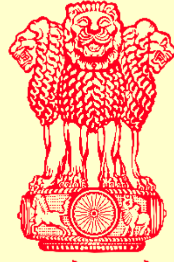

सत्यमेव जयते

Report of the
Comptroller and Auditor General of India
on
Public Sector Undertakings
for the year ended March 2016

Government of Karnataka
Report No.4 of the year 2017

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Preface

This report deals with the results of audit of Government Companies, Statutory Corporations and Departmental Commercial Undertakings for the year ended March 2016.

The accounts of the Government Companies (including companies deemed to be government companies as per the provisions of the Companies Act) are audited by the Comptroller and Auditor General of India (CAG) under the provisions of Section 619 of the Companies Act 1956 and Sections 139 and 143 of the Companies Act 2013. The accounts certified by the Statutory Auditors (Chartered Accountants) appointed by the CAG under the Companies Act are subject to supplementary audit by the officers of the CAG and the CAG gives his comments or supplements the reports of the Statutory Auditors. In addition, these companies are also subject to test audit by the CAG.

The Reports in relation to the accounts of a Government Company or Corporation are submitted to the Government by the CAG for laying before the State Legislature of Karnataka under the provisions of Section 19A of the Comptroller and Auditor General's (Duties, Powers and Conditions of Service) Act, 1971.

CAG also conducts the audit of accounts of the State Road Transport Corporations, State Warehousing Corporation and State Finance Corporation as per their respective Legislations.

The instances mentioned in this report are those, which came to notice in the course of test audit for the period 2015-16 as well as those which came to notice in earlier years, but could not be reported in the previous Audit Reports. The matters relating to the period subsequent to 2015-16 have also been included wherever felt necessary.

The audit has been conducted in conformity with the Auditing Standards issued by the Comptroller and Auditor General of India.

Overview

Overview

1. Overview of Government Companies and Statutory Corporations

Audit of Government Companies is governed by Sections 139 and 143 of the Companies Act, 2013 (Act). The accounts of Government Companies are audited by Statutory Auditors appointed by the Comptroller and Auditor General of India (CAG). These accounts are also subject to supplementary audit by the CAG. Audit of Statutory Corporations is governed by their respective legislations. As on 31 March 2016, the State of Karnataka had 81 working Public Sector Undertakings-PSUs (75 Companies and 6 Statutory Corporations) and 12 non-working PSUs (all Companies), which employed 1.93 lakh employees. The State PSUs registered a turnover of ₹ 53,787.89 crore during the year 2015-16 as per their latest finalised accounts. This turnover was equal to 7.31 *per cent* of the State Gross Domestic Product indicating the important role played by the PSUs in the economy. The PSUs had accumulated profit of ₹ 861.65 crore as per their latest finalised accounts.

Investments in PSUs

As on 31 March 2016, the investment (capital and long-term loans) in 93 PSUs was ₹ 92,573.62 crore. Infrastructure Sector accounted for about 50.27 *per cent* of the total investment and Power Sector about 40.86 *per cent* in 2015-16. The Government contributed ₹ 17,526.50 crore towards equity, loans and grants/subsidies in 2015-16.

Performance of PSUs

The working State PSUs earned a profit of ₹1,425.50 crore in the aggregate and incurred loss of ₹ 1,570.21 crore as per their latest finalised accounts as at the end of September 2016. The major contributors to profit were Mysore Minerals Limited (₹ 245.47 crore), Karnataka Power Corporation Limited (₹ 181.63 crore), Karnataka Power Transmission Corporation Limited (₹ 178.11 crore) and Karnataka Rural Infrastructure Development Corporation Limited (₹ 113.65 crore). Huge losses were incurred by Karnataka Neeravari Nigam Limited (₹ 970.77 crore), Krishna Bhagya Jala Nigam Limited (₹ 135.44 crore) and Gulbarga Electricity Supply Company Limited (₹ 109.86 crore).

We noticed various deficiencies in the functioning of the PSUs. Cases discussed in the subsequent Chapters of this Report indicate that there was a financial effect of ₹ 529.16 crore. The losses could have been minimised or profits enhanced substantially with better management. There is a need for greater professionalism and accountability in the functioning of the PSUs.

Quality of accounts

The quality of accounts of working Government companies needs improvement. During the year, out of 65 accounts finalised, the Statutory Auditors had given unqualified reports on 22 accounts, qualified reports on 40 accounts, adverse

reports (which means that the accounts did not reflect a true and fair view) for 2 accounts and disclaimer report (which means that auditor could not form an opinion on the accounts) on one accounts. The compliance with the Accounting Standards by companies remained poor as there were 96 instances of non-compliance in 32 accounts during the year.

Arrears in accounts and winding up

Thirty eight working PSUs had arrears of 57 accounts as at the end of September 2016. The arrears pertained to the years 2013-14, 2014-15 and 2015-16. There were 12 non-working PSUs including five under liquidation. The Government may take a decision on the revival or closure of these non-working Companies.

2. Performance Audits relating to Government Companies

The Report includes observations emanating from the Performance Audits on the **'Implementation of Lift Irrigation Schemes by Karnataka Neeravari Nigam Limited'** and **'Implementation of Restructured Accelerated Power Development and Reforms Programme by the Electricity Supply Companies in Karnataka'.** The Executive summaries of the audit findings are given below:

- **Performance Audit on 'Implementation of Lift Irrigation Schemes by Karnataka Neeravari Nigam Limited'.**

Introduction

Lift Irrigation Schemes

Gravity or flow irrigation is a conventional irrigation system wherein water is stored in a dam or barrage or large tanks and drawn for irrigation through canal network. Lift Irrigation Schemes (LIS) are those schemes where pumping machinery is installed on the banks of perennial rivers and streams, seasonal rivers with barrages, in or above the foreshore of storage reservoirs, wells, *etc.* for pumping water and transporting it through a rising main to higher elevations for irrigation of lands where water cannot be supplied by gravity.

Karnataka Neeravari Nigam Limited

The Karnataka Neeravari Nigam Limited (the Company) was established (December 1998) to plan, build, operate and maintain irrigation projects in the Krishna River basin except Upper Krishna Project in the State. The Company was one of the three Special Purpose Vehicles set up by the Government of Karnataka (GoK) for speedy implementation of irrigation projects in the State.

Audit Objectives

The objectives of the Performance Audit were to assess the effectiveness of the Lift Irrigation Schemes by examining whether:

- the LISs were planned and designed properly;
- the LISs were executed as planned and the objectives set out in the schemes were achieved.

Audit Findings

Inordinate delay in materialising LISs

The Government/Company had taken unreasonably longer time for materialising the LISs for their implementation and completion. The scope of work of six of the 13 sampled LISs was modified multiple times due to frequent/multiple changes in scope in terms of irrigation potential, number of lifts, alignment of canals, *etc.* causing cost and time overruns. Though the Government had given administrative approvals to seven out of 13 LISs (Bhima, Hipparagi-4 LISs, Singatalur, Tiluvalli) as early as 1991-92 and 1992-93, no action was initiated for their implementation for more than a decade. The projected cost of 13 LISs had gone up by more than 240 *per cent* as compared to initial proposals, from ₹ 3,549.19 crore to ₹ 12,154.81 crore. The farmers, for whose benefit the schemes were launched, are still awaiting the full extent of the envisaged benefit, with no assurance on when the schemes will be completed. (*Paragraph 2.1.14)*

Creation of excess infrastructure due to ill-planning

The Company constructed lifts under Ainapur LIS and Halyal LIS for creating irrigation potential of 21,962 ha and 20,635 ha respectively at a total cost of ₹ 57.99 crore. The actual irrigation potential was, however, reduced to 7,669 ha and 6,072 ha under these LISs respectively as the beneficiary farmers laid pipe lines directly from the river Krishna for drawing water to their fields after obtaining due permission of the Company in line with the circulars issued by GoK. As a result of creation of lifts without taking cognizance of the reduced irrigation potential due to such permissions, the full benefit of the investment of ₹ 22.10 crore made on the 1st stage lift of Ainapur LIS and ₹ 35.89 crore made on Halyal LIS was not derived as the Company could create only 35 *per cent* and 29 *per cent* of the envisaged potential respectively. (*Paragraph 2.1.15)*

Unsatisfactory progress

- Singatalur Lift Irrigation Scheme (SLIS) was proposed (1986-87) to irrigate 16,188 ha of drought prone areas covering the districts of Koppal, Gadag and Bellary by utilising 5.06 Thousand Million Cubic Feet (TMC) out of allocated 7.64 TMC of water under left and right banks of the river Tungabhadra. The scheme was originally approved (September 1992) for ₹ 63.62 crore for construction of barrage across the

river Tungabhadra and two lifts, one each on either side of the river bank. The scope of the scheme had undergone continuous changes and the latest revision proposed (January 2015) for irrigating 1.07 lakh ha including 0.88 lakh ha under micro irrigation at a cost of ₹ 5,768.04 crore. The Company, after a passage of thirty years of the conception of the scheme, could create irrigation potential of only 19,588 ha with an expenditure of ₹ 1,489 crore as of March 2016. The allocated water of 15.99 TMC is largely underutilised as the proposal of micro irrigation covering 87,792 ha was yet to materialise (December 2016). (*Paragraph 2.1.19*)

- Hipparagi Project was conceived (October 1991) to irrigate 59,692 ha at a cost of ₹ 186.70 crore. The scope of the scheme had been changed continuously, the latest revised (August 2016) cost being ₹ 3,330.23 crore for irrigating 74,742 ha. The project comprising four lifts *viz.* Halyal, Ainapur, Karimasuti and Savalgi-Tungal was completed between September 2011 and October 2013, *i.e.* after a lapse of twenty years from its conception. The lift works of Halyal, Karimasuti and Savalgi-Tungal LISs were completed with a delay ranging from six years to seven years beyond the scheduled contract period. The benefit of LISs could not be passed on to the farmers for several years due to delay in completion. (*Paragraph 2.1.20*)

Avoidable expenditure

- There was substantial reduction in actual quantities executed as compared to the estimated quantities (13 to 24 *per cent)* based on which the works were awarded for lift works of five LISs due to change in location and alignment subsequent to award of contracts. This variation in quantities was mainly due to award of contracts without conducting detailed survey. Further, the Company failed to exercise the contractual provision to effect change in contract price due to change in scope of the works. The Company paid the full amount to the contractors irrespective of quantities that were actually executed. The reduction in quantities had not only benefited the contractors but also the Company had to incur avoidable expenditure of ₹ 141.70 crore. (*Paragraph 2.1.23*)

- The Company awarded (December 2014) Gravity Main for Tubachi-Babaleshwara LIS by providing Mild Steel (MS) pipes for a length of 13.37 km. instead of PSC pipes as required by the guidelines issued by WRD. The Technical Subcommittee of the Company, while recommending (June 2012) MS pipes had not given any justification for using MS pipes in deviation from the guidelines. The Company had incurred additional expenditure of ₹ 102.73 crore on account of this deviation which could have been avoided had the work been carried out as per the guidelines. (*Paragraph 2.1.24*)

- The works of the Guddadamallapura LIS consisting of intake channel, jackwell cum pump house, rising main, gravity main and canal network, awarded (September 2005) at a cost of ₹ 46.02 crore was not completed

within the scheduled date of completion of May 2007. The Company closed the contract without risk and cost to the contractor which resulted in additional financial burden to the Company to the extent of ₹ 56.68 crore as the balance works were awarded (January 2010/September 2011) at higher cost. (*Paragraph 2.1.26*)

Underutilisation of irrigation potential

Though the Company had created irrigation potential of 1.36 lakh ha as of March 2016, the notification for the command area was issued only for 0.41 lakh ha, which was a mere 30 *per cent* of the total irrigation potential created. The notification for the balance 0.95 lakh ha was not carried out yet, as Field Irrigation Channels (FICs) were not completed. Further, the command area was notified only between 2014-15 and 2016-17 for the potential created between 2010-11 and 2015-16, after a delay upto four years due to delay in completion of FICs. (*Paragraph 2.1.32*)

Conclusions

Audit Objective-1: *Whether the LISs were planned and designed properly?*

- The Company prepared Detailed Project Reports and the initial estimates without conducting detailed survey of field conditions which was not in line with the guidelines issued by the WRD. This had resulted in substantial variations in the scope of the works during the course of execution causing unwarranted cost and time overruns. The cost of the schemes had gone up by more than 240 *per cent* as compared to initial proposals, from ₹ 3,549.19 crore to ₹ 12,154.81 crore. Since the various components of the lift works had not been synchronised, the commissioning of LISs was delayed. Besides, the investments fell idle and farmers were unable to reap the intended benefits.

Audit Objective-2: *Whether the LISs were executed as planned and the objectives set out in the schemes were achieved?*

- The Company failed to create the envisaged irrigation potential within the set time frame. The completed schemes (Halyal, Karimasuti Savalgi-Tungal, Sri Rameshwara and Souparnika) were delayed upto seven years with reference to scheduled dates of completion, while seven LISs (Bhima, Guddadamallapura, Savanur, Shiggaon, SLIS, Tiluvalli and TBLIS) were yet to be completed even after due dates.

- The delay in achieving the envisaged potential can be attributed to the Company's failure to take timely action to close and re-award the incomplete contracts and increase in the scope of works after award. The delay had caused deferment of benefits to the farmers. In addition, the Company incurred avoidable cost of ₹ 386.01 crore on account of violation of contractual provisions and guidelines of WRD.

- There was a shortfall of 55.96 *per cent* in achieving the irrigation potential in 13 LISs and underutilisation of the created potential by 70 *per cent* due to non-completion of FICs. Water User Co-operative Societies were not formed except in two LISs and therefore participatory irrigation management to promote a decentralised and self regulated efficient water management system as envisaged in the State Water Policy did not materialise.

