26968.63
2	Energy sale at EHT level (MU)	2117.11
3	Energy input to distribution system of KSEB Ltd (excluding sale at EHT level & transmission losses) = (1)-(2) in MU	24851.52
4	Loss at HT level	4.15%
5	Loss at HT level in MU	1031.34
6	Net Energy handled at HT level = (3)-(5) in MU	23820.19

7.113 Out of the total distribution ARR approved for the FY 2022-23, the amount considered for determining the wheeling charge is given below.

Table 7.113
SBU- Distribution ARR approved for the year 2022-23

Item	Rs. Crore
O&M Expenses	3,345.05
Interest & finance charges	1649.61
Interest on Additional Bond to Trust	333.42
Depreciation	266.09
Return on Equity	253.5
Recovery of previous revenue gap	850.00
Repayment of bond	339.42
Less Non Tariff/Other Income	829.04
Distribution ARR	6,208.05

7.114 Based on the above details, the wheeling charges estimated by the Commission is given below.

Table 7.114
Wheeling charges estimated by the Commission for the year 2022-23

SI No	Particulars	Estimated by the Commission
1	ARR of the SBU-D of KSEB Ltd (excluding PP cost & Intra-state transmission charges)	(Rs. Cr) 6,208.05

Sl No	Particulars		Estimated by the Commission
2	Distribution ARR at HT level considered for approving wheeling charges (25% of the ARR of SBU-D)	(Rs. Cr)	1552.01
3	Energy handled at HT level	(MU)	23820.19
4	Wheeling charges at HT level =(2)/(3)	(Rs/unit)	0.65

However, considering the various cost control measures initiated by KSEB Ltd, the Commission decided to limit the recovery of wheeling charge for the year 2022-23 at Rs 0.61 per unit for the year 2022-23. The approved rate is applicable only upto 31.03.2023. The Commission may, through separate proceedings based on a petition filed by KSEB Ltd, determine the retail tariff including transmission charges w.e.f 01.04.2023.

Cross Subsidy Surcharge (CSS)

7.115 The Regulation 89 of the KSERC (Terms and Conditions for Determination of Tariff) Regulations 2021 (herein after referred as the Tariff Regulations, 2021), specify the procedures for determination of Cross Subsidy Surcharge payable by the open access consumers, which is extracted below for ready reference.

“89. Cross Subsidy Surcharge and Additional surcharge.–

(1) The consumers who are permitted open access shall pay to the distribution business/ licensee in whose area the consumer is located, a cross subsidy surcharge as per the formula specified in the Annexure 6 to these Regulations.

(2) In addition, the Open access consumer is liable to be charged ‘Additional surcharge on charges of wheeling’, as approved by the Commission.

(3) The cross subsidy surcharge and the additional surcharge shall be levied in the manner specified in the Kerala State Electricity Regulatory Commission (Connectivity and Intra state Open Access) Regulations, 2013, as amended from time to time.

(4) The amount received by the distribution business/ licensee by way of crosssubsidy surcharge and additional surcharge, as approved by the Commission, shall be deducted from the Aggregate Revenue Requirement while calculating the tariff for distribution business/ licensee.”

The Annexure-6 of the Tariff Regulations, 2021 specify the formula for calculating the cross-subsidy surcharge, which is extracted below.

“ Cross subsidy surcharge shall be calculated as per following formula:

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 if S is computed to be negative as per the above Formula, S shall be considered as zero:

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

Provided also that the Commission may after recording the reason thereof, order the levy of the surcharge determined for consumers of a distribution licensee, from consumers of one or more other distribution licensees:

Provided also that the Commission in consultation with the Government may exempt levy of cross subsidy surcharge on Railways, as defined in the Railways Act 1989 (Central Act No 24 of 1989), on electricity purchase for its own consumption.”

7.116 As per the Tariff approved by the Commission, the average tariff for the various HT&EHT consumers is given below.

Table 7.115
Average tariff of consumers availing supply at HT & EHT level

Category	Annual consumption 2022-23	Annual revenue at approved tariff for 2022-23	Avg Tariff
	(MU)	(Rs. Cr)	(Rs/ kWh)
EHT- 66 kV	316.92	215.31	6.79
EHT-110 kV	767.53	496.20	6.46
EHT 220 kV	132.80	88.07	6.63
EHT- Gen A	12.93	8.40	6.50
EHT- Gen B	43.85	41.38	9.44
EHT- Gen C			9.00
Railways	321.49	218.08	6.78
KMRL	9.76	6.69	6.85
HT-1(A) Industry	2326.67	1789.71	7.69
HT-I(B) Industry	15.05	12.56	8.35
HT-II(A)	205.64	161.52	7.85
HT-II (B)	643.19	595.81	9.26
HT-III(A)	7.96	5.24	6.59
HT-III(B)	2.13	1.17	5.49
HT- IV (A)	346.01	356.06	10.29
HT-IV (B)	327.36	356.10	10.88
HT-V	21.98	18.84	8.57

7.117 The weighted average cost of power purchase approved for the year 2022-23 as per the approved ARR of SBU-D is given below.

Table 7.116
Weighted average cost of power purchase for the year 2022-23

Sl No	Particulars	Quantity	Amount
		(MU)	(Rs. Cr)
1	Own Generation	7034.34	613.86
2	Cost of power purchase	22936.62	9833.64
3	Less surplus sale	1946.22	729.83
4	Net Generation & power purchase for sale within the State	28024.74	9717.67
	Weighted average cost of Power Purchase (Rs/unit)		3.47

7.118 The component 'L' in the surcharge formula is the aggregate of transmission, distribution and wheeling charges applicable to the relevant voltage level. The transmission loss for providing supply at EHT level is 3.40% and the aggregate transmission and distribution loss for providing supply at HT level is 7.4%.

7.119 The component 'D' is the aggregate of the transmission, distribution and wheeling charges applicable to the relevant voltage level. The transmission charges approved is Rs 044/unit.

The wheeling charge approved including carrying cost is Rs 0.61/unit. The per unit carrying cost for the year 2022-23 is Rs 0.13/unit. Since the CSS formula accounts the carrying cost component 'R' of the regulatory assets separately, the wheeling cost excluding the per unit carrying cost amounts to Rs 0.48/unit only considered for CSS computation.

7.120 Based on the above, the cross-subsidy surcharge approved for the consumers who avail open access is given below.

Table 7.137
Cross subsidy surcharge approved

Category	T =Avg tariff (Rs/unit)	C= Avg. cost of PP (RS/unit)	L =Aggregate transmission & distribution loss (in %)	D= transmission and wheeling charges (Rs/unit)	R= Perunit carrying cost	Surcharge as per formula (Rs/unit)	Surcharge limit (20% avg. tariff) (Rs/unit)	Cross subsidy surcharge approved (Rs/unit)
EHT- 66 kV	6.79	3.47	3.4%	0.44	0.13	2.63	1.36	1.36
EHT-110 kV	6.46	3.47	3.4%	0.44	0.13	2.30	1.29	1.29
EHT 220 kV	6.63	3.47	3.4%	0.44	0.13	2.47	1.33	1.33
EHT- Gen A	6.50	3.47	3.4%	0.44	0.13	2.33	1.30	1.30
EHT- Gen B	9.44	3.47	3.4%	0.44	0.13	5.27	1.89	1.89
EHT -Gen C	9.00	3.47	3.4%	0.44	0.13	4.84	1.80	1.80

Category	T =Avg tariff (Rs/unit)	C= Avg. cost of PP (RS/unit)	L =Aggregate transmission & distribution loss (in %)	D= transmission and wheeling charges (Rs/unit)	R= Perunit carrying cost	Surcharge as per formula (Rs/unit)	Surcharge limit (20% avg. tariff) (Rs/unit)	Cross subsidy surcharge approved (Rs/unit)
Railways	6.78	3.47	3.4%	0.44	0.13	2.62	1.36	1.36
KMRL	6.85	3.47	3.4%	0.44	0.13	2.69	1.37	1.37
HT-1(A) Industry	7.69	3.47	7.4%	0.92	0.13	2.89	1.54	1.54
HT-I(B) Industry	8.35	3.47	7.4%	0.92	0.13	3.55	1.67	1.67
HT-II(A)	7.85	3.47	7.4%	0.92	0.13	3.06	1.57	1.57
HT-II (B)	9.26	3.47	7.4%	0.92	0.13	4.47	1.85	1.85
HT-III(A)	6.59	3.47	7.4%	0.92	0.13	1.79	1.32	1.32
HT-III(B)	5.49	3.47	7.4%	0.92	0.13	0.69	1.10	0.63
HT- IV (A)	10.29	3.47	7.4%	0.92	0.13	5.49	2.06	2.06
HT- IV (B)	10.88	3.47	7.4%	0.92	0.13	6.08	2.18	2.18
HT-V	8.57	3.47	7.4%	0.92	0.13	3.77	1.71	1.71

7.121 Since the Commission has been following uniform retail supply tariff (RST) for all consumers irrespective of whether the consumers are availing supply from KSEB Ltd or other licensees and differential BST for other licensees who are purchasing power from KSEB Ltd for distributing within their area of jurisdiction, the Commission orders that, cross subsidy surcharge as approved above, are applicable to KSEB Ltd and all other licensees operating in the State.

Low voltage supply surcharge

7.122 The Regulation 9 of the Kerala Electricity Supply Code, 2014 (hereinafter referred as KESC, 2014) provide as under:

“9. Low voltage supply surcharge.-Consumers availing supply at voltage lower than the one specified in Regulation 8 for the respective limits of connected load or contract demand shall pay the low voltage supply surcharge to the licensee at the rates as approved by the Commission from time to time in the tariff order.”

7.123 The Commission has noted that, there are many consumers with KSEB Ltd and other licensees, having connected load above 100kVA, but availing supply at LT. As per the Regulation - 9 of the KESC, 2014, such consumers shall pay low voltage supply surcharge at the rate approved by the Commission.

7.124 In the tariff order dated 08.07.2019, the Commission has approved the Low voltage supply surcharge as the difference between the demand charge/ fixed charge at HT level and the same at the LT level. The consumers who continue

to avail supply at LT, though are required to avail supply at HT as per the Supply Code, 2014 has to pay the low voltage supply surcharge, in addition to the fixed charge/ demand charge at LT and energy charge at LT.

7.125 The existing low voltage supply surcharge and the same proposed by KSEB Ltd is given below.

Table 7.138
Existing and proposed low voltage supply surcharge

Category	Existing rate	Proposed by KSEB Ltd for the FY 2022-23
Consumers Listed under LT-1 domestic		
Consumers listed under LT-IV (A) category	Rs 170/kVA/month	Rs 240/kVA/month
Consumers listed under LT-IV (B) category	Rs 175/kVA/month	Rs 230/kVA/month
Consumers listed under LT- V (A) category		Rs 205/ kVA/ month
Consumers listed under LT- V (B) category		Rs 218/ kVA/ month
Consumers listed under LT-VI(A) category	Rs 268/kW/month	Rs 303/kW/month
Consumers listed under LT-VI(B) category	Rs 253/kW/month	Rs 263/kW/month
Consumers listed under LT-VI(C) category	Rs 216/ kW/month	Rs 200/kW/month
Consumers listed under LT-VI(F) category	Rs 256/kW/month	Rs 240/kW/ month
Consumers listed under LT-VI (G) category	Rs 256/kW/month	Rs 240/kW/ month
Consumers listed under LT-VII (A) category	Rs 256/kW/month	Rs 240/kW/ month
Consumers listed under LT-VII(C) category	Rs 296/kW/month	Rs 250/kW/ month

7.126 KSEB Ltd further submitted that, at present LT-1 Domestic and LT V (A) Agricultural consumers do not have the facility to opt for demand based tariff . Hence these categories are being levied with low voltage surcharge for their entire connected load without reckoning their actual power demand. Hence KSEB Ltd requested to extend optional demand based Tariff to all categories of consumers.

7.127 The Commission carefully considered the proposal submitted by KSEB Ltd in their petition. The Commission noted that, many of the residential flat owners having connected load of the common connections more than 100kW, had represented before the Commission to allow to avail 'demand based tariff and also permit them to continue their common connection load' at LT by paying low voltage surcharge. The Commission after examining the issue in detail, decided to extend 'optional demand based tariff to all LT categories' henceforth.

7.128 A comparison of the fixed charge/ demand charge at LT and HT level approved for various consumer categories are given below.

Table 7.139
Difference between fixed charge/demand charge at LT and HT for different consumer categories

Particulars	Fixed charge/ demand charge at LT	Demand charge at HT	Difference with a PF @0.90 for converting kVA to KW
Consumers listed under LT 1 A	Rs 250.00/ kVA/ month	Rs 425/ KVA/month	Rs 175/ kVA/month
Consumers listed under LT-IV (A) category	Rs 185/ kVA/ month	Rs 390.00/kVA/month	Rs 205/kVA/month
Consumers listed under LT-IV (B) category	Rs 200/ kVA/ month	Rs 410/kVA/month	Rs 210/kVA/month
Consumers listed under LT- V (A) category	Rs 15/kW/month	Rs 240/kVA/month	Rs 201/kW/month
Consumers listed under LT- V (B) category	Rs 15/kW/month	Rs 240/kVA/month	Rs 201/kW/month
Consumers listed under LT-VI(A) category	Rs 70/ kW/ month	Rs420/KW/month	Rs 308/kW/month
Consumers listed under LT-VI(B) category	Rs 90/kW/month	Rs 500/kVA/month	Rs 360/KW/month
Consumers listed under LT-VI(C) category	Rs 180/ kW/month	Rs 500/kVA/month	Rs 270/kW/month
Consumers listed under LT-VI(F) category	Rs 170/kW/month	Rs 500/kVA/month	Rs 280/kW/month
Consumers listed under LT-VI(G) category	Rs 150/kW/month	Rs 500/kVA/month	Rs 300/kW/month
Consumers listed under LT-VII (A) category	Rs 160/kW/month	RS 490/kVA/month	Rs 281/kVA/month
Consumers listed under LT-VII(C) category	Rs 115/kW/month	RS 490/kVA/month	Rs 326/kVA/month

7.129 Based on the above, the low voltage supply surcharge the Commission hereby approve for consumers having connected load/ contract demand above 100 kW/kVA and availing supply at LT level as shown below.

Table 7.140
Low voltage supply surcharge approved

Category	Existing rate	Approved by the Commission
Consumers Listed under LT-1 domestic*		Rs 175/ kVA/month
Consumers listed under LT-IV (A) category	Rs 170/kVA/month	Rs 205/kVA/month
Consumers listed under LT-IV (B) category	Rs 175/kVA/month	Rs 210/kVA/month
Consumers listed under LT- V (A) category		Rs 201/kW/month
Consumers listed under LT- V (B) category		Rs 201/kW/month
Consumers listed under LT-VI(A) category	Rs 268/kW/month	Rs 308/kW/month
Consumers listed under LT-VI(B) category	Rs 253/kW/month	Rs 360/KW/month
Consumers listed under LT-VI(C) category	Rs 216/ kW/month	Rs 270/kW/month
Consumers listed under LT-VI(F) category	Rs 256/kW/month	Rs 280/kW/month
Consumers listed under LT-VI (G) category	Rs 256/kW/month	Rs 300/kW/month
Consumers listed under LT-VII (A) category	Rs 256/kW/month	Rs 281/kVA/month
Consumers listed under LT-VII(C) category	Rs 296/kW/month	Rs 326/kVA/month

* Domestic consumers with connected load above 100kW shall avail Optional Demand Based Tariff for availing low voltage surcharge

Note.

In the case of the consumers opt for 'optional demand based tariff' the low voltage surcharge shall be the difference between the demand charge at HT supply and the optional demand based tariff at LT.

