FIFTEENTH KERALA LEGISLATIVE ASSEMBLY

COMMITTEE

ON

PUBLIC UNDERTAKINGS
(2023-26)

THIRTY FIFTH REPORT

(Presented on 11th February, 2025)

SECRETARIAT OF THE KERALA LEGISLATURE

THIRUVANANTHAPURAM

2025

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On

TTPL ,TCCL ,KEL,FOMIL

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

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COMMITTEE ON PUBLIC UNDERTAKINGS
(2023-26)

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INTRODUCTION

I, the Chairperson, Committee on Public Undertakings (2023-26) having been authorised by the Committee to present the Report on its behalf, present this 35th Report on TTPL,TCCL,KEL,FOMIL based on the reports 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 Report, besides other things in their findings, brought to light some functional irregularities relating to Travancore Titanium Products Limited (TTPL), Travancore Cochin Chemicals Limited (TCCL), Kerala Electrical and Allied Engineering Limited (KEL) and Foam Mattings(India) Limited(FOMIL). The Committee, in connection with the perusal of the report, took notice of the comparability of the audit paragraphs pertaining to such irregularities and decided to examine them altogether. 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 (2021-2023) at its meeting held on 13-07-2023.

This Report was considered and approved by the Committee (2023-26) at its meeting held on 30.10.2024.

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 Industries department of the Secretariat, Travancore Titanium Products Limited (TTPL), Travancore Cochin Chemicals Limited (TCCL), Kerala Electrical and Allied Engineering Limited (KEL) and Foam Mattings (India) Limited (FOMIL), 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 Travancore Titanium Products Limited (TTPL), Travancore Cochin Chemicals Limited (TCCL), Kerala Electrical and Allied Engineering Limited (KEL) and Foam Mattings (India) Limited (FOMIL) who appeared for evidence and assisted the Committee by placing their views before the Committee.

E. CHANDRASEKHARAN,
Chairperson,
Committee on Public Undertakings.

Thiruvananthapuram,
11th February, 2025.

REPORT
ON
TTPL, TCCL, KEL, FOMIL

Compliance Audit Observations relating to Public Sector Undertakings (other than Power Sector) (2018-19)

5.1 Compliance to the Government of Kerala guidelines for implementation of Enterprise Resource Planning initiatives by Public Sector Undertakings

Non-adherence to GoK guidelines for implementing e-governance initiatives affected timely implementation of ERP systems in seven PSUs. Five PSUs could not derive any benefit even after incurring ₹1.15 crore due to non-completion of their ERP systems.

The Government of Kerala (GoK) issued (September 2009) guidelines for implementation of e-governance initiatives in the State, detailing therein the procedures to be followed in the development of software systems. In this backdrop, Enterprise Resource Planning (ERP) systems[1] implemented after September 2009 by 8 randomly selected Public Sector Undertakings (PSUs) out of 17 were examined in order to assess the level of compliance to the guidelines by these PSUs. Of the selected PSUs, ERP systems were commissioned in Kerala State Coir Corporation Limited (COIR CORP), Travancore Titanium Products Limited (TTPL) and Travancore Cochin Chemicals Limited (TCCL) with varying degrees of success. Implementation was in different stages of completion in Kerala State Horticultural Products Development Corporation Limited (HORTICORP), The Kerala State Cashew Development Corporation Limited (CASHEW CORP), Kerala State Warehousing Corporation (WAREHOUSING CORP) and Kerala Electrical and Allied Engineering Limited (KEL). The implementation of ERP system was a failure in Foam Mattings (India) Limited (FOMIL). The status of ERP implementation in the selected PSUs is given in the Appendix 7. The Audit findings in this regard are discussed below:

1 A packaged business software system that allows an enterprise to automate and integrate the majority of its business processes, share common data and practices across the entire enterprise and produce and access information in a real time environment.

5.1.1 Leadership and Coordination of the implementation process

TCCL constituted a committee comprising of head of individual departments in which Nodal Officer and implementing agency (IA) were also members. Power users were identified from each department and the Nodal Officer acted as the coordinator between them and the IA throughout the implementation process

The e-governance guidelines (the Guidelines) stipulated that organisations implementing e-governance projects shall appoint a nodal officer who, even if not from the IT wing, should at least be not more than one level below the Head of the Organisation. As per the guidelines, the Nodal Officer plays a proactive role in implementation of ERP systems and is responsible for change management in the event of any adverse situation.

Audit, however, observed that except TCCL, none of the PSUs instituted a formal mechanism for ensuring involvement of top management in the implementation of ERP. Three PSUs (CASHEW CORP, WAREHOUSING CORP and KEL) appointed nodal officers from the lower managerial level as coordinators and the ERP projects in these PSUs were yet to be completed long after their projected target dates due to absence of active role of the top management. For instance, in two PSUs, development process was stalled for long periods of time[2] merely due to failure of the PSUs to test the beta versions[3] of software modules. In the case of TTPL and COIR CORP, the role of Nodal Officer was entrusted to Manager (IT) and System Analyst respectively. Such an arrangement was, however, absent in FOMIL and HORTICORP and the ERP systems in these PSUs were not yet completed (November 2019).

The GoK replied (September/ October 2020) that WAREHOUSING CORP appointed a nodal officer from the lower level due to lack of technically qualified personnel. HORTICORP appointed an Accounts Officer as nodal officer, and KEL and TTPL appointed Senior Managers.

FOMIL replied (June 2020) that a nodal officer was not appointed due to lack of any competent IT personnel. CASHEW CORP replied (June 2020) that based on the audit observation the head of IT from the top management team was appointed for supervision of ERP implementation.

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2 WAREHOUSING CORP-January 2014 to March 2017; CASHEW CORP-December 2011 to October 2016.
3 *An early version of software made available for testing and feedback.*

The reply only validates the audit observation that non-appointment of properly qualified and suitably senior nodal officers as required in the Guidelines affected the timely implementation of ERP systems in the PSUs.

5.1.2 Development of Detailed Project Proposal

The Guidelines stipulated that all IT enabled projects should invariably have a detailed project proposal (DPP) prepared either in-house or by taking external help from a Total Solution Provider[4](TSP)/professional consultancy agency. The proposal shall consist of User Requirements Specification (URS), Functional Requirements Specification (FRS[5]), Technical Analysis and an Implementation Plan. None of the PSUs, however, prepared DPPs/its components resulting in the following issues:

5.1.2.1 Non-preparation of URS and FRS

As per the Guidelines, URS and FRS should be prepared by functional experts within the organisation by defining the user requirements exhaustively, and practically feasible process reforms should be included in the FRS. Tenders for software development should be invited based on FRS which, in turn, shall form the basis for development of System Requirements Specification (SRS) to be delivered by the Implementing Agency (IA).

