FIFTEENTH KERALA LEGISLATIVE ASSEMBLY

COMMITTEE

ON

PUBLIC UNDERTAKINGS
(2023-2026)

SEVENTY FOURTH REPORT

(Presented on 27th January, 2026)

SECRETARIAT OF THE KERALA LEGISLATURE
THIRUVANANTHAPURAM
2026

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On

Transformers and Electricals Kerala Limited & Kerala State Electronics Development Corporation Limited

(Based on the Report of the Comptroller and Auditor General of India for the year ended 31st March, 2019)

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COMMITTEE ON PUBLIC UNDERTAKINGS
(2023-2026)

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INTRODUCTION

I, the Chairperson, Committee on Public Undertakings (2023-2026) having been authorised by the Committee to present the Report on its behalf, present this 74th Report on Transformers and Electricals Kerala Limited & Kerala State Electronics Development Corporation Limited based on the report of the Comptroller and Auditor General of India for the year ended 31st March, 2019 relating to the Public Sector Undertakings of the State of Kerala.

The aforesaid Report of the Comptroller and Auditor General of India was laid on the Table of the House on 10.06.2021. The consideration of the audit paragraphs included in this report and the examination of the departmental witness in connection thereto were made by the Committee on Public Undertakings (2023-2026) at its meeting held on 24.12.2024.

This Report was considered and approved by the Committee (2023-26) at its meeting held on 21.01.2026.

The Committee place on record its appreciation for the assistance rendered to them by the Accountant General (Audit), Kerala in the examination of the Audit paragraphs included in this Report.

The Committee wishes to express thanks to the officials of the Finance Department, Industries Department of the Secretariat, Transformers and Electricals Kerala Limited and Kerala State Electronics Development Corporation Limited for placing the materials and information solicited in connection with the examination of the subject. The Committee also wishes to thank in particular the Secretaries to Government, Industries and Finance Department and the officials of Transformers and Electricals Kerala Limited and Kerala State Electronics Development Corporation Limited who appeared for evidence and assisted the Committee by placing their views before the Committee.

E. CHANDRASEKHARAN,
Chairperson,
Committee on Public Undertakings.

Thiruvananthapuram,
27th January, 2026.

REPORT
ON
Transformers And Electricals Kerala Limited (TELK) & Kerala State Electronics Development Corporation Limited (KELTRON)

Audit Paragraph (2018-19)

Transformers And Electricals Kerala Limited (TELK)

5.2 Electrical energy management by Public Sector Undertakings in the manufacturing sector

Delay in conducting energy audit, failure to achieve specific energy consumption norms, non-availing of open access facility etc. led to extra expenditure and non-achievement of energy savings.

Energy[1] management activities in India are governed by the Energy Conservation Act, 2001 (Act). Government of Kerala (GoK) accords high priority to energy conservation and energy efficiency and issued guidelines (May/ November 1992) for conducting energy audit and directions (June 2015) to regulate energy consumption standards for equipment and appliances. Bureau of Energy Efficiency (BEE) is established under the Act to co-ordinate with designated consumers, designated agencies and others. Energy Management Centre (EMC) is the State Designated Agency to co-ordinate, regulate and enforce the provisions of the Act/ guidelines/ directions.

1 As per Section 2(h) of Energy Conservation Act, 2001, energy means any form of energy derived from fossil fuels, nuclear substances or materials, hydro-electricity and includes electrical energy or electricity generated from renewable sources of energy or bio-mass connected to the grid.

A sample of nine[2] out of thirty Public Sector Undertakings (PSUs) functioning in the manufacturing sector was selected as per Stratified Random Sampling Method [3] for assessing the level of compliance to the Act/ guidelines/ directions and evaluating the implementation of energy conservation measures during the period 2016-17 to 2018-19. Audit findings in this regard are discussed below:

5.2.1 Delay in conducting energy audit

As per the GoK directions (1992/2015) read with Government Order (January 2011), all HT/EHT installations should conduct energy audit once in three years.

Audit observed that out of nine PSUs selected for audit, energy audit was not conducted in STL so far (October 2019). Though SILK conducted first energy audit in 2008, subsequent energy audits were not conducted till October 2019. In the case of remaining six[4]PSUs, delay ranging from 7 to 59 months was noticed in conducting the latest energy audit which was due between May 2012 and March 2019. The energy audit conducted by MCL, KMML and KSCMMCL did not include all their HT/EHT connections[5].

TELK replied (September 2020) that the energy audit was conducted and report submitted to EMC in September 2020. Regarding not conducting energy audit of all the units, the PSUs replied that steps were initiated to conduct the energy audit of these units.

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2 Travancore Cochin Chemicals Limited (TCCL), Malabar Cements Limited (MCL), The Kerala Minerals and Metals Limited (KMML), Kerala State Coir Machinery Manufacturing Company Limited (KSCMMCL), Travancore Titanium Products Limited (TTPL), Keltron Component Complex Limited (KCCL), Steel Industrials Kerala Limited (SILK), Sitaram Textiles Limited (STL) and Transformers and Electricals Kerala Limited (TELK).

3 Based on energy consumption bill data.

4 TCCL, KMML, KSCMMCL, TTPL, KCCL and TELK. Since the last energy audit of MCL was conducted in April 2016, next audit was due in April 2019.

5 Mines at Walayar of MCL, Mineral Separation Unit and Titanium Sponge Plant of KMML and the administrative building of KSCMMCL.

The fact, however, remains that non-conducting of energy audit or delay in conducting it would lead to delayed identification of areas for energy efficiency and conservation with probable energy savings.