Power factor incentive and penalty

7.130 KSEB Ltd requested to retain the power factor penalty and incentive as per the Tariff Order dated 08.07.2019 in OP No. 15/2018.

7.131 The power factor penalty and incentive approved by the Commission vide the Tariff Order dated 08.07.2019 in OP No. 15/2018 is extracted below.

Power factor incentive / disincentive

The following incentive and disincentive shall be applicable to LT industrial consumers with a connected load of and above 20 kW, HT&EHT Consumers for power factor improvement.

<u>PF range (lag)</u>	<u>Incentive/ Penalty</u>
<u>Incentive</u>	
Above 0.95 and upto 1.00	0.50% of the Energy Charge for each 0.01 unit increase in power factor from 0.95
<u>Penalty</u>	
0.90 and upto 0.95	0.50% of the energy charges for every 0.01 fall in PF below 0.95 and upto 0.90
below 0.90	1% of the energy charge for every 0.01 fall in PF from 0.90

Note:- No penalty and incentives for consumers with leading power factor.

7.132 The Commission also noted that, M/s Cochin Port Trust vide the Petition No. OP 53/2021 had requested to allow the power factor incentive to the licensee M/s Cochin Port Trust at the approved rate as per the order dated 08.07.2019 in Petition OP No. 15/2018, who purchase power from KSEB Ltd.

7.133 The Regulation 85(11) of the Regulation 85(11) of the KSERC (Terms and Conditions for Determination of Tariff) Regulations, 2021, (herein after referred as Tariff Regulations, 2021) provide as follows.

“(11) The Commission shall prescribe in the Tariff Order, appropriate incentive/disincentive for maintaining the power factor of the distribution system, at a level between 0.95 lag and 0.95 lead as specified in the Central Electricity Authority (Technical Standards for Connectivity to the Grid) Regulations 2007, as amended from time to time, to certain category of consumers including Bulk consumers/ distribution licensees in the State.”

These Regulations are applicable from 01.4.2022.

7.134 Considering the Regulations 85(11) of the Tariff Regulations, 2021, the Commission here by orders that, the ‘power factor incentive and penalty approved by the Commission as extracted under paragraph 7.131 of this order shall be applicable a to all Bulk consumers/ distribution licensees in the State.

Meter rent

(a) Consumer meter

7.135 KSEB Ltd in the Tariff Petition dated 10.02.2022 submitted that, the Commission vide the tariff order dated 08.07.2019 in petition OA No. 15/2018 had approved the meter rent as follows.

Table- 7.141
Meter rent approved vide MYT order dated 08.07.2019

Sl.No.	Description	Meter rent approved (meter/month)
1	Single phase static energy meters with LCD and ToD facility and with ISI certification	6
2	Three phase static meters with LCD and ToD facility with ISI certification	15
3	LT CT operated three phase four wire static energy meters (Class 0.5 accuracy) with LCD and ToD facility and ISI certification	30
4	3 phase AC static tri-vector energy meters with ABT, ToD facility and compliant to Device Language Message specification (DLMS) protocol	1000

KSEB Ltd not proposed any revision for consumer meters from the existing rate..

Considering the request of KSEB Ltd, the Commission hereby orders to continue to levy the existing meter rent as above till further orders.

(b) Meter rent for Renewable Energy Meter

7.136 KSEB Ltd proposed the meter rent of Renewable Energy meter as follows.

Table 7.142
Meter rent proposed for RE meters

Sl.No.	Item	Monthly Meter Rent(Rs)
1	Renewable Energy meter - Single phase 2 wire 5-30-A,static LCD meters with TOD facility	10
2	Renewable Energy meter - Three phase 10-60A static LCD meters with TOD facility	20
3	Renewable Energy meter - LTCT Meter DLMS Class 0.5 S -/5A	25
4	Renewable Energy meter - 3 Phase 4 Wire, CT/PT Operated, HT, Static Energy Meters of Class 0.2S Accuracy + GPRS Modem	200
5	Renewable Energy Meter - 3 Phase 4 Wire, CT/PT Operated, EHT, Static Energy Meters of Class 0.2S Accuracy+ GPRS Modem	200
6	Net Meter - single phase 5-30A class 1.0	30
7	Net Meter - Three phase 10-60A class 1.0	35
8	Net Meter- LTCT meter, class 0.5S,-/5A	70
9	Net meter- CTPT operated HT meter Class 0.2S	435

7.137 The Commission has examined the meter rent proposed by KSEB Ltd in detail. The licensee had submitted the details of the cost of RE meter based on the latest purchase orders of KSEB Ltd and its details are give below.

Table 7.143
Cost of RE meter claimed by KSEB Ltd as per the latest purchase order

Sl No	Item	KSEBL claim-Cost of meter as per latest purchase order
		(Rs)
1	Renewable Energy meter - Single phase 2 wire 5-30-A,static LCD meters with TOD facility	603
2	Renewable Energy meter - Three phase 10-60A static LCD meters with TOD facility	1449
3	Renewable Energy meter - LTCT Meter DLMS Class 0.5 S -/5A	2070
4	Renewable Energy meter - 3 Phase 4 Wire, CT/PT Operated, HT, Static Energy Meters of Class 0.2S Accuracy + GPRS Modem	11487.6 + 4489.9 = 15978
5	Renewable Energy Meter - 3 Phase 4 Wire, CT/PT Operated, EHT, Static Energy Meters of Class 0.2S Accuracy+ GPRS Modem	11487.6 + 4489.9 = 15978
6	Net Meter - single phase 5-30A class 1.0	760
7	Net Meter - Three phase 10-60A class 1.0	2188.99
8	NetMeter- LTCT meter,class 0.5S,-/5A	5500
9	Netmeter- CTPT operated HT meter Class 0.2S	36000

7.138 The useful life of RE meters is about 15 years. Further the average interest rate of SBU-D as per the ARR petition for the MYT from 2022-23 to 2026-27 is 9.9%. Based on the above, the meter rent is estimated in such a way that the cost of meter with interest is fully recovered within the useful life in equated monthly instalment basis. Accordingly, the meter rent approved by the Commission is given below.

Table 7.144
Meter rent approved for RE meters

Sl.No.	Item	Monthly Meter Rent(Rs)
		Approved by the Commission
1	Renewable Energy meter - Single phase 2 wire 5-30-A,static LCD meters with TOD facility	10
2	Renewable Energy meter - Three phase 10-60A static LCD meters with TOD facility	20
3	Renewable Energy meter - LTCT Meter DLMS Class 0.5 S -/5A	25
4	Renewable Energy meter - 3 Phase 4 Wire, CT/PT Operated, HT, Static Energy Meters of Class 0.2S Accuracy + GPRS Modem	200
5	Renewable Energy Meter - 3 Phase 4 Wire, CT/PT Operated, EHT, Static Energy Meters of Class 0.2S Accuracy+ GPRS Modem	200
6	Net Meter - single phase 5-30A class 1.0	30
7	Net Meter - Three phase 10-60A class 1.0	35
8	Net Meter- LTCT meter, class 0.5S,-/5A	70
9	Net meter- CTPT operated HT meter Class 0.2S	435

Proposal for changing the time zone for ToD pricing

7.139 KSEB Ltd proposed that, as duration of the three time zones as per the prevailing tariff order dated .08.07.2019 is given below.

08.00 hrs to 18.00 hrs	Normal time zone
18.00 hrs to 22.00 hrs	Peak time zone
22.00 hrs to 06.00 hrs (next day)	Off peak time zone

KSEB Ltd further submitted that, in the power exchanges, the duration of the peak hours is from 17:00 hrs to 23:00 hrs instead of 18:00 hrs to 22:00 hrs. Hence, KSEB Ltd has to supply costly power procured from the exchanges to its consumers at an incentivized rate during 22.00 hrs to 23.00 hrs. In order to address the financial loss on account of variation in peak hour time zone, KSEB Ltd requested before the Commission to accord an in-principle approval to change the peak ToD time zone from (18.00 hrs - 22.00 hrs) to (17.00 hrs - 23.00 hrs) at the time of installing smart meters as part of RDSS, through ARR& ERC petition. KSEB Ltd also requested to allow to file a comprehensive proposal before the Hon'ble Commission prior to the commencement of scheme.

7.140 The Commission hereby allow KSEB Ltd to submit a comprehensive proposal on the installation of smart meters through RDSS scheme. Along with the

proposal, KSEB Ltd may take up the matter on shifting of load curve with suitable incentive also for off-peak consumption with all relevant details and supporting documents. **Till such time, the Commission hereby direct KSEB Ltd to continue with the present duration of each time zone under ToD tariff as per the order of the Commission dated 08.07.2019 in Petition OA No. 15/2018.**

ANNEXURE

KERALA STATE ELECTRICITY REGULATORY COMMISSION THIRUVANANTHAPURAM

SCHEDULE OF TARIFF AND TERMS AND CONDITIONS FOR RETAIL SUPPLY OF ELECTRICITY BY KERALA STATE ELECTRICITY BOARD LIMITED AND ALL OTHER LICENSEES WITH EFFECT FROM 26.06.2022 to 31.03.2023

(Vide order dated 25.06.2022 in OP No. 11/2022)

Unless the context otherwise requires, the words and expressions used in this schedule shall be as defined in the Electricity Act, 2003 or in the Regulations specified by the Kerala State Electricity Regulatory Commission and shall have the meaning respectively assigned to them in the Act or in the Regulations mentioned above.

The tariff mentioned in this Schedule shall apply to consumers to whom the Kerala State Electricity Board Limited or other distribution licensee has undertaken or undertakes to supply electricity, notwithstanding anything to the contrary contained in any agreement entered into with any consumer earlier by the Kerala State Electricity Board, or other distribution licensees or Government of Kerala or in any of the Tariff Regulations or rules and / or orders previously issued.

The rates specified in this Schedule are exclusive of Electricity Duty and / or surcharge and/or any other cess, taxes, minimum fees, duties and other impositions existing or that may be levied or imposed in future by the Government or the Commission, which are payable in addition to the charges payable as per the tariff mentioned in this Schedule.

PART A - LOW TENSION (LT) TARIFF

The expression 'Low Tension Consumer' (LT) means a consumer who is supplied with electrical energy at low or medium voltage by the Kerala State Electricity Board Limited and other distribution licensees in the State. The voltage limits specified for low tension supply are however subject to the variations allowed under the provisions of the Kerala Electricity Supply Code, 2014.

General Conditions

1. The minimum charge payable by all LT consumers shall be the fixed charge or demand charge as the case may be of the respective category even during the period of disconnection.
2. All LT Industrial (both LT-IV (A) and LT-IV (B) consumers) and LT Agricultural consumers shall, for power factor improvement, install static capacitors with ISI certification as specified in Annexure C attached to this schedule and obtain the approval of the licensee. Such consumers shall submit to the licensee, an application for approval of the capacitor, as soon as it is installed. The licensee shall communicate to the consumer, its decision about such approval or otherwise within a period of 15 days from the date of submission by the consumer, the application for approval of capacitor. If the licensee does not communicate to the consumer its decision about such approval or otherwise within a period of 15 days, it shall be deemed that the licensee has granted the required approval for the installation of the capacitor.
3. For LT Industrial and Agricultural consumers who have not installed capacitors with ISI certification of specified value, the fixed charge and energy charge shall be higher by 20% of the tariff applicable to the respective categories.
4. For the consumers using welding sets without installing capacitors with ISI certification of specified value, the fixed charge and energy charge shall be higher by 30% of the tariff applicable to the respective categories.
5. The officer of the licensee who is authorized to take meter reading shall inspect the static capacitor and ensure that it is functioning properly. If such officer notices that the static capacitor has become faulty or unserviceable, he shall forthwith intimate the matter to the officer in charge of the Electrical Section / Sub-division of Kerala State Electricity Board Limited or to the concerned officer in the case of other distribution licensees, who shall issue notice to the consumer directing him to replace such faulty or unserviceable capacitor within one month or within such other time limit as stipulated by the concerned officer of the licensee. The consumer shall replace such faulty /unserviceable capacitors within the time limit as directed by the officers of

the licensee.

6. If the capacitor is not replaced or put back into service duly repaired, to the satisfaction of the concerned officer of Kerala State Electricity Board Limited or of other distribution licensees, as the case may be, within one month or such other time limit as stipulated by the concerned officer of the licensee, enhanced charges as per clause 3 or clause 4 above shall be payable for the whole period during which the capacitor remains faulty or unserviceable.
7. Such consumers other than those in LT-IV Industry and LT-V Agriculture category who install capacitors as specified above shall be eligible for a rebate at the rate of 5% on the energy charges. Such rebate shall be allowed from the billing month succeeding the month in which the approval / deemed approval has been obtained for the capacitors installed by the consumer. No rebate is admissible on the fixed charges.
8. (a) Power supply for common facilities in high rise buildings/ apartment complex etc used exclusively for domestic (housing) purpose such as fire control, common lighting, lifts, water pumping, sewage treatment, waste disposal, offices of the residential associations in residential apartment complexes shall be billed at domestic tariff.
(b) Power supplies to common facilities in high rise buildings mainly for domestic occupation shall be under the domestic tariff if the connected load other than for domestic purpose, is less than 5% of the total load.
9. (a) Power supply for common facilities such as fire control, common lighting, lifts, water pumping, sewage treatment, waste disposal etc in the high rise buildings, for the occupation by consumers in LT-VI or in LT-VII categories shall be charged at the respective tariffs for such categories.

(b) In the case of combination of occupation of different categories of consumers, common facilities shall be charged at the highest of LT-VI or LT-VII tariff applicable to such categories.
10. ToD tariff shall be applicable to all LT-IV Industrial consumers (except the pumphouses of Kerala Water Authority) having connected load above 20 kW and to LT-I domestic consumers (3 Phase) having monthly consumption

above 500 units. The charges and other terms & conditions for ToD tariff shall be as per Annexures 'A, D & E' to this schedule.

11. Optional Demand Based Tariff can be availed by all categories of consumers other than those billed under ToD Tariff as per the conditions in Annexure – F to this schedule.
12. The consumers who are required to avail supply at HT and above as per the Regulation 8 of the Kerala Electricity Supply Code, 2014, but availing supply at LT, shall pay the low voltage surcharge at the following rates.

Low voltage supply surcharge for consumers having connected load/ contract demand above 100 kVA and availing supply at LT level

Category	Approved by the Commission
Consumers Listed under LT-1 domestic*	Rs 175/ kVA/month
Consumers listed under LT-IV (A) category	Rs 205/kVA/month
Consumers listed under LT-IV (B) category	Rs 210/kVA/month
Consumers listed under LT- V (A) category	Rs 201/kW/month
Consumers listed under LT- V (B) category	Rs 201/kW/month
Consumers listed under LT-VI(A) category	Rs 308/kW/month
Consumers listed under LT-VI(B) category	Rs 360/KW/month
Consumers listed under LT-VI(C) category	Rs 270/kW/month
Consumers listed under LT-VI(F) category	Rs 280/kW/month
Consumers listed under LT-VI (G) category	Rs 300/kW/month
Consumers listed under LT-VII (A) category	Rs 281/kVA/month
Consumers listed under LT-VII(C) category	Rs 326/kVA/month

* Domestic consumers shall avail Optional Demand Based Tariff for availing the benefit of low voltage surcharge

LOW TENSION – I- DOMESTIC (LT- I)

The tariff applicable to supply of electrical energy for domestic purpose (both single phase and three phase)

Low Tension - I- Domestic (LT- I)				
Monthly consumption slab	Fixed charge		Energy Charge	Remarks
	(Rs/ Consumer/ month)			
	Single phase	Three phase	(Rs/Unit)	
0-40	Nil		1.50	This rate is applicable only to BPL category with connected load of and below 1000 watts.
0-50	35	90	3.15	Telescopic
51-100	55	120	3.95	
101-150	70	150	5.00	
151-200	100	160	6.80	
201-250	110	175	8.00	
0-300	130	175	6.20	Non- Telescopic
0-350	150	175	7.00	
0-400	175	175	7.35	
0-500	200	200	7.60	
Above 500	225	225	8.50	

Note-1. Fixed charges shall not be applicable to consumers belonging to below poverty line (BPL) category with connected load of and below 1000 watts and monthly consumption of and below 40 units.