Recommendations

1. The Company needs to conduct detailed survey of field conditions before awarding contracts. Scope of works should be well defined and realistic estimates should be prepared in line with the guidelines issued by WRD.

2. Various components of the LISs should be synchronised as to ensure that all the works are completed in tandem and the schemes are commissioned within the stipulated time frame.

3. Field irrigation channels may be completed in a time-bound manner so that the created irrigation potential can be utilised.

4. Water User Co-operative Societies as envisaged in the State Water Policy may be formed for effective water management.

(Chapter 2.1)

- **Performance Audit on 'Implementation of Restructured Accelerated Power Development and Reforms Programme by the Electricity Supply Companies in Karnataka'.**

Introduction

The Government of India had modified the erstwhile Accelerated Power Development and Reforms Programme during XI Plan (2007-12) as 'Restructured Accelerated Power Development and Reforms Programme' (RAPDRP) with the aim of restoring the commercial viability of the distribution sector by putting in place appropriate mechanism to reduce Aggregate Technical and Commercial (AT&C) losses, establish reliable and sustainable automated systems for collection of base line data, adopt IT in the areas of energy accounting and consumer care and strengthen the distribution network.

The Programme was implemented by Electricity Supply Companies (ESCOMs) in Karnataka in two parts *viz.* Part-A and Part-B. Part-A included the projects for establishment of baseline data and IT applications for energy accounting and auditing and IT based consumer service centres. Part-B included regular distribution strengthening projects.

In Karnataka, 98 towns under Part-A and 81 towns under Part-B of the Programme were sanctioned at a total cost of ₹ 398.71 crore (February 2009) and ₹ 786.58 crore (between March 2010 and June 2010) respectively. Part-A was implemented by all the five ESCOMs *viz.* Bangalore Electricity Supply Company Limited (BESCOM), Chamundeshwari Electricity Supply Corporation Limited (CESC), Gulbarga Electricity Supply Company Limited (GESCOM), Hubli Electricity Supply Company Limited (HESCOM) and Mangalore Electricity Supply Company Limited (MESCOM), while Part-B was implemented by four ESCOMs, except MESCOM.

Audit Objectives

The Audit objectives were to assess whether:

- The planning for implementation of the Programme was adequate;
- The Programme has been implemented in an efficient, effective and economical manner to achieve the intended objectives.

Audit Findings

Implementation of the Programme without completion of pilots

The ESCOMs had taken up implementation of Part-A of the Programme in one town in each of the ESCOMs as pilot project. The ESCOMs issued Detailed Work Awards between February 2010 and May 2010 with a stipulation to complete the same within 12 months. The pilot implementation in respect of four of the five towns selected was completed with delay ranging from two to five years from the scheduled date. On account of non-completion of pilots within the scheduled time, the ESCOMs could not gauge potential hindrances in implementation of Part-A of the Programme in other towns. Implementation in other towns had commenced simultaneously along with pilot towns without resolving the bottlenecks encountered in pilot towns. (*Paragraph 2.2.12*)

Declaration of towns 'go-live' without completion

BESCOM declared (between January 2013 and March 2014) 60 of the 98 towns 'go-live' and the balance 38 towns in March 2016 without ensuring that all the functions in the modules were operational and User Acceptance Test had been run successfully in the production environment, which was not in line with the guidelines issued by Power Finance Corporation (PFC). (*Paragraph 2.2.13*)

DTC metering

The ESCOMs failed to assess whether the existing DTC meters were Device Language Message Specification (DLMS) compliant. Non-compliance of the existing meters with DLMS was ignored by the ESCOMs while deciding (December 2009) to install meters at the unmetered Distribution Transformer Centers (DTCs). This contributed to the delay in the completion of the

Programme as the non-compliant meters continued to be replaced with DLMS compliant meters until 2015-16. (*Paragraph 2.2.16*)

Feeder level metering

The ESCOMs had delayed the decision to replace the feeder level meters which act as input energy points to the project areas and are critical to ascertain AT&C losses. During installation of modems in the meters, ESCOMs observed (May 2016) that data was not being communicated by the existing meters making the assessment of accurate AT&C losses difficult. Meter reading was being taken manually every month and uploaded into the RAPDRP system for determining the AT&C losses in the project areas. Even after this exercise, AT&C loss figures continued to be erroneous due to errors in uploading the data into system. (*Paragraph 2.2.17*)

Failure of modems

Information Technology Implementing Agency (ITIA) installed (August 2010 onwards) 59,520 modems at DTCs, boundary meters and HT consumers under all the five ESCOMs. The ESCOMs found that modems were not communicating the data and perforce they had to procure (June 2015) new modems which were installed by March 2016. As a result, the replacement of meters took almost six years. The day-wise analysis of functioning of modems during the period March 2016 to July 2016 in five ESCOMs revealed that the percentage of modems that were communicating data was very poor. There was not only delay in installation of modems but the installed modems were still to function to their potential. This had delayed the process of analysing the results of meter reading and AT&C losses. *(Paragraph 2.2.19)*

Failure to update the incremental assets

The ESCOMs failed to update the incremental assets and consumers as and when they were added. The ESCOMs took up the job of updation of assets only in January 2015 *i.e.* after a lapse of three years from the scheduled date of completion (February 2012) of Part-A of the Programme, instead of updating the assets simultaneously with their addition. The delay in updation/non-updation of assets into RAPDRP system had resulted in delay in completion of the Programme and determining accurate AT&C losses. (*Paragraph 2.2.21*)

Deficient planning

PFC sanctioned Detailed Project Reports (DPRs) of 81 towns between March 2010 and June 2010 for implementation of the works under Part-B. Considering a reasonable period of six months to finalise the tenders from the date of sanctioning of the DPRs, ESCOMs awarded the contracts after a lapse of five to 21 months, which contributed to delay in completion of the works. The reasons for delay in awarding of works were inclusion of works in the estimates which were not feasible for implementation, multiple revisions of estimates and frequent amendment to terms of contracts, unwarranted cancellation of tenders, *etc*. (*Paragraphs 2.2.24 to 2.2.28*)

Ineffective implementation

The ESCOMs awarded the works under Part-B for strengthening works of electrical distribution network including replacement of consumer electro-mechanical meters with tamper proof electro-static meters between March 2011 and August 2012. The stipulated period of completion ranged from 12 to 24 months from the dates of award of works. The ESCOMs had not only released payments to the contractors in violation of contractual terms but also failed to initiate action on the contractors for the delay in completion beyond the stipulated period. The delay in completion of works ranged from 6 to 38 months. (*Paragraph 2.2.29*)

Violation of contractual provisions

The ESCOMs paid 75 to 92 *per cent* of the value of the material supplied in respect of contracts awarded in three towns *viz.* Ramanagara, Mysuru and Kollegal without the equipment being commissioned which was in violation of the contractual terms. Such extra payment amounting to ₹ 10.53 crore was made (between December 2012 and October 2014) based on the requests of the contractors concerned. (*Paragraph 2.2.32*)

Unviable investment

The guidelines issued by PFC prescribed the criterion of Return on Investment (RoI) to be not less than 10 *per cent* for a town to be eligible for inclusion under the Programme. BESCOM and HESCOM had included three towns (₹ 63.42 crore) and six towns (₹ 14.63 crore) respectively under the Programme though RoI was less than 10 *per cent* rendering the investment possibly unviable. (*Paragraph 2.2.38*)

Avoidable borrowings at higher cost

Three ESCOMs (GESCOM, HESCOM, MESCOM) had received loan of ₹ 57.99 crore from PFC against the eligibility of ₹ 106.04 crore. The received amount was much less than the actual expenditure of ₹ 90.56 crore incurred by these ESCOMs. ESCOMs failed to pursue PFC to release the instalments due though they had spent ₹ 32.57 crore more than the disbursement. Non-receipt of amount due from PFC had forced the ESCOMs to spend out of funds borrowed at higher rate of interest. (*Paragraph 2.2.40*)

Likely financial burden on consumers

The ESCOMs were required to complete the works under Part-A and Part-B within three years from the date of sanction to avail the benefit of conversion of loan into grant. The ESCOMs had received ₹ 276.84 crore under Part-A and ₹ 109.05 crore under Part-B from PFC as of March 2016. Although the scheduled date of completion of the Programme was extended upto March 2016/September 2016, there was no commitment from the Ministry of Power, GoI on conversion of loan into grant in the changed scenario of breaching of the deadlines by ESCOMs. In the event of non-conversion of loan into grant,

it is likely that the entire loan availed under the Programme would become a burden on the consumers as the cost is factored into tariff. (*Paragraph 2.2.41*)

Ineffective monitoring

There was no monitoring during 2011-12, 2014-15 and 2015-16 by Distribution Reforms Committee as it did not meet even once at the time when implementation was at critical stage. Monthly meetings held through video conferencing headed by the Energy Department did not identify bottlenecks in implementation in order to resolve them. Similarly, monthly meetings headed by the Managing Directors/Chief Engineers held at ESCOMs level for monitoring Part-B had merely noted the progress achieved and did not identify the problems in execution or resolve them. (*Paragraph 2.2.42)*

Conclusions

Audit Objective-1: *Whether the planning for implementation of the Programme was adequate.*

- The ESCOMs failed to plan the completion of the pilots under Part-A as scheduled. As a result of taking up of Part-A on a large scale without completing the pilots, the bottlenecks in implementation remained unresolved even after a lapse of more than four years beyond the scheduled dates of completion;

- The ESCOMs delayed the award of contracts by five months to 21 months. Inclusion of new items of work without feasibility, frequent amendments to the estimates and bid conditions and cancellation of tenders without justified reasons were the reasons for the delay;

- BESCOM and HESCOM made investments in three and six towns respectively under Part-B although return on investment was less than 10 *per cent* stipulated under the guidelines.

Audit Objective-2: *Whether the Programme has been implemented in an efficient, effective and economical manner to achieve the intended objectives.*

- The IT applications under Part-A have not been stabilized and the ESCOMs were yet to reap the desired benefits *i.e.* establishing reliable and automated sustainable systems for collection of base line data and adopting IT in the areas of energy accounting and consumer care, even after a lapse of four years from the scheduled date. This was owing to pending consumer indexing and asset mapping in respect of incremental consumers and assets, poor functioning of modems fitted at DTCs and Feeders, pending installation of input energy meters at feeder level, *etc.*;

- Owing to incomplete works under Part-A, the ESCOMs were not in a position to assess whether distribution strengthening works done under Part-B had actually yielded the desired results in terms of reduction in AT&C losses and envisaged savings;

- The ESCOMs had violated contractual provisions in making payments towards supply of materials and failed to penalise the contractors for delay in completion or non-completion of the contracts under Part-B. This had not only caused delay in completion of the works ranging from six months to 38 months from the stipulated dates but also caused additional burden on the ESCOMs due to increase in cost;

- The ESCOMs failed to impress upon PFC to release the instalments due in time, which had resulted in avoidable borrowings at higher cost for implementation;

- The Distribution Reforms Committee, responsible for overseeing the implementation of the Programme at State Level, had failed to address the bottlenecks in implementation. The review meetings held at ESCOMs level had merely discussed the progress rather than identifying the problems and resolving them.

Recommendations

1. The ESCOMs may ensure that pilots are completed as per schedule before embarking on large scale implementation of a Programme or Scheme so that any hindrances or bottlenecks can be resolved at the initial stages. The learning from the pilots should be utilised during full scale implementation;

2. Incremental assets and consumers need to be mapped and added to the data base for accurate assessment of AT&C losses;

3. The estimates may be proposed based on the field conditions before inviting tenders;

4. The compliance mechanism to contractual terms should be strengthened;

5. The ESCOMs may ensure proper assessment of viability or otherwise of future capital investments;

6. Various authorities/committees constituted for monitoring the implementation, both at the State and ESCOMs levels, should identify the bottlenecks and resolve the issues in a time bound manner.

(Chapter 2.2)

3. Compliance Audit Observations

The observations included in this Report highlight deficiencies in planning, investment and other activities in the management of PSUs, which resulted in financial irregularities. The observations are broadly of the following nature:

Unproductive investment amounting to ₹ 4.61crore.

(Paragraph 3.10)

Non-recovery of dues amounting to ₹ 2 crore.

(Paragraph 3.1)

Avoidable expenses amounting to ₹ 90.56 crore.

(Paragraphs 3.2, 3.3, 3.5, 3.11, 3.12, 3.14)

Miscellaneous and other cases amounting to ₹ 19.10 crore.

(Paragraphs 3.4, 3.6, 3.7)

Gist of some of the important audit observations are given below:

- Karnataka Power Transmission Corporation Limited Sanctioned Open Access facilities to Shantha Projects Limited without ensuring payment security mechanism had resulted in non-recovery of ₹ 2 crore from a private firm.

(Paragraph 3.1)

- The decision of the Managing Director of Cauvery Neeravari Nigama Limited that the contractor had suffered loss due to reduction in number of visitors to Brindavan Gardens during the contract period without material evidence on record led to undue financial benefit of ₹ 3.31 crore to the contractor.

(Paragraph 3.4)

- Karnataka State Electronics Development Corporation Limited had lost potential revenue of ₹ 15 crore by extending undue favour to franchisees.

(Paragraph 3.7)

- Poor implementation of IBM Mainframe training project by Karnataka State Electronics Development Corporation Limited without analysing the market demand resulted in non-achievement of the intended objectives and a cumulative loss of ₹ 5.78 crore.

(Paragraph 3.8)

- The Central Purchase Committee of Hubli Electricity Supply Company Limited approved and awarded contracts worth ₹ 37.50 crore to an ineligible contractor overlooking the delegated financial powers and violating the Karnataka Transparency in Public Procurement Act and Rules.