Audit also noticed that EMC was appointed (January 2011) as the State Designated Agency to co-ordinate, regulate and enforce the provisions of the rules in force. EMC, however, did not regularly monitor the conduct of energy audit and follow-up measures implemented by the PSUs.

EMC stated (July 2020) that empanelled energy auditors would be directed to incorporate details including status of implementation of previous energy audit and recommendations in energy audit report.

5.2.2 Non-achievement of specific energy consumption targets

As per Perform Achieve and Trade (PAT) Rules 2012[6] , designated consumers[7] are required to achieve specific energy consumption[8] target over a cycle of three years. Any shortfall in achieving the target is compensated by purchasing required number of Energy Savings Certificates (ESCerts). As per Section 26 of the Energy Conservation Act, 2001, non-compliance of the above would attract a penalty of ₹10 lakh in addition to ₹10,000 per day for continued failures. The performance of the designated consumers, MCL and TCCL, under PAT cycle-I (1 April 2012 to 31 March 2015) and PAT cycle-II (1 April 2016 to 31 March 2019) was examined in audit.

6 Energy Conservation (Energy Consumption Norms and Standards for Designated Consumers, Form, Time within which, and Manner of Preparation and Implementation of Scheme, Procedure for Issue of Energy Savings Certificate and Value of Per Metric Tonne of Oil Equivalent of Energy Consumed) Rules, 2012, which is known as PAT Rules, 2012.

7 Government of India notified consumers from 11 energy intensive sectors (i.e., Thermal power stations, Fertilisers, Cement, Iron and Steel, Chlor-Alkali, Aluminium, Railways, Textile, Pulp and Paper, Petroleum Refinery and Electricity Distribution Company) as designated consumers. Out of nine PSUs selected for audit, TCCL (Chlor-Alkali) and MCL (Cement) are designated consumers.

8 Specific energy consumption refers to all the energy used to perform an action or manufacture something. In a factory, total energy consumption can be measured by looking at how much energy a production proess consumes.

Audit noticed that MCL failed to achieve the specific energy consumption target of 0.1050 and 0.1011 Ton of Oil Equivalent (TOE) per ton of finished product in PAT cycle-I and PAT cycle-II respectively. As a result, MCL has a liability to purchase 16,522 nos. (3,958 nos. for PAT cycle-I and 12,564 nos. for PAT cycle-II) of\ ESCerts costing ₹74.35 lakh[9] . Since MCL did not purchase any ESCerts so far (December 2019), it was also liable to pay penalty of ₹60.80 lakh [10] as per Section 26 of the Energy Conservation Act, 2001. Further, the non-achievement of specific energy consumption norms resulted in excess consumption of fuel amounting to ₹80.05 crore [11] for the PAT cycle-II (1 April 2016 to 31 March 2019).

The GoK replied (November 2020) that MCL could not achieve capacity utilisation due to interruptions in continuous running of plant caused by external factors like sluggish market demand which affected the energy efficiency of the entire plant.

The reply was, however, silent as to why MCL did not approach BEE for revising the target, citing unfavourable market conditions. Further, MCL did not purchase ESCerts even after receiving directions (November 2017) from EMC in this regard.

5.2.3 Excess power consumption by non-designated PSUs

In the case of non-designated PSUs, Audit reviewed the existence of power consumption norms and power consumption pattern against such norms, if any.

Audit observed that four[12] out of seven PSUs did not fix any norms for power consumption.

9 As per the last traded rate of ₹450 per ESCerts at Indian Energy Exchange, the liability amounts to ₹17.81 lakh in PAT cycle-I and ₹56.54 lakh for PAT cycle-II

10 ₹60.80 lakh = ₹10 lakh + ₹10,000 x 508 days.

11 Calculated based on the average cost of High Speed Diesel in 2017-18.

12 KSCMMCL, TELK, SILK and KCCL.

TELK/KSCMMCL replied (September/December 2020) that steps were being taken for fixing norms for consumption of energy for different productions levels, production mix etc.

5.2.4 Non-utilisation of open access facility for purchase of power

As per Section 42 of the Electricity Act 2003, Kerala State Electricity Regulatory Commission introduced (2013) open access scheme enabling the electricity users having more than 1 MW connected load to avail the benefits of cheap power by purchasing it from the open market.

Audit noticed that out of seven PSUs[13]which were eligible to avail the open access facility, only two PSUs, KMML and TCCL, utilised the facility from 2015-16 and 2017-18 onwards respectively. There were savings of ₹13.37 crore to KMML and ₹8.72 crore to TCCL on account of purchasing power using the open access facility up to 2018-19.

Out of the remaining five PSUs, three PSUs, MCL, TTPL and TELK, had EHT connections and there was scope for availing power through open access facility to minimise the cost of power.

5.2.4.3 TELK, however, did not take any action for purchasing power through open access till date (December 2019).

TELK stated (September 2020) that steps were taken to explore the possibilities of open access facility.

13 MCL, TCCL, KMML, TELK, TTPL, KCCL and STL.

5.2.5 Non-implementation of solar power projects

The Budget Speech 2013-14 of the GoK encouraged the PSUs to set up solar energy units. GoK also issued directions (July/December 2013) to six[14] out of nine PSUs selected for audit to implement solar energy units.

Audit observed that four[15] out of the six PSUs set up solar energy units as directed by GoK. In the case of the remaining two PSUs, TELK did not take any steps to comply with the directions of the GoK.

TELK replied (September 2020) that the possibilities of implementing roof top solar project were being explored.

However, as per the notification (November 2015) of MNRE, subsidy was not available to commercial and industrial buildings of the private sector but was available for an industrial building under a State PSU. In the case of other PSUs, they were yet to comply with the direction (2013) of the GoK.