Note-2. BPL family having cancer patients or permanently disabled persons as family members due to polio or accidents, and consume upto 100 units per month shall be billed @Rs 1.50/unit, provided their connected load is of and below 1000 watts.

Note-3. Home stay units approved as such by Department of Tourism shall be billed under LT-I domestic.

Note-4. Domestic consumers shall be allowed to utilize electrical energy in a portion of their residence for their own use for purposes other than domestic if the connected load for the purposes other than for domestic, in their premises does not exceed 20% of the total connected load or 1000 Watts whichever is less. When connected load other than for domestic use in such cases exceeds 20% of the

total connected load or 1000 Watts whichever is less, such loads shall be segregated and separate service connection shall be obtained under appropriate tariff. When this is not done, the tariff applicable to the whole service connection shall be at the appropriate tariff applicable to the connected load used for purposes other than domestic, if such tariff is higher than the tariff for LT-I category.

Note.5: (a) The tariff for domestic consumption by the families of the victims of endosulfan tragedy in Hosdurg and Kasaragod Taluks of Kasaragod District shall be Rs.1.50 / unit for a monthly consumption up to 150 units. If the consumption of the consumer, who is eligible for the above concession, exceeds 150 units per month, the consumption in excess of 150 units will be charged at the rates specified for the slabs 151-200 units or 201-250 units as the case may be. This concession will not be available for the consumers with monthly consumption above 250 units.

(b)The consumer who is eligible for this concession granted to endosulfan victims has to submit to the officer in charge at the section office of the licensee, a certificate from the revenue authorities or from the local self-government authority to prove his / her eligibility for this tariff concession.

Note-6: (a) The following water supply schemes, solely for domestic purposes shall be charged under domestic tariff.

- (i) water supply schemes under Jananidhi, Jaladhara or Swajaladhara Projects;
- (ii) water supply schemes coming under water supply societies or under beneficiary committees;
- (iii) water supply schemes for Scheduled Caste (SC) and / or Scheduled Tribe (ST) colonies;
- (iv) water supply schemes for Laksham Veedu Settlements taken over and managed by Local Self Government Institutions;
- (v) social drinking water supply schemes established using local area development funds of Members of Legislative Assembly (MLA) and / or Members of Parliament (MP);
- (vi) social drinking water supply schemes established using funds of Local Self Government Institutions;
- (vii) social drinking water supply schemes under Peoples Participatory Schemes (PPS);
- (viii) Rajeev Gandhi Drinking Water Schemes managed by beneficiary groups.

(b) The method for billing for the above mentioned water supply schemes solely for domestic purpose shall be as specified hereunder;

(c) The total monthly consumption of electricity of the units of such water supply schemes will be divided by the number of beneficiary households and the average consumption per households will be billed under LT – I domestic tariff. The amount of electricity charges assessed for the average consumption per beneficiary household will then be multiplied by the number of beneficiary households to assess the total electricity charges to be paid by the units of such schemes.

(d) Anganwadies, if any, availing drinking water from the above water supply schemes shall also be considered as a beneficiary availing the water supply for domestic purpose and the benefit of such community drinking water schemes shall be extended to them.

Note-7: All the consumers billed under *LT II Colonies* erstwhile shall be billed under LT I Domestic category from the date of this Order.

LOW TENSION – III TEMPORARY SERVICES INCLUDING TEMPORARY CONNECTIONS AND EXTENSION (LT- III)

Low Tension – III (A) Temporary connections {LT III (A)}

Tariff applicable for single or three phase temporary connections for purposes such as illumination, exhibition, festivals, public meeting and fairs.

LT – III (A) Temporary connections	
Energy Charge (Rs/kWh)	15.00
OR	
Daily minimum of Rs.150 /kW or part thereof of the connected load, whichever is higher	

Note: 40% concession in the rates shall be allowed if the connection is for;

(c) the exhibitions conducted or sponsored by the Government or Local Self-Government institutions or by Government educational institutions or by Public Sector Undertakings and the exhibitions

conducted by recognized private educational institutions;

- (d) Festivals of religious worship centres for the illumination, public address system and security lighting. (This concession is limited to the energy availed by the religious worship centres and not by other agencies who function in the premises of religious worship centres where festival is being organized).

LOW TENSION – III (B) - TEMPORARY EXTENSIONS {LT III (B)}

Applicable to temporary extension taken from the premise of existing consumers.

LT – III (B) TEMPORARY EXTENSIONS
Fixed charges per day - Rs.65/kW or part thereof of, the temporarily connected load plus the application fee, test fee etc. Energy charges shall be recovered from the consumer wherefrom extension is availed, at the tariff applicable to him

Note: Temporary extension shall be allowed only for a maximum period of 15 days at a time.

LOW TENSION IV - INDUSTRY (LT- IV)

(a) LT- IV (A) – INDUSTRY

LT-IV (A) Industrial tariff is applicable for the general purpose industrial loads (single or three phase) which include,-

- (i) manufacturing units,
- (ii) grinding mills, flour mills, oil mills, rice mills,
- (iii) saw mills, units using electric hydraulic axe machine to break down logs into small pieces.
- (iv) ice factories,
- (v) rubber smoke houses, tyre vulcanizing/re-treading units, units manufacturing rubber sheets from latex, coconut drying units,
- (vi) workshops using power, mainly for production and/or repair,
- (vii) public waterworks, drinking water pumping for public by Kerala Water Authority, Corporations, Municipalities and Panchayats, telemetry stations of KWA, pumping water for non- agricultural purposes, sewage pumping units,
- (viii) power laundries,

- (ix) screen printing of glass ware or ceramic, SSI units engaged in computerized colour printing excluding photo studios/ colour labs.
- (x) audio/video cassette/CD manufacturing units,
- (xi) printing presses including presses engaged in printing dailies,
- (xii) bakeries (where manufacturing process and sales are carried out in the same premises)
- (xiii) diamond- cutting units, stone crushing units, granite cutting units (where boulders are cut into sheets in the same premises)
- (xiv) book binding units with allied activities,
- (xv) garment making units,
- (xvi) seafood processing units, prawn peeling and processing units, granite cutting units (where large granite blocks are cut into sheets in the same premises),
- (xvii) plantations of cash crops, tea factories, cardamom drying and curing units,
- (xviii) units carrying out extraction of oil in addition to the filtering and packing activities carrying out in the same premise and under the same service connection,
- (xix) dairy, processing of milk by pasteurization and its storage and packing,
- (xx) soda manufacturing units, bottling plants/ packaging drinking water.
- (xxi) Crematoria.
- (xxii) Dewatering of agriculture land.
- (xxiii) Dewatering of water logged areas.

LT - IV (A) INDUSTRY	
(a) Fixed Charge	
(i) Connected load of and below 10 kW (Rs. per consumer per month)	120
(ii) Connected load above 10kW and up to 20 kW (Rs. per kW or part thereof per month)	80
(iii) Connected load above 20kW (Rs. per kVA or part thereof per month)	185
(b) Energy Charge (Rs/unit)	
Connected load of and below 10 kW	5.80
Connected load above 10kW and up to 20 kW	5.80
Connected load above 20 kW	5.85

Note: 1- Workshops with automobile service stations shall segregate the workshop load for availing the benefit of industrial tariff. If loads are not segregated the charges shall be realized at the rates applicable to automobile service stations.

Note: 2- General conditions relating to installation of capacitors will apply.

(b) LOW TENSION – IV (B) – IT and IT Enabled Services. {LT IV (B)}

Tariff applicable to Information Technology (IT) and IT enabled services including akshaya-e-centres, computer consultancy services units, call centers, software services, data processing activities, desktop publishing (DTP), software development units and such other IT enabled services.

LT - IV (B) IT and IT Enabled Services	
Fixed Charge	
(i) Connected load of and below 10kW (Rs. per consumer per month)	165
(ii) Connected load above 10 kW and up to 20kW (Rs. per kW or part thereof per month)	120
(iii) Connected load above 20 kW (Rs. per kVA or part thereof per month)	200
Energy Charge (Rs/kWh)	
Connected load of and below 10kW	6.50
Connected load above 10 kW and up to 20kW	6.50
Connected load above 20 kW	6.60

Note: General conditions relating to installation of capacitors will apply.

LOW TENSION - V- AGRICULTURE

(a) LT- V AGRICULTURE (A) {LT- V (A)}

This tariff applicable to the use of electricity for:

- (3) pumping, dewatering and lift irrigation for cultivation of food crops, fruits and vegetables.
- (4) pumping, dewatering and lift irrigation for the cultivation of cash crops such as cardamom and coffee and for the cultivation of crops such as

coconut, areca nut, pepper, nutmeg, cloves, cocoa and betel leaves as pure crops or as inter crops.

LT - V (A)- Agriculture	
Fixed Charge (Rs. per kW or part thereof per Month)	15
Energy Charge (Rs/kWh)	2.30

Note:-1 General conditions relating to installation of capacitors will apply.

2. The electricity for pumping and lift irrigation for the cultivation of cash crops only are included under LT V(A) agriculture tariff and the electricity for general purpose industrial loads like drying, further processing, value addition etc. of plantation of cash crops shall be billed under LT IV(A) tariff'.

(b) LT – V - AGRICULTURE (B) {LT -V (B)}

The tariff under this category is applicable to the supply of electricity for the use of the following activities such as,-

- (i) livestock farms, combination of livestock farms with dairy, poultry farms, rabbit farms, piggery farms, hatcheries,
- (ii) silk worm breeding units, sericulture,
- (iii) floriculture, tissue culture, agricultural and floricultural nurseries, mushroom culture,
- (iv) aquaculture, fish farms including ornamental fish farms, prawn farms, other aqua farms, aquarium run by the Agency for Development of Aquaculture, Kerala, and
- (v) cheenavala without fish farming and egger nurseries

LT - V (B)- Agriculture	
Fixed Charge (Rs. per kW or part thereof per Month)	15
Energy Charge (Rs/kWh)	3.30

Note1: General conditions relating to installation of capacitors will apply.

Note-2: LT-V (B) Agriculture tariff is applicable to the dairy farms, which have facilities for collection, chilling and storing of milk, till it is sent to the processing units, and also applicable to the primary milk producer's co-operative societies, the primary function of which is the collection of milk from the farmers and to sell the same to the processing units in bulk. This tariff will be also applicable for retail sales outlets if the connected load of sales outlets does not exceed 10% of the total connected load.

Note-3: The electricity used for running electric motors for making rubber sheets from Latex by individual farmers shall be billed under LT-V- Agriculture (B) [LT-V(B)].

Note -4: The electricity used for running Shredding machines used for powdering dry waste such as coconut leaves, coconut husk, grass etc by individual farmers

LOW TENSION –VI GENERAL

LT-VI- General (A) [LT- VI (A)]

The tariff under LT-VI (A) category is applicable to,-

- (i) Government or Government aided educational institutions; libraries and reading rooms of Government or Government aided educational institutions.
- (ii) Primary health centres, dispensaries and hospitals under the Central Government or State Government or Local Self Government Institutions; X-Ray units, laboratories, blood banks, mortuaries and such other units attached to such primary health centres, dispensaries and hospitals; blood banks of IMA; poly clinics under Ex-servicemen Contributory Health Scheme (ECHS).
- (iii) Centres for religious worship such as temples, mosques and churches; institutions imparting religious education, monasteries and convents;

LT - VI GENERAL (A)	
(a) Fixed Charge (Rs. per kW or part thereof per Month)	70
(b) Energy Charge (Rs/kWh) (Non telescopic)	
(i) Of and Below 500 kWh (all units)	5.80
(ii) Above 500 kWh (all units)	6.65

LT- VI GENERAL (B)

The tariff under this category is applicable to,-

- (xix) offices and institutions under the State or Central Governments or under the Local Self Government Institutions, except those which are included in the category LT-VI General (C); village offices; Government Treasuries.
- (xx) offices of the Corporations, Boards and other Public Sector Undertakings under State or Central Governments;
- (xxi) offices of the Kerala Water Authority (KWA), Kerala State Road Transport Corporation (KSRTC) and Kerala State Water Transport Corporation (KSWTC);
- (xxii) museum and / or zoo;
- (xxiii) hostels of educational institutions affiliated to Universities, hostels under the control of the Director of Technical Education or the Director of Medical Education or the Director of Public Instruction or such other institutions of Government, hostels run by the State or Central Government, hostels run by State Social Welfare Board, hostels run by institutions registered under the Travancore - Cochin Literary, Scientific and Charitable Societies Registration Act, 1955 (12 of 1955) or under the Societies Registration Act, 1860 (21 of 1860) or under Indian Trust Act, 1882, the donations to which are exempted from payment of Income Tax; Working women hostels operating under the scheme approved by the Ministry of Women and Child Development, Government of India, hostels under the supervision and monitoring of Department of Social Welfare, Government of Kerala;
- (xxiv) Pay wards and institutions of Kerala Health Research and Welfare Society (KHRWS);
- (xxv) travellers' bungalows, rest houses and guest houses under government; Police Clubs,
- (xxvi) type writing institutes;
- (xxvii) offices of social service organizations, offices of service pensioners' associations.
- (xxviii) offices of political parties not approved by the Election Commission of India;
- (xxix) collection centres of 'FRIENDS'; single window service centres under Department of Information Technology;

- (xxx) offices of Department of Posts, all post offices including extra departmental (ED) post offices;
- (xxxi) cameras at traffic signal points, surveillance cameras installed by the Local Self Government Institutions.
- (xxxii) offices of KMRL
- (xxxiii) Old age homes which charge the inmates for boarding and lodging.
- (xxxiv) Offices of Railways including Railway Stations,
- (xxxv) Light houses
- (xxxvi) Offices of the document writers.

LT - VI GENERAL (B)	
(a) Fixed Charge (Rs. per kW or part thereof per Month)	90
(b) Energy Charge (Rs/kWh) (Non-telescopic)	
(i) Of and below 500 kWh (all units)	6.50
(ii) Above 500 kWh (all units)	7.15

LT- VI GENERAL (C)

The tariff under this category is applicable to:

- (i) offices or institutions under Income Tax or Central Excise and Customs Departments,
- (ii) offices under Motor Vehicles Department or Sales Tax department or Excise Department; Sub-Registry offices; and such other tax earning departments under State or Central Government (other than Local Self Government Institutions);
- (iii) banking and / or financing institutions (excluding micro financing institutions registered and functioning as per the guidelines issued by Reserve Bank of India);
- (iv) ATM counters including the ATM counters of post offices.
- (v) offices of Airport Authority of India except airports;
- (vi) Insurance companies,
- (vii) Offices of the Goods and Service Tax (GST)
- (viii) Microfinancing Institutions,
- (ix) Offices of the LIC Agents
- (x) Offices of the pawn brokers; and
- (xi) any other LT categories not included anywhere in this schedule.

