Chapter V

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

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[84] 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:

5.1.1 Leadership and Coordination of 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 pro-active role in implementation of ERP systems and is responsible for change management in the event of any adverse situation.

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.

[84] 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.

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[85] merely due to failure of the PSUs to test the beta versions[86] 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.

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[87] (TSP)/ professional consultancy agency. The proposal shall consist of User Requirements Specification (URS), Functional Requirements Specification (FRS[88]), 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).

[85] WAREHOUSING CORP-January 2014 to March 2017; CASHEW CORP-December 2011 to October 2016.
[86] An early version of software made available for testing and feedback.
[87] So approved by GoK.
[88] Defines how URS is to be achieved.

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:

- In CASHEW CORP, the URS study was conducted by Kerala State Electronics Development Corporation (KELTRON), the IA. This, however, did not meet the actual user requirements[89] and the 'beta version' of the software was modified several times. Even after the lapse of eight years since releasing the beta version, none of the 12 modules could be put to use (December 2019).

  CASHEW CORP replied (June 2020) that the beta version did not meet the requirements though KELTRON prepared the URS.

  The reply substantiates the audit observation that the PSU did not ensure the adequacy of URS prepared by KELTRON before development of the software.

- WAREHOUSING CORP did not conduct URS study before inviting tender. It was observed that the Payroll and Warehouses modules developed by the IA (CDAC) at a cost of ₹ six lakh had unresolved issues such as integration of Leave Management System and Income Tax modules with Payroll module, incorporation of payment mode of electronic transfer, verification of balance sheet and linking user management with Payroll *etc*. for which the PSU paid an additional amount of ₹2.23 lakh to the IA. Also, the requirement of 'ability to make back dated accounting entries' in Accounts module was not included in the original requirements. Inclusion of this at a later stage caused delay in implementation. Audit also noticed that the requirement for various kinds of MIS reports at Head Office, Regional Offices and Zonal Offices was not finalised even though the project was nearing completion.

  The GoK replied (September 2020) that the computerisation project was completed in March 2020.

  The fact remains that the shortcomings in the development process due to non-adherence to the Guidelines delayed the completion of the project by eight years.

- In HORTICORP, the URS was not prepared either by the PSU or by the IA. As a result, the system implemented did not meet the requirements like entry of physical damage of stock in the software, entering physical stock manually and inclusion of many standard reports called for by the Head Office even after four years of implementation of the pilot phase. This is despite the fact that 88 *per cent* (₹66.91 lakh) of the contract amount has been incurred (October 2019) though as per the agreement, the IA was eligible for 50 *per cent*.

[89] Some of the additional requirements were lot mixing report, lot transfer (inter-factory transfer) reports, lot receipt reports, daily status report of filling, production expenses report *etc.* for Production Department. Sales report, Origin-wise, Grade-wise, Tin-wise reports, Comparison (origin and rate-wise) and payment status report *etc*. for Commerce Department.

The GoK replied (September 2020) that URS and FRS were prepared by IA under the guidance of KELTRON officials due to absence of technical person in HORTICORP.

The reply was not acceptable as the PSU did not furnish the URS and FRS during the course of audit. Further, the additional documents furnished[90] by the PSU in support of the GoK reply did not substantiate the claim regarding preparation of URS or FRS.

- 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.

- Due to absence of exhaustive user requirement study in the beginning, COIR CORP had to bring in a number of additional features during the course of development for which an extra amount of ₹2.30 lakh was paid. Conversely, though the PSU did not require a Training module, the ERP system included it as it was not backed by a user requirement study. Thus, the module could not be utilised despite spending ₹0.50 lakh for it.

  COIR CORP replied (June 2020) that FRS was prepared before publishing the tender and the same was included in the tender document. Also, the additional requirements were for meeting regulatory requirements like Goods and Services Tax (GST) which were not applicable when tenders were invited.

  Audit, however, observed that COIR CORP provided an outline of functional requirements in the tender document which was not comprehensive due to absence of detailed user requirement study. Hence, additional features, which were functional in nature[91], had to be included later.

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[92] *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:

- HORTICORP, during the implementation of ERP proposed to link weighing machines located in outlets with the ERP system so as to facilitate real time data

[90] The PSU furnished copy of three documents, *viz.*, User Manual (553 pages), project summary (15 pages) and transaction flow chart of District Procurement Centre, Thiruvananthapuram (two pages).

[91] The additional features included were GST features, creation of credit and debit notes, changes in leave and loan management, salary based on punching system, inclusion of three new reports, training personnel dashboard and despatch document/ workflow management.

[92] Relational Database Management System.

on stock position of vegetables and fruits. An amount of ₹5.20 lakh was expended for upgrading existing weighing balances at outlets with GPRS modem to make them compatible with the ERP system. However, the power backup capability of the weighing machines was not assessed. As a result, the ERP system could not be implemented in retail/ mobile outlets as the upgraded machines could be used only for two to three hours continuously. Though the manufacturer of the weighing machine suggested additional battery backup to solve this, HORTICORP did not entertain the same as it needed additional investment.

The GoK replied (September 2020) that initially the entire system worked efficiently, but the efficiency of the system dropped due to power back up issues which could not be addressed due to huge investments.

The reply confirmed that there was absence of technical analysis which hindered online monitoring of sales in retail outlets.

- WAREHOUSING CORP decided (July 2017) to use the existing Tally financial accounting package even after implementation of the ERP system. Hence, generation and export of XML[93] files from the Accounts Module of ERP system to the Tally package was attempted while developing the ERP system. It was, however, not found feasible and the Accounts Module had to be modified accordingly. The time and effort expended on integration of Tally with the ERP did not have the backing of any technical analysis. Further, the proposal for using Tally financial accounting package along with ERP system lacked justification as ERP system was implemented as an integrated software solution for materials, marketing and finance functions.

  The GoK replied (September 2020) that the computerisation project was completed in March 2020.

  The fact remains that the shortcomings in development process due to non-adherence to the Guidelines delayed the completion of the project by eight years.

- As per the Guidelines, free and open source based software[94] should be used, wherever possible. Audit, however, observed that only CASHEW CORP used open source platform[95] in its ERP system while other PSUs used proprietary[96] platforms[97]. Three PSUs (KEL, HORTICORP and WAREHOUSING CORP) spent ₹2.95 lakh towards license fee for proprietary software.

  COIR CORP stated (June 2020) that MS SQL was selected due to its better data management and security features. FOMIL stated (June 2020) that technical

[93] eXtensible Markup Language (XML) is a markup language that is designed to transport and store data in a specific format.

[94] 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.

[95] PGSQL/Apache/Linux.

[96] 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.

[97] RDBMS like MS SQL and Oracle.

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 client-server 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

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.

Regarding phase-wise rollout, Audit noticed that CASHEW CORP's decision to roll out the software in all factories and Head Office in one go faced hurdles like non-completion of data entry in all factories, difficulties in inter-factory transactions, non-availability of adequate number of trained personnel *etc*.

CASHEW CORP replied (September 2020) that it was now fully equipped to implement the project. The other PSUs did not offer any specific reply in this regard.

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[98] PSUs 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.

> 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.

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.

CASHEW CORP replied (June 2020) that the tendering was carried out before the Guidelines came into force and the work was awarded to KELTRON. COIR CORP replied (June 2020) that the experience of the firm was stipulated as criteria instead of fixing turnover. Also, the financial statements of the last five years were scrutinised.

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

[98] HORTICORP awarded the work on nomination basis.

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[99] (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.

  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.

- As per CVC guidelines (July 2007), tendering process is a basic requirement for the award of contract as any other method, especially award of contract on nomination basis, would amount to a breach of Article 14 of the Constitution guaranteeing right to equality. It was noticed that HORTICORP selected the IA in an arbitrary manner in a meeting (July 2015) in which the representative of the IA also participated. HORTICORP justified the selection of IA stating that the manufacturer of the weighing machines used by it advised to award the work to the IA for best results. It is pertinent to note that the project was currently dormant due to software and technical issues (November 2019).

  The GoK did not offer any reply in this regard.

- 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[100] (SLA) needs to be entered into

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

[100] 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.

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.

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:

- Disagreement between CASHEW CORP and the IA on the completion/ commissioning status of various modules of the ERP led to suspension of development work for over two years.

- 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.

- WAREHOUSING CORP did not conduct acceptance testing of the modules completed by the IA in October 2012. In the absence of any testing reports, the IA could not further proceed with the development work for over four years (up to July 2017).

- HORTICORP released about 88 *per cent* of the contract price without any testing and acceptance procedure though the IA was eligible for only 50 *per cent* as per the work order[101]. HORTICORP, thus, paid an excess amount of ₹28.73 lakh without considering the stages of implementation. Further, the software was presently utilised only for generating invoices. The other functionalities such as real time monitoring of outlets, procurement, storage, accounting *etc*. envisaged in the project have not been achieved to date (January 2020).