Audit observed that since the user requirements were not exhaustively identified through URS by the PSUs themselves, no process reforms could be identified and brought out through FRS. The PSUs assigned the work of developing SRS to the IAs without identifying the user requirements and FRS. The SRS developed by the IAs, hence, suffered from the following shortcomings which affected the development process.

- As no URS was prepared in FOMIL, demands for changes cropped up immediately after the installation of the software. Reports and invoices generated through the system did not meet the statutory and business requirements and the software remained non-functional despite incurring ₹8.19 lakh (80 per cent of the contract amount).

FOMIL replied (June 2020) that due to lack of competent officials it was not aware of the procedures to be followed.

4 *So approved by GoK.*
5 *Defines how URS is to be achieved*

5.1.2.2 Absence of Technical Analysis

As per the Guidelines, technical analysis shall be carried out based on the URS and different alternatives for connectivity, operational platform (Operating System, RDBMS[6] etc.) and risks associated therewith. Audit, however, observed that none of the PSUs carried out any detailed technical analysis of the proposed ERP systems which led to the following issues:

As per the Guidelines, free and open source based software[7] should be used, wherever possible. Audit, however, observed that only CASHEW CORP used open source platform[8] in its ERP system while other PSUs used proprietary[9] platforms[10]. Three PSUs (KEL, HORTICORP and WAREHOUSING CORP) spent ₹2.95 lakh towards license fee for proprietary software.

FOMIL stated (June 2020) that technical analysis was not done due to non-awareness of procedure and absence of competent IT personnel. The fact remained that the selection of proprietary software was not followed by any technical analysis.

TTPL invited tenders and awarded the work order to the IA for developing the ERP systems on ‘web based platform’. The system was, however, developed on ‘client-server’ model at the time of implementation. This was due to the fact that the PSU did not conduct an analysis regarding the feasibility of having a suitable platform of the system to be developed before inviting the tender.

The GoK replied (October 2020) that TTPL proceeded for developing clientserver model software, as there was not enough internet facility to support functioning of the ERP software on a web based platform. The reply confirmed that the technical analysis did not consider all aspects that had a bearing on the selection of type of software platform.

5.1.2.3 Absence of Implementation Plan

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6 *Relational Database Management System.*
7 It is a type of computer software in which source code is released under a license in which the copyright holder grants users the rights to study, change, and distribute the software to anyone and for any purpose.
8 *PGSQL/Apache/Linux*
9 *It is a closed-source, non-free computer software for which the software's publisher or another person retains intellectual property rights, usually copyright of the source code and patent rights.*
10 *RDBMS like MS SQL and Oracle*

As per the Guidelines, an implementation plan containing an estimate prepared on the basis of 'total cost of ownership', the expected benefits quantified based on higher revenue generation or cost reduction and the time schedule for the pilot phase and final rollout for the project shall be prepared.

Audit, however, observed that the PSUs did not envisage any definite objective for implementation of ERP systems. In the absence of the implementation plan, Audit could not assess the outcome or impact of ERP projects that were completed and the opportunity cost of those that were delayed beyond the target date.

5.1.3 Application Development and Project Rollout

5.1.3.1 Invitation of tender

As per the Guidelines, application development involving a third party agency shall be through a transparent tendering process based on FRS, detailed technical architecture, implementation plan and information security policy of Kerala State IT Mission (KSITM)/ Computer Emergency Response Team-IN (CERT-IN). The PSUs, however, did not comply with this stipulation and entered into tendering with bare minimum specifications of the functional processes to be covered by the software.

5.1.3.2 Prequalification criteria

TCCL prequalified bidders based on essential characteristics like Modularity, Flexibility, Open Architecture, Transaction Audit Trails, Integrated Workflow, Simplicity, Manageability and Scalability. Points were allotted for experience, solution status, functionality compliance, readiness to handover source code and detailed project implementation plan.

The Guidelines stipulated that there shall be a prequalification process to shortlist the bidders. As per the Central Vigilance Commission (CVC) guidelines, the average annual financial turnover of the bidders is to be included as one of the prequalification criteria in the tender document to ensure the financial soundness of the firm. CVC guidelines also stipulated that all important tender evaluation criteria need to be specified in unambiguous terms in the bid documents so that the evaluation of bids can be made without any subjectivity.

Audit, however, observed that two PSUs (CASHEW CORP and WAREHOUSING CORP) did not include any prequalification criteria in the tender. Of the five[11] PSUs

Both COIR CORP and TCCL stipulated successful implementation of the software in their respective sectors as a prequalification criterion which led to selection of experienced IAs and successful implementation of the ERP.

11 HORTICORP awarded the work on nomination basis

which included prequalification criteria in the tender, the criteria stipulated by FOMIL, TCCL and COIR CORP did not include parameters for ensuring financial soundness of the bidders while that of FOMIL were too vague to ensure participation of only ERP vendors. Similarly, WAREHOUSING CORP, COIR CORP and TTPL did not include the evaluation criteria, subsequently used for prequalifying the bids, in their tender documents.

The absence of or ambiguous prequalification criteria led to selection of inexperienced Implementation Agencies resulting in non-implementation/ delayed implementation of the ERP systems by the Implementing Agencies.

The GoK replied (September/ October 2020) that WAREHOUSING CORP and TTPL carried out technical evaluation of the bids received and selected the lowest firm from the technically qualified bidders. The main focus of TCCL was on robustness of software, proximity of its transaction flows to the business practices and technical expertise of the bidder.

The fact, however, remains that the CVC guidelines were not complied with by the PSUs, with adverse impact on implementation of the ERP systems.

5.1.3.3 Evaluation of bids and award of work

The following deficiencies were noticed in bid evaluation and award of work in the case of six out of eight PSUs:

- FOMIL selected the IA though the firm did not meet the criteria of having 'supported ERP systems of at least two PSUs in Kerala' and 'twenty-five-year experience in IT sector' prescribed for the technical qualification of the bidders. As per the Stores Purchase Manual[12] (SPM), price bids of technically qualified bidders alone shall be opened. FOMIL, however, opened the price bids of all the four bidders including that of two technically disqualified bidders and evaluated them.

12 Read with Office order No.72/12/04 dated 10 December 2004 issued by CVC.

- FOMIL replied (June 2020) that 25 years' experience criterion was overlooked. The bid of the firms that had implemented ERP projects in government aided agencies were considered as equivalent to PSUs.

The reply was not tenable as the evaluation was not in line with the criteria stipulated in the tender document.