LT - VI GENERAL (C)	
(a) Fixed Charge (Rs. per kW or part thereof per Month)	180
(b) Energy Charge (Rs/unit) (Non telescopic)	
(i) Upto 500 units (all units)	7.15
(ii) Above 500 units (all units)	8.65

LT- VI GENERAL (D)

The tariff under LT-VI (D) category is applicable to:

- (i) orphanages;
- (ii) anganwadis; schools and hostels for differently abled or physically challenged persons (including mentally retarded students, deaf/dumb/blind/physically handicapped persons),
- (iii) old age homes where no charges are levied for the boarding and lodging of inmates,
- (iv) Cheshire homes; polio homes; SoS Childrens' Villages,
- (v) charitable centres for cancer care, pain and palliative care and HIV rehabilitation,
- (vi) charitable hospital guidance centres registered under the Travancore - Cochin Literary, Scientific and Charitable Societies Registration Act, 1955 (12 of 1955) or under the Societies Registration Act, 1860 (21 of 1860) or under Indian Trust Act, 1882, donations to which are exempted from payment of Income Tax,
- (vii) shelters exclusively for orphaned animals and birds run by charitable institutions registered under the Travancore - Cochin Literary, Scientific and Charitable Societies Registration Act, 1955;
- (viii) libraries and reading rooms with connected load of and below 2000 watts and monthly consumption of and below 100 units.
- (ix) e-toilet and public comfort stations, where no charges levied for use.
- (x) Dialysis centres providing free dialysis to the poor

LT - VI GENERAL (D)	
(a) Fixed Charge/ consumer/ month	Rs.35.00
(b) Energy Charge (Rs/kWh)	2.10

LT VI GENERAL (E)

The tariff under LT-VI(E) category is applicable to:

- (i) sports and / or arts clubs (with connected load not exceeding 2000 Watts);
- (ii) sailing and / or swimming clubs (with connected load not exceeding 2000 Watts);
- (iii) gymnasium (with connected load not exceeding 2000 W);
- (iv) libraries and reading rooms excluding those which are included in LT VI-A and LT VI-D categories,
- (v) press clubs;
- (vi) offices of political parties approved by Election Commission of India;
- (vii) e-toilet and public comfort stations, where charges are levied for use

LT-VI-GENERAL (E)	
Particulars	Approved tariff
(a) Fixed charge (Rs/ consumer/month)	
Single phase consumers	40
Three phase consumers	100
(b) Energy charges (Rs /kWh) (Non telescopic)	
0 to 50 units per month	3.65
0 to 100 units per month	4.65
0 to 200 units per month	5.35
Above 200 units per month	7.05

LT VI GENERAL (F)

The tariff under LT- VI (F) is applicable to:

- (x) Computer training institutes, private coaching or tuition centres, self-financing educational institutions including the hostels run by them,
- (xi) Cinema studios, audio/video cassette recording/duplication units, CD recording units, cinema dubbing and animation studios,
- (xii) All construction works,

- (xiii) Installations of cellular mobile communications, satellite communications, offices and / or exchanges of telecom companies,
- (xiv) Offices or institutions of All India Radio (AIR), Doordarshan and other television broadcasting companies, cable TV networks, radio stations,
- (xv) Hall marking centres.
- (xvi) Offices of the advocates or chartered accountants or company secretary or consulting engineers or tax consultants or architects or cost accountants or of management consultants.
- (xvii) Offices of the 'on line news channels and on line portals'.
- (xviii) Printing press engaged in printing dailies along with online media channels.

LT VI GENERAL (F)	
Fixed charge (Rs/ kW or part thereof per month)	
Single Phase	85
Three phase	170
Energy Charge (Rs per unit) (Non- telescopic)	
0 to 100 units per month	6.00
0 to 200 units per month	6.80
0 to 300 units per month	7.50
0 to 500 units per month	8.15
above 500 units per month	9.25

LT-VI- GENERAL (G)

The tariff under this category is applicable to all the private hospitals, private clinics, private clinical laboratories, private X-ray units, private mortuaries, private blood banks and private scanning centers and such other private institutions in health care sector.

LT VI General (G)	
Fixed charge (Rs/ kW or part thereof per month)	
Single Phase	70
Three phase	150
Energy Charge (Rs per unit) (Non-telescopic)	
0 to 500 units per month	5.85
0 to 1000 units per month	6.60
0 to 2000 units per month	7.70
Above 2000 units per month	8.60

LOW TENSION - VII – COMMERCIAL

LT- VII-Commercial (A) [LT- VII (A)]

The tariff under LT-VII (A) category is applicable to commercial and trading establishment such as,

- (i) shops, showrooms, display outlets, business houses,
- (ii) hotels and restaurants (having connected load exceeding 2000 Watts),
- (iii) house boats
- (iv) private lodges, private hostels, private guest houses, private rest houses, private travellers bungalows,
- (v) freezing plants, cold storages, milk chilling plants for the purpose of marketing the milk and milk products.
- (vi) shops selling confectioneries, sweetmeat, breads and such other eatables without manufacturing process,
- (vii) petrol/diesel/ LPG /CNG bunks, LPG bottling plants,
- (viii) automobile service stations, computerized wheel alignment centres,
- (ix) marble and granite cutting units,
- (x) units carrying out filtering, packing and other associated activities of oil brought from outside,
- (xi) share broking firms, stock broking firms, marketing firms,
- (xii) godowns of Kerala State Beverages Corporations,
- (xiii) photo studios/ colour labs

LT VII Commercial (A)		
(a) Fixed charge (Rs/ kW or part thereof per month)		
(i)	Single Phase	80
(ii)	Three phase	160
(b) Energy Charge (Rs per unit) (Non telescopic)		
(i)	0 to 100 units per month	6.05
(ii)	0 to 200 units per month	6.80
(iii)	0 to 300 units per month	7.50
(iv)	0 to 500 units per month	8.15
(v)	Above 500 units per month	9.40

LT- VII Commercial (B) [LT-VII-B]

Tariff applicable to commercial and trading establishments such as,-

- (i) shops, bunks, hotels, restaurants, having connected load of and below 2000 Watts.
- (ii) telephone / fax / e-mail / photocopy booths and internet cafes having connected load of and below 2000 Watts.

When connected load of the above mentioned consumers exceeds 2000 Watts, such consumers shall be charged under LT -VII (A) tariff. If monthly consumption of LT- VII (B) consumers having connected load of and below 2000 Watts, exceeds 300 units, the energy charges shall be realized at the rate of energy charges applicable to LT -VII (A) consumers.

LT - VII Commercial (B)		
(a) Fixed Charge		
Upto 1000 watts (Rs/consumer/month)		50
Above 1000 watts and upto 2000 watts (Rs. Per kW/month)		60
(b)Energy charge (Rs/unit) (Non telescopic)		
(i)	0 to 100 units	5.30
(ii)	0 to 200 units	6.10
(iii)	0 to 300 units	6.70

LT- VII Commercial (C) [LT-VII-C]

The tariff under LT VII (C) is applicable to,-

- (i) cinema theatres;
- (ii) circus;
- (iii) sports and arts clubs, sailing or swimming clubs and gymnasium having connected load exceeding 2000W.
- (iv) Stadiums, turf courts, and indoor courts.
- (v) Multiplexes

LT - VII Commercial (C)	
(a) Fixed Charge (Rs. per kW or part thereof / Month)	115
(b) Energy Charge (Rs/ unit) (Non telescopic)	
(i) Upto 1000 units	6.30
(ii) Above 1000 units	7.70

LOW TENSION – VIII PUBLIC LIGHTING (LT- VIII)

LT – VIII (A) Unmetered street lights {LT VIII (A)}

Tariff applicable to various categories of unmetered public lighting per lamp.

LT – VIII (A) – Composite Tariff approved for Unmetered Street Lights				
TYPE OF LAMP	Watts (W)	Rs/Lamp/Month		
		Burning Hours per day		
		4 Hours	6 Hours	12 Hours
Ordinary	40	26	39	79
Ordinary	60	39	59	121
Ordinary	100	66	99	199
Fluo tube	40	26	39	79
Fluo tube	80	52	79	159
Floodlight	1000	664	996	1993
MV Lamp	80	60	83	170
MV Lamp	125	90	133	264
MV Lamp	160	114	170	340
MV Lamp	250	177	264	531
MV Lamp	400	284	423	848
SV Lamp	70	50	76	149
SV Lamp	80	57	83	170
SV Lamp	100	70	106	212
SV Lamp	125	90	133	264
SV Lamp	150	106	159	318
SV Lamp	250	177	264	531
CFL	11	6	10	19
CFL	14	8	12	25
CFL	15	9	13	26
CFL	18	11	15	31
CFL	22	13	19	38
CFL	30	18	26	52
CFL	36	21	31	63
CFL	44	25	38	76
CFL	72	42	63	125
CFL	144	83	125	249
LED	9	2	3	8
LED	12	3	4	11
LED	15	4	5	14
LED	18	4	9	16
LED	20	6	9	18
LED	24	8	11	24
LED	25	8	11	25
LED	30	9	13	30
LED	35	11	16	31
LED	40	12	18	36
LED	45	13	19	42
LED	70	21	31	63
LED	80	23	36	72
LED	110	32	51	98
LED	150	44	69	134
MV Lamp on semi high mast only for 12 hrs burning per day	1200			2566
SV Lamp on semi high mast only for 12 hrs burning per day	250			535

LT – VIII (B) METERED STREET LIGHTS AND TRAFFIC SIGNAL LIGHTS

{LT-VIII (B)}

Tariff applicable for metered street lights and tariff signal lights.

LT – VIII (B) Tariff for Metered Street Lights and Traffic Signal Lights	
(a) Fixed charge (Rs/ meter/month)	75
(b) Energy Charge (Rs/unit)	4.70

Note: 1.- When public lighting is to be done after extension of lines, the beneficiaries shall pay the cost of the work as per the cost data approved by the Commission.

Note: 2.- In campuses where lines and lights are provided by the beneficiary, LT metered supply shall be provided at Rs. 4.70 per unit plus fixed charge of Rs.75.00 per meter per month subject to other conditions regarding the payment of cost of the work.

Note: 3.- Supply to light houses when taken from the street mains of Kerala State Electricity Board Limited or any other licensee will be charged at appropriate public lighting tariff. Where metered independent supply is provided at low tension, the rate applicable will be Rs. 4.70 per unit plus fixed charge at Rs.75.00 per meter per month and subject to other conditions regarding payment of cost of the work.

Note: 4.- In areas where low tension distribution lines of Kerala State Electricity Board Limited and other licensees exist, metered supply shall be given by the respective licensee for special type of lamps, for which the rates are not given in the table above, provided the lamps are installed and maintained by the local bodies at their cost. The tariff applicable in such cases shall be Rs 4.70 per unit plus fixed charge at Rs 75.00 per meter per month, subject to other conditions regarding payment of cost of the work.

Note: 5.- Separate charges shall not be collected from the consumers towards service charges for street lighting.

Note: 6.- Electricity duty is not payable for public lighting as per the provisions of Kerala Electricity Duty Act, 1963.

LT IX : DISPLAY LIGHTING AND HOARDINGS

Tariff applicable to display lighting, hoarding, external illumination of buildings for publicity and sales- promotion purposes.

LT - IX Display Lighting and Hoardings	
Fixed Charge	
(a) Rs. per Connection per month upto 1kW	700
(b) For every additional kW above 1kW (Rs. per kW per month)	150
Energy Charge (Rs/unit)	12.50

Note: The electricity used for the purposes of displaying the name, address, working time and such essential details of commercial, industrial or other category of consumers is allowed to be charged at same tariff applicable to the category to which such consumers belong.

LT-X : ELECTRIC VEHICLES CHARGING STATIONS

Tariff applicable to electric vehicle charging stations at LT

LT – X : Electric vehicle charging stations	
(a) Fixed Charge (Rs per kW or part thereof per month)	90
(b) Energy Charge (Rs/ unit)	5.50

Note : The ceiling tariff that can be charged by EV charging stations / outlets from customers shall be Rs 8.00/unit.

PART B – HIGH TENSION (HT) AND EXTRA HIGH TENSION (EHT) TARIFF

General conditions for HT and EHT tariff

1. For the purpose of conversion from kVA to kW or vice versa, an average power factor of 0.9 shall be taken.
2. Billing demand shall be the recorded maximum demand for the month in kVA or 75% of the contract demand as per the agreement, whichever is higher.
3. All the HT&EHT consumers shall be allowed to use upto 130% of the contract demand during off-peak hours without the payment of excess demand charge. However, when the recorded maximum demand during normal period or peak period in a month exceeds the contract demand as per the agreement or the recorded maximum demand during off-peak hours exceeds 130% of the contract demand, the excess demand shall be charged at a rate of 150 percent of the demand charges applicable, as per the billing procedure specified under Annexure-E to this Schedule.
4. (a) As per Section 55 of the Electricity Act, 2003 and provisions of the Central Electricity Authority (Installation and Operation of meters) Regulations 2006, consumer meter shall generally be installed and owned by the licensee.

(b) Even if the consumer elects to purchase the meter as stipulated in proviso under Sub Section 1 of Section-55 of the Electricity Act, 2003, such meter shall be tested, calibrated, sealed, installed, operated and maintained by the licensee as provided in the said regulations.

(c) The consumer has to purchase only such meters which are included in the list of manufactures and models which has to be provided by the licensee, as stipulated in clause (c) of Sub-Regulation (2) of Regulation 6, of the Central Electricity Authority (Installation and Operation of Meters) Regulations 2006.

(d) If any existing consumer, having elected to purchase and supply the meter for replacement of the defective meter in his premises, fails to do so within two months, such consumer will be charged 50% extra over the prevailing rates applicable to him for both demand and energy, for the said two months and one month thereafter.

(e) The licensee shall, in performance of its duty under Section 55 of the Act, replace the defective meter and realize the security deposit and meter rent in accordance with the provisions of Section 55 of the Electricity Act, 2003.
5. All EHT consumers (except Railway Traction) and all HT consumers

(except drinking water supply pumping stations of Kerala Water Authority, Municipal Corporations, Municipalities and Panchayats) shall be billed on ToD tariff as per the formula indicated in the Annexure - A to this schedule.

6. The monthly minimum charge payable shall be the minimum guarantee amount as per Minimum Guarantee Agreement, if any, or the billing demand as per condition 2 above, whichever is higher. This applies even during the period of disconnection of power supply.
7. In the case of factory lighting and colony supply of HT /EHT (Industrial) consumers, the applicable tariff shall be subject to the following conditions:
 - a. **Factory lighting** – When the total connected lighting load of the factory is less than or equal to 5% of the connected load for power, it can be tapped off from the power mains without segregation. When the above lighting load exceeds this limit of 5%, the whole lighting load should be segregated and metered by a sub-meter and lighting consumption in excess over 10% of the bulk supply consumption for power, shall be charged at 20 paise extra per kWh for HT and 10 paise extra per kWh for EHT consumers.
 - b. **Colony Supply:** Colony supply, when availed from the HT / EHT supply of the consumer, such supply shall be segregated and metered by means of a sub-meter and the consumption will be charged at 20 paise extra per kWh for HT and 10 paise extra per kWh for EHT consumers.
 - c. If no segregation is made as specified in clauses (a) or (b) above, the bill amount of the consumer shall be increased for demand and energy charges by 10% for both HT and EHT consumers.
8. Power factor incentives/penalties as per Annexure - B shall be applicable to all HT and EHT consumers.

TARIFF FOR HIGH TENSION (HT) CONSUMERS

This tariff shall be applicable to all High Tension consumers to whom the Kerala State Electricity Board Limited or other licensees has undertaken or undertakes to supply energy. The expression 'high tension' (HT) consumer means a consumer who is supplied with electrical energy at a voltage of 33,000 Volts, 22,000 Volts or 11,000 Volts under normal conditions, subject however to, the variation indicated in the agreement with the Kerala State Electricity Board Limited or other licensees or the variation allowed under the Kerala Electricity Supply Code, 2014.

HIGH TENSION- I - INDUSTRY (A) {HT- I (A)}

Tariff applicable to general purpose industrial load of all classes of consumers listed in LT-IV (A) category availing supply of electricity at high tension.

HIGH TENSION- I - INDUSTRY (A)	
(a) Demand Charge (Rs./kVA of Billing Demand/Month)	390
(b) Energy Charge (Rs/unit)	6.10

HIGH TENSION-I - IT and IT Enabled Services {HT – I (B)}

Tariff applicable to of all classes of consumers listed in LT-IV (B) category availing supply of electricity at high tension.