(Paragraph 3.9)

- The objective of providing drinking water to five Rehabilitation Centres in Jamakhandi Taluk was yet to be achieved and expenditure of ₹ 4.61 crore was rendered unfruitful due to the failure of Krishna Bhagya Jala Nigam Limited to conclude agreements with the authorities concerned.

(Paragraph 3.10)

- Karnataka State Handicrafts Development Corporation Limited suffered loss of potential revenue of ₹ 2.32 crore due to its failure to conclude an agreement with the Mysore Palace Board.

(Paragraph 3.13)

- Karnataka State Road Transport Corporation and Bangalore Metropolitan Transport Corporation failed to produce new buses as planned as the existing production capacity of Regional Workshops was not sufficient to meet the stipulated targets. The purchase orders for procuring chassis were initiated after commencement of the financial year contributing to shortfall in production of new buses. The Corporations had also failed to undertake repair and reconditioning within the prescribed time, which resulted in cancellation of scheduled kilometres and consequent loss of contribution of ₹ 85.70 crore during 2011-12 to 2015-16.

(Paragraph 3.14)

Chapter - I

Overview of PSUs

Chapter - I

1. Functioning of State Public Sector Undertakings

Introduction

1.1. The State Public Sector Undertakings (PSUs) in Karnataka consist of State Government Companies and Statutory Corporations. The State PSUs are established to carry out activities of commercial nature keeping in view the welfare of people and also occupy an important place in the State's economy. As on 31 March 2016, there were 93 PSUs in Karnataka. Of these, one PSU[1] was listed on the stock exchange(s). During the year 2015-16, one PSU[2] was incorporated while one PSU[3] was classified as a Central PSU. The details of the State PSUs in Karnataka as on 31 March 2016 are given below:

Table No.1.1: Total number of PSUs as on 31 March 2016

Type of PSUs	Working PSUs	Non-working PSUs[4]	Total
Government Companies[5]	75	12	87
Statutory Corporations	6	0	6
Total	**81**	**12**	**93**

The working PSUs registered a turnover of ₹ 53,787.89 crore as per their latest finalised accounts as of September 2016. This turnover was equal to 7.31 *per cent* of the State Gross Domestic Product (GDP) for 2015-16. The working PSUs incurred net aggregate loss of ₹ 144.71 crore as per their latest finalised accounts as of September 2016. The PSUs had employed 1.93 lakh employees at the end of March 2016.

As on 31 March 2016, there were 12 non-working PSUs existing for the last 13 years, having investment of ₹ 591.30 crore. This is a critical area as the investments in non-working PSUs do not contribute to the economic growth of the State.

Accountability framework

1.2. The process of audit of Government Companies is governed by respective provisions of Section 619 of the Companies Act 1956 and Section 139 and 143 of the Companies Act, 2013 (Act). According to Section 2(45) of the Act, Government Company means any Company in which not less than fifty one *per cent* of the paid up share capital is held by the Central Government, or by any State Government or Governments, or partly by the Central Government

[1] The Mysore Paper Mills Limited.
[2] Karnataka Tourism Infrastructure Limited.
[3] Karnataka Solar Power Development Corporation Private Limited.
[4] Non-working PSUs are those which have ceased to carry on their operations.
[5] Includes companies referred to in Section 139(5) and 139(7) of the Companies Act, 2013.

and partly by one or more State Governments, and includes a Company which is a subsidiary Company of such Government Company.

Further, as per subsection 7 of section 143 of the Act, the CAG may, in case of any Company covered under subsection (5) or subsection (7) of Section 139, if it considers necessary, by an order, cause test audit to be conducted of the accounts of such Company and the provisions of Section 19A of the Comptroller and Auditor General's (Duties, Powers and Conditions of Service) Act, 1971 shall apply to the report of such test Audit. Thus, a Government Company or any other Company owned or controlled, directly or indirectly, by the Central Government, or by any State Government or Governments or partly by Central Government and partly by one or more State Governments is subject to audit by the CAG. An audit of the Financial Statements of a Company in respect of the financial years that commenced on or before 31 March 2014 shall continue to be governed by the provisions of the Companies Act, 1956.

Statutory Audit

1.3. The financial statements of the Government Companies are audited by Statutory Auditors, who are appointed by the CAG as per the provisions of Section 139(5) or (7) of the Act. Thereafter, a copy of the Audit Report is submitted to the CAG under Section 143(5) of the Act, which, among other things, includes the Financial Statements of the Company. These financial statements are subject to supplementary audit to be conducted by the CAG within sixty days from the date of receipt of the Audit Report under the provisions of Section 143(6) of the Act.

Audit of Statutory Corporations is governed by their respective legislations. Out of the six Statutory Corporations in Karnataka, the CAG is the sole auditor for four State Road Transport Corporations[6]. In respect of State Warehousing Corporation and State Financial Corporation, the audit is conducted by Chartered Accountants while the Supplementary audit is conducted by the CAG.

Role of Government and Legislature

1.4. The State Government exercises control over the affairs of these PSUs through their administrative departments. The Chief Executives and Directors to the Board are appointed by the Government.

The State Legislature also monitors the accounting and utilisation of Government investments in the PSUs. For this, the Annual Reports together with the Statutory Auditors' Report and Comments of the CAG, in respect of State Government Companies and Separate Audit Reports in case of Statutory Corporations are placed before the Legislature under Section 394(2) of the Act or as stipulated in the respective Acts. The Audit Reports of the CAG are

[6] Karnataka State Road Transport Corporation, Bangalore Metropolitan Transport Corporation, North Eastern Karnataka Road Transport Corporation and North Western Karnataka Road Transport Corporation.

submitted to the Government under Section 19A of the CAG's (Duties, Power and Conditions of Service) Act, 1971.

Stake of Government of Karnataka

1.5. The State Government has financial stake in these PSUs. This stake is of mainly three types:

- **Share capital and loans** – In addition to the Share Capital Contribution, GoK also provides financial assistance by way of loans to the PSUs from time to time.
- **Special financial support** – GoK provides budgetary support by way of grants and subsidies to the PSUs as and when required.
- **Guarantees** – GoK also guarantees the repayment of loans with interest availed by the PSUs from financial institutions.

Investment in State PSUs

1.6. As on 31 March 2016, the investment (capital and long-term loans) in 93 PSUs was ₹ 92,573.62 crore as per details given below:

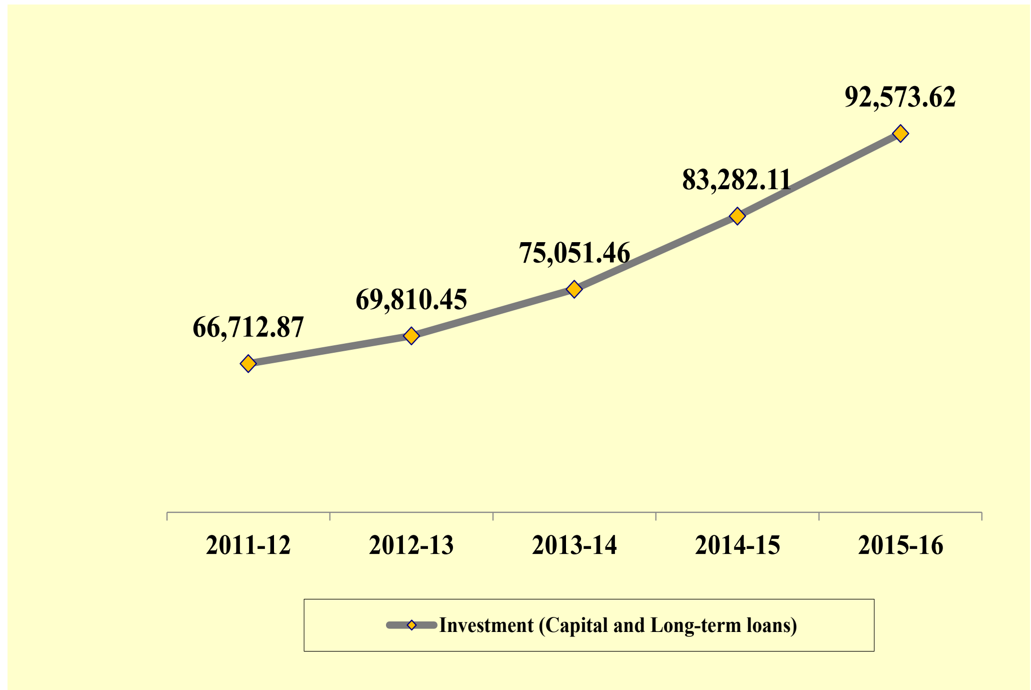
Table No.1.2: Total Investment in PSUs

(₹ crore)

Type of PSUs	Government Companies			Statutory Corporations			Grand total
	Capital	Long-term loans	Total	Capital	Long-term loans	Total	
Working PSUs	53,650.88	33,497.96	87,148.84	1,988.35	2,845.13	4,833.48	91,982.32
Non-working PSUs	160.21	431.09	591.30	-	-	-	591.30
Total	**53,811.09**	**33,929.05**	**87,740.14**	**1,988.35**	**2,845.13**	**4,833.48**	**92,573.62**

As on 31 March 2016, of the total investment in State PSUs, 99.36 *per cent* was in working PSUs and the remaining 0.64 *per cent* in non-working PSUs. This total investment consisted of 60.28 *per cent* towards capital and 39.72 *per cent* in long-term loans. The investment had grown by 38.76 *per cent* from ₹ 66,712.87 crore in 2011-12 to ₹ 92,573.62 crore in 2015-16 as shown in the graph below:

Chart No.1.1: Total investment in PSUs (₹ in crore)



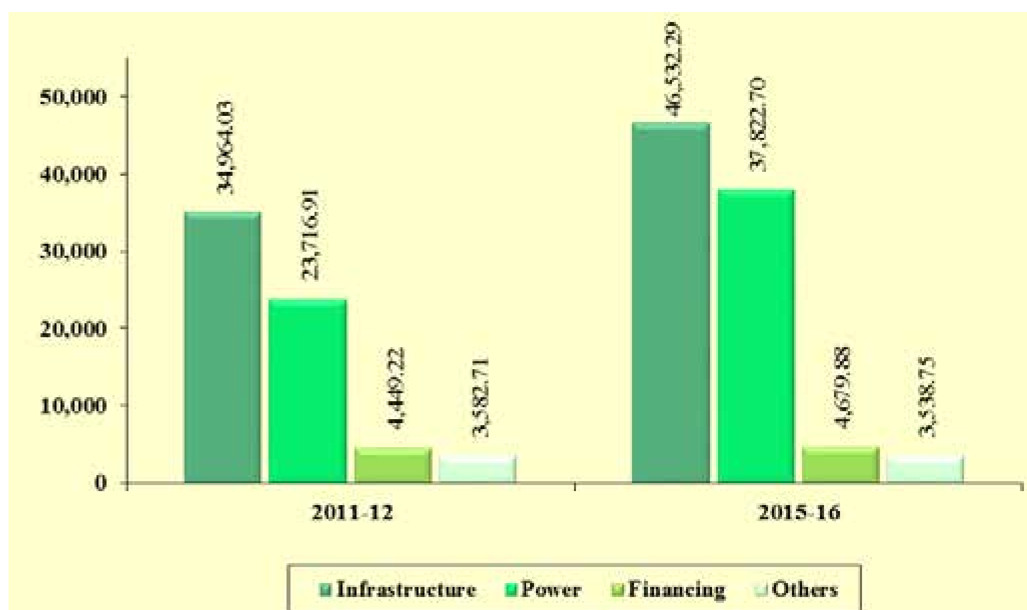
1.7 The sector-wise summary of investments in the State PSUs as on 31 March 2016 is given below:

Table No.1.3: Sector-wise investment in PSUs

Name of the Sector	Government companies		Statutory corporations	Total	Investment (₹ crore)
	Working	Non-working			
Agriculture and allied	12	5	1	18	445.59
Financing	14	-	1	15	4,679.88
Infrastructure	12	-	-	12	46,532.29
Manufacturing	19	7	-	26	1,106.38
Power	11	-	-	11	37,822.70
Service	4	-	4	8	1,986.67
Miscellaneous	3	-	-	3	0.11
Total	**75**	**12**	**6**	**93**	**92,573.62**

The investment in four significant sectors and percentage thereof at the end of 31 March 2012 and 31 March 2016 are indicated below in the bar chart.

Chart No.1.2: Sector-wise investment in PSUs (₹ in crore)



The thrust of investments in PSUs was in Infrastructure and Power sectors accounting for 50.27 *per cent* and 40.86 *per cent* respectively in 2015-16. Between 2011-12 and 2015-16, the investment in Infrastructure and Power sectors increased by ₹ 11,568.26 crore and ₹ 14,105.79 crore respectively.