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:

COIR CORP

- As per Rule 7.33 of the SPM, a minimum of 15 days should be given to submit the tenders. However, the PSU allowed only six days (30 April 2013 to 6 May 2013) which was not justified as there was no urgency.
- As per the tender conditions, the successful bidder was to furnish a performance bank guarantee for an amount equivalent to 10 *per cent* of the quoted value. The PSU, however, did not insist for its compliance by the IA.
- Even though the Annual Maintenance Contract (AMC) for the ERP commenced three years ago, the PSU did not sign any agreement with the IA detailing the terms and conditions thereof.

[101] Fifty *per cent* payment as advance along with work order, another 30 *per cent* after successful installation of hardware and software and acceptance of HORTICORP based on the recommendation of technical committee and balance 20 *per cent* after successful trial run.

COIR CORP replied (June 2020) that as it wanted to implement the project in the shortest possible time, the bid submission date was fixed short. Since the IA was not able to furnish bank guarantee, a deduction of 10 to 25 *per cent* from bill amount was made which was released after six months of successful implementation of the project. Further, the software was under the warranty period of three years and an agreement was being entered into with the IA for future AMC.

However, COIR CORP did not comply with the provisions of the SPM and the tender conditions. By shortening the bid submission date, the PSU did not provide equal chance to all the prospective bidders to participate in the tender. The delay in entering into an agreement for the AMC would entail the risk of non/poor performance from the IA.

WAREHOUSING CORP

- As per the agreement with the IA (CDAC) in June 2019, the entire payment was to be released after the acceptance of individual modules. The agreement, however, did not provide for integration of individual modules, which was an essential characteristic of the ERP system.

  The GoK replied (September 2020) that payment was released after acceptance of each module and final payment was made only after completion (March 2020) of the project.

  The fact, however, remains that the integration of all individual modules was not specified as a payment milestone.

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 payment.

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.

> 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.

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 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 non-functional. 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 sever 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.

Audit also noticed that the ERP system of HORTICORP faced a ransomware[102] attack in August 2016. Though all the files were decoded by the malware, they were restored from the backup server in KELTRON and an antivirus software was installed in the server in December 2016. The validity of the software, however, expired in December 2017 and the server remained without the protection of an antivirus software or a firewall since then.

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.

[102] Ransomware is a type of malicious software that threatens to publish the victim's data or block access to it.

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.

COIR CORP replied (June 2020) that they have demanded the IA to provide change control and source code.

However, COIR CORP completed the project in February 2014, but the request was made to the IA only after it was pointed out by Audit.

5.1.6.2 Role of KELTRON as a Total Solution Provider in HORTICORP

As per Government Order (February 2000), role of TSPs in IT project implementation was limited to aid the clients in preparation of feasibility studies, technical evaluation of bids, preparation of SRS, assisting in tendering process, onsite support after implementation *etc*. The TSPs were also required to follow all the instructions in the Guidelines scrupulously, lest it would result in revocation of their TSP status. KELTRON was the TSP in the case of HORTICORP. Audit, however, observed that:

- HORTICORP decided to appoint its IA on nomination basis without following transparent tendering process in a meeting (July 2015) where representatives of both IA and KELTRON were present. Though it was the duty of KELTRON as TSP to point out the non-compliance to the Guidelines regarding selection of IA, KELTRON did not object to the non-compliance.

The GoK replied (October 2020) that tendering process was not followed as the supplier of weighing machine suggested the IA as they had integrated ERP software of the IA.

The reply was not acceptable as the Guidelines stipulated that application development involving a third party agency shall be through a transparent tendering process.

- KELTRON also failed to advise HORTICORP regarding the use of common IT infrastructure, usage of free and open source software and to ensure that proper system study and technical analysis were carried out prior to project rollout.

  The GoK replied (October 2020) that upgradation/procurement of the weighing machine and its installation was only the scope of work. KELTRON proceeded with the procurement of these facilities only after the receipt of completion certificate of the pilot phase of project from HORTICORP.

  The reply was not tenable as the scope of work of KELTRON as TSP included turn-key implementation of ERP initiative in HORTICORP.

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[103] 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 coordinate, regulate and enforce the provisions of the Act/ guidelines/ directions.

[103] 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[104] out of thirty Public Sector Undertakings (PSUs) functioning in the manufacturing sector was selected as per Stratified Random Sampling Method[105] 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[106] 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[107].

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.

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. 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

[104] 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).

[105] Based on energy consumption bill data.

[106] 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.

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

KMML did not claim the subsidy though it conducted energy audits, these PSUs did not receive the subsidy[108] from EMC.

Audit also noticed that EMC was appointed (January 2011) as the State Designated Agency to coordinate, regulate and enforce the provisions of the rules[109] 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[110], the designated consumers[111] are required to achieve specific energy consumption[112] 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.

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[113]. Since MCL did not purchase any ESCerts so far (December 2019), it was also liable to pay penalty of ₹60.80 lakh[114] as per Section 26 of the Energy Conservation Act, 2001. Further, the non-achievement of specific

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

[109] The Energy Conservation Act 2001, Guidelines issued by the GoK in May 1992 and November 1992 and the Directions issued by GoK in June 2015.

[110] 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.

[111] 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.

[112] 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 process consumes.

[113] 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.

[114] ₹60.80 lakh = ₹10 lakh + ₹10,000 x 508 days.

energy consumption norms resulted in excess consumption of fuel amounting to ₹80.05 crore[115] 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[116] out of seven PSUs did not fix any norms for power consumption. In the case of remaining three[117] 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 [118] 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.

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*.

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 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

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[115] Calculated based on the average cost of High Speed Diesel in 2017-18.
[116] KSCMMCL, TELK, SILK and KCCL.
[117] KMML, TTPL and STL.
[118] KMML (₹10.87 crore), TTPL (₹33.96 lakh) and STL (₹14.55 lakh).

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[119] 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.

The GoK confirmed (December 2020) that STL did not initiate steps for availing open access facility for purchase of power. KCCL would explore the possibilities of utilisation of open access facility.

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.

5.2.4.1 Audit noticed that MCL applied for no objection certificate from Kerala State Electricity Board Limited (KSEBL) in April 2013. But, instead of pursuing the application pending with KSEBL, MCL initiated (August 2013) steps for obtaining legal opinion on an agreement proposed to be entered into with Power Trading Corporation of India for purchasing power through open access. The legal opinion was received only in April 2017. MCL lost four years in obtaining the legal opinion and took another two years for obtaining no objection certificate from KSEBL, which was received only in July 2019. Power purchase through open access could be commenced only from November 2019 onwards. As per information furnished by MCL, though the plant was not running full-fledged, it could achieve savings of ₹2.75 lakh for the month of November 2019 by using the open access facility.

The GoK replied (November 2020) that MCL applied for NOC and waited for the NOC in good faith. But, there was delay from KSEBL in giving the NOC which could be realised in later years. The legal opinion was obtained only to ensure correctness of the proposed agreement.

The reply was not tenable as it was silent on why MCL waited for four years (April 2013 to April 2017) for obtaining the legal opinion instead of pursuing the application pending with KSEBL for the NOC. During this period, MCL did not take any steps to comply with the directions (April 2013) of KSEBL for installation of required meters and other facilities. This was also confirmed by the Managing Director in an exit meeting with the audit team. Considering the benefit of ₹2.75 lakh achieved in November 2019 when the plant was not running full-fledged, MCL lost an opportunity to save ₹1.32 crore for these four years.

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.

[119] MCL, TCCL, KMML, TELK, TTPL, KCCL and STL.

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

5.2.4.3 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 2013-14 of the GoK encouraged the PSUs to set up solar energy units. GoK also issued directions (July/December 2013) to six[120] out of nine PSUs selected for audit to implement solar energy units.

Audit observed that four[121] 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. KMML did not implement the solar energy unit as it was not financially viable (2014) and due to closure (2018) of a scheme for roof top solar project under Renewable Energy Service Company (RESCO) model[122] implemented by Solar Energy Corporation of India Limited. Audit noticed that implementation of solar energy project would have reduced the liability of KMML towards purchase of Renewable Energy Certificates for fulfilling Renewable Purchase Obligation[123].

It was further noticed that MCL failed to claim subsidy of ₹ six lakh[124] from Ministry of New and Renewable Energy (MNRE) for implementing the solar energy project. After it was pointed out by Audit, MCL claimed (October 2019) the same, which was yet to be received.

The GoK replied (November 2020) that there was no intentional delay on KMML's part in implementing the solar project. Further, MCL was not eligible for MNRE subsidy as it comes under industrial building under State PSU.

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

[120] KMML, MCL, TELK, TTPL, TCCL and STL.
[121] MCL, TTPL, STL and TCCL.
[122] Under this model, there is no capital investment by KMML and regular upkeep of the facility will be done by the supplier for 25 years.
[123] As per Kerala State Electricity Regulatory Commission (Renewable Energy) Regulations, 2015, 2017 and 2019, KMML was liable to purchase Renewable Energy Certificates for a certain percentage (ranged from 4.50 *per cent* to 12 *per cent*) of the total energy availed through open access from renewable sources.
[124] Cost capital subsidy of 30 *per cent* of the project cost limited to ₹30 per Watt peak for Photovoltaic Systems without battery backup.