- The Guidelines stipulated that the estimated cost of an IT project should be assessed based on 'total cost of ownership' and that cost comparison among various software should include cost of all necessary licenses and recurring expenses for first three years. Costs related to licensing and annual maintenance (varying from 10 to 12 per cent) were, however, considered by TCCL, TTPL and KEL only.

FOMIL replied (June 2020) that the failure to incorporate maintenance cost in the tender was due to lack of expertise/ absence of an IT official.

5.1.3.4 Service Level Agreements

As per the Guidelines, System Requirements Specification (SRS), detailed acceptance test plan based on the SRS, application software with fully documented source code and all necessary licenses are the deliverables expected from the IA. Accordingly, a detailed Service Level Agreement[13] (SLA) needs to be entered into with the IA covering all the aspects of development, implementation and maintenance of the software.

Audit observed that four PSUs (FOMIL, COIR CORP, KEL and HORTICORP) did not enter into any SLA with the respective IAs and therefore these PSUs did not have clear-cut guidelines regarding the service obligations of the IAs and the associated service deliverables during the implementation process. The remaining four PSUs (CASHEW CORP, WAREHOUSING CORP, TTPL and TCCL), through the SLAs, ensured that the SRS was prepared and source code of the developed system was handed over to it by the IA. Further, none of these SLAs provided for comprehensive acceptance testing including the final acceptance testing by an independent third party as stipulated by the Guidelines.

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13 *A Service Level Agreement is a contract between a service provider and its customers that documents what services the provider will furnish and defines the service standards the provider is obligated to meet.*

COIR CORP accepted (June 2020) that they did not enter into SLA with the IA, while FOMIL replied (June 2020) that they were unaware of the guidelines regarding SLA.

The fact remained that the PSUs did not comply with the Guidelines. The replies of the PSUs were also silent on the absence of provision for comprehensive acceptance testing. Absence of or incomplete SLA would result in inadequate mapping of deliverables expected from the implementation of ERP systems.

5.1.3.5 Acceptance Testing

The Guidelines stipulated that Acceptance Test Plan (ATP) along with sample data should be ready by the time the application software is developed and that testing is conducted by functional experts within the organisation. The Final Acceptance Testing (FAT) should be conducted by a professional agency appointed through a transparent process.

Audit observed that documentation regarding in-house acceptance testing was not available in any of the PSUs nor did the PSUs involve any external agency for FAT since there were no agreement clauses regarding the same. Absence of ATP or FAT led to the following issues in four out of eight PSUs:

- FOMIL released about 80 per cent of the contract price without conducting any testing. Even though the IA claimed successful completion of ERP, various departments in FOMIL raised complaints/ demanded changes in the software which the IA did not carry out. As a result, FOMIL went for litigation.

The GoK replied (September/ October 2020) that WAREHOUSING CORP conducted the testing after revamping the project and all the modules were running. HORTICORP released 88 per cent of the contract price based on technical committee evaluation that ERP implementation attained 80 per cent progress. Further, acceptance testing in TCCL was conducted by functional experts within the company which helped in timely completion of the project. In the case of TTPL, the software was accepted with the help of technical experts from The Kerala Minerals and Metals Limited, a State PSU.

CASHEW CORP replied (June 2020) that all the issues with IA were over and the project was revived. Though SLA did not provide for acceptance test by a third party, the process of independent audit and testing by a government approved external agency was initiated.

FOMIL replied (June 2020) that the requirement of testing by a third party agency was not known to the management.

The replies of GoK and FOMIL were not acceptable as the Guidelines mandated final acceptance test by an external agency selected through a transparent process. The reply regarding HORTICORP was not acceptable as the payment made was not in line with the conditions specified in the work order. The failure to conduct ATP or FAT resulted in the delayed development and fine-tuning of the ERP software based on actual requirements.

5.1.3.6 Other Contract Management Issues

Audit also noticed contract management issues in various PSUs as stated below:

FOMIL

- As per the tender conditions, no advance payment could be made to any suppliers. The PSU, however, agreed to pay 50 per cent advance along with work order while issuing work order to the IA. The conditions under which the PSU agreed to pay the advance, were not forthcoming from the records made available in audit.

FOMIL replied (June 2020) that in the absence of subject expert with the company, management believed the IA and released the payments.

5.1.4 Procurement of Hardware

The Guidelines also stipulated that no e-governance initiative should plan for common IT infrastructure like server since the facility in the State Data Centre could be made use of and duplicate expenditure avoided.

Audit, however, observed that out of eight PSUs covered in audit, only CASHEW CORP explored the possibility of using State Data Centre (who offered free hosting) for their data storage needs. While TCCL used the existing server, COIR CORP was hosting database through Amazon Web Services and incurred ₹2.68 lakh (from March 2017 onwards) as hosting charges. In the case of remaining five PSUs, four PSUs (TTPL, FOMIL, WAREHOUSING CORP and HORTICORP) spent ₹9.49 lakh for procuring the server machines. The amount spent by

CASHEW CORP has entered into an agreement with KELTRON for hosting its database in the Cloud VMs of State Data Centre, thus avoiding extra expenditure for own server.

KEL for procuring the server, however, could not be ascertained from the documents produced in audit.

The GoK replied (September 2020) that WAREHOUSING CORP procured the server machine as per the advice of IA and the server was running without any issues. The services provided by State Data Centre were not available when TTPL procured their server. HORTICORP procured the hardware through KELTRON as there were no technical experts in the PSU.

FOMIL replied (June 2020) that the procurement of server was made without the knowledge that common state level facilities existed. COIR CORP replied (June 2020) that server space was not available in IT Mission when it approached them in 2013-14. In-house server was used for two to three years until it became nonfunctional. Amazon Web Services were availed by the company as their cost was cheaper compared to new server machine.

The replies were not acceptable as the procurement of hardware by PSUs was not in line with the Guidelines issued by GoK. Further, COIR CORP did not ascertain the availability of server space with the State Data Centre/ IT Mission before it opted for Amazon Web Services in 2017 or thereafter. The reply regarding TTPL was to be seen against the fact that the Guidelines issued by GoK in September 2009 provided for use of common facilities like servers. Hence, procurement of server by TTPL in April 2011, i.e., after 18 months of issue of the Guidelines was not justified.

5.1.5 Security of Hardware and Data

Of the eight PSUs, ERP systems of six PSUs (TCCL, TTPL, WAREHOUSING CORP, COIR CORP, HORTICORP and KEL) were either fully or partially operationalised (i.e., some of the modules) and the PSUs used live production servers to host their data. The security of hardware and data assumed importance as any loss of data could cripple their operations from short to medium duration.

5.1.5.1 Information security policy

As per the Guidelines, an organisation should either use Information Security Policy published by KSITM (based on CERT-IN) or use a modified version to suit their requirement. Audit, however, noticed that none of the six PSUs adopted Information Security Policy of KSITM or prepared a modified version.