Special support and returns during the year

1.8. The State Government provides financial support to PSUs in various forms through annual budget. The summarised details of budgetary outgo towards equity, loans, grants/subsidies, loans written off and interest waived in respect of State PSUs for three years ended 2015-16 are given below:

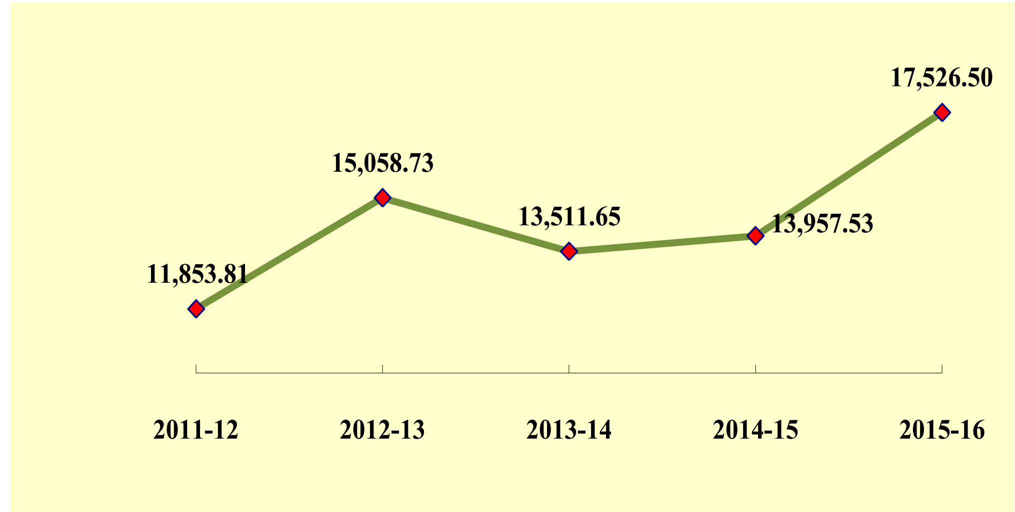
Table No.1.4: Details regarding budgetary support to PSUs

(₹ crore)

Sl. No.	Particulars	2013-14		2014-15		2015-16	
		No. of PSUs	Amount	No. of PSUs	Amount	No. of PSUs	Amount
1	Equity capital outgo from budget	21	4,078.15	22	3,990.66	22	4,528.88
2	Loans given from budget	3	67.55	5	38.88	7	241.47
3	Grants/Subsidy from budget	32	9,365.95	27	9,927.99	31	12,756.15
4	**Total outgo (1+2+3)**	**42**	**13,511.65**	**41**	**13,957.53**	**44**	**17,526.50**
5	Waiver of loans and interest	-	-	1	8.25	-	-
6	Guarantees issued	12	1,775.65	9	3,736.46	7	2,434.04
7	Accumulated Guarantee Commitment	21	4,542.73	15	7,251.35	17	10,477.08

The details regarding budgetary outgo towards equity, loans and grants and subsidies for past five years are given in a graph below:

Chart No.1.3: Budgetary outgo towards equity, loans, grants and subsidies (₹ in crore)



The budgetary support in respect of equity, loans and grants and subsidies increased from ₹ 11,853.81 crore in 2011-12 to ₹ 17,526.50 crore in 2015-16.

Guarantees for loan and guarantee commission outstanding

1.9. In order to enable PSUs to obtain financial assistance from Banks and Financial Institutions, the State Government gives guarantee under Karnataka Ceiling on Government Guarantees Act, 1999 (as amended by Act 15 of 2002). The Government would charge a minimum of one *per cent* as guarantee commission, which shall not be waived under any circumstances. The guarantee commitment increased from ₹ 4,542.73 crore in 2013-14 to ₹ 10,477.08 crore during 2015-16. Fifteen PSUs paid guarantee fee of ₹ 137.94 crore during 2015-16 and outstanding accumulated guarantee fees or commission was ₹ 50.45 crore[7] (as on 31 March 2016).

Reconciliation with Finance Accounts

1.10. The figures in respect of equity, loans and guarantees outstanding as per the records of State PSUs should agree with that of the figures appearing in the Finance Accounts of the State. In case, the figures do not tally, the PSUs concerned and the Finance Department should carry out reconciliation of the differences. The position in this regard as at 31 March 2016 is given below:

[7] The PSUs which had major arrears were Rajiv Gandhi Rural Housing Corporation Limited (₹ 24.49 crore), Karnataka Food and Civil Supplies Corporation Limited (₹ 7.64 crore) and Krishna Bhagya Jala Nigam Limited (₹ 7.58 crore). The outstanding dues of the remaining PSUs was ₹ 10.74 crore.

Table No.1.5: Equity, loans and guarantees outstanding as per Finance Accounts *vis-a-vis* records of PSUs

(₹ crore)

Outstanding in respect of	Amount as per Finance Accounts	Amount as per records of PSUs	Difference
1	2	3	4 = 2-3
Equity	53,569.07	52,799.69	769.38
Loans	2,613.27	1,354.15	1,259.12
Guarantees	9,194.72	10,477.08	1,282.36

There were differences in respect of 82 PSUs. The Government and the PSUs should take concrete steps to reconcile the differences in a time-bound manner.

Arrears in finalisation of accounts

1.11. The financial statements of the Companies for every financial year are required to be finalised within six months from the end of the relevant financial year *i.e.* by September end in accordance with the provisions of Section 96(1) of the Act. Failure to do so, may attract penal provisions under Section 99 of the Act. Similarly, in case of Statutory Corporations, their accounts are finalised, audited and presented to the Legislature as per the provisions of their respective Acts.

The table below provides the details of progress made by working PSUs in finalisation of accounts by 30 September 2016.

Table No.1.6: Position relating to finalisation of accounts of working PSUs

Sl. No.	Particulars	2011-12	2012-13	2013-14	2014-15	2015-16
1	Number of working PSUs	76	79	81	81	81
2	Number of accounts finalised during the year	59	81	73	82	70
3	Number of accounts in arrears	42	40	48	44[8]	57[9]
4	Number of working PSUs with arrears in accounts	37	36	41	38	47
5	Extent of arrears (number in years)	1 to 2 years	1 to 2 years	1 to 3 years	1 to 2 years	1 to 3 years

During the year, 70 accounts have been finalised, which includes five accounts of five Statutory Corporations. The number of accounts in arrears has increased from 42 (2011-12) to 57 (2015-16). Of the 57 arrears of accounts, 51 accounts pertained to the working Government Companies, which have arrears ranging between one and three years. The arrears include six accounts pertaining to six Statutory Corporations.

[8] During the year 2014-15, two PSUs (Karnataka Vishwakarma Community Development Corporation Limited and Bangalore Suburban Rail Company Limited) had not finalised their first accounts and one PSU (Karnataka EMTA Collieries Limited) was closed down, hence arrears of these three PSUs were excluded.

[9] During the year 2015-16, the arrears of two PSUs (Karnataka Vishwakarma Community Development Corporation Limited and Bangalore Suburban Rail Company Limited), which were excluded last year (2014-15) have been added back.

The Administrative Departments have the responsibility to oversee the activities of these PSUs and to ensure that the accounts are finalised and adopted by these PSUs within the stipulated period. The PAG/AG has periodically taken up the matter with the State Government/Administrative Departments concerned for liquidating the arrears of accounts.

1.12. The State Government had invested ₹ 12,723.60 crore in 47 PSUs during the years for which accounts have not been finalised as detailed in **Appendix-1.** In the absence of finalisation of accounts and their subsequent audit, it could not be ensured whether the investments and expenditure incurred have been properly accounted for and the purpose for which the amount was invested was achieved or not. Thus, the Government's investment in such PSUs remained outside the control of the State Legislature.

1.13. In addition to the above, as on 30 September 2016, there were arrears in finalisation of accounts by non-working PSUs. Out of 12 non-working PSUs, five were in the process of liquidation whose accounts were in arrears for eleven to thirteen years. Of the remaining seven non-working PSUs, no PSUs had arrears of accounts.

Table No.1.7: Position relating to arrears in finalisation of accounts of non-working PSUs

No. of non-working companies	Period for which accounts were in arrears	No. of years for which accounts were in arrears
7	-	-
1	2005-06 to 2015-16	11
2	2004-05 to 2015-16	12
2	2003-04 to 2015-16	13

Placement of Separate Audit Reports

1.14. The position depicted below shows the status of placement of Separate Audit Reports (SARs) issued by the CAG (up to 30 September 2016) on the accounts of Statutory Corporations in the Legislature.

Table No.1.8: Status of placement of SARs in Legislature

Sl. No.	Name of Statutory Corporation	Year up to which SARs placed in the Legislature	Year for which SARs not placed in the Legislature	
			Year of SAR	Date of issue to the Government/ Present Status (December 2016)
1	Karnataka State Road Transport Corporation	2014-15	2015-16	Preparation of SAR under progress
2	Bangalore Metropolitan Transport Corporation	2014-15	2015-16	Preparation of SAR under progress
3	North Eastern Karnataka Road Transport Corporation	2014-15	2015-16	Preparation of SAR under progress
4	North Western Karnataka Road Transport Corporation	2014-15	2015-16	Preparation of SAR under progress
5	Karnataka State Financial Corporation	2014-15	2015-16	Preparation of SAR under progress

Impact of non-finalisation of accounts

1.15. As pointed out above (Paragraph 1.11 to 1.13), the delay in finalisation of accounts may also result in risk of fraud and leakage of public money apart from violation of the provisions of the relevant statutes. In view of the arrears of accounts, the actual contribution of PSUs to the State GDP for the year 2015-16 could not be ascertained and their contribution to State exchequer was also not reported to the State Legislature.

It is therefore, recommended that:

- The Government may setup a cell to oversee the clearance of arrears and set the targets for individual companies which would be monitored by the cell.
- The Government may consider outsourcing the work relating to preparation of accounts wherever the staff is inadequate or lacks expertise.

Performance of PSUs as per their latest finalised accounts

1.16. The financial position and working results of working Government Companies and Statutory Corporations are detailed in **Appendix-2.** A ratio of turnover of PSUs to State GDP shows the extent of PSUs' contribution in the State economy. Table below provides the details of working PSUs' turnover and State GDP for a period of five years ending 2015-16.

Table No.1.9: Details of working PSUs turnover *vis-a-vis* State GDP

(₹ crore)

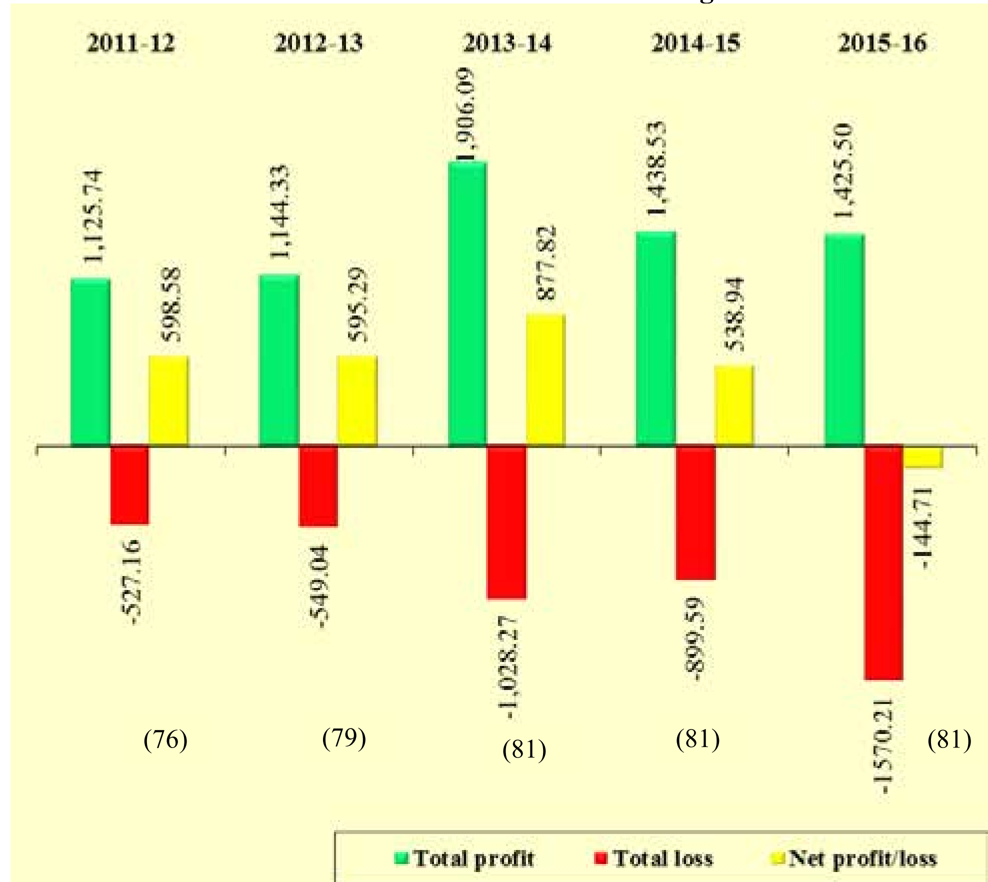
Particulars	2011-12	2012-13	2013-14	2014-15	2015-16
Turnover[10]	34,490.58	37,867.13	44,908.32	48,765.18	53,787.89
State GDP	4,34,270.00	5,20,766.00	6,01,633.00	6,85,207.00	7,35,975.00
Percentage of turnover to State GDP	7.94	7.27	7.46	7.12	7.31

The percentage of turnover to State GDP had reduced from 7.94 *per cent* in 2011-12 to 7.31 *per cent* in 2015-16.

[10] Turnover as per the latest finalised accounts.

1.17. Overall profit (losses) earned (incurred) by State working PSUs during 2011-12 to 2015-16 are given below in a bar chart.

Chart No.1.4: Profit/Loss of working PSUs



(Figures in brackets show the number of working PSUs in respective years) (₹ crore)

As per their latest finalised accounts, out of 81 working PSUs, 51 PSUs earned profit of ₹ 1,425.50 crore and 21 PSUs incurred loss of ₹ 1,570.21 crore. Further, Bangalore Suburban Rail Company Limited and Karnataka Tourism Infrastructure Limited incorporated in March 2014 and July 2015 respectively have not finalised their first accounts. Three companies[11] did not prepare profit and loss account and had only pre-operative expenditure. One Company (Rajiv Gandhi Rural Housing Corporation Limited) prepared income and expenditure account and capitalised the excess of expenditure over income. Two Companies (Karnataka Food and Civil Supplies Corporation Limited and Karnataka Vocational Training and Skill Development Corporation Limited) prepared statement of income and expenditure. One Company (Karnataka Urban Infrastructure Development and Finance Corporation Limited) recorded zero profit by claiming management fee equal to the net administrative expenses incurred.

[11] Cauvery Neeravari Nigama Limited, Raichur Power Corporation Limited and Tadadi Port Limited.