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[125] to HT and EHT consumers for power factor[126] (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 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[127], 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[128].

TTPL replied (January 2020) that on implementation of the ongoing projects, the total power requirement would be 3,850 KVA. 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. KSCMMCL replied (December 2020) that full level of production was not yet started and more machinery were being installed and assured that steps would be taken to reduce the CD to a safer level.

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[129] achieved PF above 0.90 in all the three years (total eight connections). Out of this, TCCL obtained PF incentive of 10 points for 34 months and nine points for two months. In the remaining five connections, three PSUs (KMML-2, KSCMMCL-2 and SILK-1) paid penalty of ₹7.21 lakh during this period for reduction in PF below 0.90. Continued reduction

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[125] 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.

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

[127] Two connections in KSCMMCL, one connection each in TTPL and TELK.

[128] 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.

[129] TCCL, MCL, TTPL, TELK, KCCL, SILK (one connection) and STL.

in the PF and payment of penalty indicated that the PSUs failed to investigate the reasons for poor PF and take remedial action. Though the energy audit report recommended (April 2018) replacement of capacitor in one of the HT connections, KMML replaced the capacitor only in June 2019 despite paying penalty for PF reduction on a regular basis.

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

5.3 Operation of Modern Rice Mills by Public Sector Undertakings

Non-procurement of adequate quantity of paddy by the PSUs led to underutilisation/ idling of paddy processing capacity established by incurring ₹21.85 crore. Further, only a meagre quantity of the total rice produced was channelled through Public Distribution System, leading to non-achievement of the objectives of providing fair price for paddy to the farmers and rice at reasonable rates to the consumers.

The Government of Kerala (GoK) accorded (between January 2000 and January 2017) approval for establishing five Modern Rice Mills (MRMs) with the objective of ensuring fair price for paddy to the farmers and providing rice at reasonable rate to the consumers. Establishment and operation of the MRMs were entrusted to four Public Sector Undertakings (PSUs), *viz*., Kerala State Warehousing Corporation (KSWC), Oil Palm India Limited (OPIL), Kerala Agro Industries Corporation Limited (KAICO) and Kerala State Palmyrah Products Development and Workers' Welfare Corporation Limited (KELPALM). None of these PSUs had any previous experience in operating MRMs. The details of MRMs are indicated in **Table 5.1**

Table 5.1: Details of MRMs planned/established by GoK up to 2018-19

Sl. No.	Location of MRM (District in brackets)	Project cost	Actual cost incurred	Installed capacity	Time of completion	PSUs to which operation was entrusted
		(₹ in crore)		MT/year		
1	Thakazhi (Alappuzha)	1.70	0.54	12,000	Abandoned	KSWC
2	Vaikom (Kottayam)	8.00	9.91	12,000	May 2012	OPIL
3	Alathur (Palakkad)	1.26	2.40	6,000	November 2008	KSWC and OPIL
4	Sulthan Bathery (Wayanad)	0.25	0.46	300	January 2019	KAICO
5	Kallepully (Palakkad)	9.61	1.61	14,400	Under construction	KELPALM
Total		**20.82**	**14.92**	**44,700**		

As of March 2019, only the MRM at Vaikom was in operation. The MRM at Thakazhi was abandoned (March 2005) after completion of the civil works[130] due to labour dispute. The MRM at Alathur commenced operation under KSWC in November 2008 but was closed down in June 2010 due to paucity of working capital and lack of qualified technical staff. The MRM was again operated, this time by OPIL from September 2018 to December 2018 and thereafter remained inoperative. The MRM at Sulthan Bathery, though completed in January 2019, is yet to commence operations as rectification works for defects noticed during trial run (March 2019) were continuing as of December 2019. The MRM at Kallepully is under construction as of March 2019.

Audit analysed the working of the MRMs at Vaikom and Alathur which were in operation during the period 2014-15 to 2018-19 and noticed the following:

5.3.1 Underutilisation of production and storage capacity

The Detailed Project Report (DPR) of MRM at Vaikom stated that paddy was readily available in the surrounding area of the MRM and was to be procured directly from these farmers. Further, GoK authorised (February 2011) OPIL to procure paddy in the same manner as it was being done by The Kerala State Civil Supplies Corporation Limited[131] (Supplyco). The DPR envisaged 90 *per cent* capacity utilisation to be achieved by the third year of operation.

OPIL, however, could not procure the required quantity of paddy for operating the MRM at 90 *per cent* capacity even after seven years of operation. During the period 2014-15 to 2016-17, the capacity utilisation of Vaikom MRM ranged between 40.11 *per cent* (2015-16) and 59.20 *per cent* (2016-17). The low capacity utilisation was attributed to the inadequate storage facility. Accordingly, as approved (August 2013) by GoK, OPIL constructed (February 2016) a silo[132] storage facility having capacity

[130] The building was being used as a godown by KSWC.
[131] A State Public Sector Undertaking acting as an agency for procurement of paddy from the farmers and distribution of rice through the Public Distribution System (PDS) in Kerala.
[132] A silo is a tall tower used for storing grain, cement *etc.*

to store 5,000 MT in one paddy season[133] at a total cost of ₹9.37 crore. The silo was put to use from 30 September 2016 to 23 December 2017 and was idling thereafter. Audit observed that even after commissioning of the silo, procurement of paddy did not improve and the capacity utilisation reduced to 42.72 *per cent* in 2017-18 and to 34.55 *per cent* in 2018-19. The investment made in the construction of silo, therefore, proved unfruitful despite OPIL's claim (September 2016) that 100 *per cent* capacity utilisation was attainable with the commissioning of the silo.

OPIL attributed shortfall in procurement of paddy from 2017-18 onwards to shortage of working capital due to non-receipt of State Incentive Bonus (SIB)[134] from GoK. Audit observed that though OPIL claimed the SIB from time to time, GoK released only ₹0.43 crore in 2014-15 and ₹2.17 crore in 2018-19. As of March 2019, an amount of ₹18.72 crore was yet to be received from GoK on account of SIB. The delay in releasing SIB, thus, affected the working capital position of OPIL and led to low procurement of paddy leaving the capacity of the MRM and the silo underutilised.

The GoK confirmed (September 2020) that the underutilisation of production capacity was due to absence of storage facility up to 2016-17 and thereafter due to lack of working capital and stated that GoK decided (August 2020) to release ₹8.63 crore to OPIL as part of SIB. GoK also stated that as envisaged in the DPR, OPIL was ready to procure paddy from the local farmers. But the variety of paddy available in the Kuttanad (Alappuzha) region was mainly 'Unda' and it was not economically viable for OPIL to procure this variety alone.

The reply was not acceptable as the MRM was established to support the local farmers by providing a ready market for their paddy. Also, the primary objective of MRM was to make use of the paddy available in the surrounding area as envisaged in the DPR.

5.3.2 Sale of rice

Ensuring availability of rice at reasonable rates to the consumers was one of the objectives of establishing the MRMs. As per the DPR of MRM at Vaikom, rice was to be distributed in the open market as well as through the Public Distribution System (PDS).

OPIL sold rice in the open market at the price fixed by it from time to time based on market conditions, including the price of its competitors. Up to 2016-17, OPIL sold the entire quantity of rice (14,811.28 MT) in the open market without resorting to sales through PDS. GoK also did not ensure that the MRM effected sales through PDS until October 2017 when a meeting was convened between the Minister for Agriculture and the Minister for Food and Civil Supplies wherein it was decided to sell the entire quantity of rice produced at the MRM through Supplyco. The MRM, however, sold only 3,839 MT of rice to Supplyco during 2017-19 while 5,741.18

[133] Paddy harvesting seasons are October to December and February to April every year.

[134] SIB is the difference between the Minimum Support Price for paddy fixed by Government of India and the price at which GoK authorised OPIL to procure paddy from the farmers.

MT was sold in the open market. Thus up to 2018-19, out of the total sales of 24,391.46 MT, 84.26 *per cent* was sold in the open market against the objective envisaged in the DPR. As the price of rice sold in open market was fixed based on market conditions, the objective of ensuring availability of rice at reasonable rates to the consumers could not be achieved.

The GoK replied (September 2020) that the processing charges (₹2.14 per kg) paid by Supplyco for rice sold under PDS was meagre considering the overall cost of production. At certain stages, deviating from the DPR, the Company was constrained to resort to open market sale so as to run the company in a profitable manner.

The reply was not acceptable as since inception, all the rice produced by the MRM was sold in the open market. The direction (October 2017) of the GoK to sell all the rice produced by the MRM through PDS was also not complied with as it sold 60 *per cent* of rice produced during 2017-19 in the open market.