The GoK replied (October 2020) that TTPL now formulated documented information security policy and necessary steps were being initiated by TCCL and WAREHOUSING CORP for the same.

5.1.5.2 Server security

As per the System Security Guidelines issued by CERT-IN, physical access to a server should be limited to only the administrator and other server operators. Audit, however, noticed that this was not ensured in five PSUs and only HORTICORP complied with this requirement. In fact, in TCCL and TTPL, main server and hot back-up server machines were kept in a room which was accessible to other staff for use of common printer kept therein. In WAREHOUSING CORP, the server machine was kept in a photocopy room adjacent to the visitor's room.

The GoK replied (October 2020) that TTPL and WAREHOUSING CORP have now ensured server room security and entry was restricted to authorised persons only.

5.1.5.3 Database security

As per the Database Server Security Guidelines issued by CERT-IN, database server supplying information to a website should never be on the same machine as the web server. In the case of WAREHOUSING CORP and KEL, Audit, however, observed that the web server and database server were located in the same server machine. In WAREHOUSING CORP and HORTICORP, though the server was connected to the internet, the database was not protected by any firewall.

The GoK replied (September/ October 2020) that implementation of firewall and related security systems which were part of the computerisation plan of WAREHOUSING CORP was progressing. KEL has installed an end point security business software for data security. In the case of HORTICORP, an antivirus software was installed for database security.

However, the ERP system implemented by WAREHOSUING CORP was functioning without any firewall protection. The other PSUs initiated action after the same were pointed out by Audit.

5.1.5.4 Data backup policy

It was observed that all the PSUs had either manual or automatic back-up systems. In the case of COIR CORP and CASHEW CORP, the responsibility for data backup was entrusted to their respective data storage service providers. The other PSUs, however, did not have a documented data backup policy as stipulated by the System Security Guidelines.

The GoK replied (September/ October 2020) that TTPL formulated new IT policy which includes data backup policy and data of HORTICORP was backed up in backup server in KELTRON. The data of WAREHOUSING CORP would be backed up in the State Data Centre.

COIR CORP replied (June 2020) that data backup was done by the IA on weekly basis.

However, the PSUs except TTPL were yet to formulate a documented data backup policy as required under the Guidelines which may weaken the regular data backup procedures and audit trail.

5.1.6 Other Related Issues

5.1.6.1 Training, documentation and change management

The Guidelines stipulated that all users and stakeholders of the new system shall be imparted knowledge about the new systems to ensure proper use and operation of applications and infrastructure. The Guidelines read with Regulation No. 161 of Regulation on Audit and Accounts issued by the CAG of India also required that all documentations such as the URS, FRS, SRS, design documents, change control documents, training materials, source code etc. shall be kept under safe custody of the IT Division so that maintenance and change management are carried out smoothly.

It was observed that COIR CORP did not maintain change control documents, source code etc. while none of the prescribed documents were available in KEL. Though all the

PSUs entered into agreements/ issued work orders with specific clauses for imparting training in the new software, computer illiteracy was a major impediment in ERP implementation in the case of WAREHOUSING CORP and KEL.

The GoK replied (September/ October 2020) that the IA of KEL imparted training, but there was high reluctance from employees due to poor computer literacy which delayed the implementation. WAREHOUSING CORP was providing training to their employees.

Recommendation 5.1: The GoK/PSUs may ensure that the Guidelines for implementation of e-governance initiatives are complied with while implementing ERP systems so that such projects are completed in a time bound manner and intended benefits achieved.

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[14] 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 coordinate 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.

A sample of nine[15] out of thirty Public Sector Undertakings (PSUs) functioning in the manufacturing sector was selected as per Stratified Random Sampling Method[16] for

14 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.

15 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).

16 Based on energy consumption bill data.

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[17] 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[18].

Regarding delay in conducting energy audit, the GoK replied (October/ November/ December 2020) that SILK planned to conduct energy audit during July 2020, which did not materialise due to Covid-Pandemic situation. TCCL conducted the energy audit only in February 2019 due to selecting energy auditor from the BEE's empanelled list. Further, KMML and TTPL had initiated steps for conducting the energy audit for its units. KCCL missed one energy audit due to retirement of key personnel and STL would take immediate steps to conduct energy audit.

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. The reply of GoK regarding TCCL was not correct as the delay was due to failure of the PSU to ensure technical qualification of the L1 firm before opening the price bid which led to cancellation of the tender. Further, as STL and SILK did not conduct any energy audit and KMML did not claim the subsidy though it conducted energy audits, these PSUs did not receive the subsidy[19] from EMC.

17 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.

18 Mines at Walayar of MCL, Mineral Separation Unit and Titanium Sponge Plant of KMML and the administrative building of KSCMMMCL

19 EMC provides subsidy of ₹50,000 or 50 per cent of the cost incurred, whichever is less, to PSUs for conducting energy audit.

Audit also noticed that EMC was appointed (January 2011) as the State Designated Agency to coordinate, regulate and enforce the provisions of the rules[20] in force. EMC, however, did not regularly monitor the conduct of energy audit and followup 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.

5.2.3 Excess power consumption by non-designated PSUs

In the case of non-designated PSUs[21], Audit reviewed the existence of power consumption norms and power consumption pattern against such norms, if any.

Audit observed that four[22] out of seven PSUs did not fix any norms for power consumption. In the case of remaining three [23] PSUs, the consumption of power was higher than the norm fixed by them. The excess power consumption over the norms ranged between 0.47 per cent (TTPL) and 13.90 per cent (KMML) during 2016-17 to 2018-19. This resulted in extra expenditure of ₹11.36 [24] crore.

The GoK replied (November/ December 2020) that the specific energy consumption of TTPL was fixed for a daily production of 45 tons and the excess compared to the norm was due to non-achievement of this production level. Further, steps were being taken to fix the range of specific energy consumption under different production levels. The GoK replied that STL achieved the norms in 2016-18, but the power consumption increased in 2018-19 due to the increase in capacity utilisation.

The GoK reply was silent on the reasons for the excess consumption of power in KMML. The reply regarding TTPL was also not acceptable as no production level was stipulated for achieving the specific energy consumption at the time of fixing the norm. Further, the norm was revised from 1,200 kWh to 1,150 kWh in May 2016 based on the

20 The Energy Conervation Act 2001, guidelines issued by the GOK in May 1992 and November 1992 and directions issued by the GOK in June 2015.

21 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. All PSUs not included in the sectors stated above are non designated PSUs.