HIGH TENSION-I (B)- IT and IT Enabled Services	
(a) Demand Charge (Rs./kVA of Billing Demand/Month)	410
(b) Energy Charge (Rs/unit)	6.60

HIGH TENSION - II - GENERAL (A) {HT – II (A)}

Tariff applicable to all classes of consumers listed in LT-VI (A), LT-VI (B), LT-VI (D), and LT-VI (E) categories availing supply of electricity at high tension.

HIGH TENSION - II - GENERAL (A)	
(a) Demand Charges (Rs./kVA of Billing Demand/Month)	420
(b) Energy Charge (Rs/unit)	5.85

HIGH TENSION – II - GENERAL (B) {HT –II (B)}

Tariff applicable to all classes of consumers listed in LT-VI(C), LT-VI (F) and LT-VI (G) categories availing supply of electricity at high tension.

HIGH TENSION – II - GENERAL (B)	
(a) Demand Charges (Rs./kVA of Billing Demand/Month)	500
(b) Energy Charge (Rs/ unit)	
(i) Of and below 30,000 units (All units)	6.80
(ii) Above 30,000 units (All units)	7.80

HIGH TENSION –III AGRICULTURE (A) – {HT – III (A)}

Tariff applicable to the classes of agricultural consumers listed in LT-V (A) category, availing supply of electricity at high tension.

HIGH TENSION –III (A) AGRICULTURE	
(a) Demand Charges (Rs./kVA of Billing Demand/Month)	220
(b) Energy Charge (Rs/ unit)	3.40

HIGH TENSION - III AGRICULTURE (B) – (HT – III (B))

Tariff applicable to classes of agricultural consumers listed in LT-V (B) category, availing supply of electricity at high tension.

HIGH TENSION – III (B) AGRICULTURE	
(a) Demand Charges (Rs./kVA of Billing Demand/Month)	240
(b) Energy Charge (Rs/ unit)	3.90

HIGH TENSION – IV (A) COMMERCIAL [HT – IV(A)]

Tariff applicable to all classes of commercial consumers listed in LT-VII (A) and LT-VII (C) categories availing supply of electricity at high tension, except those who categorize under HT-IV (B).

HIGH TENSION – IV (A) COMMERCIAL [HT – IV A]	
(a) Demand Charges (Rs./kVA of Billing Demand/Month)	490
(b) Energy Charge (Rs/kWh) (Non telescopic)	
(i) Of and below 30,000 units (All units)	6.75
(ii) Above 30,000 units (All units)	7.75

HIGH TENSION – IV (B) COMMERCIAL [HT – IV (B)]

Tariff applicable to hotels, marriage halls, convention centers, shopping malls and multiplexes availing supply at high tension.

HIGH TENSION – IV (B) COMMERCIAL [HT – IV (B)]	
(a) Demand Charges (Rs./kVA of Billing Demand/Month)	490
(b) Energy Charge (Rs/kWh) (Non telescopic)	
(iii) Of and below 30,000 units (All units)	6.90
(iv) Above 30,000 units (All units)	7.90

HIGH TENSION – V DOMESTIC (HT – V)

Tariff applicable to domestic consumers and colonies availing supply of electricity at high tension.

HIGH TENSION – V DOMESTIC (HT – V)	
(a) Demand Charges (Rs./kVA of Billing Demand/Month)	425
(b) Energy Charge (Rs/ unit)	6.15

Note: The HT domestic connection shall be effected subject to the following conditions:

1. The connections provided shall be for domestic use only.
2. The consumer shall not resell the power supplied to the occupants inside or outside the premises to which HT connection is provided.
3. If the apartment /flat/ room is rented out or made use of for any other purpose, he shall take individual LT connection at his cost. Appropriate LT tariff shall apply in such cases, based on the purpose of electricity usage. The consumer shall maintain the transformer and allied equipment at his cost in such cases.

HT- VI. ELECTRIC VEHICLES CHARGING STATIONS

Tariff applicable to charging stations of electric vehicles availing electricity at high tension.

HIGH TENSION – VI DOMESTIC (HT – VI)	
(a) Demand Charges (Rs./kVA of Billing Demand/Month)	270
(b) Energy Charge (Rs/k unit)	6.00

Note : The ceiling tariff that can be charged by EV charging stations / outlets from customers shall be Rs 8.00/unit.

HIGH TENSION- VII TEMPORARY CONNECTIONS (HT-VII)

Tariff applicable availing temporary connections at HT for the purposes such as illumination, exhibition, festivals, public meetings, fairs etc.

HT VII- TEMPORARY CONNECTIONS	
Energy charge	Rs 11.00 per unit
OR	
Daily minimum Rs/kW or part thereof of connected load whichever is higher	Rs 110.00/KW

HIGH TENSION –VIII -SEASONAL CONSUMERS (HT – VIII)

1. HT consumers with seasonal load shall register themselves with the Kerala State Electricity Board Limited or other licensees as seasonal consumers for the purpose for which electricity is used. They shall be billed under appropriate tariff applicable to the category to which they belong, for the period of use.
2. For registration as a seasonal consumer, the consumer should have a minimum of four working months per annum or he should guarantee a minimum equivalent thereto for the working season.
3. If a consumer registered with the Kerala State Electricity Board Limited

or other licensees as a seasonal consumer, specifies the use of electricity for different purposes during different seasons and also specifies the period of usage for each such purpose, then the consumer shall be billed under appropriate tariff for each purpose during different seasons separately.

4. If a registered seasonal consumer using electricity for different purposes without specifying the purposes and the period of usage, then the consumer shall be charged at the highest tariff applicable amongst the different uses, for the various operations for the whole year.
5. The conditions for lighting for seasonal industrial consumers shall be the same as applicable in the case of HT-I.
6. If a registered seasonal consumer opts for disconnection of supply during the period other than the period of usage (specified seasonal usage), then he shall pay higher demand charges during the working season as below:
 - (a) Demand charges shall be increased by $5(12-N)$ % where 'N' is the number of months during which the consumer registers himself with the Kerala State Electricity Board Limited or other licensees to utilize the service in the year.
 - (b) There will be no billing for the idling period.
 - (c) The service to the consumer will be disconnected without notice immediately on termination of the registered period unless the consumer asks for continuance of the service during the idle period for which also he will be charged at the same seasonal rate applicable for the original period.
 - (d) Monthly minimum charge equivalent to demand charges for 75% of the contract demand increased as per (a) above shall be collected from the consumer in each working month.
 - (e) The reconnection fee shall be as specified in the Kerala Electricity Supply Code, 2014 and its amendments from time to time.

EXTRA HIGH TENSION (EHT) TARIFF

This tariff shall be applicable to all Extra High Tension consumers. The expression Extra High Tension (EHT) consumer means a consumer who is supplied with electrical energy at a voltage exceeding 33000 Volts under normal conditions subject however to, the variation indicated in the agreement with the Kerala State Electricity Board Limited or other licensees or allowed under the Kerala Electricity Supply Code, 2014.

EXTRA HIGH TENSION (EHT) INDUSTRIAL

EHT INDUSTRIAL (66 kV)

Tariff applicable to general purpose industrial load at 66 KV.

EHT INDUSTRIAL (66 KV)	
(a) Demand Charges (Rs./kVA of Billing Demand/Month)	400
(b) Energy Charge (Rs/ unit)	6.00

EHT INDUSTRIAL (110 kV)

Tariff applicable to general purpose industrial load at 110 kV.

EHT INDUSTRIAL (110 KV)	
(a) Demand Charges (Rs./kVA of Billing Demand/Month)	390
(b) Energy Charge (Rs/ unit)	5.90

EHT INDUSTRIAL (220 KV)

Tariff applicable to general purpose industrial load at 220 KV.

EHT Industrial (220 kV)	
(a) Demand Charges (Rs./kVA of Billing Demand/Month)	360
(b) Energy Charge (Rs/ unit)	5.30

EHT COMMERCIAL (66 kV, 110 kV, 220kV)

Tariff applicable to commercial institutions availing power at EHT.

EHT Commercial (66 kV, 110 kV, 220kV)	
(a) Demand Charges (Rs./kVA of Billing Demand/Month)	460
(b) Energy Charge (Rs/kWh) (non telescopic)	
(i) Upto 60,000 units	6.20
(ii) Above 60,000 units	7.20

Extra High Tension –General A (EHT-General-A) (66 kV, 110kV, 220 kV)

This tariff is applicable to the consumers enumerated under LT-VI(A) category, availing supply at EHT level.

EHT-General A (66kV, 110kV, 220kV)	
(a) Demand Charges (Rs./kVA of Billing Demand/Month)	390
(b) Energy Charge (Rs/ unit)	5.60

Extra High Tension –General – B (EHT-General-B) (66 kV, 110kV, 220 kV)

The tariff under this category is applicable to Indian Space Research Organisation (ISRO) and Government Research Institutions.

EHT -General –B (66 kV, 110 kV, 220kV)	
(a) Demand Charges (Rs./kVA of Billing Demand/Month)	425
(b) Energy Charge (Rs/kWh) (non telescopic)	
(i) Upto 60,000 units	6.00
(ii) Above 60,000 units	7.00

Extra High Tension –General – C (EHT-General-C) (66 kV, 110kV, 220 kV)

The tariff under this category is applicable to utility services such as Airports, Self financing educational institutions and any other EHT consumers not included elsewhere.

EHT -General –C (66 kV, 110 kV, 220kV)	
(a) Demand Charges (Rs./kVA of Billing Demand/Month)	450
(b) Energy Charge (Rs/kWh) (non telescopic)	
(i) Of and below 60,000 units	6.30
(ii) Above 60,000 units	7.30

Railway Traction (110 kV) and ‘defence installations’ excluding defence housing colonies

Tariff applicable to Railway Traction and defence installations excluding defence housing colonies

Railway Traction (110 kV)	
(a) Demand Charges (Rs./kVA of Billing Demand/Month)	340
(b) Energy Charge (Rs/unit)	5.40

Kochi Metro Rail Corporations (KMRL)

Tariff applicable to traction for KMRL

KMRL (110 kV)	
(a) Demand Charges (Rs./kVA of Billing Demand/Month)	290
(b) Energy Charge (Rs/unit)	5.10

PART-C BULK SUPPLY TARIFF APPLICABLE TO SMALL LICENSEES AND BULK CONSUMERS

1. The tariff mentioned in this schedule shall apply to the Licensees who avail energy through High Tension or Extra High Tension systems at their terminal notwithstanding anything to the contrary contained in any agreement earlier entered into with any Licensee by Kerala State Electricity Board/Government or any of the Tariff Regulations and/or rules and/or orders previously issued.
2. The rates specified in this schedule are exclusive of Electricity Duty and/or surcharge, other cesses, taxes, minimum fees, duties and other impositions existing or that may be levied in future by the Government or the Commission which are payable in addition to the charges as per the tariff mentioned in this Schedule.
3. The tariff applicable will be two part tariff as under:--

Name of Licensees	Demand Charges (Rs/kVA of Billing Demand per month)	Energy Charges (Rs per unit)
KINESCO POWER & UTILITIES (P) LIMITED	380	6.15
COCHIN SPECIAL ECONOMIC ZONE AUTHORITY	380	6.15
RUBBER PARK INDIA (P) LIMITED	380	5.50
TECHNOPARK	380	6.00
COCHIN PORT TRUST	380	6.25
THRISSUR CORPORATION	380	6.50
KANNAN DEVAN HILLS PLANTATIONS PRIVATE	380	5.30
INFOPARK	380	5.90
SMART CITY	380	5.90
KARNATAKA ELECRCITY DEPARTMENT	400	6.10

Note: Billing Demand shall be the recorded Maximum Demand for the month in kVA or 75% of Contract Demand whichever is higher.

Special Conditions

1. The installations and maintenance of meters shall be strictly in accordance with the provisions of the Central Electricity Authority (Installation and Operation of Meters) Regulations, 2006.
2. For billing purpose each point of supply shall be treated as a separate consumer.

3. ToD tariff shall be applicable to HT, EHT and LT consumers of the respective licensees as per the terms and conditions mentioned in the respective schedule.

PART-D OTHER CHARGES

Summary of other charges applicable with effect from 26.06.2022

1. The transmission charges - Rs 0.44/unit or Rs.9869/MW/day.
2. The wheeling charges - Rs 0.61/unit.
3. SLDC Charges - Rs 95/MW/day
4. The cross subsidy surcharge.

Category	Cross Subsidy surcharge (Rs/ unit)
EHT- Industrial (66 kV)	1.36
EHT-Industrial (110 kV)	1.29
EHT- Industrial (220 kV)	1.33
EHT- Gen A	1.30
EHT- Gen B	1.89
EHT- Gen C	1.80
Railways	1.36
KMRL	1.37
HT-1(A) Industry	1.54
HT-I(B) Industry	1.67
HT-II(A)	1.57
HT-II (B)	1.85
HT-III(A)	1.32
HT-III(B)	0.63
HT- IV (A)	2.06
HT- IV (B)	2.18
HT-V	1.71

5. Meter rent to be levied from the consumers

SI No	Description	Meter rent approved (Rs/meter/month)
1	Single phase static energy meters with LCD and ToD facility and with ISI certification	6
2	Three phase static meters with LCD and ToD facility with ISI certification	15
3	LT CT operated three phase four wire static energy meters (Class 0.5 accuracy) with LCD and ToD facility and ISI certification	30
4	3 phase AC static tri-vector energy meters with ABT, ToD facility and compliant to Device Language Message Specification (DLMS) protocol	1000

6. Meter rent for Renewable Energy meter

SI.No.	Item	Meter rent for RE meters approved (Rs/meter/month)
1	Renewable Energy meter - Single phase 2 wire 5-30-A, static LCD meters with TOD facility	10
2	Renewable Energy meter - Three phase 10-60A static LCD meters with TOD facility	20
3	Renewable Energy meter - LTCT Meter DLMS Class 0.5 S -/5A	25
4	Renewable Energy meter - 3 Phase 4 Wire, CT/PT Operated, HT, Static Energy Meters of Class 0.2S Accuracy + GPRS Modem	200
5	Renewable Energy Meter - 3 Phase 4 Wire, CT/PT Operated, EHT, Static Energy Meters of Class 0.2S Accuracy+ GPRS Modem	200
6	Net Meter - single phase 5-30A class 1.0	30
7	Net Meter - Three phase 10-60A class 1.0	35
8	Net Meter- LTCT meter, class 0.5S, -/5A	70
9	Net meter- CTPT operated HT meter Class 0.2S	435

7. The transmission charges, wheeling charges, SLDC Charges, cross subsidy surcharge and meter rent approved in this order shall be applicable to KSEB Ltd and other licensees in the State.

Annexure- A

ToD Tariff applicable to EHT, HT (except HT-V domestic) and LT industrial consumers (with connected load of and above 20KW) Consumers

The ToD tariff applicable to EHT, HT (except HT-V domestic) and LT industrial consumers (with connected load of and above 20 kW) for energy consumption is given below:

	Rates		
	Normal period (6:00 hrs to 18:00 hrs)	Peak period (18:00 hrs to 22:00 Hrs)	Off peak (22:00 hrs to 6:00 hrs)
Energy Charges	100%	150%	75%

Billing of the demand charges:

Monthly Demand Charge shall be:

$$\text{Billing Demand during the month} \times \text{Demand Charge per kVA}$$

Billing of Energy charges:

The billing of the energy charge for HT&EHT consumers shall be done as follows

- Normal time: *Consumption during normal time x energy rate / unit.*
- Peak time: *Consumption during peak time x energy rate / unit x 1.50*
- Off-peak time: *Consumption during off-peak time x energy rate/unit x 0.75*

$$\text{Total energy charge during a month} = (a) + (b) + (c)$$

Other conditions:

- Demand/energy charges shall be the demand/energy charges for normal period as per the tariff approved in this Schedule.