5.3.3 High level of immature paddy

As per the norms[135] fixed by Food Corporation of India (FCI), immature, shrunken and shrivelled grains in the paddy should not exceed three *per cent* of the total quantity of the paddy procured from farmers.

In the case of paddy procured by the MRM at Vaikom during 2014-19, the percentage of immature paddy, however, ranged between 5.83 *per cent* (2015-16) and 9.86 *per cent* (2017-18) with an average of 8.01 *per cent.* Considering the average cost of paddy procured during this period, the excess immature paddy over the norm resulted in extra expenditure of ₹3.18 crore. It was further noticed that OPIL did not reduce the procurement price of paddy in proportion to the excess immature paddy, though it did so in the case of excess moisture content of the paddy.

The GoK replied (September 2020) that OPIL categorised all the impurities in the paddy as immature paddy and its total percentage was within the norm of 13 *per cent* fixed by FCI. Though the impurities in the paddy available in Alappuzha and Kottayam districts were comparatively high, OPIL procured paddy in order to protect the interests of farmers.

The reply was not acceptable. Since FCI prescribed separate norms for each category of impurity, OPIL should have categorised the impurities in line with the FCI norms. Even while accepting paddy with high impurities from farmers, OPIL should have reduced the procurement price of such paddy in proportion to the excess immature paddy as it did in the case of excess moisture content.

[135] Foreign matter - two *per cent*, Damaged, discoloured, sprouted and weevilled grains – five *per cent*, Immature, shrunken and shrivelled grains - three *per cent*, Admixture of lower class – six *per cent* and Moisture content - 17 *per cent*.

5.3.4 Loss due to reduced yield

As per the DPR of MRM at Vaikom, 68 *per cent* yield was to be achieved from the paddy processed by it.

The actual yield achieved by the MRM during the period 2014-15 to 2018-19, however, ranged between 56.11 *per cent* and 61.48 *per cent* only. Considering the yield as per the DPR, there was shortage in yield to the tune of 2,394.14 MT of rice valuing ₹7.35 crore[136]. OPIL, however, did not analyse the reasons for low yield and take corrective action to achieve the yield envisaged in the DPR.

The GoK replied (September 2020) that the target depicted in DPR would vary based on the actual situation of each project. The actual yield ranged between 56.11 *per cent* and 61.48 *per cent* was quite near to the target of 68.00 *per cent* in DPR.

The reply was not acceptable as operation of the MRM would not be economically viable without ensuring the yield envisaged in DPR. Further, the yield showed a declining trend warranting action from OPIL to analyse the reasons for such decline.

5.3.5 Operational performance

The operational performance of MRM at Vaikom during 2014-15 to 2018-19 was as indicated in **Table 5.2**:

Table 5.2: Operational performance of MRM at Vaikom

(₹ in crore)

Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
Total revenue	12.47	12.21	18.07	15.19	11.98
Total expenses	13.13	13.09	18.89	15.79	15.16
Loss	0.66	0.88	0.82	0.60	3.18
Loss as a percentage of total revenue	5.29	7.21	4.54	3.95	26.54

Audit observed that the MRM incurred loss in all the years since 2014-15 and the same increased every year resulting in an accumulated loss of ₹6.14 crore as of March 2019. The MRM incurred loss even after selling 84.26 *per cent* of the rice through open market at competitive rates. The major reasons that contributed to this loss was shortage in the yield of rice (average yield of 58.93 *per cent* during 2014-15 to 2018-19) and underutilisation of production capacity.

The GoK replied (September 2020) that except during 2018-19, the loss incurred was not extensive. From 2013-14 to 2018-19, OPIL could fully recover the depreciation during three years and the operational result before providing for depreciation was nominal in two years. The loss during 2018-19 was attributed to the non-release of SIB. In the Exit Conference, OPIL stated (September 2020) that it had to match the price of rice according to the market which led to the loss. OPIL accepted that low capacity utilisation was one of the major reasons for the loss.

[136] Based on the average sales realisation during 2014-15 to 2018-19.

The reply was not acceptable. The MRM incurred loss on account of underutilisation of capacity and low yield while OPIL did not take measures to improve the utilisation of production capacity of the MRM and investigate the reasons for low yield.

5.3.6 Lack of continuity in revival activities

The MRM at Alathur was implemented at a total cost of ₹2.40 crore with an installed capacity of 6,000 MT *per annum*. Since commissioning in November 2008, the MRM was operated for a period of 19 months till June 2010 and processed 738 MT of paddy. The effective utilisation, thus, worked out to 7.77 *per cent* of installed capacity. Audit observed that neither GoK nor KSWC took the initiative to revive the MRM until June 2018, when GoK decided to entrust the operation of the MRM to OPIL for a period of one year. Regarding the future operation of the MRM, KSWC decided (October 2018) to conduct a technical evaluation using an external agency and assess the present value of the mill based on the direction of GoK. Though KSWC overhauled the MRM incurring ₹17 lakh before handing it over, OPIL operated the MRM only for a period of 81 days[137] and processed 294.44 MT of paddy. As the revival activities were not followed up by technical evaluation and arrangements for continuing the operations, the MRM remained idle thereafter leaving the investment of ₹2.57 crore unfruitful.

Though the MRM at Alathur was not in operation since June 2010, KSWC did not temporarily disconnect the high tension electrical service connection of the MRM until a firm decision on the continued operation was taken. As a result, KSWC incurred electricity charges of ₹33 lakh for the service connection from October 2010 to September 2018.

The GoK replied (September 2020) that OPIL could operate the MRM only for a short period due to lack of sortex machine, weigh bridge, storage facility *etc*. The MRM needed complete overhauling and KSWC entrusted an expert from Kerala Agriculture University to conduct a technical evaluation and further action would be taken based on the evaluation report. It was also replied that steps have been taken to minimise the electricity charges of the MRM in view of its non-functioning. If the service connection was disconnected, restoration of the same would take time and cost.

The reply was not acceptable as no initiative was taken by KSWC or GoK to revive the MRM until June 2018. Though KSWC decided (October 2018) to conduct a technical evaluation, the report was not yet received (September 2020). Further, for a period of eight years, electricity charges were paid though the MRM remained unused.

Thus, non-procurement of adequate quantity of paddy by the PSUs led to underutilisation and/ or idling of paddy processing capacity established by incurring

[137] 24 September 2018 to 13 December 2018.

₹21.85 crore[138]. Further, only a meagre quantity of the total rice produced was channelled through the Public Distribution System. These led to non-achievement of the objectives of providing fair price for paddy to the farmers and rice at reasonable rates to the consumers.

Recommendation 5.3: GoK may ensure a support ecosystem to the PSUs selected for operating the MRMs to tackle the problems associated with the new line of business. For instance, a back-to-back arrangement with the Supplyco could have provided operational synergy to achieve the intended objectives of the MRMs.

Kerala State Road Transport Corporation

5.4 Construction and utilisation of Bus Terminals-cum-Shopping Complexes

Failure of the Corporation in augmenting non-operating income through shopping complexes due to inefficiencies in planning and implementation of projects, non-development of envisaged projects and underutilisation of completed projects.

Kerala State Road Transport Corporation (Corporation) decided (January 2005) to construct 19 bus terminals-cum-shopping complexes (BTSCs) for augmenting non-operating revenue. As of November 2019, the construction of six[139] BTSCs was completed and six[140] BTSCs were under construction, while seven[141] BTSCs were not developed. As of November 2019, the Corporation incurred ₹51 crore for 12 BTSCs (six completed and six under construction). Audit examined the level of compliance to relevant rules and procedures in the construction of six BTSCs (three[142] completed and three under construction[143]). The utilisation of commercial built-up area was examined in all the six completed BTSCs while two[144] non-developed BTSCs were randomly selected to examine the reasons for non-development. Thus, out of 19 BTSCs, 11 were covered in the audit, details of which are given in ***Appendix 8***. The audit findings in this regard are discussed below:

5.4.1 Planning and implementation of BTSCs

5.4.1.1 As per Section 1601.1.6 of the Kerala Public Works Department (PWD) Manual, a revised estimate shall be prepared and got sanctioned when there are deletions, additions or alterations to the scope of the work as originally sanctioned, when there are major structural alterations from the originally sanctioned design, when the cost of a work is likely to exceed by more than five *per cent* of technically sanctioned amount. This shall be done as soon as any two of the above conditions

[138] Cost incurred for establishing MRMs at Alathur (₹2.40 crore) and Vaikom (₹9.91 crore), construction of silo in the MRM at Vaikom (₹9.37 crore) and overhauling of MRM at Alathur (₹0.17 crore).
[139] BTSCs at Kottarakkara, Kasargod, Kattakkada, Nedumangad, Neyyattinkara and Payyannur.
[140] BTSCs at Thodupuzha, Malappuram, Haripad, Nilambur, Muvattupuzha and Pathanamthitta.
[141] BTSCs at Palakkad, Kottayam, Eenchakkal, Pala, Munnar, Fort (Thiruvananthapuram) and Karunagappally.
[142] BTSCs at Nedumangad, Neyyattinkara and Payyannur which were completed after 2014.
[143] BTSCs at Thodupuzha, Malappuram and Haripad selected based on their cost of construction.
[144] BTSCs at Kottayam and Palakkad.

are anticipated during the course of execution of the work. As per the Delegation of Powers of the Corporation, approval for the revised estimate is to be obtained from the Board of Directors (BoD).