22 KSCMMCL, TELK, SILK and KCCL.

23 KMML, TTPL and STL.

24 KMML (₹10.87 crore), TTPL (₹33.96 lakh) and STL (₹14.55 lakh).

performance in 2015-16 and no revision was made thereafter which indicated that the norm was achievable. The reply regarding STL was not tenable as increase in capacity utilisation would ideally help to achieve the norm.

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[25] 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.

5.2.4.2 Despite initiating steps (March 2017) for availing open access, TTPL could not avail open access facility due to revision of specifications and non-supply of Availability Based Tariff (ABT) meter by KSEBL.

The GoK replied (November 2020) that steps were initiated by TTPL for installation of ABT meter and to avail power from open access.

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[26] to HT and EHT consumers for power factor[27] (PF)

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

26 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.

27 Power Factor (PF) expresses the ratio of true power used in a circuit to the apparent power delivered to the circuit.

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 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[28], 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[29] .

TTPL replied (January 2020) that on implementation of the ongoing projects, the total power requirement would be 3,850 KVA.

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

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

[The Audit paragraph 5.1 & 5.2 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

<u>Discussion and findings of the Committee</u>

5.1. Compliance to the Government of Kerala guidelines for implementation of Enterprise Resource Planning initiatives by Public Sector Undertakings.

5.1.1. Leadership and Coordination of the implementation process

28 Two connections in KSCMMCL, one connection each in TTPL and TELK.

29 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.

5.1.3.5 Acceptance Testing

The Committee enquired the reason for not appointing a Nodal Officer for implementing ERP (Enterprise Resource Planning) systems in FOMIL (Foam Mattings (India) Limited) as per the e-governance guidelines. The concerned officer replied that the post of Junior Officer (Computer) in the company's IT department, which is the only post in the Company’s IT wing , was vacant at the time of receiving the instruction to implement the ERP system in 2011 and currently the post is being filled through PSC. Lack of qualified IT personnel in FOMIL affected the appointment of nodal officer and the Company had not sought any help from other agencies such as Kerala State IT Mission.

To a query of the Committee regarding the audit reference that 80% of the contract amount was spent without implementing the ERP system, the concerned officer replied that as per the work order for the implementation of the ERP system, the Board had decided to give 50% of the contract amount as advance and 30% after the software installation. The official further informed that although the software installation has been completed, various departments of FOMIL have requested that the software shall be customized to make it useful due to the deficiencies experienced during the operational phase, but as the implementing agency was unable to do so, the company has legally moved to recover the total amount along with interest and the case is now at the execution stage.

The Committee inquired why it was decided to implement ERP system even though the post of the skilled personnal (Junior Officer, Computer) was vacant. The concerned official informed that although the nodal officer was not appointed, further steps had been taken with a good intention of implementing the ERP project and that tenders were invited and the said agency was qualified in terms of technical bid and financial bid. He further informed that during the presentation shown by the implementing agency to the company officials, it was thought that the project could be implemented successfully. But when it was implemented, all the requirements of the company were not met.

The Committee enquired whether the experience of the implementing agency had been evaluated at the time of bid. The concerned official informed that the implementing agency had produced the documents of implementing similar type of ERP systems in different organizations. In the communication with the said institutions over telephone it was understood that the projects had been implemented successfully. He added that compared to other institutions, the working method of FOMIL is different and therefore the implementing agency failed to customize the software as required by the Company.

The Committee observed that the ERP system has not been implemented in the company despite proceeding with legal actions against the implementing agency and sought an explanation in this regard. The concerned official informed that the process of merging of FOMIL with Coir Corporation Limited is nearing completion and since ERP system has been implemented in Coir Corporation, there is no need to implement ERP separately in FOMIL and the process of merger is in final stage. The Committee observed that it was understood that the implementing agency was not competent to undertake the contract.

The Committee observed that as per the e-governance guidelines, organisations implementing e-governance projects shall apppoint a nodal officer, who even if not from the IT wing, should at least be not more than one level below the Head of the organisation. Moreover, he plays a pro-active role in implemention of ERP systems and shall be responsible for change management in the event of any adverse situation. The Committee noted that no nodal officer had been appointed in FOMIL due to lack of qualified personnel in the Company. Moreover in the absence of qualified officers in the Company they did not seek the help of other agencies. Therefore, the Committee suggested that CVC guidelines should be strictly followed while implementing this type of project in future.

To a query of the Committee about the appointment of Nodal Officer, the Managing Director, Travancore Titamium Products Limited informed that in the absence of senior officers with IT expertise, a person at managerial level was appointed as the nodal officer and requested the government to appoint a qualified person in this post as qualification and efficiency are required to meet the basic criteria for the said post. He added that based on the study of the centre for Management Development, steps are being taken to upgrade the TTPL and if approval is available, a senior officer can be appointed as the nodal officer and that ERP system has already been upgraded.

From the Government reply the Committee observed that KEL had constituted a high level Committee comprising of a senior executive with Senior Manager as Nodal Officer after a delay of more than 5 years and the ERP modules has been implemented successfully only in one unit ie. Mamala unit of KEL.

In the case of TCCL, reply furnished by Government was accepted by the Committee.

Conclusions/Recommendations of the Committee

1. The Committee observes that FOMIL neither appointed a nodal officer nor seek the help of other agencies like Kerala State IT Mission for the implementation of e-governance project and thereby violating the e-governance guidelines. Hence the Committee recommends that CVC guidelines must be followed while implementing this type of projects in future.

2. The Committee noted that FOMIL released about 80% of contract amount for the project violating the CVC guidelines eventhough they do not conducted Acceptance Test Plan (ATP) or Final Acceptance Testing (FAT) .The Committee suggests to furnish a detailed report regarding the decision to implement the project in the absence of the nodal officer and the decision to release the contract amount before successfully implementing the project.

3. The Committee observes that ERP implementation has been done only in Mamala unit of KEL. Therefore, the Committee recommends to implement ERP in all the units of KEL and submit a report to the Committee.

5.1.2. Development of Detailed Project Proposal

5.1.2.1 Non preparation of URS and FRS

Guidelines stipulated that all IT enabled projects should invariably have a detailed project proposal (DPP) prepared either in-house or by taking external help from a Total Solution Provide (TSP)/professional consultancy agency and DPP shall consist of User Requirement Specification (URS), Functional Requirement Specification (FRS), Technical ananalysis and an implementation plan. URS and FRS should be prepared by functional experts within the organisation and tenders for software development should be invited based on FRS, which shall form the basis for System Requirement Specification (SRS) to be delivered to the Implementing Agency(IA). The Committee inquired whether the development of the system requirement specification prepared by the implementing agency was hindered by the non-preparation of URS and FRS. The concerned official replied that due to the absence of the nodal officer in FOMIL, the procedure protocol could not be followed.