- Demand/energy charges for LT industrial consumers with a connected load of and above 20KW, shall be as per the tariff approved in this Schedule.
- Demand charges during a particular month shall be assessed based on the recorded maximum demand during that month or 75% of the contract demand whichever is higher.
- Excess demand charges: Additional demand charges shall be levied if the recorded maximum demand exceeds the contract demand during normal period and peak period, which shall be charged at 50% extra for the excess over the contract demand (ie., additional demand during normal/peak period x ruling demand charges x 0.5). Additional demand charges during off-peak period shall be levied only if the recorded maximum demand during off peak period is in excess of 130% of the contract demand.
- For the consumption of electricity during normal period ie 6.00 hours to 18.00 hours the demand/energy charges shall be at the notified rates applicable to the consumer category.

Annexure - B

Power factor incentive / disincentive

The following incentive and disincentive shall be applicable to LT industrial consumers with a connected load of and above 20 kW, HT&EHT Consumers, and Bulk consumers and distribution licensees for power factor improvement.

<u>PF range (lag)</u>	<u>Incentive/ Penalty</u>
<u>Incentive</u>	
Above 0.95 and upto 1.00	0.50% of the Energy Charge for each 0.01 unit increase in power factor from 0.95
<u>Penalty</u>	
0.90 and upto 0.95	0.50% of the energy charges for every 0.01 fall in PF below 0.95 and upto 0.90
below 0.90	1% of the energy charge for every 0.01 fall in PF from 0.90

Note: No penalty and incentive for consumers with leading power factor

Annexure- C

Recommended values of Static capacitor in KVAR for power factor improvements

A. Induction Motors (LT)

Sl.No.	Total Motor Rating (HP)	KVAR rating of capacitors insisted	Sl.No.	Total Motor Rating (HP)	KVAR rating of capacitors insisted
1	Upto 3	1	8	Above 25 up to 30	10
2	Above 3 up to 5	2	9	Above 30 up to 40	12
3	Above 5 up to 7.5	3	10	Above 40 up to 50	14
4	Above 7.5 up to 10	4	11	Above 50 up to 60	18
5	Above 10 up to 15	5	12	Above 60 up to 80	22
6	Above 15 up to 20	6	13	Above 80 up to 100	25
7	Above 20 up to 25	7.5	14	Above 100 up to 130	35

B. WELDING TRANSFORMERS (LT)

Sl.No.	Rating of welding trans-formers in KVA	KVAR rating of capacitors insisted	Sl.No.	Rating of welding trans-formers in KVA	KVAR rating of capacitors insisted
1	1	1	16	16	12
2	2	2	17	17	13
3	3	2	18	18	13
4	4	3	19	19	14
5	5	4	20	20	15
6	6	4	21	Above 20 up to 22	16
7	7	5	22	Above 22 up to 24	17.5
8	8	6	23	Above 24 up to 26	18
9	9	7.5	24	Above 26 up to 28	20
10	10	7.5	25	Above 28 up to 30	21
11	11	8	26	Above 30 up to 35	24
12	12	9	27	Above 35 up to 40	27.5
13	13	10	28	Above 40 up to 45	32.5
14	14	10	29	Above 45 up to 50	35
15	15	11			

Annexure - D

ToD Tariff for Domestic Consumers

(Applicable to HT-V and LT consumers with monthly consumption above 500 units)

Particulars	Normal Period (6 hrs to 18 hrs)	Peak Period (18 hrs to 22 hrs)	Off Peak Period (22hrs to 06 hrs)
Energy charge	100% of the ruling tariff	120% of the ruling tariff	90% of the ruling tariff

Note

1. In the case of LT- domestic category;
 - (a) Six months consumption shall be monitored from normal bi-monthly readings during January / February and July / August every year. If the average monthly consumption for first or second half of the year is above 500 Units, the consumer will be brought under ToD system after installing ToD meter in the premises.
 - (b) ToD based billing will be done whenever the monthly consumption exceeds 500 Units. If the consumption falls below 500 Units/month in any month, slab based billing shall be followed.
 - (c) The ruling tariff for LT- domestic is the energy charge approved for the monthly consumption above 500 units.
2. In the case of HT-V domestic, the ruling energy charge is the energy charge approved for HT-V domestic category.

Annexure – E

Billing Procedures under ToD tariff system for LT -IV Industrial, HT & EHT consumers.

1. Demand Charges (DC)

- (i) The recorded maximum demand during normal time zone (T1) from 06.00 hrs to 18.00 hrs = RMD1
- (ii) The recorded maximum demand during peak time (T2) from 18.00 hrs to 22.00 hrs = RMD2
- (iii) The recorded maximum demand during off - peak time (T3) from 22.00 hrs to 06.00 hrs = RMD3
- (iv) Recorded Maximum demand during a billing period,
RMD= RMD1, RMD2 or RMD3 whichever is higher.
- (v) The Contract Demand (kVA) = CD
- (vi) The Ruling Demand Charge (Rs/kVA) = D
- (vii) Billing Demand, BMD = RMD or 75% of the CD whichever is higher.
- (viii) Demand Charge, DC = BMD x D
- (ix) Excess Demand for LT, HT& EHT consumers in each time zone shall be
 - (a) in Time Zone (T1), ED1 = (RMD1-CD)
 - (b) in Time Zone (T2), ED2 = (RMD2-CD)
 - (c) in Time Zone (T3), ED3 = {RMD3-(1.30x CD)}
- (x) Excess Demand Charge (ED) = Excess demand ED1, ED2 or ED3
whichever is higher x 0.50 X D
- (x) Total Demand Charge (TDC) = DC + ED

2. Energy Charges (EC)

- (i) The energy consumption in Time Zone (T1) = X1
- (ii) The energy consumption in Time Zone (T2) = X2
- (iii) The energy consumption in Time Zone (T3) = X3
- (iv) The Ruling Energy Charge(Rs/unit) = E
- (v) Energy Charges in each time zone shall be :
 - (a) in Time Zone (T1), Ec1 = X1 x E
 - (b) in Time Zone (T2), Ec2 = X2 x E x 1.5
 - (c) in Time Zone (T3), Ec3 = X3 x E x 0.75
- (vi) Total Energy Charge (EC) = Ec1+Ec2+Ec3

3 Total Monthly Charges = TDC + EC

Annexure – F
OPTIONAL DEMAND BASED TARIFF

- Eligibility : All categories of consumers other than those billed under ToD Tariff
- Billing demand : Recorded maximum demand or 75% of the contract demand whichever is higher
- Demand charges: Based on Rs./kVA of billing demand as per tariff mentioned in the table below.

Fixed Charge Rs./kVA of billing demand per month	Energy Charges
250	Existing energy charges of respective categories shall apply

Other conditions

- (1) Consumers who opt for maximum demand based tariff may, at their option, install ToD compliant meters at their cost. Meters may also be installed at the cost of KSEB Ltd. If the consumers provide meters, it has to be got tested at the laboratory of KSEB Ltd or of the Electrical Inspectorate. It will be the responsibility of KSEB Ltd or other licensees as the case may be to ensure the accuracy of the meters after proper testing.
- (2) For those who opt for maximum demand based tariff, the contract demand shall be treated as connected load.
- (3) The consumers who opt for maximum demand based tariff shall declare the contract demand in kVA by executing a supplementary agreement showing the contract demand and details of connected load in their premises.
- (4) The consumers who opt for the new system may be allowed to revise upwards or downwards the declared contract demand within six months from the date of option without any conditions or charges. After this, the usual terms and conditions shall be applicable for changing contract demand.
- (5) The Billing demand shall be the recorded maximum demand or 75% of the contract demand whichever is higher. In case the billing demand exceeds the contract demand during normal or peak hours or 130% of the contract demand during night off peak hours, the demand charges for the excess demand shall be charged 50% extra.
- (6) When the consumption of domestic consumers exceeds 500 units in a month, the energy charges will be arrived in accordance with Annexure D of this Order
- (7) The above scheme (optional demand based tariff) shall be effective till ToD tariff is made compulsory.

CHAPTER -8

DIRECTIVES

The Commission hereby issues the following directives to KSEB Ltd for immediate compliance and report the same within the time frame specified therein.

8.1 Master trust and related issues.

Regarding the issue of Master Trust

- (i) KSEB Ltd shall, w.e.f 01.04.2017, pay the interest and principal of the two bonds to the Trust as envisaged in the Government notifications on re-vesting dated 31.10.2013 and 28.01.2015, and as per the terms and conditions specified in the bond certificates dated 01.04.2017. KSEB Ltd shall also pay the additional amount provisionally approved in the ARR for the MYT period from 2022-23 to 2026-27 along with the additional fund approved in the orders on Truing up of accounts in the years 2017-18 to 2020-21 to the Master Trust.

The audited accounts along with the bank statement of Master Trust shall be submitted along with the petition for approval of the Truing Up of accounts of each year of the MYT period, failing which such amounts as approved in the ARR will not be approved in the Truing up of accounts.

- (ii) The amount due from the State Government towards the second set of bonds shall be adjusted as envisaged in the Government notifications on re-vesting.
- (iii) KSEB Ltd shall, every year, carry out the actuarial valuation of the pension liabilities of the personnel transferred to KSEB Ltd as on date of re-vesting and claim the additional contributions required if any, through tariff as provided in the Tariff Regulations, 2021, with all the relevant details and supporting documents.

8.2 Purchase of 465MW power through long term contracts under DBFOO

Since the Ministry of Power, Government of India has declined to approve the deviations made by KSEB Ltd in the purchase of 465MW power from the provisionally approved/ unapproved DBFOO contracts due to the facts and circumstances explained in paragraphs 6.93 to 6.111 of this Order, the *Commission has not approved KSEB Ltd's proposal to purchase 3363.29 MUs yearly from these PSAs. Instead, KSEB Ltd is hereby permitted to procure 465 MW of equivalent power or as required on medium term basis through competitive bidding as per Section 63 of the Electricity Act, 2003. Alternatively, KSEB Ltd may make necessary arrangements for procuring 465 MW or as*

required, from power plants through competitive bidding route who have assigned coal linkage as per the SHAKTI policy of the Central Government.

8.3 Collection of arrears

The Commission notes that the arrears on account of electricity charges have been increasing year by year and stands at Rs 2771.00 crore as on 31.12.2021. The Commission is of the firm view that the timely collection of electricity dues is the primary responsibility of the licensee. Further, Section 45 & 56 of the EA-2003 and Regulation 131, 136 & 138 Supply Code, 2014 clearly mandates its timely recovery. In the absence of its timely recovery, the licensee is often forced to resort to borrowings leading to avoidable interest payments. This is not a desirable state of affairs and the Commission cannot remain a mute spectator to such lapses.

Under such circumstances, in order to improve the licensee's financial position, ensure adequate cash flow and to avoid liquidity problems, the licensee shall collect its electricity dues from the consumers, when due and within the time specified by the Commission through the Regulations. It is also a fact that during the Commission's public hearings on the tariff petition, many of the participants pointed out that, if KSEB Ltd collects the electricity dues from the defaulting consumers in a timely manner, the revenue gap and resulting tariff revisions can be reduced to some extent.

After considering the importance of the issue in detail, the Commission hereby directs that KSEB Ltd shall immediately constitute an arrear recovery team entrusted with the following responsibilities.

- (i) Review the arrears in each category and do an age wise analysis.
- (ii) Examine the arrears held up due to court cases and consider recovery action in cases where there is no stay granted by the Courts.
- (iii) Pursue with the State Government departments, PSUs and other local bodies for early and timely recovery of the entire arrears.
- (iv) Propose a time bound action plan with quarterly recovery targets and entrust this responsibility to identified teams.

8.4 Accounting treatment of interest on outstanding dues

The Commission notes that KSEB Ltd is following the accrual system of accounting. However, in their annual accounts, KSEB Ltd has given a disclosure that the interest due on non-payment of bills is being accounted on cash basis. i.e., only on actual receipt basis. Since the licensee's accounts are maintained on accrual basis and the licensee is legally eligible to get this amount, the Commission is at a loss to understand why such a methodology is adopted for interest accounting. Moreover, a company maintaining its accounts under the accrual system has every legal right to account for this dues too and failure to account these dues on accrual basis results in understatement of income. Hence, the Commission hereby direct KSEB Ltd to review this practice and adopt a consistent accounting treatment for all its transactions.

8.5 Ring fencing of SLDC

Independent function of State Load Despatch Centre (SLDC) is an important requirement to carry out its statutory functions under Section 32 of the Electricity Act, 2003. In view of its importance, KSEB Ltd shall implement a scheme for ring fencing the State Load Despatch Centre, to ensure its independent function in a time bound manner. Details of the actions taken in this regard shall be submitted to the Commission along with the Truing up petitions for the FY 2022-23.

8.6 Feeder metering to measure energy transfer from SBU-T to SBU-D.

KSEB Ltd shall, within this financial year (2022-23) take necessary actions to measure the energy transferred from SBU-T to SBU-D on monthly basis and report the compliance before the Commission.

8.7 Metering arrangements to measure auxiliary consumption of Hydro Stations.

KSEB Ltd shall take immediate steps to provide metering arrangements at evacuation point of each Hydro generating station of KSEB Ltd to measure auxiliary consumption and report compliance to the Commission along with the Truing up petitions for the FY 2022-23.

8.8 Petition for fuel surcharge

As per the Regulation 87 of the Tariff Regulations, 2021, KSEB Ltd is required to submit regularly and at the specified intervals, the application for approval of the fuel surcharge. As per the Regulation 88 of the Tariff Regulations, 2021, within 30 days from the close of every financial year, KSEB Ltd is also required to submit the proposals for passing on the impact of the change in hydro-thermal mix.

KSEB Ltd shall comply with the above provisions in the Tariff Regulations, 2021.

8.9 KSEB Ltd is hereby directed that, they shall file petitions for obtaining fresh approval for the Power Purchase Agreement from all generators/ traders/ intermediary procurers etc., whose COD was either delayed or their PPA is due to lapse at least six months prior to CoD / termination agreement with full justification thereof.

The Commission hereby directs that, KSEB Ltd shall scrupulously comply with above directives within the time frame specified therein. However, if there is any genuine difficulty in implementing any of the above directions, the KSEB Ltd may approach the Commission at the earliest and not later than 31st March 2023.