Audit observed that there were changes to the scope of work in five[145] out of six BTSCs[146] requiring approval of revised estimate. The Corporation, however, did not obtain approval of the BoD for the revised estimates of three[147] BTSCs while in the case of Thodupuzha and Nedumangad BTSCs, the approval was obtained after a delay of 11 to 16 months. In the case of Nedumangad BTSC, the unjustified delay in approving the revised estimate delayed the payment to the contractor and therefore delayed the completion of the BTSC by a year resulting in loss of license fee amounting to ₹10.46 lakh[148].

The Corporation replied (September 2020) that as per the practice followed till 2017, bills were settled after approval of revised estimate by the Chairman and Managing Director for projects which were completed within the sanctioned amount. Since the Payyannur and Neyyattinkara BTSCs were completed before 2017 and within the sanctioned amount, approval of the BoD was not obtained. In the case of Thodupuzha and Nedumangad BTSCs, approval of the BoD was obtained and the revised estimate of Haripad BTSC was prepared for submission to the BoD.

The reply was not acceptable as the practice followed by the Corporation till 2017 was not in line with the PWD Manual. The reply was silent on the delay in obtaining approval for the revised estimate from the BoD.

5.4.1.2 As per Clauses 1.03 to 1.10 of the agreement with the architect, a preliminary design shall be submitted to the Corporation for approval which shall be revised as directed by the Corporation. The architect, thereafter, shall submit complete working drawings to commence the work. Thus, the civil works were to be commenced after the Corporation approved the design submitted by the architect. As per Clause 1.13 of the agreement with the architect, the Corporation was entitled to claim damages or recover the fee payable to the architect if they failed to do the work in a satisfactory manner.

Audit observed that the Corporation noticed (September/ October 2013) significant defects in structural designs of BTSCs at Nedumangad and Thodupuzha when the civil works were in progress. So, the structural designs and estimated costs were revised later (October 2014/ February 2015). This indicated that the Corporation failed to detect the defects in the structural designs before its approval. The Corporation blacklisted (October 2014) the architect of Nedumangad BTSC only and did not assess and recover the cost of damages suffered due to the defects in design and released (October 2015) the full payment (₹9.50 lakh) to the architect of

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[145] BTSCs at Payyannur, Neyyattinkara, Nedumangad, Thodupuzha and Haripad.

[146] Selected by Audit for examining the level of compliance to relevant rules and procedures in the construction.

[147] BTSCs at Payyannur, Neyyattinkara and Haripad.

[148] Basement 12 shops (1,135 sq. ft.x ₹35 x 12 months) = ₹4,76,700 and Ground floor 9 shops (1,898 sq. ft.x ₹25 x 12 months) = ₹5,69,400.

Nedumangad BTSC.

The Corporation replied (September 2020) that the architect of Thodupuzha BTSC was given only part payment and no further payments would be released. The Corporation did not engage him for any further projects. Action against the architect of Nedumangad BTSC was initiated when the project was nearing completion. Engaging another architect at that stage would have caused delay. As the work was completed, full payment was released to the architect.

The reply was not acceptable as the Corporation did not assess and recover the cost of damages from the architect despite enabling provisions in the agreements with them.

5.4.1.3 As per the Government Order (March 2013) approving the construction of BTSCs, the cost of construction was to be financed by the Corporation through Interest Free Security Deposits (IFSD) mobilised from prospective tenants. Hence, the Corporation was to ensure that the BTSCs had adequate commercial built up area and that the minimum IFSD fixed for each shop was sufficient to cover the cost of construction. Further, the Corporation issued guidelines to the architect stating that the commercial space in the building as per the design submitted by them should be prime and sufficient to justify the viability of the BTSCs.

Audit observed that the Corporation did not ensure adequacy of the commercial built up area earmarked in each BTSC so as to mobilise the required IFSD as detailed below:

Out of the three completed BTSCs examined, the Corporation could not mobilise IFSD equivalent to the cost of construction in Payyannur and Nedumangad BTSCs. The construction of Payyannur and Nedumangad BTSCs was completed in 2015 incurring ₹5.14 crore and ₹9.66 crore respectively. However, as of September 2019, the IFSD collected was only ₹3.30 crore in Payyanur BTSC and ₹6.61 crore in Nedumangad BTSC.

In respect of Payyannur BTSC, the inflow of passengers to the BTSC was low as it was located away from the main town and a considerable number of buses proceed to their destination without entering the BTSC. As of October 2019, 15 out of 40 shops in the BTSC remained vacant. The wrong selection of site for the BTSC, therefore, adversely affected the realisation of IFSD.

In the case of Nedumangad BTSC, the Corporation did not complete the construction of a standalone building with commercial built-up area of 4,390 sq. ft. as planned. The Corporation did not give any reason for not completing the construction which led to foregoing the opportunity to mobilise the IFSD for 4,390 sq. ft.

The expected IFSD[149] based on the available commercial built up area in the ongoing BTSCs at Haripad, Thodupuzha and Malappuram was ₹4.01 crore, ₹8.00 crore and ₹2.26 crore as against their estimated construction cost of ₹6.45 crore, ₹14.98 crore

[149] Expected IFSD for all the three BTSCs was calculated @ ₹6,000 per sq. ft. approved by the BoD for Haripad BTSC as no specific rate was approved for other BTSCs.

and ₹7.90 crore respectively. Up to September 2019, the Corporation mobilised[150] ₹1.39 crore as IFSD from Thodupuzha BTSC while no IFSD could be mobilised from Malappuram[151] and Haripad BTSCs. The Corporation stopped (March 2019) the construction of these BTSCs due to shortage of funds.

In the case of Thodupuzha BTSC, bids received in respect of 10 shops in the tender-cum-auction conducted in May 2017 were not accepted as the minimum IFSD fixed for these shops was not offered. Next tender-cum-auction was conducted in August 2018 and the Corporation allotted six shops. It was noticed that in the case of four of these shops, the minimum IFSD fixed by the Corporation was lower than the IFSD offered in the previous tender-cum-auction. Hence, the allotment of four shops in August 2018 led to reduced collection of IFSD amounting to ₹19.56 lakh

The Corporation replied (September 2020) that the expected IFSD could not be fetched due to unpredicted variations in the economic situation of the country. The plan for operating all the buses from Payyannur BTSC could not be implemented due to local and political reasons. New ways for subletting/ leasing the commercial space in Payyannur BTSC were being explored. The construction of standalone building at Nedumangad BTSC was postponed due to poor response to the tender-cum-auctions. It was now envisaged to lease out the standalone building as a whole to interested parties. In the case of Haripad, Thodupuzha and Malappuram BTSCs, the Corporation was planning to lease the entire commercial area and pre-bid meeting for the same was conducted for Haripad BTSC**.**

The reply was not acceptable. The Corporation could not mobilise the required IFSD in completed projects even after five years of their completion. The reply was silent on the efforts taken by the Corporation to operate all buses from the Payyannur BTSC. In the case of Nedumangad BTSC, commercial built-up area was only 16.10 *per cent* of the total built-up area. Considering the average IFSD actually realised for the shops already rented out, this was not sufficient to recover the cost of construction. The reply was not specific to the audit comment regarding the possibility of not recovering the cost of construction in the BTSCs under construction due to inadequate commercial built-up area.

5.4.1.4 As per Rules 4 and 17 of the Kerala Municipality Building Rules, 1999 (KMBR), permission for construction of a building shall be obtained from the Municipality concerned and deviation from the approved plan shall not be made unless a revised permit is obtained. Further, as per Section 235AA of the Kerala Panchayat Raj Act 1994, an unauthorised construction would be liable to property tax at twice the normal rate.

Audit observed that in Neyyattinkara BTSC, the Corporation did not provide 10-meter splay at both sides of the exit point as per the approved plan. The Municipality refused (January 2016) to issue the building completion certificate for Neyyattinkara BTSC due to non-adherence to the approved plan and imposed property tax at twice the normal rate for 18 months from October 2015. This led to payment of additional

[150] Including amount receivable (₹0.47crore) from the tenants towards subsequent instalments.
[151] Though the Corporation allotted one shop and collected IFSD of ₹0.08 crore, the tenant requested for refund of IFSD subsequently.

property tax amounting to ₹4.57 lakh. Further, as the Municipality refused to grant license for commencing business in the BTSC stating that the construction was unauthorised, four bidders withdrew from the allotment made to them and the Corporation had to refund IFSD of ₹50.95 lakh. As agreements were executed with these four bidders to rent out the shops for two years, the withdrawal also resulted in loss of license fee for two years amounting to ₹3.44 lakh[152].