Principal Secretary, Industries Department informed the Committee that FOMIL has not prepared URS and FRS and the observation of audit is correct.

The Committee observed that the software was not operational because the implementing agency was given the task of developing the SRS without preparing the URS and FRS, which were the basis of the system requirement specification, and awarded 80% of the contract amount. Hence the Committee suggested to collect the amount spent on software from the concerned officers who were responsible for the loss.

Conclusions/Recommendations of the Committee

4. The Committee noted that in FOMIL, SRS was developed by the implementing agency without preparing URS and FRS. Hence the Committee recommends to review the total project and to insist the same Implementing Agency to rectify the project without making any additional payment.

5.1.2.2 Absence of Technical Analysis

To a query about absence of technical analysis in TTPL, the Managing Director of TTPL informed that the company used office automation package in a client server platform from 1995-96 onwards but the guidelines for implmentation of e-governance were issued by the Government in 2009. Although internet conncection and availability of aux cable was limited during 2013-14, the company switched over to the present ERP system only in 2017-18 which was the upgradation of IT based Knowledge Development Integration to meet the requirements of that time. He added that during 2017-18 the requirements of the company were changed and hence ERP system was upgraded to web based platform accordingly. He added that at present, the integration is being done by forming an IT Committee comprising the officers of the IT Mission and the web based system is being used by carrying out the integration on the web based platform as and when the technology switches to new mode.

The Committee remarked that TTPL has not conducted technical analysis regarding the feasibility of a suitable platform to be developed before inviting the tender and it has not considered all aspects that had a bearing on the selection of type of software platform.

The Committee enquired about the current status of ERP implementation in Kerala Electrical and Allied Engineering Limited (KEL). The General Manager, KEL informed that earlier there was no IT wing capable of doing technical analysis and now, under the leadership of a high level committee consisting of Senior

Managers, the software was upgraded by conducting requirement analysis and all the modules are working successfully. He added that the software is currently being used in the Mamala Unit and steps are being taken to implement it in the next regional unit, Kundara.

The Committee noted that as per guidelines, free and open source based software should be used wherever possible, but KEL spent ₹2.95 lakh towards licence fee for proprietary software.

The Committee observed that in FOMIL technical analysis was not done due to non-awareness of procedure and absence of competent IT personnel. Moreover the selection of proprietary software was not followed by any technical analysis. In the Government reply, FOMIL stated that since the installation of ERP was not completed within the stipulated time, the Company has initiated legal action against the firm.

The Committee remarked that the guidelines were not followed by KEL, FOMIL and TTPL for the technical analysis in the selection of software for the implementation of ERP. Hence the Committee recommended that these types of negligence should be avoided in future and insisted that the companies had to strictly adhere to the Government guidelines issued from time-to-time.

Conclusions/Recommendations of the Committee

5. The Committee observes that the guidelines were not followed by KEL, FOMIL and TTPL for technical analysis in the selection of software for the implementation of ERP. Hence the Committee recommends that this type of negligence should be avoided in future and insists that the companies should strictly adhere to the Government guidelines issued from time-to-time.

5.1.2.3. Absence of implementation plan

To a query of the Committee about the reason for the absence of implementation plan in TCCL, the Managing Director replied that TCCL had a definite implementation plan and considering the criticality, company decided to go in for phased implementation.

In the Government reply about absence of implementation plan in FOMIL, it was stated that as per the work order it was strictly mentioned to complete the software installation to ensure successful running within 90 days from the date of work order and a thorough study of the process and operation should be undertaken before finalising the module.

The Committee observed that FOMIL did not envisage any definite objective for implementation of ERP systems.

5.1.3. Application Development and Project Rollout

5.1.3.2. Prequalification criteria

5.1.3.3. Evaluation of bids and award of work

To a query of the Committee about the failure to incorporate maintenance cost in FOMIL's tender, the concerned officer informed that due to lack of higher level managers and technically qualified officers, the tender did not include the required parameters.

The Committee inquired whether any technical expertise has been sought from IT Mission and whether non implementation of ERP was intimated to Government. The concerned official informed that they were not aware of the Government guidelines of 2009 and there was no formal IT department or technical committee at the time of ERP implementation and it was not known that technical expertise should be sought from the IT Mission if there was no IT expert in the firm. He further added that when the implementing agency did not complete the work and proceeded with the case to recover the expenditure, the technical aspects and possibilities of ERP were realised and then FOMIL sought technical expertise from the IT Mission. He admitted that the government was not informed about the non-completion of the ERP.

The Committee observed that the head of the organization should have a clear understanding of the ERP system to be implemented there. The Committee also criticised the statement of the official that they were unaware of the government guidelines. The Committee expressed dismay at the statement and criticised the lackadaisical attitude of officials. The concerned official informed that the coir industry is different in terms of wage structure and other aspects compared to other public sector institutions and the presentation of the implementing agency was successful. Also, the official added that the bidder has been selected as he has worked in companies like Coir Cluster, Mats & Mattings Company and has produced a good certificate from Coir Board.

The Committee opined that since the IT Department's order states that the Director, KSITM shall provide technical support to any government/organization for any purpose mentioned in those guidelines relating to an e-governance project, FOMIL should have utilized the assistance of the IT Mission.

The Principal Secretary informed that normally there is CVC guidelines for implementing requirements and from time to time the government also issues orders for smooth implementation of projects. He added that PSUs can implement the ERP system with their own initiatives according to the framework but if it violates the guidelines then they have to refer it to Government for sending it to IT Department or IT Mission.

The Committee observed that the implementing agency was selected in FOMIL without following the guidelines of 2009 and violating the SPM rules and suggested that necessary precautions should be taken to prevent such lapses in future.

Conclusions/Recommendations of the Committee

6. The Committee criticised the statement of the officials of FOMIL that they were unaware of the government guidelines. The Committee expressed dismay at

the statement and criticised the lackadaisical attitude of officials. The Committee noted that the implementing agency was selected without following the guidelines of 2009 and recommends that necessary precautions should be taken to prevent such lapses in future.

5.1.3.4 Service Level Agreement

The Committee inquired the reason for not entering into Service Level Agreement with the implementing agency of ERP system by FOMIL and KEL, The Managing director, FOMIL informed that the contract to implement ERP was made as per the detailed work order with terms and conditions given by the implementing agency including the guarantee period and the period for completing the implementation of ERP and other conditions.

The General Manager, KEL informed that initially KEL did not have a Service Level Agreement and later entered into a Service Level Agreement with the implementing agency and entered into a five year annual maintenance contract.

The Committee opined that the Service Level Agreement should have been implemented in 2017.