5.2.6 Lapses in energy requirement planning and efficiency improvement measures

As per the tariff orders of KSEBL approved by the Kerala State Electricity Regulatory Commission, 75 per cent of the Contract Demand (CD) or the actual Recorded Maximum Demand (RMD) whichever is higher is considered as the billing maximum demand. If the RMD exceeds the CD, RMD is billed at 1.5 times. The tariff orders from time to time also provide for incentives [16] to HT and EHT consumers for power factor[17] (PF) improvement. An increase in PF above 0.90 would thus reduce energy charges. If the PF falls below 0.90, one per cent of energy

14 KMML, MCL, TELK, TTPL, TCCL and STL.
15 MCL, TTPL, STL and TCCL.
16 0.50 per cent vide Kerala Gazette Order No. 782 dated 21/04/2017, 0.25 per cent vide Kerala Gazette Order No. 1305 dated 28/11/2012, No. 2652 dated 9/9/2013 and No. 2379 dated 27/09/2014.
17 Power Factor (PF) expresses the ratio of true power used in a circuit to the apparent power delivered to the circuit.

charges for reduction of every 0.01 unit is charged in addition to the applicable charges.

5.2.6.1 Analysis of the contract demand and the actual consumption pattern from the monthly electricity bills of nine PSUs (total 13 connections) from April 2016 to March 2019 was made in audit. In four connections of three PSUs[18], the actual RMD was in the range of 15.25 per cent to 67.83 per cent of the CD. The PSUs did not analyse the need for reducing the CD and act accordingly which resulted in avoidable expenditure of ₹54.14 lakh [19] .

TELK replied (September 2020) that KSEBL insisted (2016) for upgradation of equipment in the TELK substation for reduction of CD. TELK added that as the planned upgradation of the equipment would take time, it would again request KSEBL to reduce the CD.

Audit, however, noticed that the energy audit reports of these PSUs also recommended for reduction in contract demand which was not yet complied with.

5.2.6.2 Analysis also revealed that seven PSUs[20] achieved PF above 0.90 in all the three years (total eight connections).

The GoK and PSUs (January/ October 2020) replied that steps were being taken to improve the power factor.

Recommendation 5.2: The GoK/PSUs may accord priority for undertaking timely energy audit, to identify energy efficiency and conservation areas including availing open access facility in order to achieve efficient use of

18 Two connections in KSCMMCL, one connection each in TTPL and TELK.
19 Excess contract demand is worked out by taking difference between the actual connected load and the connected load recommended in energy audit reports. This excess contract demand is multiplied with applicable fixed charges.
20 TCCL, MCL, TTPL, TELK, KCCL, SILK (One Connection) and STL.

energy. A senior management level oversight mechanism may be contemplated to monitor the achievement in this regard.

[The Audit paragraph 5.2 to 5.2.6.2 contained in the report of the C &AG for the year ended 31 March 2019.]

The notes furnished by the Government on the audit paragraph are given in Appendix II.

Discussion and findings of the committee

5.2 Electrical energy management by Public Sector Undertakings in the manufacturing sector

5.2.1 Delay in conducting energy audit

The Head of Production, TELK, informed the Committee that energy audits were conducted in 2020 and 2023, and subsequent reports had been submitted.

The Committee accepted the reply. Hence no remarks.

5.2.3 Excess power consumption by non-designated PSUs

In response to the Committee's query regarding alternative measures to control power consumption, the Head of Production, TELK, explained that as a power transformer industry the company manufactures and distributes transformers of varying capacities ranging from 5MVA to 315 MVA. He added that it was challenging to implement controlling measures as current requirements for each transformer is different. However, the Company is taking steps to maintain the power factor as stipulated by KSEB.

When the Committee inquired about the company's current financial situation, the Head of Production, TELK, replied that the company has an order position of approximately ₹600-700 crore. However, he added that the company is facing challenges due to high price of raw material, insufficient availability of the main raw material. CRGO which is largely controlled by China, and difficulty in manufacturing CTC, a major conductor. He further informed the Committee that the Company's major client, Megha Engineering and Infrastructure Limited, is now facing fund crisis, and therefore, TELK is unable to supply transformers. He stated that despite these challenges the Company has recently secured an order for 16 transformers worth ₹54 crore from KSEBL and is trying to find new clients. In response to the Committee’s query regarding the role of private sector in transformer manufacturing, the Head of Production stated that the majority of companies operating in the transformer manufacturing sector are privately owned.

The Committee inquired about TELK's competitiveness against private companies, and the Head of Project responded that TELK maintains a leadership position in manufacturing transformers up to 400 kVA. He further highlighted TELK's reputation for quality, citing that some of its transformers, which were manufactured 40-50 years ago, are still functioning well across India.

In response to the Committee's query regarding the reason for the current financial crisis, the Head of Production informed the Committee that the current financial difficulties were due to the significant increase in the cost of raw materials after 2020. When the Committee inquired about the impact of increased raw material costs on the private sector, the witness explained that a factor called price variation, which may be omitted in some orders, can significantly affect costs. The Committee inquired about how private companies overcome the crisis caused by price variation, the Head of Production replied that private companies typically mitigate this risk by purchasing raw materials in bulk.

The Committee further inquired whether any constraints prevent TELK from buying raw materials in bulk. The witness replied that the company lacks sufficient cash flow to make bulk purchases. The Chief Operating Officer elaborated that a bulk purchase of CRGO would require a deposit of ₹300 crore, which would enable the company to import it directly, but due to cash shortage, they are unable to do so and purchased core from sub-vendors. He added that TELK made loss for three continuous years because the price variation was denied by KSEBL.