The Corporation replied (September 2020) that there was no violation of KMBR in the construction of the BTSC. It did not widen the exit of the BTSC as per the design because it would be conducive for unauthorised parallel transport services that operated in the area.

The reply was not acceptable as the non-widening of exit points in line with the design approved by the Municipality was not in compliance with the KMBR. The reply also indicated that the unauthorised parallel service was a known issue which was not considered while designing the BTSC.

5.4.1.5 As per Rule 4 of KMBR, a building permit issued by the Municipality is valid for three years from the date of issue and can be extended up to nine years provided that it is extended before expiry of the original validity. As per Rule 54 (4a) of KMBR, a certificate of approval from the Director of Fire Force and a No Objection Certificate (NOC) from Kerala State Pollution Control Board (PCB) were also required for issuing building permits. The Corporation had entrusted the architect with the responsibility of obtaining necessary statutory permissions.

Audit observed that the Corporation did not renew the building permits of Thodupuzha and Haripad BTSCs though their validity expired in December 2016 and August 2018 respectively. As the building permits were not renewed before their expiry, the Corporation faced the risk of non-receipt of further extensions. Similarly, NOC from the PCB was not obtained for Haripad and Malappuram BTSCs. For Thodupuzha BTSC, the NOC from PCB which expired in September 2019 was not renewed.

Audit also noticed that though the construction of Payyannur BTSC was completed in October 2015, the Municipality granted building numbers only in June 2016 due to non-completion of fire and safety measures. This led to delay in entering into tenancy agreements and resulted in loss of license fee amounting to ₹11.69 lakh.

The Corporation replied (September 2020) that it applied (August 2015) for renewal of the building permit of Haripad BTSC, but the same was pending. Further directions from the Municipality in this regard were being awaited. Necessary steps would be initiated to renew the permit of Thodupuzha BTSC at the earliest. NOC from PCB was obtained after completion of the Sewage Treatment Plant (STP) works. The STP works of Thodupuzha BTSC have commenced while that of Haripad and Malappuram BTSCs were yet to commence. The firefighting works at Payyannur BTSC could not be carried out due to financial constraints.

[152] Three shops - ₹2,85,600 (*i.e.* ₹25 x 476 sq. ft. x 24 months) and one shop - ₹57,960 (*i.e.*, ₹35 x 69 sq. ft. x 24 months).

5.4.1.6 The GoK sanctioned (December 2012/ March 2013) a special loan of ₹30 crore for meeting initial expenses related to the construction of 14 BTSCs[153]. The loan carried interest of 13.50 *per cent* and penal interest of 2.50 *per cent* in case of default. The loan was to be repaid in three years commencing from one year from the date of drawal of the loan. The Corporation was to furnish detailed statement of expenditure incurred out of the loan and utilisation certificate to the GoK. A monitoring committee was also to be constituted to ensure the completion of the BTSCs by January 2015.

Audit observed that the Corporation availed the loan during January to March 2013, but has not repaid the loan yet (October 2019). Out of the 14 BTSCs, the Corporation could complete (October 2015) only one BTSC (Payyannur) while the works of six BTSCs were stopped due to shortage of funds. The Corporation could not commence construction of seven BTSCs till October 2019 despite GoK earmarking ₹18 crore[154] out of ₹30 crore for these BTSCs. Further, the Corporation did not adhere to the directions of GoK regarding constitution of monitoring committee, furnishing of utilisation certificate and statement of expenditure incurred.

The Corporation replied (September 2020) that directions have been issued to properly record the utilisation of all funds received from GoK and to maintain individual project-wise accounts in future.

5.4.2 Utilisation of completed BTSCs

5.4.2.1 As of November 2019, 54.39 *per cent* of the total commercial built-up area (88,483 sq. ft.) in the six completed[155] BTSCs remained vacant. Audit observed that the Corporation did not issue any guidelines regarding the frequency of tendering or constitute a centralised monitoring mechanism to oversee the vacancy position of commercial built-up area in the BTSCs. This lead to unjustified delay in conducting tender-cum-auction in three BTSCs as detailed below:

Though tenders were invited at regular intervals in the case of Kottarakkara and Kattakada BTSCs, commercial area of 5,357 sq. ft. (32.78 *per cent*) and 4,176 sq. ft. (26.40 *per cent*) respectively remained vacant owing to the high vacancy position in second floor in these BTSCs (Kottarakkara-3,932 sq. ft. and Kattakada-4,176 sq. ft.). Further, unlike the other BTSCs, Kottarakkara BTSC was located separately from the already existing bus terminal. In the case of Kasargod BTSC, though tenders were invited regularly, 25,405 sq. ft. (65.59 *per cent*) of commercial built-up area including 6,745 sq. ft. in the second floor remained vacant due to poor demand.

In Payyannur BTSC, the Corporation did not conduct tender-cum-auction since October 2017. As of November 2019, 38.02 *per cent* of the total commercial built-

[153] BTSCs at Payyanur, Thodupuzha, Haripad, Malappuram, Karunagappally, Munnar, Muvattupuzha, Pathanamthitta, Thiruvananthapuram, Palakkad, Pala, Kottayam, Eenchakkal and Nilambur.

[154] Munnar- ₹1 crore, Fort-Thiruvananthapuram- ₹1 crore, Palakkad- ₹2 crore, Karunagappally- ₹2 crore, Kottayam- ₹3 crore, Eenchakkal- ₹4 crore and Pala- ₹5 crore.

[155] Kottarakkara, Kasargod, Kattakkada, Nedumangad, Neyyattinkara and Payyannur.

up area of 11,632 sq. ft. remained vacant. In Neyyattinkara BTSC, 40.42 *per cent* of the total commercial area of 6,551 sq. ft. remained vacant since the latest tender-cum-auction conducted in June 2018. In Nedumangad BTSC, 6,934 sq. ft. out of the total commercial area of 10,038 sq. ft. remained vacant since the tender-cum-auction in December 2017. The next tender-cum-auction was conducted (March 2019) after 15 months, in which four shops (1,399 sq. ft.) were rented out.

The Corporation replied (September 2020) that it invited tenders for all the vacant shops in Payyannur BTSC in January 2020 and March 2020, but the response was poor. Though tenders were invited for 18 shops of Neyyattinkara BTSC in February 2020, only three shops could be rented out. In the case of Nedumangad BTSC, there were no responses for the latest tender invited in January 2020.

However, the fact remains that there was considerable gap in conducting regular tenders for renting out vacant shops in the BTSCs. The reply was also silent on the efforts taken to rent out vacant shops in Kasargod, Kottarakkara and Kattakkada BTSCs.

5.4.2.2 As per the terms and conditions of tender-cum-auction, IFSD received from the licensee shall be refunded within three months after the contract period.

Audit observed that as of November 2019, the Corporation did not refund IFSD of ₹1.58 crore payable to 21 tenants in Payyannur, Kasargod and Malappuram BTSCs[156]. The delay in refund of IFSD ranged from 4 to 14 months.

5.4.3 Non-developed BTSCs

As per Section 2003 of the PWD Manual, 100 *per cent* hindrance free possession of the land should be ensured before bids are invited for a work.

Out of the ₹30 crore special loan sanctioned by GoK, ₹3 crore and ₹2 crore were earmarked for the BTSCs at Kottayam and Palakkad respectively. Audit observed that the works for construction of Kottayam and Palakkad BTSCs were awarded in March 2015 and March 2016 respectively. But the Corporation did not hand over the site to the contractors even after a lapse of 10 to 19 months as there was protest (April 2015) against re-location of employees in Kottayam BTSC. In the case of Palakkad BTSC, the Corporation could not evict the office of the Employees Co-operative Society from the site. The Corporation did not proceed with the construction of the BTSCs due to shortage of fund despite incurring ₹52.04 lakh towards consultancy and other charges.

The Corporation, meanwhile, requested (May/ July 2018) the GoK to include Kottayam BTSC under KIIFB[157] project. The Corporation obtained (July 2019) administrative sanction from the GoK for construction of Palakkad BTSC using the Legislative Assembly Constituency Asset Development Fund of ₹7.10 crore. Details

[156] Payyanur BTSC-10 cases – ₹87.00 lakh; Kasargod BTSC -11 cases- ₹63.39 lakh and Malappuram BTSC - one case- ₹8.00 lakh.

[157] Kerala Infrastructure Investment Fund Board (KIIFB) was established by the GoK with the main objective of providing investment for projects in the State of Kerala in sectors like Transport, Water Sanitation, Energy, Social and Commercial Infrastructure, IT and Telecommunication *etc*.

of further progress in this regard were awaited (October 2019).