5.1.3.6 Other Contract Management Issues.

As per the tender conditions, no advance payment could be made to any suppliers but FOMIL agreed to pay 50% advance along the work order while issuing work order to the Implementing Agency. The Committee sought clarification regarding the responsible officer for the execution of the contract. The concerned official informed that the responsibility was not fixed and the amount was paid by the MD at the time of implementation of the contract. The MD who implemented the contract has been changed and legal action was taken against the supplier after discussing the matter with the new MD. The Additional Director, COIR added that the problem arose due to lack of IT expert in the company. The Principal Secretary added that 80% of the amount has been paid to the contractor.

The Committee opined that the award of the contract was not fair and action has to be taken against the then MD who acted against the Government guidelines. The Committee recommeded to fix the responsibility and to recover the amount from the concerned official.

The Principal Secretary assured the Committee that he would take action and inform the Committee about the action against the erring official.

Conclusions/Recommendations of the Committee

7. The Committee observes that FOMIL paid 50% of the contract amount along with the work order to the contractor, even though no advance payment have to be made to the contractor as per tender provision. The Committee opined that the payment of advance amount was not fair and action has to be taken against the then MD who acted against the Government guidelines. The Committee recommends to fix the responsibility and to recover the amount from the concerned official.

5.1.4 Procurement of Hardware

The Committee enquired whether TTPL approached the Government to sort out the issues with State Data Centre before deciding to procure its own server. MD, TTPL elucidated that there was an urgent need for a server as the existing server was damaged and the services provided by the state data centre were not available at that time. He added that four letters have been sent to the State Data Centre in the last one year regarding e-office implementation. As there was no reply from SDC, it was decided to resolve the problem through the IT department and a letter has been sent to the government four months ago regarding this matter.

The Committee inquired whether there were clear guidelines at the time of signing the contract for ERP implementation and how long it had been since the server damage occurred. The MD informed that the company had a server at the time of ERP implementation and it was upgraded and used from 1995 to 2012 and the server got damaged in 2012. He added that the new server was bought because the previously implemented system had an emergency spare server system and at the time of server damage, the financial and marketing functions were in that system, so the server would have been active or the entire data would have been lost. He further stated that when the server was damaged, they approached the State Data Centre for the server and it was informed that the SDC server will be made available when the e-office become active even if there will be some delay.

The Principal Secretary informed that when the server got damaged, the State Data Centre should have to provide a new server but first priority was given to government departments and only second priority was given to public sector institutions.

5.1.5 Security of Hardware and Data

5.1.5.1 Information security Policy

5.1.5.2 Server Security

The Committee enquired whether KEL, TTPL and TCCL have implemented security of hardware and data. The Managing Director, TCCL informed that the server room has been moved to another floor and isolated to ensure security of hardware and data.

The Managing Director, TTPL responded that they were not aware before the audit observation that main server and backup server machines should be kept separately as a matter of security and they have been relocated after audit observation.

The General Manager, KEL replied that endpoint security business software system has been implemented to ensure security of hardware and data.

The Principal Secretary, Industries Department replied that the data has been stored in the computer working from the production server and that data should be kept separately in back up to prevent potential loss caused by continuous use.

5.1.5.3 Database security

The Committee sought clarification regarding the current status of database security in TTPL and KEL. The concerned officer in TTPL replied that database server has now been kept as a separate entity. The General Manager, KEL informed that on the basis of audit observation, a special system has been implemented in KEL’s Mamala unit and will be implemented in Kundara unit as well.

Conclusions/Recommendations of the Committee

8. The Committee observes that a special system for security of data has been implemented only in Mamala Unit of KEL. Therefore, the Committee recommends to give a detailed report regarding the steps taken to implement database security in the Kundara unit.

5.1.5.4 Data backup policy

To a query of the Committee about the Data backup policy of TTPL, KEL and FOMIL, the concerned officer in KEL replied that now the company has automatic and parrallel backup and ground space has been taken for backup.

The Managing Director, TTPL informed the Committee that a separate store room has been provided and a web based system was introduced.

The Personal Manager, FOMIL stated that a separate server room system has been implemented to ensure database security.

5.1.6 Other Related Issues

5.1.6.1 Training, documentation and change management

To a query of the Committee about training and refresher courses imparted to the staff of PSUs who were using ERP, the concerned officer in KEL replied that the implementation was a little difficult in the first stage, but after training were given to the employees, there has been a change and now an electrical engineer is working as the nodal officer.

General Recommendations

9.The Committee is at a loss to understand why the government intiated establishing e-governance program in PSUs for the development of software system and the procedure to be followed under the banner ERP in a hasty manner banking only on the guidelines issued by IT mission. The Government should have evolved a protocol under the aegis of IT Mission for implementing ERP in PSUs and a monitory mechanism to oversee the procedure in each phase should also have established especially in the dearth of competent officials in PSUs.

10.For selecting the Implementing Agency for each PSU, the concurrence of the IT Mission should also have made mandatory.

11.The Committee observes that when new programmes or projects are being implemented utilising State/Central funds through PSUs, no controlling or monitoring mechanism is seen established by administrative departments. Hence the Committee strongly recommends that strict procedural guidelines for monitoring the implementation of the new projects /programmes in PSUs should be evolved by the Chief Technical Expert under the technical wing of Finance PUC.

5.2 Electrical Energy Management by Public Sector Undertakings in the Manufacturing Sector.

5.2.1 Delay in conducting Energy Audit

To a query of the Committee, the Managing Director, TCCL informed that according to the Bureau of Energy Efficiency mandate, energy audit is being conducted every three years and when the tender file related to the energy audit of 2019 was checked, it was found that the eligibility criteria was not met with and hence the order was not given. The tender was cancelled and fine was imposed on the company because of the delay in retendering and placing the order.

The Audit Officer enquired whether the officials were not aware of the eligibility criteria at the time of opening the technical bid. The concerned official replied that in the caustic soda plant there was a condition that only those who have experience and technical qualification can participate in the bid and as there was no proof of experience in the file at the time of final file inspection, the bid was cancelled and retendered in 2020 and energy audit was completed.

The Principal Secretary also informed that it was a wrong claim by the bidder.

5.2.3 Excess power consumption by non-designated PSUs

The Committee sought clarification about the current purchase of power and its percentage of consumption. The Managing Director, TCCL informed that there is a demand of 6 lakh units of electricity per day and that 50% of the material cost is the power cost and 50% of the power cost is the production cost and the cost increases when the power tariff increases. He added that when electricity is purchased from open market, KSEB will increase the reading charge accordingly and that the electricity consumption rate has increased significantly in the last one year and the power cost of the company in the last three months has increased to ₹4.5 crore.