The Committee inquired about the possibility of adjusting the product price in accordance with the changes in raw material costs. The witness explained that the company faced difficulties in moving forward due to various factors, including increased material costs following the COVID-19 pandemic. He added that KSEBL withheld payments under the price variation item due to delayed delivery, but after discussions between the Minister of Power and KSEBL Chairman, the amount is now being paid in installments.

The Committee observed that both public and private sectors faced a crisis during the COVID-19 pandemic, but the private sector overcame the situation, while public sector institutions continue to struggle. The Committee recommended that necessary steps be taken to address this issue and suggested to conduct a market study and to increase the price of the products accordingly.

The witness stated that orders placed prior to 2019 were delayed due to material shortage, and emphasized that timely receipt of materials is crucial for production in the power transformer industry. He informed the Committee that TELK is currently receiving orders with good margins, also. He added that TELK made a profit of ₹ 2.84 crore in the previous year and is expecting a profit of ₹ 5 crore this year.

The Committee inquired about TELK's annual production, and the Chief Operating Officer replied that the company's average installed capacity is 4500 MVA, but production has been limited to 2500 MVA over the last three years; however, he assured the Committee that TELK aims to reach 3000 MVA this year.

Observation / Recommendation of the Committee

1. The Committee oberves that TELK failed to implement controlling measures to reduce power consumption due to the varying current requirement of transformers. So the Committee recommends to take effective steps to maintain the power factor according to the prescribed norms.

2. The Committee observes that after the covid period, TELK struggled to overcome the situation due to increased material cost. So the Committee recommends to take necessary steps to address the issue and suggests to conduct a market study to increase the price of the products if found needed.

5.2.4 Non- utilization of open access facility for purchase of power

The Head of Production informed the Committee that the open access facility for purchasing electricity is not utilized since TELK has only low electricity consumption.

The Committee accepted the reply. Hence no remarks.

5.2.5 Non- implementation, of solar power projects

In response to the Committee's query regarding the non-implementation of solar energy projects, the witness explained that the primary reason for the delay in implementing solar energy projects is financial crisis. However, he assured the Committee that TELK intends to proceed with these projects in future, by leveraging its land and other facilities. The witness added that since the plants of the Company are about sixty years old which were roofed with Asbestos and they give priority to change the roofs. Then the Committee recommended to implement the solar projects after completing the renovation of roof top.

Observation / Recommendation of the Committee

3. The Committee observes that TELK is planning to change the roof of the plant which is built of Asbestos about sixty years ago. So the Committee recommends to implement the solar project after completing the renovation of the rooftop.

5.2.6 Lapses in energy requirement planning and efficiency improvement measures

Audit para 5.2.6.1
Audit para 5.2.6.2

The Committee inquired about the audit objection regarding contract demand. The Chief Operating Officer replied that KSEBL has agreed to reduce the contract demand. He added that the application is currently under process and expected to be resolved within the next three months.

The Committee accepted the reply. Hence no remarks.

<u>Kerala State Electronics Development Corporation Limited</u> (KELTRON)

5.7 Avoidable loss

Purchase of Tablet PCs for sale through single tender system without analysing the demand, compounded by complete lack of efforts to market the same resulted in liquidation of stock at reduced price resulting in loss of ₹39.72 lakh.

As per Stores Purchase Manual (SPM) (Rule 7.11) whenever the estimated value of the contract is ₹10 lakh or more, procurement should be carried out through open tender system. SPM allows (Rule 7.20) single tender system for procurement when the articles required are of a proprietary character and competition is not expected to be advantageous. As per Central Vigilance Commission (CVC) guidelines (July 2007), open tendering is the most preferred mode of tendering, but procurement can also be done through private negotiation where the supplier or contractor has exclusive rights in respect of the goods or services and no reasonable alternative or substitute exists.

Kerala State Electronics Development Corporation Limited (Company) decided (January 2014) to enter into the business of Tablet PCs through one of its units, Keltron Communication Complex (KCC). The Company anticipated demand for the Tablet PCs from Government Departments, educational institutions and business organisations across the country. The Company proposed (January 2014) to enter into an agreement with Intel Technologies India (Intel) for manufacturing the Tablet PCs under 'Keltron Intel' brand. The Company also proposed to market the Tablet PCs in the consumer market and Government Departments across the country through Info Gnet Solution India. Accordingly, as advised by Intel (January 2014), the Company placed (January 2014) purchase order with Intel's Original Device Manufacturer of Tablet PCs, Elite Group Computers System Co.

Ltd., Taiwan for supply of 500 Tablet PCs at the rate of ₹9,011.26 per unit. The Company received the Tablet PCs in July 2014, incurring a total cost of ₹55.75 lakh [21] (i.e. ₹11,150 per unit) and fixed the selling price at ₹17,000 per unit. As of December 2019, the Company was, however, able to sell only 333 units while 39 units were issued for internal use and 33 units were kept for replacement under warranty/testing leaving 95 units in closing stock.

In this regard, Audit observed that:

- The Company selected Intel as the manufacturer of Tablet PCs to be marketed by it without adopting a transparent procedure. The procurement was made through single tender system though the conditions stipulated by SPM/CVC guidelines for resorting to it were not fulfilled.

- The Company decided to purchase the Tablet PCs without any market study, but based on the interest expressed by some Government Departments. However, no records were available to indicate that these Government Departments were actually interested in buying the Tablet PCs. The placement of initial order for purchase of 500 units of Tablet PCs, therefore, lacked justification.

- The Company neither initiated any steps to launch the Tablet PCs in the target markets nor engaged Info Gnet Solution India to market the Tablet PCs. Instead, within one month of receiving the Tablet PCs, the Company offered (August 2014) to sell them to its employees at a reduced price of ₹14,700 per unit. The Managing Director also had confirmed that no effort was made by the officials concerned for marketing the Tablet PCs.