The major contributors to profit were Mysore Minerals Limited (₹ 245.47 crore), Karnataka Power Corporation Limited (₹ 181.63 crore), Karnataka Power Transmission Corporation Limited (₹ 178.11 crore) and Karnataka Rural Infrastructure Development Corporation Limited (₹ 113.65 crore). Huge losses were incurred by Karnataka Neeravari Nigam Limited (₹ 970.77 crore), Krishna Bhagya Jala Nigam Limited (₹ 135.44 crore) and Gulbarga Electricity Supply Company Limited (₹ 109.86 crore).

Working PSUs had been showing aggregate profits during the last four years from 2011-12 to 2014-15. However, there is a cause of concern that PSUs incurred net aggregate loss of ₹ 144.71 crore during the year 2015-16. The main contributors, as compared to previous year (2014-15), were increase in losses of Karnataka Neeravari Nigam Limited (by ₹ 675.18 crore) and Krishna Bhagya Jala Nigam Limited (by ₹ 51.88 crore); decrease in profit of Hutti Gold Mines Limited (by ₹ 138.30 crore), Mysore Minerals Limited (by ₹ 67.88 crore), Chamundeshwari Electricity Supply Corporation Limited (by ₹ 48.13 crore) and Karnataka Forest Development Corporation Limited (by ₹ 32.87 crore).

1.18. Some other key parameters of PSUs are given below:

Table No.1.10: Key parameters of State PSUs

(₹ crore)

Particulars	2011-12	2012-13	2013-14	2014-15	2015-16
Return on capital employed (*per cent*)	4.22	4.77	5.46	5.16	4.80
Debt	29,197.31	27,434.29	28,434.00	32,086.94	36,774.18
Turnover[12]	34,490.58	37,867.13	44,908.32	48,765.18	53,787.89
Debt-Turnover ratio	0.85:1	0.72:1	0.63:1	0.66:1	0.68:1
Interest payments	2,555.79	2,557.69	3,038.67	4,090.73	4,592.09
Accumulated profits / losses (-)	1,368.93	1,388.01	1,894.94	731.66	861.65

(Above figures pertain to all PSUs except for turnover, which is for working PSUs)

1.19. The State Government had formulated (May 2003) guidelines according to which Government nominees on the Boards of Public Enterprises or Joint Ventures, where the State Government had equity holding, should insist on the declaration of minimum dividend of 20 *per cent* on share holding. As per their latest finalised accounts, 55 PSUs[13] earned an aggregate profit of ₹ 1,425.66 crore, but only 18 PSUs declared dividend amounting to ₹ 72.16 crore.

Winding up of non-working PSUs

1.20. There were 12 non-working PSUs (all companies) as on 31 March 2016. Of these, five PSUs have commenced liquidation process. The number of non-working companies at the end of each year for the past five years is given below:

[12] Turnover of working PSUs as per their latest finalised accounts as of 30 September 2016.
[13] Including four non-working PSUs.

Table No.1.11: Non-working PSUs Particulars

Particulars	2011-12	2012-13	2013-14	2014-15	2015-16
No. of non-working companies	14	14	14	12	12

Since the non-working PSUs are not contributing to the State economy and are not meeting the intended objectives, these PSUs may be considered either for closure or for revival. During 2015-16, non-working PSUs incurred ₹ 30.98 crore towards establishment costs. This expenditure was financed by the State Government (₹ 8.78 crore) and through rental, interest receipt and other receipts.

1.21. The stages of closure in respect of non-working PSUs are given below:

Table No.1.12: Stages of closure of non-working PSUs

Sl. No.	Particulars	Companies
1	Total number of non-working PSUs	12
2	Of (1) above, the number under	
(a)	Liquidation by Court (Liquidator appointed)	5
(b)	Closure *i.e.* closing orders / instructions issued but liquidation process not yet started	7

During the year 2015-16, no PSU was wound up. The companies which have taken the route of winding up by Court order are under liquidation for a period ranging from eleven years to thirteen years. The process of voluntary winding up under the Companies Act is much faster and needs to be adopted vigorously.

Comments on Accounts

1.22. Fifty six working companies forwarded their 65 audited accounts to the Accountant General (AG) between 1 October 2015 and 30 September 2016. Of these, 42 accounts (of 36 companies) were selected for Supplementary Audit. The Audit Reports of the Statutory Auditors (appointed by the CAG) and the supplementary audits of the CAG indicate that the quality of maintenance of accounts needs to be improved. The details of aggregate money value of comments of statutory auditors and the CAG are given below:

Table No.1.13: Impact of audit comments on working companies

(₹ crore)

Sl. No.	Particulars	2013-14		2014-15		2015-16	
		No. of accounts	Amount	No. of accounts	Amount	No. of accounts	Amount
1	Decrease in profit	15	524.19	14	746.20	17	2,165.03
2	Increase in profit	6	11.72	7	38.75	4	30.12
3	Decrease in loss	3	37.19	1	1.36	-	-
4	Increase in loss	10	499.83	8	656.53	6	13.83

Sl. No.	Particulars	2013-14		2014-15		2015-16	
		No. of accounts	Amount	No. of accounts	Amount	No. of accounts	Amount
5	Non-disclosure of material facts	-	-	5	-	3	-
6	Errors of classification	-	-	10	-	2	-

During the year 2015-16, the Statutory Auditors had given unqualified reports on 22 accounts, qualified reports on 40 accounts, adverse reports (which means that accounts did not reflect a true and fair position) on two accounts and disclaimer report (which means that auditor could not form an opinion on the accounts) on one accounts. This includes comments by the CAG on three accounts. The compliance of companies with the Accounting Standards remained poor as there were 96 instances of non-compliance in 32 accounts during the year.

1.22.1. Similarly, five working Statutory Corporations forwarded their five accounts to AG during the year 2015-16. Of these, four accounts of four Statutory Corporations pertained to sole audit by the CAG, while the other one was supplementary audit after audit by Statutory Auditors. The Audit Report of Statutory Auditors and the sole/supplementary audit of the CAG indicate that the quality of maintenance of accounts needs improvement. The details of aggregate money value of comments of the Statutory Auditors and the CAG are given below.

Table No.1.14: Impact of audit comments on Statutory Corporations

(₹ crore)

Sl. No.	Particulars	2013-14		2014-15		2015-16	
		No. of accounts	Amount	No. of accounts	Amount	No. of accounts	Amount
1	Decrease in profit	2	12.03	3	4.63	1	15.96
2	Increase in profit	1	2.47	-	-	-	-
3	Decrease in loss	-	-	-	-	-	-
4	Increase in loss	3	27.15	4	27.92	3	9.50

During the year all five accounts received qualified certificates. One Statutory Corporation reported a total profit of ₹ 33.72 crore while four reported losses amounting to ₹ 176.59 crore.

Response of the Government to Audit

Performance Audits and Paragraphs

1.23. For the Report of the Comptroller and Auditor General of India for the year ended 31 March 2016, two performance audits and 14 compliance audit paragraphs were issued to the Additional Chief Secretaries or Principal Secretaries of the respective Departments to furnish replies. Replies in respect

three Compliance Audit Paragraphs were awaited from the State Government (22 February 2017).

Follow up action on Audit Reports

Replies outstanding

1.24. The Report of the CAG represents the culmination of the process of audit scrutiny. It is, therefore, necessary that they elicit appropriate and timely response from the Executive. The Finance Department, Government of Karnataka issued (January 1974) instructions to all Administrative Departments to submit replies to paragraphs and performance audits (PAs) included in the Audit Reports of the CAG within a period of three months of their presentation to the Legislature without waiting for any questionnaires from the Committee on Public Undertakings (COPU). The status of receipt of replies to the Report of CAG from the GoK is given below:

Table No.1.15: Replies not received as on 30 September 2016

Year of the Audit Report (Commercial/ PSUs)	Date of placement of Audit Report in the State Legislature	Total PAs and Paragraphs in the Audit Report		Number of PAs/ Paragraphs for which replies were not received	
		PAs	Paragraphs	PAs	Paragraphs
2014-15	5.03.2016	2	17	1	10

It could be seen that replies for one performance audit and ten paragraphs in respect of four departments[14], which were commented upon, were not furnished by GoK (September 2016).

Discussion of Audit Reports by COPU

1.25. The status of Performance Audits (PAs) and Paragraphs that appeared in Audit Reports on PSUs and discussed by COPU as on 30 September 2016 was as under:

Table No.1.16: Status of discussion of PAs and Paragraphs

Period of Audit Report	Number of PAs/paragraphs			
	Appeared in Audit Report		Para discussed	
	PAs	Paragraphs	PAs	Paragraphs
2010-11	2	11	1	11
2011-12	2	12	0	11
2012-13	2	12	2	9
2013-14	2	19	0	5
2014-15	2	17	0	4
Total	**10**	**71**	**3**	**40**

[14] Energy Department, Commerce and Industries Department, Co-operation Department and Transport Department.

Compliance to Reports of COPU

1.26. Action Taken Notes (ATN) from the GoK pertaining to four Paragraphs of four Reports and two *suo motu* Reports of COPU, presented to the State Legislature between December 2011 and March 2016 had not been received (December 2016) as indicated below:

Table No.1.17: Compliance to COPU Reports

Year of the COPU Reports	Total number of COPU Reports	Total no. of recommendations in COPU Report	No. of recommendations where ATNs not received
2011-12	1	25	25
2012-13	1	11	11
2013-14	2	18	18
2014-15	1	5	5
2015-16	1	7	7
Total	**6**	**66**	**66**

These reports of COPU contained recommendations in respect of paragraphs pertaining to four Departments[15], which appeared in the Reports of the CAG of India for the years 2008-09 to 2011-12.

It is recommended that the Government may ensure: (a) sending replies to inspection reports/ draft paragraphs/ performance audits and ATNs on the recommendations of COPU as per the prescribed time schedule; (b) recovery of the system of responding to audit observations.

Response to Inspection Reports

1.27. Audit observations noticed during audit and not settled on the spot are communicated to the head of PSUs and departments concerned of State Government through Inspection Reports. The heads of PSUs are required to furnish replies to the Inspection Reports through respective heads of departments within a period of one month. Department-wise break-up of Inspection Reports and audit observations outstanding as on 31 March 2016 are given in **Appendix-3.**

It is recommended that the Government may ensure that a procedure exists for taking action (a) against officials who fail to respond to Inspection Reports based on the reports of Audit Monitoring Cell constituted by the Government and (b) to recover loss / outstanding advances / overpayment within the prescribed time.

Coverage of this Report

1.28. This Report contains 14 Compliance Audit observations and two Performance Audits on 'Implementation of Lift Irrigation Schemes by Karnataka Neeravari Nigam Limited' and 'Implementation of Restructured Accelerated Power Development and Reforms Programme by the Electricity

[15] Commerce and Industries Department, Urban Development Department, Women and Child Development Department and Transport Department.

Supply Companies in Karnataka', involving a financial effect of ₹ 529.16 crore.

Disinvestment, Restructuring and Privatisation of PSUs

1.29. The State Government had approved and adopted (February 2001) a comprehensive policy on public sector reforms and privatisation of public sector undertakings in the State. Accordingly, the Government identified 31 PSUs for closure, restructuring and privatisation. Seven Companies[16] were dissolved / amalgamated at the end of September 2016. The position about action taken by the Government in respect of the remaining 24 companies identified for closure / privatisation / restructuring was as under:

Table No1.18: Status of disinvestment / restructuring of PSUs

Particulars	No. of companies	Government order issued	Government order not yet issued
Non-working Government Companies decided for closure	12	12[϶]	-
Working Government Companies decided for closure	3	1[¢]	2[@]
Working Government Companies decided for privatisation	8	6[♥]	2[♣]
Restructuring of Working Government Companies	1	1[Ω]	-

In October 2005, the Government adopted a Policy on Public Sector Enterprises Reforms, which enunciated an assessment on a case-to-case basis including mechanism for its implementation by incorporating the earlier reform process. After the study, appropriate specific solution was to be considered. The present status of the recommendations of study on case-to-case basis of PSUs was awaited (December 2016).

[16] Karnataka Tungsten Moly Limited, Karnataka Agro Proteins Limited, Vishveswaraya Vidyuth Nigam Limited, Karnataka Film Industries Development Corporation Limited, Karnataka Small Industries Marketing Corporation Limited, Chamundi Machine Tools Limited and Karnataka State Textiles Limited.

϶ All the non-working companies are as per **Appendix-2.**

¢ Karnataka State Construction Corporation Limited.

@ The Karnataka Fisheries Development Corporation Limited, Karnataka State Electronics Development Corporation Limited.

♥ Karnataka Silk Industries Corporation Limited, Karnataka Soaps and Detergents Limited, The Mysore Electrical Industries Limited, Karnataka Vidyuth Karkhane Limited, Mysore Minerals Limited, Sree Kanteerava Studios Limited.

♣ The Mysore Sugar Company Limited, The Mysore Paper Mills Limited.

Ω The Karnatak State Forest Industries Corporation Limited to be merged with Karnataka Cashew Development Corporation Limited and Karnataka Forest Development Corporation Limited.

Chapter - II

Performance Audits of Government Companies

Chapter - II

2. Performance Audits relating to Government Companies

2.1 Performance Audit on 'Implementation of Lift Irrigation Schemes by Karnataka Neeravari Nigam Limited'.

Executive Summary

Introduction

Lift Irrigation Schemes

Gravity or flow irrigation is a conventional irrigation system wherein water is stored in a dam or barrage or large tanks and drawn for irrigation through canal network. Lift Irrigation Schemes (LIS) are those schemes where pumping machinery is installed on the banks of perennial rivers and streams, seasonal rivers with barrages, in or above the foreshore of storage reservoirs, wells, *etc.* for pumping water and transporting it through a rising main to higher elevations for irrigation of lands where water cannot be supplied by gravity.