Chapter- 9

ORDERS OF THE COMMISSION

9.1 The Commission, in exercise of the powers vested in it under the provisions of the Electricity Act, 2003 and of the Kerala State Electricity Regulatory Commission (Terms and Conditions for Determination of Tariff) Regulations, 2021 and other regulations enabling it in this behalf, orders as follows, -

- 1) The Aggregate Revenue Requirement (ARR) of Strategic Business Unit (Generation) for the financial years 2022-23 to 2026-27 is approved at as shown below:

Table 9.1
Net ARR for SBU-G as approved for the MYT period

Sl.No	Item	2022-23	2023-24	2024-25	2025-26	2026-27
		(Rs. Cr)	(Rs. Cr)	(Rs. Cr)	(Rs. Cr)	(Rs. Cr)
1	Gross ARR	624.15	701.26	745.97	778.92	816.21
2	Less Other Income	10.30	10.81	11.35	11.92	12.52
3	Net ARR of SBU G	613.85	690.45	734.62	767.00	803.69

- 2) The Aggregate Revenue Requirement (ARR) of Strategic Business Unit (Transmission) for the financial years 2022-23 to 2026-27 is approved at as shown below:

Table : 9.2
KSERC approval- Net ARR of SBU-T including ARR of SLDC

Particulars	2022-23	2023-24	2024-25	2025-26	2026-27
	(Rs. Cr)	(Rs. Cr)	(Rs. Cr)	(Rs. Cr)	(Rs. Cr)
Aggregate Revenue Requirement	1362.76	1588.20	1763.72	1912.89	2046.52
Non-tariff Income	52.25	54.86	57.60	60.48	63.51
Net ARR	1310.51	1533.34	1706.12	1852.41	1983.01

- 3) The Aggregate Revenue Requirement (ARR), Revenue from Existing Tariff and Revenue gap of Strategic Business Unit (Distribution) for the financial years 2022-23 to 2026-27 is approved at as shown below:

Table : 9.3
Revenue gap provisionally approved for the MYT period

Particulars	2022-23	2023-24	2024-25	2025-26	2026-27
	(Rs.Cr)	(Rs.Cr)	(Rs.Cr)	(Rs.Cr)	(Rs.Cr)
Net ARR	17966.07	19195.05	19750.08	20218.89	21085.47
Revenue from tariff	15309.04	15873.80	16611.19	17381.63	18203.38
Revenue from external sale	729.83	382.16	118.59	0.00	0.00
Total revenue	16038.87	16255.96	16729.78	17381.63	18203.38
Revenue Gap	1927.20	2939.09	3020.30	2837.26	2882.09

- 9.2 The Commission approves to recover an additional amount of about Rs. 1010.94 Crore through revision for the year 2022-23.
- 9.3 The Commission orders that the retail tariff approved for KSEB Ltd and its consumers as detailed in Chapter 7 read with the Tariff Schedule approved as per this order shall come into force with effect from 26.06.2022 and shall continue to be in force up to 31.03.2023.
- 9.4 The Commission does also order that the transmission charges, the wheeling charges, the cross subsidy surcharge applicable to the open access consumers, the average pooled power purchase cost, the meter rent and the low voltage surcharge at the rates specified in Chapter 7 read with the Tariff Schedule approved as per this order come into force with effect from 26.06.2022 and shall continue to be in force up to 31.03.2023.
- 9.5 The retail tariff, the transmission charges, the wheeling charges, the cross subsidy surcharge, the average pooled power purchase cost, the meter rent, the low voltage surcharge, etc., as approved in this order read with the Tariff Schedule, shall also be applicable to the distribution licensees, other than KSEB Ltd., and to its consumers from 26.06.2022 to 31.03.2023.
- 9.6 Tariff Schedule shall be part and parcel to this Tariff Order.
- 9.7 If any difficulty arises in giving effect to any of the provisions of this order, the Commission may, for reasons to be recorded in writing, issue orders necessary for removing such difficulty.
- 9.8 The licensee shall submit the application for truing up of accounts for each year of the control period as per the provisions in the Tariff Regulations,2021.
- 9.9 The Commission shall separately appraise and approve the petition for the Capital Investment Plan submitted by KSEB Ltd.

The petition disposed off. Ordered accordingly.

Sd/-

Adv. A J Wilson
Member (Law)

Sd/-

Preman Dinaraj
Chairman

Approved for issue

Sd/-

Secretary

Annexure-I

List of persons attended the public Hearings

Public Hearing at Ernakulam on 01.04.2022

1. Shri. James M David, KSEB Ltd (Rtd)
2. Shri. Manu Senan.v., AEE, TRAC, KSEB Ltd
3. Shri. Edward.P.Boniface, AEE, TRAC, KSEB Ltd
4. Shri. Babukuttan Nair.T, DAO, TRAC, KSEB Ltd
5. Shri. A.R.Satheesh, Secretary, KSPC
6. Shri. K.M.Gopinathan, Standing council of Trade Union
7. Shri. V.P. George, Intuc
8. Shri. George Oommen, Appolo, Kerala plant
9. Shri. Renjit Jacob, Appolo, Perumbavoor
10. Shri. Rajesh Kuruvilla, CUMI, DGM
11. Shri. Nair.P.Nandakumar, CUMI, Sr AVP
12. Shri. Aneesh.R, Appolo
13. Shri. Prabhakaran.K.V, HT&EHT Assosiation
14. Shri. V.R.Sudhi, KSEB Seniors Forum
15. Shri. K.K.Gopi, Appolo Tyres, Perambra
16. Shri. K.V.Vinod, Appolo Tyres, Perambra
17. Shri. Justin Dominic.P., Appolo Tyres, Perambra
18. Shri. K.V.Sujith Lal, Appolo Tyres, Perambra, ATWM
19. Shri. M.Y.Kuriachan, HOCL HOCWU(CITU)
20. Shri. Sijo Paulose, GTN Textiles AITUC
21. Shri. T.V.Vipindas, GTN Textiles INTUC
22. Shri. E.V.Vineeth Kumar, GTN Textiles BMS
23. Shri. Sathar.M.A, G.T.N, GTNWA
24. Shri. Pratheesh, G.T.N, Jobbers
25. Shri. P. Satheesh, Indus, Airtel, Vodafone
26. Shri. K.A.Joseph, KSSIA. State General Secretary
27. Shri. Viswanathan.K, Consumer, Tripunithura
28. Shri. Shine Raj, AE, KSEB Ltd
29. Smt. Latha.S.V, AEE, KSEB Ltd
30. Smt. Seema.P.Nair, AEE, KSEB Ltd
31. Smt. BijiChristudas, AE, KSEB Ltd
32. Shri. Manoj.G, AEE, KSEB Ltd
33. Shri. Anees.T.M, AM(E), Rubber Park
34. Shri. Sunil.K, President Engineers Assosiation,KSEB LTD
35. Smt. Renjana Devi, Officers Assosiation, KSEB Ltd

36. Smt. Indira.K, Officers Assosiation, KSEB Ltd
37. Shri. Sarath, FACT
38. Shri. George.V.James, MD, Rubber Park
39. Shri. Rajesh.R, AEE, KSEB Ltd
40. Shri. K.K.George
41. Shri. Suji Paul, BPCL Kochin Refinery, DGM(Electrical)
42. Smt. Neenu Skaria, Director, ETLS Pvt Ltd
43. Shri. Venugoplal.P, GTN Textiles, Aluva
44. Shri. Rajumon.P.C, DGM(Electrical), CIAL
45. Shri. Romy George, DM, CUMI
46. Shri.Eloor Gopinath, RACCO(Residence Assosiation Coordination)
47. Shri. Rajeev Kumar.K, CECCN, KSEB Ltd
48. Shri. Joji George Mathew, Dy. CE, O/o CE CCN Kozhikode
49. Shri.V.P.George, State Vice President INTUC
50. Smt.Reena.C.J., S.A, TCED
51. Shri.Basuraj, S.A, TCED
52. Shri. Suresh.A, EE, KSEB Ltd
53. Shri. M.P. Rajan, DCE, KSEB Ltd
54. Shri. T.A. Assainar, Appolo Tyres, Kalamassery(CITU)
55. Shri.Vijilin John.C, Appolo Tyres, Kalamassery(INTUC)
56. Shri.M.H.Nazer, Appolo Tyres, P.T.W.A
57. Shri.Aneesh.R, Appolo Tyres, Kalamassery
58. Shri.Manzoor.T.C, DGM, KMRL
59. Shri. Sam David.T., ASE/PST, KMRL
60. Shri.C.P.George, DYCE, KSEB Ltd(Rtd)
61. Shri.M.Sambasivan, CITU, Kalamassery
62. Shri.Sugosh.G.Pillai, HOCL , BMS, Secretary
63. Shri.N.K.Rajan, General Secretary, HOC SWU(INTUC)
64. Shri.U.K.Santhosh Kumar, Working President, HOC USU(CITU)
65. Shri.Biju.T.V, HOC BMS
66. Shri.Ayyappan.T.K, HOCL(INTUC)
67. Shri.P.K.Sathyan, FACT-BMS
68. Shri.Remesh Babu, EE COS
69. Shri.Hari.V.R, KSEB Ltd
70. Shri.C.A.Narayanan, Consumer
71. Shri.M.Ramadas, CUMI
72. Shri.S.N.Ashok Kumar, M(F), KPUPL
73. Shri.Sajeev.M.S, RE, KPUPL
74. Shri. Ajith Kumar.T.M, CEO, KINESCO

75. Shri. Krishna Varma.K, CSEZ, Kakkanad
76. Shri.M.T.Varghese, LSEB Pensioners Assosiation
77. Shri.Nanda Kumar Nair, CUMI
78. Shri.Udayan.M.S, KESFOMA
79. Shri.V.K.Ananda, KESFOMA
80. Shri.Yoonus,KESFOMA
81. Shri.Arun.C.Aby, PTC India Ltd
82. Shri.Dr.B. Ashok, CMD KSEB Ltd
83. Shri.Sunil Joseph, Dy. CE, KSEB Ltd
84. Shri.SreegeshShaji, NGIL, Kakkanad
85. Shri.K.K.Sebastine, NGIL, Kakkanad
86. Shri.T.KrishnanKutty,
87. Shri.Ajith Kumar.C.S, KSEB Ltd
88. Shri.Ajay Abraham, Hydropower
89. Smt.Gouri.R,
90. Shri.Nithin.C.S, FACT-UDL
91. Shri. Vipin Gopi, Nitta Gelatine India Ltd
92. Shri.Sabu.A.C, DDMD, KSEB Ltd
93. Shri. J.B.M. Ansar, KSFOMA
94. Shri.Thomas Vadakkal, ESSIA
95. Shri. Anwar Thoppil, ESSIA
96. Shri.Shibin.G.Varghese, KSFOMA
97. Shri.K.M.Radhakrishnan, RGCCO
98. Shri.Prasad Chandran.PS, Public
99. Shri.P Rajan, KSSIA, Ernakulam
100. Shri. Vijayan V.R, AGM (Projects) Infopark
101. Shri. Arun S, Asst. Engineer, Infopark
102. Shri. Ismail.P.B, CUMI
103. Shri. Hareesh Madhav, HOCL
104. Shri. M.V. Rajesh, Vi Ltd
105. Shri. P. Kumaran, Former Director, KSEB LTD
106. Shri. AnilKumar.E.M, Vice President, TCC Employees Union (INTUC)
107. Shri. Krishna Kumar. K, TCC Employees Association (CITU)
108. Shri. Sabu Pariyarath, General Secretary, Aluva Taluk Pouravakasa Samrakshana Samithi
109. Shri. Johnson M.V, Joint Secretary, Aluva Taluk Pouravakasa Samrakshana Samithi
110. Shri. A.V. Roy, Aluva Taluk Pouravakasa Samrakshana Samithi
111. Shri. J.B.M Ansar, Keston Residence Association

112. Shri. Prasanna Kumar, Electricity Consumers Association
113. Shri. Jose Paul, Consumer

Public Hearing at Trivandrum on 06.04.2022

1. Shri. Sreelal.P.S, Flour & Oil Mills Association
2. Shri. N. Sreekumar, IHRD
3. Shri. Noushil.P.M, IHRD
4. Shri. Manoj.G, AEE, TRAC, KSEB LTD
5. Shri. Dejokappan, Kottayam
6. Shri. Anil Kumar, Thiruvananthapuram
7. Shri. Saji Mathew, MRF, Kottayam
8. Shri. Aneesh Thomas, Pala
9. Shri. Bobby, Thiruvananthapuram
10. Shri. Suresh.A, EE, KSEB LTD
11. Shri. Sathjith.V.H, Kollam
12. Shri. V. Sudaresa Panicker,
13. Shri. Gireesh, Media24 (Flowers)
14. Shri. Girish Kumar. V.S, FO, TRAC, KSEB LTD
15. Smt. Latha.S.V, AEE, TRAC, KSEB LTD
16. Shri. Venkitaraman.M, Kerala Television Federation
17. Shri. H. Gopalakrishnan, Kerala Television Federation
18. Shri. Vamadevan.V, KSEB Seniors' Forum
19. Dr. Thempammood Sahadevan, Convenor, Human Rights Protection Forum, Venjaramood
20. Shri. Johnson, Deputy Chief Engineer Operation, Southern Railway
21. Shri. Sasankan Nair, CE, KSEB LTD
22. Shri. M.P.Rajan, Dy. CE
23. Smt. Seema P Nair, Asst. Exe. Engineer, KSEB LTD
24. Smt. Biji Christudas, AE, TRAC, KSEB LTD
25. Shri. Nandakumar N, KSEBOA
26. Shri. Shine Raj, AE, TRAC, KSEB LTD
27. Shri. Edward P Beoniface, AEE, TRAC, KSEB LTD
28. Shri. Anil Kumar, Suptd, TRAC, KSEB LTD
29. Shri. Rajesh R, AEE, TRAC, KSEB
30. Shri. Babukuttan Nair.T, DAO, TRAC, KSEB LTD
31. Shri. Surendra.P, CESC
32. Shri. Hail Rosswin, Plant Engineer (Electrical), KMML
33. Smt. Geetha.V.S, KSEB LTD
34. Shri. Radhakrishnan, Thiruvananthapuram

35. Smt. Subha. T.G, AE, KSEB
36. Shri. A. Salim, Flour Mill
37. Shri. Rahul.B, Chief Manager
38. Shri. Rajesh.G, Sr. Manager Adm
39. Shri. Shoby George, Chief GM-Works, Malayala Manorama
40. Shri. Varghese.L, Travancore Titanium TGLU(CITU)
41. Dr. G. Sreenivasan, Thiruvananthapuram
42. Shri. Sreesankar.U.S, Driver Mathrubhumi
43. Shri. A. Shanavas, CE (CI&CC), KSEB Ltd
44. Shri. Rajeev Devaraj, Mathrubhumi News / Kerala Television Federation
45. Shri. Prem Kumar, Dy. CE, KSEB System Operation
46. Shri. Noushad.S, Kerala Power Board Officers Federation KSEB Ltd
47. Shri. P.S. Prasanth, Kerala Power Board Officers Federation KSEB Ltd
48. Shri. Hafiz Mohamed, Greenland Paper Mills Ltd
49. Shri. Anand, General Secretary, KRSMA
50. Shri. Anas.A.N
51. Rev. Shiji Sam, Lahari Vimochana Samithi
52. Shri. Anoop.M, O/o SOR
53. Rev. Moncy P Joy, Navajeeva Kendram
54. Smt. Gouri.R, Asar
55. Shri. Fasiludeen, KSSIA
56. Shri. Panagottukonam Vijayan, Vyapari Vyavasai Association
57. Smt. Manju.R, KSEB LTD, AEE
58. Smt. Amritha.R, KSEB LTD, EE
59. Smt. Lekha.P, EE, KSEB (on deputation KFON)
60. Shri. Hari, Residents Association
61. Shri. Firoz.N, Manager
62. Shri. Jahazar.M, Consultant
63. Shri. Viswakumar, Nalanchira
64. Shri. R. Gopakumar, Railways
65. Shri. V. Dileep Kumar, Railways
66. Shri. Jothiraman, Railways
67. Smt. Priya, Researcher
68. Shri. Suresh Kumar M.K, KSEBOA
69. Shril Prakash, KSEBOA
70. Shri. Lijin L.R, President, KFB Dist. Unit
71. Shri. Nousal P.N, KSEB
72. Shri. A Gopakumar, Org. Secretary, Federation of Residents Association, Kerala (Ferka)