21 Cost price ₹45.06 lakh, warranty charges ₹1.38 lakh, customs duty ₹7.99 lakh and freight insurance and other charges ₹1.32 lakh.

- During July to October 2014, the KCC unit of the Company could sell only 18 units at an average price of ₹14,117 per unit. After retaining eight units, the KCC unit transferred (January 2015) 474 units to Information Technology Business Group[22] (ITBG) unit of the Company to sell the Tablet PCs. Since the ITBG unit also could not improve the sales (only 13 units were sold up to August 2016), a Committee was constituted (December 2017) for liquidating the Tablet PCs. The Committee recommended (January 2018) sale of the Tablet PCs at ₹4,750 per unit among the employees of the Company. Since the demand was low even at this price, the Company was forced to further reduce (June 2018) the price to ₹2,000 per unit. As of March 2019, the Company, thus, sold a total of 333 units of which 275 units were sold to the employees of the Company at ₹2,000 per unit.

- The Company did not enter into an agreement with Intel as envisaged after the procurement of Tablet PCs in July 2014. The 95 units in stock and 33 units retained by Company for providing as replacement for damaged units under warranty were more than five years old and hence have become technologically outdated. In the absence of an agreement with Intel for technology up-gradation, which was a continuous process, these Tablet PCs cannot be updated either.

Thus, purchase of Tablet PCs for sale without analysing the demand and efforts to market the same resulted in liquidation of stock at reduced price resulting in loss of ₹39.72 lakh[23] . Further, the procurement of Tablet PCs did not comply with the requirements of SPM and CVC guidelines and thus lacked transparency.

The GoK replied (October 2020) that the Company entered into Tablet PC market considering the market trend in 2013. The Company held discussions with Intel, AMD etc. and Intel came forward to associate with the Company.

22 Engaged in the execution and after sales support of projects which include hardware and software products related to information technology.

23 Loss on the sale of 333 units- ₹25.45 lakh and loss on account of obsolete stock of 128 units- ₹14.27 lakh.

Education sector was identified to establish the market and around 4.5 lakh Table PCs were required for E-learning project of GoK. The Company finalised the specifications in consultation with Education Department. The Company procured 500 Tablet PCs and proposed to give it to schools. As GoK could not proceed with the project, the Tablet PCs could not be sold. Being a customised product, it could not be marketed in other sectors. Further, the Company invited Expression of Interest for selection of channel partners for marketing and participated (August 2014) in Intel Channel meet and in various exhibitions to market the Tablet PCs.

The reply was not acceptable as the Company should have called for Expression of Interest for selecting the manufacturer of Tablet PCs instead of informal/ undocumented communications. The reply regarding market identified by the Company was not convincing as the proposal seeking approval for entering into the Tablet PC market and purchasing 500 units did not mention that the Tablet PCs would be suitable only for education sector. Rather, the proposal was to cater to the consumer market as well as various government departments. The reply regarding marketing efforts was also not supported by any documentary evidence. The reply was also silent on the reasons for offering the Tablet PCs to employees of the Company immediately after the Tablet PCs were received.

Recommendation 5.7: New business activities may be undertaken after analysing demand for the proposed product and with an effective marketing mechanism to ensure its success.

[The Audit paragraph 5.7 contained in the report of the C &AG for the year ended 31 March 2019.]

The notes furnished by the Government on the audit paragraph are given in Appendix II.

Discussion and findings of the Committee

5.7 – Avoidable Loss

The audit objection was that Keltron placed an order for 500 Tablet PCs without analysing demand, and failed to take steps to market the purchased devices, which cost ₹55.75 lakh. As a result, the company had to sell the Tablet PCs at a significantly reduced price of up to ₹2,000 per unit, resulting in a total loss of ₹39.72 lakh.

The Managing Director, Keltron, explained that in 2013, Keltron decided to enter into the Tablet PC business for e-learning and smart classroom projects. He stated that as advised by Intel, Keltron placed purchase order for 500 Tablet PCs with Taiwan's Elite Group Computer System Company Limited, the original manufacturer of Intel's Tablet PCs, at a price of ₹11,150 per unit. Although the target price was ₹17,000, only a few Tablet PCs were sold to schools at that rate, and the rest were sold to Keltron employees at a significantly lower price.

The witness admitted that the purchase was made without an Expression of Interest, but with the approval of management. He assured the Committee that Keltron has adopted a policy to purchase from a government agency or other authority, and to proceed according to open tender procedure as per the purchase manual.

The Committee inquired whether there was a demand from the Education Department for 500 Tablet PCs. The MD of Keltron replied that there was no evidence of such demand in the files. However, he added that after five years Keltron started receiving significant orders. Specifically, Keltron secured orders worth ₹150 crore for giving digital content through KITE in Kerala, ₹180 crore in Orissa, and is currently implementing smart classroom project worth ₹ 900 crore in Tamil Nadu, with an additional ₹ 86 crore for providing Tablets. He clarified that though there was loss initially due to procedural lapses, Keltron secured plenty of orders in e-learning projects. He added that the loss of about ₹ 44 Lakhs has been compensated through KITE project.

In response to the Committee's query about profitability, the MD replied that the company has been operating at a small profit for the last three years.

The Committee enquired about the substantial delay in delivering computers and laptops to schools through MLA funds, and about the poor quality of equipment supplied by Keltron. The Managing Director clarified that laptops and computers supplied under MLA funds are procured from reputable companies such as HP, Dell and Acer.

In response to the Committee's query, the Managing Director, stated that there is currently no demand for Coconics laptops and informed that efforts are being made to enhance the quality of the same.