To a query of the Committee, the Managing Director, TCCL replied that the electricity consumption has not reached 40% and due to membrane cell technology, electricity consumption is low but the cost is high and currently the power tariff is ₹6.70.

The Manager, TCCL added that though the power cost at the central grid is ₹3.50, it becomes around ₹6 in the State which includes the reading charge which ranges from ₹1.18 to ₹1.20, cross subsidy surcharge of ₹1.19, wheeling charge 30 paise and a reduction of 7% less from the point of connectivity to the organization. The Managing Director further added that all these are available only when there is open access facility.

The Managing Director, TTPL replied that open access facility was not available all the time and there was a difference of 50 paise between open market and KSEB, the reading charge has been increased drastically and KSEB now discourages the open market.

The Committee sought clarification about the power cost of TTPL. The Managing Director informed that power cost of TTPL is only about 12% and there is a problem of low production and that efforts are being made to reduce the consumption of electricity, turbine generator has been installed with the support of EMC and solar power has also been implemented as a part of smart city project. He added that the main problem is variation in production quantity and difficulty in reaching standard capacity.

The Committee opined that the power cost of TTPL is more than the standard and the company should take measures to reduce the power cost by conducting energy audit properly. Therefore, the Committee suggested that timely energy audit should be properly undertaken to identify energy efficiency and to reduce the cost of electricity. To that the Principal Secretary, Industries Department informed that most of the plant and machinery has not been upgraded and even now they are using old technology which is energy intensive. He added that generally all PSUs are upgrading technology.

The Director TCCL informed that they are upgrading technology continuously in TCCL to meet the energy standards.

Conclusions/Recommendations of the Committee

12. The Committee opined that the power cost of TTPL is more than the standard and the Company should take measures to reduce the power cost by

conducting energy audit properly. Therefore, the Committee suggests that timely energy audit should be properly undertaken to identify areas of energy efficiency and to reduce the cost of electricity.

5.2.4 Non-utilisation of Open Access facility for purchase of power

The Committee enquired about the non purchase of power using open access facility in TTPL. The Managing Director replied that though all the procedures were completed for getting open access, due to the changes in the specification of Availability Based Tariff Meters and non-distribution of meters by KSEB in time resulted in the delay. He added that they are purchasing power through open access since November 2021.

5.2.6 Lapses in energy requirement planning and efficiency improvement measures

To a query of the Committee about the Contract Demand of TTPL,the Managing Director informed that the Contract Demand has been reduced from 4000KVA to 3500 KVA from January 2017 and capacitor bank has been commissioned to improve the system power factor.

The Committee enquired whether a senior management level oversight mechanism was there to monitor electrical energy management. The MD, TTPL replied that at the time of audit, the energy manager's certificate had not been renewed from EMC. The person who has obtained this certificate is currently supervising and at present two persons have passed the examination conducted by the EMC.

E.CHANDRASEKHARAN,
Chairperson,
Committee on Public Undertakings.

Thiruvananthapuram
11th February, 2025.

APPENDIX-I
SUMMARY OF MAIN CONCLUSIONS/RECOMMENDATIONS

Sl No.	Para No.	Department Concerned	Conclusions/Recommendations
(1)	(2)	(3)	(4)
1	1	Industries Department	*The Committee observes that FOMIL neither appointed a nodal officer nor seek the help of other agencies like Kerala State IT Mission for the implementation of e-governance project and thereby violating the e-governance guidelines. Hence the Committee recommends that CVC guidelines must be followed while implementing this type of projects in future.*
2	2	Industries Department	*The Committee noted that FOMIL released about 80% of contract amount for the project violating the CVC guidelines eventhough they do not conducted Acceptance Test Plan (ATP) or Final Acceptance Testing (FAT) .The Committee suggests to furnish a detailed report regarding the decision to implement the project in the absence of the nodal officer and the decision to release the contract amount before successfully implementing the project.*
3	3	Industries Department	*The Committee observes that ERP implementation has been done only in Mamala unit of KEL. Therefore, the Committee recommends to implement ERP in all the units of KEL and submit a report to the Committee.*
4	4	Industries Department	*The Committee noted that in FOMIL, SRS was developed by the implementing agency without preparing URS and FRS. Hence the Committee recommends to review the total project and to insist the same Implementing Agency to rectify the*

			project without making any additional payment.
5	5	Industries Department	*The Committee observes that the guidelines were not followed by KEL, FOMIL and TTPL for technical analysis in the selection of software for the implementation of ERP. Hence the Committee recommends that this type of negligence should be avoided in future and insists that the companies should strictly adhere to the Government guidelines issued from time-to-time.*
6	6	Industries Department	*The Committee criticised the statement of the officials of FOMIL that they were unaware of the government guidelines. The Committee expressed dismay at the statement and criticised the lackadaisical attitude of officials. The Committee noted that the implementing agency was selected without following the guidelines of 2009 and recommends that necessary precautions should be taken to prevent such lapses in future.*
7	7	Industries Department	*The Committee observes that FOMIL paid 50% of the contract amount along with the work order to the contractor, even though no advance payment have to be made to the contractor as per tender provision. The Committee opined that the payment of advance amount was not fair and action has to be taken against the then MD who acted against the Government guidelines. The Committee recommends to fix the responsibility and to recover the amount from the concerned official.*
8	8	Industries Department	*The Committee observes that a special system for security of data has been implemented only in Mamala Unit of KEL. Therefore, the Committee recommends to give a detailed report regarding the steps taken to implement database security in*

			the Kundara unit.
9	9	Industries Department	*The Committee is at a loss to understand why the government intiated establishing e-governance program in PSUs for the development of software system and the procedure to be followed under the banner ERP in a hasty manner banking only on the guidelines issued by IT mission. The Government should have evolved a protocol under the aegis of IT Mission for implementing ERP in PSUs and a monitory mechanism to oversee the procedure in each phase should also have established especially in the dearth of competent officials in PSUs.*
10	10	Industries Department	*For selecting the Implementing Agency for each PSU, the concurrence of the IT Mission should also have made mandatory.*
11	11	Industries Department	*The Committee observes that when new programmes or projects are being implemented utilising State/Central funds through PSUs, no controlling or monitoring mechanism is seen established by administrative departments. Hence the Committee strongly recommends that strict procedural guidelines for monitoring the implementation of the new projects /programmes in PSUs should be evolved by the Chief Technical Expert under the technical wing of Finance PUC.*
12	12	Industries Department	*The Committee opined that the power cost of TTPL is more than the standard and the Company should take measures to reduce the power cost by conducting energy audit properly. Therefore, the Committee suggests that timely energy audit should be properly undertaken to identify areas of energy efficiency and to reduce the cost of electricity.*