The Corporation replied (September 2020) that it could not make available the free possession of the land due to various political issues/ other reasons. At present, the work of Palakkad BTSC was under progress using MLA-LAC-ADS[158] fund.

Thus, the Corporation completed only six out of 19 BTSCs even after 15 years. The deficiencies in planning and implementation of the BTSCs led to delay in completion. This also resulted in loss of license fee, payment of additional property tax and refund/ inadequate collection of IFSD to the tune of ₹1.01 crore. Further, the delay in conducting tender-cum-auction to rent out the vacant spaces in the completed BTSCs resulted in underutilisation of commercial area.

Recommendation 5.4: Construction activities may be carried out complying with all the relevant rules and regulations and avoiding procedural delays in case of revision in plans. Efforts may be made to utilise the vacant spaces in completed BTSCs so that the objective of construction of BTSCs is achieved.

Kerala State Poultry Development Corporation Limited and Kerala Agro Industries Corporation Limited

5.5 Idling of investment

Delay in completing civil works, deficiency in tendering and unjustified denial of consultancy fee resulted in avoidable delay in completing the project and idling of investment amounting to ₹7.31 crore.

The Government of Kerala (GoK) approved (May 2011) a proposal by Kerala State Poultry Development Corporation Limited (Company) for setting up an Environmentally Controlled Hi-Tech Commercial Layer Farm (ECHCL farm) at a cost of ₹10.00 crore at Kudappanakunnu in Thiruvananthapuram. The Company later decided (January 2014) to change the type of farm from ECHCL to High-Tech Commercial Layer Farm of 'Open Type Housing with Collapsible Walls with Battery Cages having Automatic Feeding System, Egg Collection and Manure Removal System' (Open Type farm) on the ground that the protocol for operation of ECHCL farms in India was not standardised. Rooh Global Traders (Consultant) was appointed (June 2014) as the consultant for the project at a fee of 4.70 *per cent* of the project cost. The GoK released (July 2011 to July 2014) ₹9.80 crore to the Company for implementing the project. As of May 2020, the project was yet to be commissioned though the Company incurred ₹7.31 crore.

Audit examined the implementation of the project by the Company and observed the following:

- The project included three major areas of works *viz*., civil works, procurement and installation of machinery and super-structural works. The civil works were

[158] Legislative Assembly Constituency-Asset Development Scheme (LAC-ADS) was constituted (June 2012) by GoK for creating durable capital assets under the ownership of Government for which ₹ five crore is earmarked annually to each Member of Legislative Assembly for their respective constituencies.

to be completed first. The Company awarded (January 2015) the supply and installation of machinery for ₹4.62 crore to Big Dutchman Agriculture (India) Private Limited with a scheduled delivery in April 2015. The Company awarded the civil works to Kerala Agro Industries Corporation Limited (KAICO), a Public Sector Undertaking in March 2015 and stipulated three months for the completion of works. Subsequently, the Company entrusted (June 2015) additional works such as cutting of trees and blasting of rocks in the work site to KAICO without defining any specific timeframe for completion. The civil works were not completed before the delivery of the machinery which was delivered in June/ July 2015 and had to be stored in a temporary shed constructed at Kudappanakunnu incurring ₹13.27 lakh. KAICO completed the civil works only in March 2016.

- The Central Vigilance Commission (CVC) had stated[159] (December 2002) that the prequalification criteria for a tender needs to be fixed in advance specifying the minimum qualification, experience and number of similar works executed. Further, the term 'similar works' is to be clearly defined. Rule 9.1 of the Stores Purchase Manual (SPM) states that all the aspects to be accounted for evaluating the tenders are to be incorporated in the tender enquiry document without any ambiguity. No new condition should be brought in while evaluating the tenders. As per Rule 7.50 of the SPM, while inviting tenders in two-bid system, the technical bids are to be opened in the first instance and evaluated with reference to the parameters prescribed in the tender documents. In the second stage, the financial bids of only the technically acceptable offers are to be opened for further scrutiny, evaluation, ranking and placement of contract.

  The Company awarded (December 2015) the super-structural works to KAICO to be completed in June 2016. KAICO, in turn, re-tendered (December 2016) the works as only two bids were received in response to the first tender (February 2016). Though the criteria for qualifying in the technical evaluation in the re-tender stated that the contractor should be capable of supplying and erecting similar type of material including pre-fabricated structures, it did not define the term 'similar type of material'. A Technical Committee, including representatives of the Company, the Consultant and KAICO, prequalified (January 2017) only one out of the four bids received on the ground that the remaining three bidders lacked experience in sandwich panel work. For getting more competitive bids, KAICO opened (February 2017) the financial bids of two out of the three bidders who were not prequalified. After evaluation, KAICO recommended to select the lowest bidder who happened to be one of the bidders who failed in the technical evaluation. As the Consultant objected to this, the Company referred (June 2017) the matter to the Chief Technical Examiner, Department of Finance, GoK through the Department of Agriculture.

  The Chief Technical Examiner stated that the action of the Technical Committee to reject the bids citing lack of previous experience in sandwich panel construction without specifying the same in the notice inviting tenders was not in order. Based on this, the Agriculture Department directed (March 2018) the

[159] Vide Office Memorandum No. 12-02-1-CTE-6.

Company to re-tender the works. Thus, ambiguous eligibility criteria in the tender document led to defective evaluation of tenders and delay in implementation of the project from March 2017 to March 2018.

Further, as per directions issued (May 2015) by GoK, Public Sector Undertakings shall follow e-Government[160] procurement for all tenders above ₹5 lakh. The estimated cost of super structural works awarded to KAICO was ₹2.46 crore. While inviting tenders for executing the work, KAICO, however, did not follow e-Government procurement.

- The Company floated (July 2014) tender for the supply of machinery based on the specifications furnished by the Consultant. Though the Consultant was eligible to receive fee at 4.70 *per cent* of the value of machinery, the Company decided (April 2016) not to pay the consultancy fee amounting to ₹17.61 lakh on the ground that it directly procured the machinery. Since the Company did not pay the fee as agreed, the Consultant refused to provide revised estimate for floating fresh tender for the super-structural works. The Company referred the matter to Law Department, GoK as directed (October 2019) by the Minister for Agriculture, GoK. The Law Department advised (January 2020) to pay the consultancy fee after ascertaining whether there was any breach of agreement conditions on the part of the Consultant. The unjustified denial of consultancy fee, thus, stalled the project from March 2018 onwards.
- As per the agreement with Big Dutchman Agriculture (India) Private Limited for supply and installation of machinery, the warranty of the machinery would be up to 18 months from the date of delivery. As the machinery was delivered in June/July 2015, the warranty of the machinery expired in January 2017 and the machinery has been idling for 60 months up to May 2020. The Company might have to incur additional expenditure if any repairs were necessitated due to prolonged storage of the machinery.

The GoK replied (November 2020) that the Company has admitted to lapses in project management which was caused by absence of qualified technical manpower, dependence on accredited agencies, differing interpretations of agreement conditions and the absence of a proper technical advisory/ oversight mechanism within the Company. It was assured that GoK shall ensure that adequate mechanisms were in place to avoid such lapses in future. The project was estimated to be completed within six months.

The GoK reply was to be seen against the fact that the project sanctioned by GoK in 2011 was yet to be completed despite incurring ₹7.31 crore and ₹2.49 crore out of the ₹9.80 crore released by GoK remained unutilised since March 2017.

Thus, the delay in completion of civil works, deficiency in tendering and unjustified denial of consultancy fee resulted in avoidable delay in completing the project and

[160] It is the e-Submission Tender System of GoK that enables the tenderers to download the Tender Schedule free of cost and then submit the bids online through the portal ‘www.etenders.kerala.gov.in’.

idling of investment amounting to ₹7.31 crore[161].

Recommendation 5.5: Necessary steps may be taken to avoid such lapses in future so as to complete the projects in a time bound manner.

The Plantation Corporation of Kerala Limited

5.6 Non-achievement of intended benefits

Stoppage of construction works due to non-obtaining of Government approval for revised estimate leading to non-achievement of intended benefits even after 12 years from the initial sanction of the project, despite incurring an expenditure of ₹5.62 crore.

As per Section 1601.1.6 of the Kerala Public Works Department Manual, a revised estimate must be prepared and got sanctioned: (a) when there are deletions, additions or alterations to the scope of the work as originally sanctioned, (b) when there are major structural alterations from the design as originally sanctioned, (c) when the cost of a work is likely to exceed by more than five *per cent* of technically sanctioned amount. The revised estimate should be prepared and approval obtained when any two of the above conditions are anticipated and the same should not be held back for approval till the work is completed or reaches an advanced stage of completion.