The Committee observed that Keltron, being a prestigious institution in Kerala,is now working only as a commission agent. The Committee instructed to improve the quality of the products which are bought from other companies and those which are being manufactured by Keltron.

To a query of the Committee regarding the barriers in manufacturing own products, the witness replied that the products of Keltron are widely used in three areas namely Nuclear Power Corporation, Defence Department and Navy. He added that they also perform software development for ISRO and not received any complaints yet. He assured that the Company would ensure the quality of own products.

The Committee observed that the purchase of Tablet PCs, was made through a single tender system and sold at a low price without assessing demand, resulted in a loss of ₹39.72 lakhs. The Committee strongly criticized the purchase, citing the lack of inspection which resulted in loss to the Company. The Committee recommended to take action against those responsible for the loss and to seek an explanation for the unauthorized purchase, which was made without understanding marketing principles or following established procedures.

Observation / Recommendation of the Committe

4. The Committee observes that the purchase of Tablet PCs was made through a single tender system and sold at a low price without assessing demand, resulting in a loss of ₹39.72 lakhs. The Committee strongly criticizes Keltron for the purchase, citing the lack of inspection which resulted in loss to the Company. The Committee recommends to take action against the officials responsible for the loss and to seek an explanation for the unauthorized purchase, which was made without understanding marketing principles or following established procedures.

5. The Committee observes that Keltron decided to purchase the Tablet PCs without any market study. The Committee recommends that the company should adopt a demand-driven approach for new business activities, conducting thorough market analysis and establishing effective marketing mechanisms to ensure success.

6. The Committee observes that Keltron, being a prestigious institution in Kerala, is now working only as a commission agent. So, the Committee recommends Keltron to improve the quality of the products which are bought from other companies and those which are being manufactured by Keltron.

E.Chandrasekharan,
Chairperson,
Committee on Public Undertakings.

Thiruvananthapuram
27th January, *2026.*

APPENDIX-I
SUMMARY OF MAIN CONCLUSIONS/RECOMMENDATIONS

Sl No.	Para No.	Department Concerned	Conclusions/Recommendations
(1)	(2)	(3)	(4)
1	1	Industries	*The Committee oberves that TELK failed to implement controlling measures to reduce power consumption due to the varying current requirement of transformers. So the Committee recommends to take effective steps to maintain the power factor according to the prescribed norms.*
2	2	Industries	*The Committee observes that after the covid period, TELK struggled to overcome the situation due to increased material cost. So the Committee recommends to take necessary steps to address the issue and suggests to conduct a market study to increase the price of the products if found needed.*
3	3	Industries	*The Committee observes that TELK is planning to change the roof of the plant which is built of Asbestos about sixty years ago. So the Committee recom-mends to implement the solar project after completing the renovation of the rooftop.*
4	4	Industries	The Committee observes that the purchase of Tablet PCs was made through a single tender system and sold at a low price without assessing demand, resulting in a loss of ₹39.72 lakhs. The Committee strongly criticizes Keltron for the purchase, citing the lack of inspection which resulted in loss to the Company. The Committee recommends to take action against the officials responsi-ble for the loss and to seek an explanation for the unau-

			thorized purchase, which was made without understanding marketing principles or following established procedures.
5	5	Industries	The Committee observes that Keltron decided to purchase the Tablet PCs without any market study. The Committee recommends that the company should adopt a demand-driven approach for new business activities, conducting thorough market analysis and establishing effective marketing mechanisms to ensure success.
6	6	Industries	The Committee observes that Keltron, being a prestigious institution in Kerala, is now working only as a commission agent. So, the Committee recommends Keltron to improve the quality of the products which are bought from other companies and those which are being manufactured by Keltron.

GOVERNMENT OF KERALA
INDUSTRIES DEPARTMENT

REPORT OF COMPTROLLER AND AUDITOR GENERAL OF INDIA ON PUBLIC SECTOR UNDERTAKINGS FOR THE YEAR ENDED ON 31.3.2019 - STATEMENT OF REMEDIAL MEASURES TAKEN ON PARA 5.2 W.R.T THE TRANSFORMERS AND ELECTRICALS KERALA LIMITED

Para No.	Recommendation	Action taken
5.2.1	**Delay in conducting energy audit** As per the GoK directions (1992/2015) read with Government Order (January 2011), all HT/EHT installations should conduct energy audit once in three years. TELK replied (September 2020) that the energy audit was conducted and report submitted to EMC in September 2020. Regarding not conducting energy audit of all the units, the PSUs replied that steps were initiated to conduct the energy audit of these units. The fact., however, remains that non-conducting of energy audit or delay in conducting it would lead to delayed identification of areas for energy efficiency and conservation with probable energy savings	TELK had conducted Energy Audit in March 2020 and July 2023 and the report was submitted to Energy Management Centre.
5.2.3	**Excess power consumption, by non-designated PSUs.** In the case of non-designated PSUs, Audit reviewed the existence of power consumption norms and power consumption pattern against such norms, if any.	TELK is difficult to fix energy consumption directly to production level, i.e., MVA which is the measurable production quantity for Transformer.