Public Hearing at Kozhikode on 11.04.2022

1. Shri. Nandakumar, KSEB Engineers Association
2. Shri. P. Moideen Haji, Flour & Oil Mill Association
3. Shri. G. Anand, Consumer Indian News Paper Society
4. Shri. Shine Raj, AE, KSEB LTD
5. Shri. Suresh A, EE TRAC
6. Shri. Gireesh Kumar V.S, FO, TRAC, KSEB LTD
7. Shri. AjithKumar.G, DAO, TRAC, KSEB LTD
8. Shri. Babukuttan Nair. T, DAO, TRAC
9. Shri. M.P. Rajan, DCE, TRAC
10. Smt. Latha.S.V, AEE, TRAC
11. Shri. Manu Senan V, AEE, TRAC
12. Smt. Seema P Nair, AEE, TRAC
13. Shri. Rajesh.R, AEE, TRAC
14. Shri. Mahesh Kumar. P.R, Consumer
15. Shri. Edward. P, Boniface AEE, TRAC, KSEB LTD
16. Shri. Prakash Kumar.K, Parisons Rollerfilm
17. Shri. Hareendranath.N.K, Flour & Oil Mill Association
18. Shri. P.C. Abdul Latheef, Kerala Janavedi
19. Shri. Nithin Das K, Kozhikode Municipal Corporation
20. Shri. Kanarakutti, Kozhikode Municipal Corporation
21. Shri. K. Asokan, Advisory Committee Member
22. Shri. Babu Rajendran, FEEC
23. Smt. C. Nisha Banu, EE/ FO, Balussery, KSEB
24. Smt. P. Sheeba, EE, KSEB, PMU, Kozhikode
25. Shri. E. Manoj, AEE, KSEB Officers Association
26. Shri. Thanseer.M.H, DAO KSEB Officers Association
27. Shri. Sunil Kumar. V.K, DCE, O/o the CEE, Kannur
28. Shri. Sanal. V, Paper Mill Association
29. Shri. Harinarayan C, AEE, RMV & UD, Kozhikode
30. Shri. P. Chandrababu, Dy CE, EE, Kozhikode
31. Shri. Manikandan. A.K, Dy. CE, Design Cell, Kozhikode
32. Smt. Chitra K.P, Representing CE, Civil
33. Shri. Ramada. K.P, AEE, O/o the CEE, Kozhikode
34. Shri. P.M. Sudhakaran Nair, Western India Plywood, Kannur
35. Shri. Judin Syrus, Western India Plywood, Kannur
36. Shri. Prasanth Kumar. K, Western India Plywood, Kannur

37. Shri. Saji Rockey, Providence college
38. Shri. Shaji Sudhakaran, KSEB / EE/ ED/ Kozhikode
39. Shri. Satheesh Kumar, Peekay Steel
40. Shri. Shagith K.K, SM
41. Shri. Kesavadas M, Sr. Engineer, Peekay Steel
42. Shri. Viswambharan P, AE, KSEB
43. Shri. Sreevijaya P.V, AEE(i/c), ED Feroke
44. Shri. Asij K.M, Sr. Manager, Admin, Madhyamam
45. Shri. Abdul Sageeth K, Electrical Supervisor (Madhyamam)
46. Shri. Shirshad T.K, Public
47. Smt. Bindhu.N.S, AEE, ESD, Balussery, KSEB
48. Smt. Shyni K.P, AE, ES, Central
49. Smt. Usha T.S, AEE, RPTI, Kozhikode
50. Shri. K. Sanumaster, Consumer
51. Shri. P.V. Sasidharan, KESFOMA
52. Shri. T.S. Jayanthan, Consumer
53. Shri. Jacob Jose, Consumer
54. Shri. Vipin.C, Reporter
55. Shri. Ashraf. K.U, Daya Charitable Trust
56. Shri. Salin. N.R, KSEB

Public Hearing at Palakkad on 13.04.2022

1. Shri. Balakrishnan Kannimari, Mini Rice, Flour, Oil Mills Association
2. Smt. Saheena Sulaiman,
3. Shri. A.R. Satheesh, Engineers' Club, Ekm
4. Shri. Saji Mathew, Dy, Manager, Electrical
5. Shri. Dejo Kappen, Pala
6. Shri. Viswanathan. K, Residents Association
7. Shri. Rajesh.J.Kuruvila, Haritha Residents Association
8. Shri. Ramesh.H, KSEBWA (CITU)
9. Shri. Prabhakaran. K.V, Consumer
10. Shri. Prini Peter, Consumer
11. Shri. Sarath.R, Consumer
12. Shri. Renjith Jacob, Appolo Tyres, Kalamassery
13. Shri. Nair NandKumar, Vice President, HT & EHT Association
14. Shri. Ramesh, NFPS Association
15. Shri. George V James, MD, Rubber Park
16. Shri. Anees T.M, Asst. Manager (Ele), Rubber Park
17. Shri. K. Narendran, Rice, Flour, Oil Mills Association

18. Shri. Pushparajan, Palakkad
19. Shri. S. Reghunathan, Palakkad
20. Shri. Jacob Cheriyan, Malayala Manorama
21. Shri. A.P Unnikrishnan, AGM, Precot Ltd
22. Shri. Suresh.K.B, AM, Electrical, Precot Ltd
23. Shri. Shine Sebastian, KSEBEA
24. Shri. Kunjunni P.S, KSEBEA
25. Shri. R. Ramanathan, Consumer
26. Shri. V.V. Vijayan, KSEBWA (CITU)
27. Shri. Mahesh Kumar. P.R, INS
28. Shri. Suresh.A, EE, KSEB
29. Shri. Babukuttan Nair.T, DAO, KSEB LTD
30. Shri. Shine Raj, AE, KSEB LTD
31. Shri. Manu Senan.V, AEE, TRAC
32. Shri. Girishkumar.V.S, FO, TRAC
33. Smt. Latha.S.V, AEE, TRAC
34. Smt. Seema P Nair, AEE, TRAC
35. Shri. Biji Christudas, AE, TRAC
36. Shri. Edward.P.Boniface, AEE, TRAC, KSEB LTD
37. Shri. Rajesh R, AEE, KSEB LTD, TRAC
38. Shri. Soman.V, KSEBEA
39. Shri. Joshy.P.Chithlappilly, KSEBEA
40. Shri. K.K.Rajeev,KSEB
41. Shri. S. Nagarajan, AEE, KSEB
42. Shri. Premraj.C.V, AEE, KSEB LTD
43. Shri. Vipin.N, Nodal Officer, KSEB LTD
44. Shri. Shamla.K, Sr. Asst. KSEB
45. Shri. Swaminathan K.B, KSEB Retd
46. Shri. Ajo M.S,
47. Shri. Rajeevan, G.M, PATSPIN Ltd
48. Shri. Ratheesh, Hr. Head, PATSPIN
49. Shri. Jiju, EE
50. Er. Rajan. M.Menon, Sr. Consultant, Palakkad
51. Shri. Rathish.M, Head-HR, PATSPIN
52. Shri. A. Satheesh Kumar, EE/KSEB LTD
53. Shri. Venugopalan.P, KSEB Seniors Forum
54. Shri. Ajith Kumar.G, DAO, KSEB Ltd
55. Shri. P.V. Sreeram, EE, KSEB LTD
56. Shri. Edathara Ramakrishnan, Kissan Janatha

57. Shri. Lenin, Yuvajanatha dal (s)
58. Shri. Mahesh, Yuvajanatha dal (s)
59. Shri. Vijesh
60. Shri. Shyam
61. Shri. Pratheesh.S, BMS PATSPIN
62. Shri. Sunil Joseph, KSSIA, Palakkad
63. Shri. Suresh Kumar M.G, President, KSEBOA
64. Shri. Adwaith.H, YJD
65. Shri. S. Suresh, CITU, PATSPIN
66. Shri. K. Suresh, CITU, PATSPIN
67. Shri. Girish.R, Malabar Cements
68. Shri. Manoj. V.V, MCL CITU
69. Shri. Mohamed Azad, MCL STU
70. Shri. Murugan.K, MCL, INTUC
71. Shri. B. Radhakrishnan,
72. Shri. Kiran Kumar.R, Kanjikode Industries Forum
73. Shri. Anjith.R, Saint Gobain, Kanjikode
74. Shri. Sreenivasa Pai, Saint Gobain Services
75. Shri. Chamimala.R, Manager, Engg Services
76. Smt. Suchitra.K, EE, ED
77. Shri. Fijo Jose, ACE Technologies
78. Shri. Jose C George, ACE Technologies
79. Shri. K. Mohammed Rafeek, AKLWA
80. Shri. Ramaprakash.K.V, EE, ED, Alathoor
81. Shri. M. Assawmohamed Haji, KVVES
82. Shri. Rajeev Kumar.K, CECCN, Kozhikode
83. Shri. Kaladharan K, AKLWA
84. Dr. P. Rajan, InSDES
85. Shri. Anandhan M, PATSPIN
86. Shri. Raymond Antony, Karshakasamkhadana
87. Shri. C. Moorthy, PATSPIN India Ltd
88. Shri. S. Babu, PATSPIN India Ltd
89. Shri. V.I. Chandran, Mankara Panchayat
90. Shri. Dhilon M.S, Manager
91. Shri. Rajan.C.R, Nenmara
92. Shri. Munna R.C, AEE, KSEB Ltd
93. Shri. Robin, Public
94. Shri. Bose Jacob, InSDES

Annexure- II

List of Stakeholders furnished the written comments/objections

Public Hearing Held at Ernakulam

1. C A Narayanan, Kuruppampady-683545
2. General Manager (O&M) Kochi Metro Rail Limited (KMRL)
3. Airport Director, Cochin International Airport Limited (CIAL)
4. Cochin Special Economic Zone Authority (CSEZA)
5. Asst. General Manager (Electrical), The Travancore Cochin Chemicals Ltd (TCCL)
6. DGM (Electrical), Bharat Petroleum Corporation Limited - Kochi Refinery
7. The Kerala State Small Scale Industries Association
8. Kerala Television Federation
9. GTN Textiles Limited
10. The Edayar Small Scale Industries Association
11. The Joint Trade Union Movement - HOCL
12. Pain & Palliative Care Unit - Vellamunda
13. Sr. Divisional Electrical Engineer (Traction), Southern Railway
14. ETLS Pvt Ltd
15. Standing Council of Industrial Trade Unions.
16. Vodafone Idea Limited
17. Bharti Airtel Ltd
18. Indus Towers Ltd
19. The Indian News Paper Society
20. Kerala State Electricity Consumers Association (C.I.T.U)
21. Human Rights Protection Forum
22. Vyapari Vyavasayi Association State Committee.
23. Bodhi Vivaravakasa Samrakshana Sena
24. Shri Jose Paul, Thrissur
25. Dr. Mohan G Madhavamangalam
26. Kerala Samsthana Cherukida Rice, Flour & Oil Millers Association
27. Aluva Taluk Power Avakasha Samrakshana Samithi
28. The United Trade Union Organisation of TCC Ltd, Udyogamandal (CITU, INTUC, TCC Thozhilali Union)
29. KSEB, Seniors Forum

Public Hearing Held at Thiruvananthapuram

1. Centre for Consumer Education, Pala
2. Institute of Human Resources Development (IHRD)
3. Kerala Samsthana Cherukida Rice Flour & Oil Millers Association
4. Federation of Residence Association Kerala (FERKA)
5. Travancore Titanium Products Limited
6. Navajeeva Kendram, De-Addiction & Rehabilitation Centre for Addicts
7. Titanium Trade Unions (CITU, INTUC and TECC)
8. Malankara Mar Thoma Syrian Church, Lahari Vimochana Samithi
9. Kerala Recognised School Management's Association
10. Kerala Federation of Blind dated
11. Kerala Television Federation
12. Kohuveli MSME Association

Public Hearing Held at Kozhikode

1. Secretary, Kozhikode Municipal Corporation
2. Shri. Jacob Jose, Marikunnu P.O, Kozhikode
3. Kerala Samsthana Cherukida Rice Flour & Oil Millers Association
4. Kerala Jana Vedi State Committee
5. The Western India Plywoods Ltd, Baliapatam, Kannur
6. Friends of Electricity Employees and Consumers (FEEC)
7. Providence Women's College, Calicut
8. The Indian News Paper Society

Public Hearing Held at Palakkad

1. Kanjikode Industries Forum
2. Kerala State Small Industries Association (KSSIA)
3. PATSPIN India Limited Employees Association, INTUC
4. Vice President, Elappully Grama Panchayath
5. Shri. C. Moorthi, Chairman, Cousapara Mini Drinking water supply scheme
6. Kerala Samsthana Cherukida Rice & Oil Millers Association
7. PATSPIN India Ltd, Kanjikode East P.O, Palakkad
8. Palakkad District Rice, Flour & Oil Mini Millers Association
9. CITU PATSPIN Textile Mill Workers Association
10. Palakkad District Textile Mazdoor Sangham
11. CITU Pudukkottai Division Committee Palakkad District
12. Institute for Sustainable Development and Energy Studies (InSDES)

13. The Kerala HT & EHT Industrial Electricity Consumers association
14. Shri. Rajan.M.Menon, Electrical Consultant Engineer

Via Post/e-mail

1. Shri. Shibu.A.S, Kili, Kollamkode P.O., Thiruvananthapuram
2. Kerala Recognised School Management's Association, State Committee
3. Shri. V.Sundaresha Panikar, Freelance Journalist
4. Shri. James Zacharias
5. All Kerala Photographers Association
6. Shri. Wilson K.B
7. Shri. Bobby Mathews
8. Anonyms letter dated 09.02.2022
9. M/s Vodafone Idea Ltd
10. Shri. Sebastian.A.C, Kallumkal House, Kozhikode
11. Thrissur District Consumers Protection Association, Irinjalakuda
12. Shri. N.Vijay Gopalan, Thiruvananthapuram
13. Shri. Bhadran Rama
14. Shri. K.Ramachandran, Palakkad
15. Kerala Co-Operative Milk Marketing Federation Ltd (MILMA)
16. Shri. O.A. Harees, Thamanna Bhavan, Thazhava P.O, Kollam
17. Applicants and Consumers Forum
18. Shri. Varghese George, Kochi
19. Shri. Kunnukuzhi S. Mani
20. Shri. Ajay Nair
21. Institute of Human Resources and Development (IHRD)
22. Shri. Mohamed Hassan Master, Chemmad
23. Shri. Biju P.H, Parayakad P.O., Alappuzha
24. M/s S. Madhu and Associates, Thevara, Cochin
25. KSEB Seniors Forum
26. Pain and Palliative Care Unit Vellamunda
27. Shri Sathjith.V.H, Paravur P.O., Kollam
28. M/s Kannan Devan Hills Plantations Company Private Limited (KDHPCL)
29. Shri. Amaladasan Pereira, Poovar P.O., Thiruvananthapuram
30. Shri Sudhakaran Nair, Medical College P.O., Thiruvananthapuram
31. K.S.E.Board Pensioner's Association
32. Secretary, Kozhikode Municipal Corporation
33. Assistant Secretary, Thrissur Corporation Electricity Department (TCED)
34. Saint Gobain India PVT. Ltd

35. Association of approved and Classified Hotels of Kerala
36. Shri Antappan Joseph, Palakkad
37. All Kerala Licensed Wireman Association
38. M/s Rubber Park India Limited
39. Shri. Mathew Kuruvilla (MD, Tall County Apartments)
40. Department of Agriculture Development and Farmers' Welfare
41. President, Pulpally Grama Panchayath
42. Institute of Land & Disaster Management (ILDm)
43. Military Engineer Services (MES)
44. Shri. Uthaman.K, West Hill, Kozhikode
45. Shri. Sasi.B, Kudayathoor P.O., Idukki
46. Shri. K.Nanda Kumar, Managing Partner, United Film Exhibitors.
47. Shri. Issac francis, MD, Issacs & Maria AC Movie House.
48. Shri. Jacob.V. Thomas, MD, Managing Partner, Vallakalil Cine Complex
49. General Secreatry, K.S.E.Board Officers Association
50. Shri. B.Jacob, General Secretary, The Kerala Film Chamber Of Commerce
51. Shri. G.George, Partner, Abhinaya Theaters, Changanacherry, Kerala
52. Shri. G.George, Partner, Abhilash Theaters, Kottayam, Kerala