Karnataka Neeravari Nigam Limited

The Karnataka Neeravari Nigam Limited (the Company) was established (December 1998) to plan, build, operate and maintain irrigation projects in the Krishna River basin except Upper Krishna Project in the State. The Company was one of the three Special Purpose Vehicles set up by the Government of Karnataka (GoK) for speedy implementation of irrigation projects in the State.

Audit Objectives

The objectives of the Performance Audit were to assess the effectiveness of the Lift Irrigation Schemes by examining whether:

- the LISs were planned and designed properly;
- the LISs were executed as planned and the objectives set out in the schemes were achieved.

Audit Findings

Inordinate delay in materialising LISs

The Government/Company had taken unreasonably longer time for materialising the LISs for their implementation and completion. The scope of work of six of the 13 sampled LISs was modified multiple times due to

frequent/multiple changes in scope in terms of irrigation potential, number of lifts, alignment of canals, *etc.* causing cost and time overruns. Though the Government had given administrative approvals to seven out of 13 LISs (Bhima, Hipparagi-4 LISs, Singatalur, Tiluvalli) as early as 1991-92 and 1992-93, no action was initiated for their implementation for more than a decade. The projected cost of 13 LISs had gone up by more than 240 *per cent* as compared to initial proposals, from ₹ 3,549.19 crore to ₹ 12,154.81 crore. The farmers, for whose benefit the schemes were launched, are still awaiting the full extent of the envisaged benefit, with no assurance on when the schemes will be completed. (*Paragraph 2.1.14)*

Creation of excess infrastructure due to ill-planning

The Company constructed lifts under Ainapur LIS and Halyal LIS for creating irrigation potential of 21,962 ha and 20,635 ha respectively at a total cost of ₹ 57.99 crore. The actual irrigation potential was, however, reduced to 7,669 ha and 6,072 ha under these LISs respectively as the beneficiary farmers laid pipe lines directly from the river Krishna for drawing water to their fields after obtaining due permission of the Company in line with the circulars issued by GoK. As a result of creation of lifts without taking cognizance of the reduced irrigation potential due to such permissions, the full benefit of the investment of ₹ 22.10 crore made on the 1st stage lift of Ainapur LIS and ₹ 35.89 crore made on Halyal LIS was not derived as the Company could create only 35 *per cent* and 29 *per cent* of the envisaged potential respectively. (*Paragraph 2.1.15)*

Unsatisfactory progress

- Singatalur Lift Irrigation Scheme (SLIS) was proposed (1986-87) to irrigate 16,188 ha of drought prone areas covering the districts of Koppal, Gadag and Bellary by utilising 5.06 Thousand Million Cubic Feet (TMC) out of allocated 7.64 TMC of water under left and right banks of the river Tungabhadra. The scheme was originally approved (September 1992) for ₹ 63.62 crore for construction of barrage across the river Tungabhadra and two lifts, one each on either side of the river bank. The scope of the scheme had undergone continuous changes and the latest revision proposed (January 2015) for irrigating 1.07 lakh ha including 0.88 lakh ha under micro irrigation at a cost of ₹ 5,768.04 crore. The Company, after a passage of thirty years of the conception of the scheme, could create irrigation potential of only 19,588 ha with an expenditure of ₹ 1,489 crore as of March 2016. The allocated water of 15.99 TMC is largely underutilised as the proposal of micro irrigation covering 87,792 ha was yet to materialise (December 2016). (*Paragraph 2.1.19*)

- Hipparagi Project was conceived (October 1991) to irrigate 59,692 ha at a cost of ₹ 186.70 crore. The scope of the scheme had been changed continuously, the latest revised (August 2016) cost being ₹ 3,330.23 crore for irrigating 74,742 ha. The project comprising four lifts *viz.* Halyal, Ainapur, Karimasuti and Savalgi-Tungal was completed between September 2011 and October 2013, *i.e.* after a lapse of twenty years from

its conception. The lift works of Halyal, Karimasuti and Savalgi-Tungal LISs were completed with a delay ranging from six years to seven years beyond the scheduled contract period. The benefit of LISs could not be passed on to the farmers for several years due to delay in completion. (*Paragraph 2.1.20*)

Avoidable expenditure

- There was substantial reduction in actual quantities executed as compared to the estimated quantities (13 to 24 *per cent)* based on which the works were awarded for lift works of five LISs due to change in location and alignment subsequent to award of contracts. This variation in quantities was mainly due to award of contracts without conducting detailed survey. Further, the Company failed to exercise the contractual provision to effect change in contract price due to change in scope of the works. The Company paid the full amount to the contractors irrespective of quantities that were actually executed. The reduction in quantities had not only benefited the contractors but also the Company had to incur avoidable expenditure of ₹ 141.70 crore. (*Paragraph 2.1.23*)

- The Company awarded (December 2014) Gravity Main for Tubachi-Babaleshwara LIS by providing Mild Steel (MS) pipes for a length of 13.37 km. instead of PSC pipes as required by the guidelines issued by WRD. The Technical Subcommittee of the Company, while recommending (June 2012) MS pipes had not given any justification for using MS pipes in deviation from the guidelines. The Company had incurred additional expenditure of ₹ 102.73 crore on account of this deviation which could have been avoided had the work been carried out as per the guidelines. (*Paragraph 2.1.24*)

- The works of the Guddadamallapura LIS consisting of intake channel, jackwell cum pump house, rising main, gravity main and canal network, awarded (September 2005) at a cost of ₹ 46.02 crore was not completed within the scheduled date of completion of May 2007. The Company closed the contract without risk and cost to the contractor which resulted in additional financial burden to the Company to the extent of ₹ 56.68 crore as the balance works were awarded (January 2010/September 2011) at higher cost. (*Paragraph 2.1.26*)

Underutilisation of irrigation potential

Though the Company had created irrigation potential of 1.36 lakh ha as of March 2016, the notification for the command area was issued only for 0.41 lakh ha, which was a mere 30 *per cent* of the total irrigation potential created. The notification for the balance 0.95 lakh ha was not carried out yet, as Field Irrigation Channels (FICs) were not completed. Further, the command area was notified only between 2014-15 and 2016-17 for the potential created between 2010-11 and 2015-16, after a delay upto four years due to delay in completion of FICs. (*Paragraph 2.1.32*)

Introduction

2.1.1. The geographical area of Karnataka State is 1.91 lakh square kilometres (190.50 lakh hectares). Agriculture being the main occupation in the State, irrigation plays a significant part. Water resources in the State are available from seven river basins[17], the most significant of which is the Krishna River basin which covers 60 *per cent* of the catchment area *i.e.* 1.13 lakh square kilometres (113.29 lakh hectares). The State Water Policy, 2002 envisaged creation of an ultimate irrigation potential of 45 lakh hectares (ha) under major, medium and minor irrigation projects and to facilitate creation of an additional irrigation potential of 16 lakh ha by individual farmers using ground water.

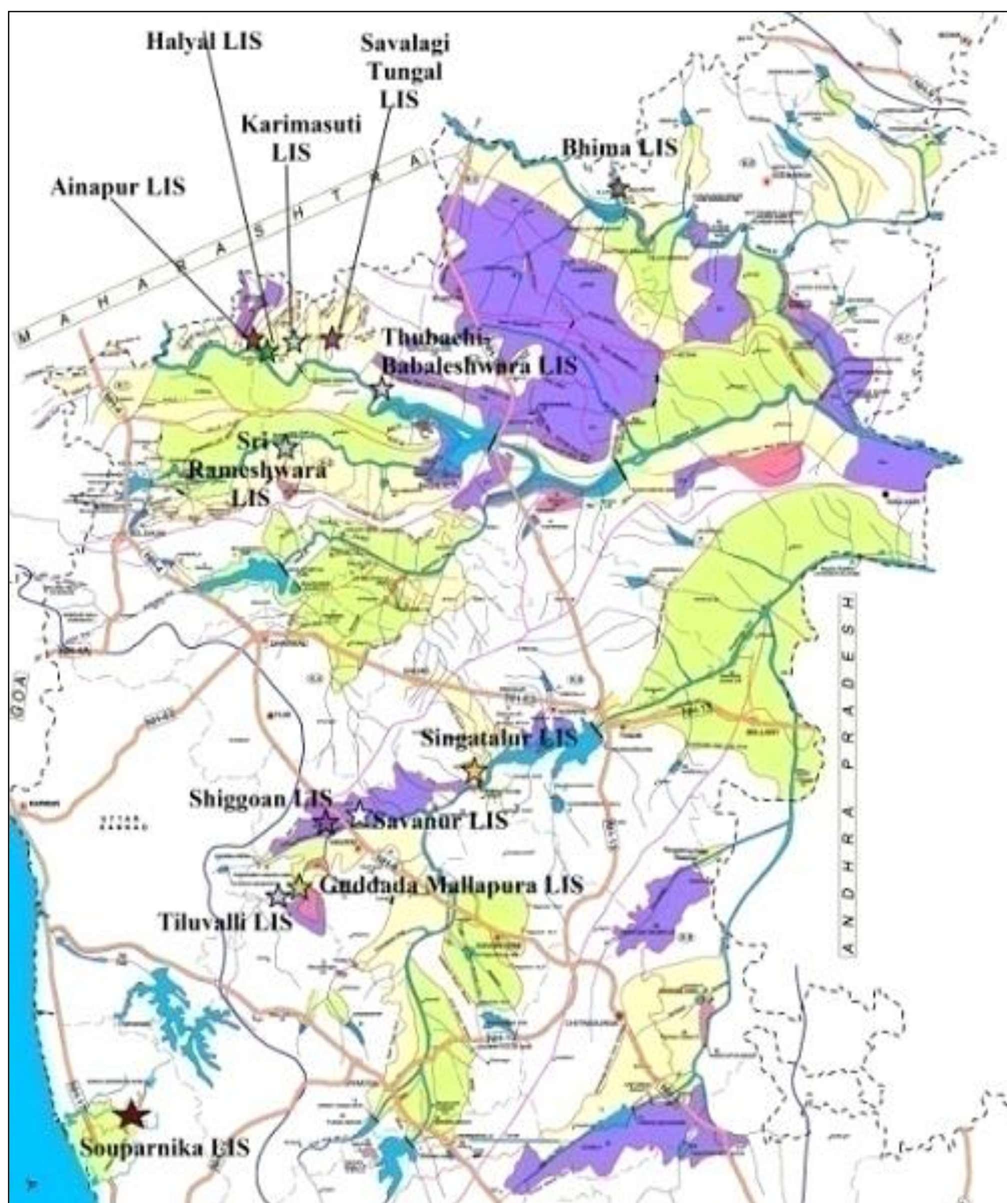


Chart No.2.1.1: Map showing Audit sampled LISs in Krishna River Basin

[17] Other six river basins are Cauvery, Godavari, North Pennar, South Pennar, Palar and West flowing rivers.

Irrigation is carried out primarily by two methods *viz*. Gravity or Flow Irrigation and Lift Irrigation. The map depicts (Chart No.2.1.1) the sampled Lift Irrigation Schemes in the Krishna River basin and that of its tributaries in the State.

Lift Irrigation Schemes

2.1.2. Gravity or flow irrigation is a conventional irrigation system wherein water is stored in a dam or barrage or large tanks and drawn for irrigation through canal network. Lift Irrigation Schemes (LIS) are those schemes where pumping machinery is installed on the banks of perennial rivers and streams, seasonal rivers with barrages, in or above the foreshore of storage reservoirs, wells, *etc.* for pumping water and transporting it through a rising main to higher elevations for irrigation of lands where water cannot be supplied by gravity. A Pictorial diagram of conventional irrigation system *vis-a-vis* LIS is depicted in Chart No.2.1.2:

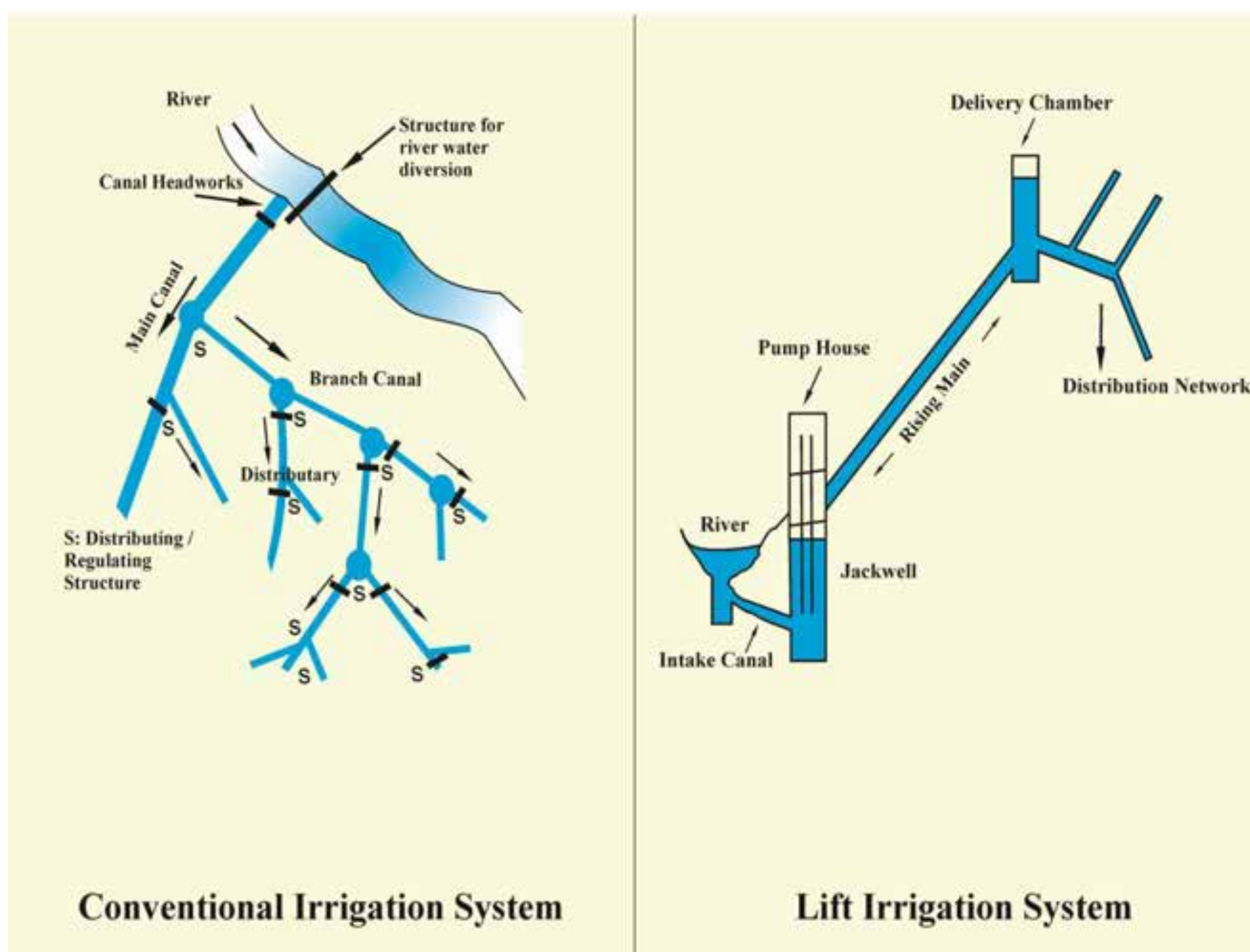


Chart No.2.1.2: Conventional irrigation system *vis-a-vis* LIS

A typical LIS consists of mainly five components *viz.* Intake Channel (Canal) to draw water from the source point (river), Jackwell cum pump house which draws water from the Intake Channel and pumps it through Rising Main which

carries water to the higher altitude and a Delivery Chamber from where the water gets distributed through the canal network.