The Plantation Corporation of Kerala Limited (the Company) decided (December 2007) to construct an office-cum-shopping complex in order to utilise the commercial potential of the land situated along the National Highway at Kozhikode and to earn rental income. The projected profit and loss statement of the project envisaged a profit after tax of ₹7.02 crore by 10th year. Based on a proposal forwarded (January 2008) by the Company, the Government of Kerala (GoK) accorded (August 2008) administrative sanction to the Company for the construction of an office-cum-shopping complex having nine floors at a total cost of ₹5.80 crore. The Company modified (November 2010) the design of the office-cum-shopping complex to comply with the requirements of town planning authorities and to ensure maximum use of available land. Due to this revision, the number of floors increased from nine to eleven and the project cost increased to ₹8.10 crore. The Board of Directors (BoD) approved (November 2010) the tendering of the works, limiting the expenditure within the amount sanctioned (₹5.80 crore) by GoK and directed the Company to obtain revised administrative sanction for ₹8.10 crore. Accordingly, the work was tendered (March 2013) reducing the scope of work to seven floors so as to limit the expenditure within the amount sanctioned by GoK. The construction work was awarded in September 2013 and was to be completed by June 2015[162]. Out of the total area of 31,696 sq. ft. tendered for construction, only 11,706.17 sq. ft. (36.93 *per cent*) could be completed till June 2016 and the works were stopped

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[161] Purchase of machinery ₹4.62 crore, civil works ₹1.62 crore and ₹1.07 crore towards consultancy fee, customs duty, bank charges *etc*.

[162] Later extended up to May 2016.

thereafter. As of March 2017, the Company incurred ₹5.62 crore[163] for the project. Audit observed that:

- The Company did not obtain administrative sanction from the GoK for the revised estimates though the conditions stipulated in the Kerala Public Works Department Manual necessitated obtaining sanction for the revised estimate. The direction (November 2010) of BoD and the recommendation (March 2016) of the consultant to obtain revised administrative sanction for the work were also not complied with by the Company as of November 2020. Hence, the Company could not continue the construction works as it did not possess administrative sanction to incur expenditure beyond ₹5.80 crore though sufficient funds were available[164].

- The GoK, while approving the project, had directed (August 2008) the Company to avoid time and cost escalations. But the Company tendered the works only in March 2013 despite obtaining the building permit in September 2011. Due to delay in implementation of the project, the estimated cost (₹5.85 crore) of the works awarded (March 2013) to the contractor increased by ₹2.37 crore when it was revised in March 2016. The reasons for delay in tendering were not forthcoming from the files made available to Audit.

- While requesting (January 2008) the Government for administrative sanction for the project, the Company had prepared a financial viability report according to which the project ensured an Internal Rate of Return of 10.50 *per cent.* Audit, however, noticed that the Company did not review the viability of the project whenever the project cost was revised.

The GoK replied (November 2020) that it had accorded administrative sanction to the Company for construction of an office-cum-shopping complex having nine floors. The Company, however, did not seek sanction from the Government when the number of floors was increased to eleven by the consultant of the project.

Thus, stoppage of construction works due to non-obtaining of Government approval for revised estimate led to non-achievement of the intended benefit of earning rental income even after 12 years from the initial sanction of the project, despite incurring an expenditure of ₹5.62 crore.

Recommendation 5.6: Appropriate action may be taken to avoid recurrence of similar lapses while executing projects so as to achieve the intended benefits of the project. Further, the financial viability of the project may be reviewed in view of the time lapse and cost escalation and steps may be taken to complete the construction in a time bound manner to achieve the benefits of investment made without further delay.

[163] Civil works - ₹5.31 crore and Consultancy and other fees - ₹0.31 crore.
[164] Fixed deposits available at the end of 2014-15: ₹111.69 crore, 2015-16: ₹67.85 crore, 2016-17: ₹50.04 crore and 2017-18: ₹48.04 crore.

Kerala State Electronics Development Corporation Limited

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[165] (*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

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

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.

- 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[166] (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[167]. 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 customised product, it could not be marketed in other sectors. Further, the Company invited Expression of Interest for selection

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

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

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.

Kerala Shipping and Inland Navigation Corporation Limited

5.8 Avoidable loss

Venturing into water sports project without assessing the environmental impact and obtaining prior approval from the Government resulted in loss of ₹28.81 lakh.

Kerala Shipping and Inland Navigation Corporation Limited (Company) was established (July 1989) with the main objective of establishing, maintaining and operating transportation services for the transport of goods and passengers in inland water in the State of Kerala or elsewhere. The Company initiated (October 2013) a proposal to enter into the business of water sports activities in four locations (*i.e.*, Kovalam, Varkala, Thanneermukkom and Bekal) in the State with a total expenditure of ₹62.10 lakh. This included capital expenditure of ₹57.10 lakh and a startup cost of ₹5 lakh. The Company projected an annual income of ₹2.26 crore against a projected annual expenditure of ₹2.06 crore, thus leaving a profit of ₹20 lakh from the project. The Managing Director invited (October 2013) a tender for purchase of equipment for operation at all the four locations. For implementing the project at Thanneermukkom, the Company procured (March 2014) water sports equipment incurring ₹20.37 lakh. Due to opposition from local population, the project could not be implemented. The water sports equipment were given out on hire for five months before being disposed of (March 2017) for ₹6.45 lakh. The Company did not implement the project at the other three identified locations also on the ground that it would entail additional cost for operation.

In this connection, Audit observed the following:

- The water sports activities at Thanneermukkom were proposed to be conducted in the Vembanad Lake. As per Section 4 (2) of Wetlands (Conservation and

Management) Rules, 2010[168] plying of motorised boat within the Vembanad-Kol wetland could be undertaken only if it was not detrimental to the nature and character of the biotic community and with the prior approval of the State Government.

The Company, however, neither undertook any study to assess whether the proposed water sports activities were detrimental to the nature and character of the biotic community nor did it obtain approval from the Government of Kerala (GoK). In the absence of such studies, the Company could not address the concerns of the fisher folk that the project would affect their livelihood. The Company also did not comply with the direction (September 2014) of the District Collector to conduct an environmental impact study to address the concerns of the fisher folk.

- The Articles of Association required the Company to obtain prior approval of the GoK for any programme or capital expenditure for an amount which exceeds ₹50 lakh[169]. Further, as decided (September 2007) by the Board of Directors (BoD), the Managing Director was authorised to sanction capital expenditure up to ₹10 lakh only.

  The total capital cost of the project as well as the estimated cost of equipment required for implementing the project exceeded ₹50 lakh. The Managing Director, however, approved the project and invited tenders for purchasing water sports equipment without taking prior approval of either the GoK or the BoD. The Company placed (March 2014) purchase orders for procurement of water sports equipment valuing ₹20.37 lakh for operation at Thanneermukkom only. The BoD was, however, informed of the Company's decision to venture into the water sports activities only in December 2014, when the implementation of the project was hindered due to opposition from the local fisher folk. The BoD did not take any action against the Managing Director despite non-compliance to the provisions of Articles of Association.

Thus, the Company incurred a total expenditure of ₹37.38 lakh[170] including operational expense of ₹17.20 lakh for the project without proper authority. The decision of the Company to venture into a new area of business without conducting an environmental impact study and obtaining approval from the Government also resulted in loss ₹28.81 lakh after adjusting ₹2.12 lakh earned as hire charges for the water sports equipment.

The GoK stated (November 2020) that it was of the Company's view that the operation of a speed boat *etc.* was not detrimental to the nature of a vast lake like Vembanad. The Company dropped the proposal when the environmental impact study was insisted upon as the cost of conducting the study was not economical. The GoK accepted that approval of the BoD was not obtained as required. The BoD was fully aware of the venture and the same person was the Chairman of the BoD and

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[168] Issued by the Ministry of Environment and Forests vide notification dated 24 March 2011.
[169] Amount revised (January 2016) to ₹1.00 crore.
[170] Including ₹20.18 lakh for procurement of water sports equipment (after deducting ₹0.19 lakh received as compensation against loss/ damage of equipment) and ₹17.20 lakh for wages, training cost, lease rent for use of IWAI terminal, operating charges, electricity *etc*.

the Managing Director at that time. Further, the expense incurred for Inland Waterways Authority of India (IWAI) terminals was a committed expenditure as it was taken on lease to explore the potential of cargo movement.

The reply was not acceptable as obtaining approval from the Government after ensuring that the project was not detrimental to the nature and character of the biotic community was a mandatory requirement. The Chairman of the BoD and Managing Director being one person does not relieve the Managing Director from obtaining prior approval from the BoD as required by the Articles of Association. The expense related to IWAI terminals was included in the expense incurred for water sports project as the Company had apprised (December 2014 and March 2015) the BoD that IWAI terminals were taken on lease solely for water sports activities.

Recommendation 5.8: Adherence to administrative and regulatory requirements may be ensured while taking up new projects for its successful implementation and to avoid bottlenecks that may lead to abandoning at a later stage.

Thiruvananthapuram,
The 23 March 2021

(K. P. ANAND)
Principal Accountant General
(Audit II), Kerala

Countersigned

New Delhi,
The 05 April 2021

(GIRISH CHANDRA MURMU)
Comptroller and Auditor General of India