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	TELK/KSCMMCL replied (September/December 2020) that steps were being taken for fixing norms for consumption of energy for different productions levels, production mix etc.	Size of a Power Transformer of same MVA is also influenced by Voltage class, Ratio, Vector group, Efficiency, Temperature rise and Impedance. Two transformers of same MVA can have different Production Man-hours, Raw Material and energy consumption.
5.2.4	**Non-utilization of open access facility for purchase of power** As per Section 42 of the Electricity Act 2003, Kerala State Electricity Regulatory Commission introduced (2013) open access scheme enabling the electricity users having more than 1 MW connected load to avail the benefits of cheap power by purchasing it from the open market. Out of the remaining five PSUs, three PSUs, MCL, TTPL and TELK, had EHT connections and there was scope for availing power through open access facility to minimize the cost of power.	It will not be beneficial to go for power trading compared to its power consumption . Moreover upgradation of TELK sub-station is already overdue and the company had received notice from M/s.KSEBL for upgradation to 110 kV class. Opting for Open Access would require two time investment in certain equipment. Accordingly, company decided to explore this option upon upgradation of TELK sub-station. As TELK is passing through financial crisis, expenditure onthis account will be taken up once financial conditions improves
5.2.4.3	TELK, however, did not take any action for purchasing power through open access till date (December 2019). TELK stated (September 2020) that steps were taken to explore the possibilities of open access facility	
5.2.5	**Non-implementation, of solar power projects** The Budget Speech 20 13-14 of the GoK encouraged the PSUs to setup solar energy units. GoK also issued directions	Present financial situation of the company is not favourable for

	(July/December 2013) to six out of nine PSUs selected for audit to implement solar energy units. TELK replied (September 2020) that the possibilities of implementing rooftop solar project were being explored.	implementation of Roof Top Solar. This option will be explored once the situation improves.
5.2.6.1	Analysis of the contract demand and the actual consumption pattern from the monthly electricity bills of nine PSUs (total connections) from April 2016 to March 2019 was made in audit. In four connections of three PSUs, the actual RMD was in the range of 15.25 per cent to 67.83. per cent of the CD. The PSUs did not analyse the need for reducing the CD and act accordingly which resulted in avoidable expenditure of Rs. 54.14 lakh. TELK replied (September 2020) that KSEBL insisted (2016) for upgradation of equipment in the TELK substation for reduction of CD. TELK added that as the planned upgradation of the equipment would take time, it would again request KSEBL to reduce the CD. Audit, however, noticed that the energy audit reports of these PSUs also recommended for reduction in contract demand which was not yet complied with.	TELK had requested KSEBL to reduce the CD (Contract Demand) from 2000kVA to 1700kVA in 2016. But KSEBL insisted for 'upgrading the meters, CTs, PTs and other equipment available at TELK substation. In October 2019, KSEB intimated TELK to upgrade systems equipment available at TELK sub-station from 66 kV to 110 kV standard. This requires upgrading of CTs, PTs, Meters, Circuit Breakers and other equipments available at sub-station. Though TELK requested to reduce the Contract Demand, KSEBL denied the request and informed TELK to upgrade the substation at the earliest. The reduction in Contract Demand (CD) was discussed by TELK in a meeting with KSEB officials headed by Chairman KSEB on 05/09/2024. It was clarified to KSEB that the reduction in Contract Demand should not be interlinked with upgradation of equipment in substation and that TELK is seeking reduction in

		CD based on recent consumption pattern and the upgradation of substation equipment will be considered as the requirement for the same arises. KSEB advised the company to resubmit the request for reduction in CD.
5.2.6.2	Analysis also revealed that seven PSUs' achieved PF above 0.90 in all the three years (total eight connections). The GoK and PSUs (January/ October 2020) replied that steps were being taken 1o improve the power factor.	TELK is maintaining PF above 0.95 and KSEBL is crediting PF incentive in the monthly bills of the company.

ACTION TAKEN REPORT OF KELTRON RELATED TO AUDIT PARAS MENTIONED IN C&AG REPORT ON PUBLIC SECTOR UNDERTAKINGS FOR THE YEAR ENDED ON 31 St MARCH 2019

Para	Observation of C&AG	ACTION TAKEN
5.7	As per Stores Purchase Manual (SPM) (Rule 7.11) whenever the estimated value of the contract is ₹10 lakh or more, procurement should be carried out through open tender system. SPM allows (Rule 7.20) single tender system for procurement when the articles required are of a proprietary character and competition is not expected to be advantageous. As per Central Vigilance Commission (CVC) guidelines (July 2007), open tendering is the most preferred mode of tendering, but procurement can also be done through private negotiation where the supplier or contractor has exclusive rights in respect of the goods or services and no reasonable alternative or substitute exists. Kerala State Eectronics Development Corporation Limited (Company) decided (January 2014) to enter into the business of Tablet PCs through one of its units, Keltron Communication Complex (KCC). The Company anticipated demand for the Tablet PCs from Government Departments, educational institutions and business organisations across the country. The Company proposed (January 2014) to enter into an agreement with Intel Technologies India (Intel) for manufacturing the Tablet PCs under 'Keltron Intel' brand. The Company also proposed to market the Tablet PCs in the consumer market and Government Departments across the country through Info Gnet Solution India. Accordingly, as advised by Intel (January 2014), the Company placed (January 2014) purchase order with intel's Original Device Manufacturer of Tablet PCs,	The Company is primarily engaged in the manufacturing of electronic products and system catering to the specific requirement of various sectors such as Defense, Space Electronic Enforcement / Traffic systems, and Power Electronics etc. Prestigeous projects of national importance for Central and State Governments were also being undertaken and executed by the Company. Moreover the Company functions as a Total Solution Provider (TSP) especially in IT & ITES segment for the State of Kerala. In the course of manufacturing of aforesaid systems and in the execution of Projects, the procurement of input material / services are usually initiated only after obtaining firm Orders from the customers who are mostly the Government Department / PSUs. As per the prevailing internal control mechanism with respect to purchases implemented at units of the Company, the procurement of materials / services are initiated strictly as per the Purchase Producers approved by the Board and only if the concrete requirement is established and backed by Customer Order. In the matter of purchase of Tablet PC, KELTRON had decided to enter into the Tablet PC market in the year 2013. The Company was expecting business opportunity in various