Karnataka Neeravari Nigam Limited

2.1.3. The Karnataka Neeravari Nigam Limited (the Company) was established (December 1998) to plan, build, operate and maintain irrigation projects[18] in the Krishna River basin except Upper Krishna Project in the State. The Company was one of the three Special Purpose Vehicles[19] set up by the Government of Karnataka (GoK) for speedy implementation of irrigation projects in the State.

The funds for implementation of irrigation projects were sourced from the State budget, borrowings from banks and financial institutions, issue of bonds and assistance from the Government of India (GoI) under the Central schemes.

The Company has been implementing 107 irrigation projects with an ultimate potential of 19.30 lakh ha, which includes 6.82 lakh ha under 23 LIS projects. As of March 2016, the Company had created a cumulative potential of 14.21 lakh ha, which includes 4.58 lakh ha under LISs.

Organisational setup

2.1.4. The Company comes under the administrative control of the Water Resource Department (WRD), GoK. The Board of Directors (Board) of the Company, assisted by its Technical Subcommittee (TSC) is the decision making body. The Managing Director of the Company is responsible for managing day-to-day activities and assisting the Board. The projects taken up by the Company were executed and monitored at field level by the Chief Engineers at the Zonal offices assisted by the Superintending Engineers and the Executive Engineers at Circle and Division Offices respectively.

Command Area Development Authority

2.1.5. In pursuance of the Command Areas Development Act, 1980, the GoK constituted six Command Area Development Authorities (CADA) in the State with the objective of ensuring rapid and optimum utilisation of irrigation potential created under major and medium irrigation projects, increasing agricultural production and reducing the gap between the irrigation potential created and its actual utilisation.

The main functions of CADA *inter alia* included construction of Field Irrigation Channels (FIC), regulation of cropping pattern, proper utilisation of available water resources and implementation of participatory irrigation management through establishment of Water Users Co-operative Societies (WUCS) to promote a decentralised, self regulated and efficient water management system.

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[18] Construction of Dams, Barrages, Canal networks, Lift Irrigation Schemes, *etc*.

[19] The other two were Krishna Bhagya Jala Nigam Limited and Cauvery Neeravari Nigama Limited.

Audit Objectives

2.1.6. The objectives of the Performance Audit were to assess the effectiveness of the Lift Irrigation Schemes by examining whether:

- the LISs were planned and designed properly;
- the LISs were executed as planned and the objectives set out in the schemes were achieved.

Scope of Audit

2.1.7. The Company had executed 23 LISs during 2011-12 to 2015-16. Out of these 23 LISs falling under six[20] zones, the Performance Audit covered 13 LISs[21] which were selected for detailed audit based on geographical location of LISs, weightage based on project cost, irrigation potential and expenditure incurred. Besides, the transactions related to notification of irrigation potential and formation of WUCS in four[22] CADAs were also scrutinised.

Audit Methodology

2.1.8. The methodology adopted for achieving the audit objectives involved explaining the audit objectives to the top management, scrutiny of records at WRD, GoK, Corporate Office of the Company and its divisions and offices of the CADA and issue of audit observations.

We explained the objectives of the Performance Audit to the Government and to the Management of the Company during the Entry Conference held on 20 June 2016. The draft Performance Audit report was discussed with the Government in the Exit Conference held on 12 January 2017.

Audit has been conducted in conformity with the Auditing Standards issued by the Comptroller and Auditor General of India.

Audit Criteria

2.1.9. The Audit Criteria adopted for achieving the audit objectives were derived from the following sources:

- Orders, Administrative approvals and guidelines issued by GoK;
- State Water Policy, 2002 and Guidelines issued by Central Water Commission (CWC);
- Decisions of the Board of Directors and Technical Subcommittee of the Company;

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[20] Belgavi (nine LISs), Munirabad (one LIS), Kalaburgi (one LIS), Shivamogga (five LISs), Dharwad (six LISs), Siddapur (one LIS).

[21] Bhima, Guddadamallapura, Hippargi (4 LISs-Ainapur, Halyal, Karimasuti, Savalgi-Tungal), Savanur, Shiggaon, Singatalur, Souparnika, Sri Rameswara, Tiluvalli and Tubachi-Bableshwara.

[22] Tunga Bhadra Project CADA (Munirabad), Malaprabha and Ghataprabha Project CADA (Belagavi), Bhadra Reservoir Project CADA (Shivamogga) and Irrigation Project Zone CADA (Kalaburgi).

- Detailed Project Reports (DPRs), Detailed Estimates, Tender conditions and Contract agreements and
- Karnataka Transparency in Public Procurement (KTPP) Act, 1999 and KTPP Rules, 2000.

Acknowledgment

2.1.10. We acknowledge the co-operation extended by the Water Resource Department of GoK and the Management of the Company in facilitating the conduct of the Performance Audit.

Status of LISs

2.1.11. The envisaged irrigation potential for the selected 13 LISs was 3.10 lakh ha[23] with a total water allocation of 47.24 thousand million cubic feet (TMC) at a total project cost of ₹ 12,154.81 crore[24] as of March 2016. The Company had achieved irrigation potential of 1.36 lakh ha with a cumulative expenditure of ₹ 4,883.26 crore on these 13 LISs as given in the table below:

Table No.2.1.1: Achievement *vis-à-vis* envisaged irrigation potential as of March 2016

<table>
<tr><th>Sl. No</th><th>LIS</th><th>River</th><th>Water allocation for irrigation (TMC)</th><th>Envisaged potential (ha)</th><th>Achieved potential (ha)</th></tr>
<tr><td>1</td><td>Bhima</td><td>Bhima</td><td>5.63</td><td>24,292</td><td>16,721 (Work in progress)</td></tr>
<tr><td>2</td><td>Guddadamallapura</td><td>Varada</td><td>1.00</td><td>5,261</td><td>Work in progress</td></tr>
<tr><td>3</td><td>Ainapur</td><td rowspan="4">Krishna</td><td rowspan="4">11.64</td><td>21,962</td><td rowspan="4">74,742</td></tr>
<tr><td>4</td><td>Halyal</td><td>20,635</td></tr>
<tr><td>5</td><td>Karimasuti</td><td>23,100</td></tr>
<tr><td>6</td><td>Savalgi-Tungal</td><td>9,045</td></tr>
<tr><td>7</td><td>Savanur</td><td>Varada</td><td>1.35</td><td>15,500</td><td>Work in progress</td></tr>
<tr><td>8</td><td>Shiggaon</td><td>Varada</td><td>1.35</td><td>13,500</td><td>9,900 (Work in progress)</td></tr>
<tr><td>9</td><td>Singatalur (SLIS)</td><td>Tungabhadra</td><td>15.99</td><td>1,07,380</td><td>19,588 (Work in progress)</td></tr>
<tr><td>10</td><td>Souparnika</td><td>Souparnika</td><td>1.02</td><td>1,730</td><td>1,730</td></tr>
<tr><td>11</td><td>Sri Rameshwara</td><td>Ghataprabha</td><td>2.20</td><td>13,800</td><td>13,800</td></tr>
<tr><td>12</td><td>Tiluvalli</td><td>Varada</td><td>0.76</td><td>1,012</td><td>Work in progress</td></tr>
<tr><td>13</td><td>Tubachi-Babaleshwara (TBLIS)</td><td>Krishna</td><td>6.30</td><td>52,700</td><td>Work in progress</td></tr>
<tr><td></td><td>Total</td><td></td><td>47.24</td><td>3,09,917</td><td>1,36,481</td></tr>
</table>

[23] Including 0.40 lakh ha added during 2011-16.
[24] The cost represents cost as approved in latest DPR by GOK (refer **Appendix-4**).

Though the achieved potential was projected at 1.36 lakh ha, the actual utilisation of potential was for 0.41 lakh ha which was a mere 30 *per cen*t of the potential created because of non-creation of Field Irrigation Channels (refer Paragraph 2.1.32).

Audit Findings

2.1.12. The Audit findings on the planning and implementation of the selected 13 LISs during the period 2011-12 to 2015-16 are discussed in the succeeding paragraphs.

Deficiency in planning

2.1.13. As per the guidelines issued (March 2003) by the WRD, GoK, a detailed survey was required to be carried out at the site selected for LIS to facilitate preparation of designs and estimates and to establish technical and financial feasibility of the scheme. It also envisaged that the LIS should be identified after careful planning and design including proper selection of the type and capacity of the pumping machinery and size and classification of pipes for the rising main.

We observed that the Company did not conduct any detailed survey prior to taking up of head works[25]. The initial DPRs and estimates of the LIS works were prepared without any detailed survey of field conditions. Successful bidders of LIS works were also given the responsibility of survey and design of head works, besides execution. As a result, the initial estimates had undergone several modifications during the course of execution. It had also resulted in avoidable cost as commented on in Paragraph 2.1.23.

We further noticed creation of excess infrastructure, selection of wrong sites for the lifts and resultant cost and time overruns. Further, various components of LISs were not synchronized resulting in idle investment and delay in commissioning. Related audit findings are discussed in Paragraphs 2.1.14 to 2.1.17.

Inordinate delay in materialising of LISs

2.1.14. We observed long delays in implementation and completion of LISs. The scope of work of six of the 13 sampled LISs was modified frequently due to multiple/frequent changes in scope in terms of irrigation potential, number of lifts, alignment of canals, *etc.* causing cost and time overruns. The details of initial estimated cost and irrigation potential of 13 LISs *vis-à-vis* their latest revised cost and potential are given in **Appendix-4**.

We observed that though the Government had given administrative approvals to seven out of 13 LISs (Bhima, Hipparagi – 4 LISs, Singatalur and Tiluvalli) as early as 1991-92 and 1992-93, no action was taken to implement them for more than a decade. The projected cost of these 13 LISs had gone up by more

[25] Head works consist of Intake Channel, Jackwell cum Pump House, Rising Main Pipes, Delivery Chamber and allied works.

than 240 *per cent* compared to the cost in initial proposals, from ₹ 3,549.19 crore to ₹ 12,154.81 crore (refer **Appendix-4**). Further, the completion of these LISs had been delayed beyond the due dates causing further cost escalation as discussed in the subsequent paragraphs of the report (Paragraphs 2.1.17, 2.1.19, 2.1.20 and 2.1.21). The farmers, for whose benefit the schemes were launched, are still awaiting the full extent of the envisaged benefit, with no assurance on when the schemes will be completed.

Creation of excess infrastructure due to ill-planning

2.1.15. The Company, while identifying the irrigation potential under two LISs of Hipparagi project *viz.,* Ainapur and Halyal, did not account for the fact that most of the farmers whose lands were in the proximity of the river bed (five to ten kilometres from the river bed) had laid pipe lines directly from the river Krishna for drawing water to their fields after obtaining due permission of the Company in line with the circulars issued (July 2002/May 2005) by GoK. The Company's failure to take cognizance of the reduction in irrigation potential due to such pipelines led to the creation of excess infrastructure as described below:

- Ainapur LIS under Hipparagi Project was initially planned (June 2001) for an irrigation potential of 21,962 ha. Accordingly, the infrastructure *viz.* Intake channel, Jackwell cum Pump house, Rising main and combined canal, was created (August 2010) at a total cost of ₹ 22.10 crore. But the actual irrigation potential was reduced to only 1,440 ha as most of the beneficiary farmers under the scheme had laid their own pipelines from the river for drawing water to their fields under permission from the Government/Company. The infrastructure created had, thus, become partly redundant. In order to utilise the excess infrastructure, the Company planned and constructed (October 2013) Ainapur 2nd Stage lift at an additional cost of ₹ 81 crore[26] for creating irrigation potential of 6,229 ha. Even after construction of the 2nd Stage lift, the actual irrigation potential created under both the Stages was only 7,669 ha (35 *per cent*) against the infrastructure created for 21,962 ha. Thus, the full benefit of the investment of ₹ 22.10 crore made on the 1st Stage lift was not derived as the Company could create only 35 *per cent* of the envisaged potential.