	Elite Group Computers System Co. Ltd., Taiwan for supply of 500 Tablet PCs at the rate of ₹ 9,011.26 per unit; The Company received the Tablet PCs in July 2014, incurring a total cost of ₹55.75 lakh (i.e. ₹l 1,150 per unit) and fixed the selling price at ₹17,000 per unit. As of December 2019, the Company was, however, able to sell only 333 units while 39 units were issued for internal use and 33 units were kept for replacement under warranty/testing leaving 95 units in closing stock. In this regard, Audit observed that: • The Company selected Intel as the manufacturer of Tablet PCs to be marketed by it without adopting a transparent procedure. The procurement was made through single tender system though the conditions stipulated by SPM/CVC guidelines for resorting to it were not fulfilled. • The Company decided to purchase the Tablet PCs without any market study, but based on the interest expressed by some Government Departments. However, no records were available to indicate that these Government Departments were actually interested in buying the Tablet PCs. The placement of initial order for purchase of 500 units of Tablet PCs, therefore, lacked justification. • The Company neither initiated any steps to launch the Tablet PCs in the target markets nor engaged info Gnet Solution India to market the Tablet PCs. Instead, within one month of receiving the Tablet PCs, the Company offered (August 2014) to sell them to its employees at a	Government and Private sectors. As a primary initiative, KELTRON had discussion with Major MNC's like Intel, AMD etc. Intel came forward to associate with KELTRON in this initiative and connected the company with an Original Design Manufactures (ODM). The plan was to establish a manufacturing facility with the help of Intel. In order to establish the market, the initial sector identified was education sector. The E-learning was a project designed by Education Department of Government of Kerala. The project was to introduce digital text books for high school classes. In this regard so many discussions with concerned authorities has been taken place. Through these discussions the specification of Tablet PC is decided that, it should be a customized one having only Wifi connectivity, and not have SIM card facility and USB ports and should have battery backup of not less than 8 hours. As a pilot execution, it was proposed to give 12 schools having 40 students, accordingly purchased a quantity of 500 customized Tablet PCs of Intel. In this case also, the procurement of Tablet PC was strictly in adherence with the purchase procedures approved by its Board of Directors. But unfortunately Government did not proceed further on the project and hence the company could not sell the Tablet PCs for the schools. Though company have also contacted private schools and conducted exhibitions and trainings, the

		reduced price of ₹14,700 per unit. The Managing Director also had confirmed that no effort was made by the officials concerned for marketing the Tablet PCs. • During July to October 2014, the KCC unit of the Company could sell only 18 units at an average price of ₹ 14,117 per unit. After retaining eight units, the KCC unit transferred (January 2015) 474 units to Information Technology Business Group (ITBG) unit of the Company to sell the Tablet PCs. Since the ITBG unit also could not improve the sales (only 13 units were sold up to August 2016), a Committee was constituted (December 2017) for liquidating the Tablet PCs. The Committee recommended (January 2018) sale of the Tablet PCs at 4,750 per unit among the employees of the Company. Since the demand was low even at this price, the Company was forced to further reduce (June 2018) the price to ₹2,000 per unit. As of March 2019, the Company, thus, sold a total of 333 units of which 275 units were sold to the employees of the Company at 2,000 per unit. • The Company did not enter into an agreement with Intel as envisaged after the procurement of Tablet PCs in July 2014. The 95 units in stock and 33 units retained by Company for providing as replacement for damaged units under warranty were more than five years old and hence have become technologically outdated. In the absence of an agreement with Intel for technology up-	Company could not grab any order from open market as the tab was a customized one with limited facilities. Hence, it is concluded that, as a remedial measure, in order to avoid such instances, the Company has strengthened the internal control mechanism with respect to purchase of materials/services in such a manner that all procurement are initiated only if it is backed by firm Orders from Customers.

	gradation, which was a continuous process, these Tablet PCs cannot be updated either. Thus, purchase of Tablet PCs for sale without analysing the demand and efforts to market the same resulted in liquidation of stock at reduced price resulting in loss of ₹39.72 lakh. Further, the procurement of Tablet PCs did not comply with the requirements of SPM and CVC guidelines and thus lacked transparency. The GoK replied (October 2020) that the Company entered into Tablet PC market considering the market trend in 2013. The Company held discussions with Intel, AMD etc. and Intel came forward to associate with the Company. Education sector was identified to establish the market and around 4.5 lakh Table PCs were required for E-learning project of GoK. The Company finalised the specifications in consultation with Education Department. The Company procured 500 Tablet PCs and proposed to give it to schools. As GoK could not proceed with the project, the Tablet PCs could not be sold. Being a customized product, it could not be marketed in other sectors. Further, the Company invited Expression of Interest for selection of channel partners for marketing and participated (August 2014) in Intel Channel meet and in various exhibitions to market the Tablet PCs. The reply was not acceptable as the Company should have called for expression of interest for selecting the manufacturer of Tablet PCs instead of informal / undocumented communications. The reply regarding market identified by the Company was not convincing as the proposal seeking	

	approval for entering into the Tablet PC market and purchasing 500 units did not mention that the Tablet PCs would be suitable only for education sector. Rather, the proposal was to cater to the consumer market as well as various Government departments. The reply regarding marketing efforts was also not supported by any documentary evidence. The reply was also silent on the reasons for offering the Tablet PCs to employees of the Company immediately after the Tablet PCs were received. **Recommendation**: New business activities may be undertaken, after analysing demand for the proposed product and with an effective marketing mechanism to ensure its success.	

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