  The Government replied (February 2017) that due to delay in implementation of the scheme the farmers drew water after obtaining permission. Such permission would get automatically cancelled once the LISs were completed.

  The Reply is not acceptable as the permission to the farmers were continued to be issued even during 2014-15. It was seen by Audit during July 2016 that the farmers were drawing water through their pipelines from the River bed even after six years of completion of 1st Stage lift.

[26] Total cost of ₹ 162.60 crore incurred on head works (₹ 21.26 crore) and canal networks (₹ 141.34 crore) in 2nd Stage is reduced by ₹ 81.61 crore saved in 1st Stage canal network.

- Similar instance was observed in Halyal LIS also wherein it was proposed (June 2001) to irrigate 20,635 ha. Due to delay in execution of the LIS, the farmers had irrigated 14,563 ha by drawing private pipelines and the actual irrigation potential was reduced to 6,072 ha (29 *per cent* of the envisaged potential). As a result, full benefit of the LIS which was commissioned (September 2011) at a cost of ₹ 35.89 crore could not be derived.

Selection of wrong location for intake channel

2.1.16. The guidelines issued by the WRD envisaged that the location of the LIS should be selected where the site is not prone to sediment deposition at or above the intake level and below the intake foundation level.

TBLIS was envisaged to draw water from the backwaters of Almatti Reservoir to irrigate 52,700 ha. The location of the Jackwell cum pump house of TBLIS was shifted (March 2015) from Janawada village to Kavatagi village due to protest by the villagers. Consequently, the intake channel, which was an integral part of the main work, was also relocated to Kavatagi village. The canal bed level was at Reservoir Level (RL) 507 metres and its ground level was between RL 516.62 metres and RL 524.70 metres. The work of intake channel awarded in December 2014 at a cost of ₹ 7.21 crore was in progress (October 2016).

We observed that the proposed area of the intake channel was under submergence under the back waters of Almatti reservoir when water was impounded upto the RL 519.60 metres as the canal bed level was at RL 507 metres. The status of the location of intake channel before and after submergence is shown below:

Chart No.2.1.3: Intake channel before submergence when water was at RL 507 metres (June 2016)

Chart No.2.1.4: Intake channel after submergence when water was beyond RL 507 metres (July 2016)

The alignment of intake channel was ill-planned as the Company did not take into account the fact that the Almatti reservoir was impounded with water at RL 519.60 metres for four to five months (July to December) in a year, when the water is actually required to be lifted for irrigation. Submergence of the intake channel during the said period would result in silt formation all along the channel warranting recurring cost on desilting and damage to the structure of the channel.

The Government replied (February 2017) that the intake channel was provided with cement concrete lining, *etc.* to avoid siltation.

The reply is not acceptable as continuous submergence of the channel even with cement concrete lining may result in substantial siltation and erosion of the lining itself. The reply was silent on ill-planning regarding construction of the intake channel at level below RL 519.60 metres.

Non-synchronisation of works

2.1.17. The LIS comprises various components *viz.* construction of diversion weir, head works, intake channel, power supply, canal network, *etc*. We observed that in four LISs, these components had not been synchronised resulting in delay in completion of the schemes, as detailed below:

Table No.2.1.2: Cases of delay in completion of LIS due to non-synchronisation

LIS	Facts	Audit observation
Halyal 1st Stage & 2nd Stage	• The head works were completed in December 2007 at a total cost of ₹ 20.38 crore. The lift was, however, commissioned in September 2011 to cater to 20,635 ha.	• The power supply works were awarded only in July 2008 *i.e.* after completion of head works. These works which should have been completed by April 2009 were completed in September 2011 due to rescinding and re-awarding the contract in July 2010. • The belated action to take up power supply works had rendered the investment of ₹ 20.38 crore on head works idle without benefits to the farmers for four years. The Government in its reply (February 2017) accepted the fact that there was no substation nearby to cater to the power needs of head works. Hence, the head works were implemented without waiting for power sanction.

LIS	Facts	Audit observation
Shiggaon	• The head works were completed at a cost of ₹ 89.57 crore in September 2012 and the power supply works were completed in July 2012/October 2012. The sprinkler irrigation system was completed in July 2014 at a cost of ₹ 174.34 crore to irrigate 9,900 ha. • Apart from 9,900 ha under sprinkler irrigation, the scheme envisaged 3,600 ha under drip irrigation by constructing a diversion weir.	• The envisaged potential of 9,900 ha had to be deferred until July 2014 despite completing the head works in September 2012 as there was no synchronisation of various components of the scheme (head works, power supply and sprinkler system) which were completed in different periods. • The construction of diversion weir required for storing water for irrigating 3,600 ha was awarded (January 2014) at a cost of ₹ 34.24 crore with a stipulation to complete in 18 months. The completion was delayed due to delay in clearances from forest department for land acquisition and finalisation of designs and drawings which was done only in January 2016. The works were under progress and the envisaged irrigation potential had not been created yet (December 2016). The Government replied (February 2017) that the entire process has not been intentionally delayed. However, the fact remains that the delay in implementation of the LIS has failed to create the irrigation potential as envisaged.
Tiluvalli	• The lift was commissioned in August 2016 at a cost of ₹ 18.87 crore. The rejuvenation of existing canal was part of the lift	• The contracts for canal rejuvenation were awarded only in January 2016, after a gap of five years of awarding lift works (October 2011) and were in progress (December

LIS	Facts	Audit observation
	works to cater to suffering atchkat[27] of 380.63 ha and create additional potential of 525.92 ha apart from existing 297.45 ha.	2016). Therefore, the additional potential could not be irrigated despite completion of the lift works. The investment of ₹ 18.87 crore would not fructify until rejuvenation works are completed. The Government replied (February 2017) that the tenders for rejuvenation were called for as soon as the lift works were near completion and will be completed in March 2017. However, the fact remains that the Lift could not be utilised effectively due to delay in rejuvenation work.
Tubachi-Babales-hwara	• The scheme was envisaged to cater to 52,700 ha. The head works were awarded in December 2014 at a cost of ₹ 1,022.58 crore and scheduled to be completed in December 2016. The financial progress was ₹ 169.29 crore (March 2016).	• The survey for identifying the canal network has been taken up only in May 2016. The belated action of survey work would further delay completion of the canal works and creation of envisaged potential. The Government replied (February 2017) that the Head works were in advanced stage of implementation and canal network estimates were prepared and tender would be floated for execution. This reinforced the audit assertion that there was no synchronisation in execution.

Thus, the Company's failure to synchronize the works of various components of the schemes had not only rendered the investment idle but also deferred the envisaged benefits.

[27] Suffering achkat is the irrigation potential situated at the tail end which could not be irrigated due to insufficient water.

Poor implementation

2.1.18. The Company failed to complete the works as planned. There were long delays in completion and avoidable cost overruns due to inaction on the part of the Company on underperforming contractors and unreasonable delay in decision making on closure and re-award of underperforming contracts. Audit observations on implementation of the schemes are detailed in Paragraphs 2.1.19 to 2.1.30.

Unsatisfactory progress

2.1.19. Singatalur Lift Irrigation Scheme (SLIS) was proposed (1986-87) to irrigate 16,188 ha of drought prone areas covering the districts of Koppal, Gadag and Bellary by utilising 5.06 TMC out of the allocated 7.64 TMC of water under the left and right banks of the river Tungabhadra. The scheme was originally approved (September 1992) at a cost of ₹ 63.62 crore for construction of barrage across the river Tungabhadra and two lifts, one each on either side of the river bank. The scope of the scheme had undergone continuous changes subsequently as detailed below:

Table No.2.1.3: Change in the scope of SLIS

Sl. No	Date of revision	Irrigation potential (ha)	Cost (₹ crore)	Reasons for revision
1	December 1998	16,188	123.00	As per the suggestions of Technical committee of the Company.
2	December 2000	47,753	595.00	Additional allocation of water from 7.64 TMC to 18.55 TMC.
3	June 2006	48, 658	787.00	As per the Government instructions on utilisation pattern of water and implementation mechanism.
4	April 2011	68,892	1,894.50	
5	January 2015	1,07,380	5,768.04	Introduction of micro irrigation. Out of 1.07 lakh ha, 19,588 ha through flow irrigation and 87,792 ha under micro irrigation.

We observed that:

- The scheme, which was conceived way back in 1986-87 had taken off only after twelve years when the barrage work was awarded in 1998-99. The Company had so far incurred ₹ 1,489 crore (March 2016) against the total estimated cost of ₹ 5,768.04 crore and created irrigation potential of 19,588 ha;

- The SLIS comprised construction of five lifts on the left bank and two lifts on the right bank apart from the construction of the barrage. The

works related to the barrage, crest gate, intake channel and head regulator were awarded between August 1998 and July 2011 and completed at a cost of ₹ 170.10 crore in September 2012. The works of the lifts were awarded between September 2005 and May 2010 at a cost of ₹ 495.83 crore and were completed between March 2013 and January 2016 against the due dates of 18 months from the date of award;

- The reasons for delay in completion of works were continuous change in scope, delay in acquisition of land and delay on the part of the contractors. Further, the Company received only ₹ 826.43 crore out of ₹ 2,541.66 crore indented for SLIS during 2011-12 to 2015-16 which hampered the progress;

- Water could be stored only upto 1.435 TMC against the envisaged capacity of 3.12 TMC in the barrage as the Rehabilitation and Resettlement (R&R) works for five villages that would submerge if the water is stored to its full capacity, approved in November 2010 and December 2012, were still under progress (October 2016);

- The decision to introduce micro irrigation for a larger area of 87,792 ha in SLIS may need rethinking as this concept has been withdrawn (May 2016) in the case of TBLIS which has a smaller irrigation potential of 52,700 ha due to its unsuitability in drought prone areas, possibility of depletion in water table, high maintenance cost and likely deterioration of drip equipment during off-season (water flows only for four months in a year);

- As a result of the decision to switch over to micro irrigation, midway, neither the flow irrigation of 68,892 ha as decided in April 2011 was completed nor did the micro irrigation materialise. It is pertinent to mention that the Company could have created 68,892 ha with an approximate expenditure of ₹ 405.50 crore[28] in addition to ₹ 1,489 crore incurred so far, as against ₹ 3,873.54 crore (₹ 5,768.04 crore - ₹ 1,894.50 crore) required to be incurred for an additional potential of 38,488 ha under micro irrigation.

Thus, as a result of continuous modifications in the scope of the scheme including the decision to switch over to micro irrigation, the Company, after a passage of thirty years of conception of the scheme, could create irrigation potential of 19,588 ha with an expenditure of ₹ 1,489 crore as of March 2016. The allocated water of 15.99 TMC[29] is largely underutilised as the proposal of micro irrigation was yet to materialise (December 2016).

The Government replied (February 2017) that the delay in execution and commissioning of the lifts was mainly because of delay in land acquisition. Non-completion of R&R works and non-impounding of water in the barrage

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[28] Estimated cost of ₹ 1,894.50 crore for 68,892 ha *less* the actual expenditure of ₹ 1,489 crore spent on completion of lifts and canal networks.

[29] Against the actual water allocation of 18.55 TMC to SLIS, 15.99 TMC is available for irrigation and the balance is used for drinking water and industrial use.

upto FRL has not deprived any irrigation facilities. Micro Irrigation was taken up to provide irrigation facilities to more drought prone areas.

The Government's reply is not acceptable as the works had been delayed by four to six years, which has deprived the farmers irrigation facilities. The reply is silent on the non-suitability of Micro Irrigation for drought prone areas.

2.1.20. Hipparagi Project was conceived (October 1991) to irrigate 59,692 ha at a cost of ₹ 186.70 crore. The scope of the scheme had been changed continuously over a period of twenty years as detailed in the table below:

Table No.2.1.4: Change in the scope of Hipparagi LIS

Sl. No.	Year of approval by GoK	Project cost as per DPR (₹ crore)	Irrigation potential (ha)	Reasons for change in cost and scope of the project.
1	June 2001	901.00	70,079	Included two lifts *i.e.* Karimasuti and Savalgi-Tungal.
2	April 2007	1,113.00	74,742	Addition of irrigation potential by 4,663 ha.
3	March 2008	1,521.78	74,742	Addition of two lifts Ainapur 2nd stage and Karimasuthi 2nd stage.
4	Pending approval	3,330.23	74,742	Increase in schedule of rates and rehabilitation and resettlement works. The revised cost proposed (August 2016) by the Company was pending for approval from GoK (December 2016).

The continuous change in scope of the scheme had delayed completion of Hipparagi LIS. The project comprising four lifts *viz.* Halyal, Ainapur, Karimasuti and Savalgi-Tungal to cater to 74,742 ha was completed between September 2011 and October 2013, *i.e.* after a lapse of twenty years from its conception. The lift works of Halyal, Karimasuti and Savalgi-Tungal LISs were completed with a delay ranging from six years to seven years beyond the scheduled contract period for the reasons as detailed below:

Table No.2.1.5: Cases of delay in completion under Hipparagi LIS

LIS/ Potential (ha)	Due date of completion	Actual date of completion	Period of delay	Reasons for delay
Halyal 1st Stage & 2nd Stage (20,635)	Head works – February 2005	September 2011	6 years	• Standing water in intake channel. • Rescinding of contract of combined canal twice due to poor progress by the contractors. • Re-awarding the contract to the defaulting contractor.
Karimasuti 1st stage (19,800)	Head works 1st stage –	1st stage- March 2012	7 years	• Non-availability of land. • Obstruction by farmers.

LIS/ Potential (ha)	Due date of completion	Actual date of completion	Period of delay	Reasons for delay
	September 2005			• Poor progress by the contractor. • Delay in closing the initial contract (three years). • Delay in re-awarding the balance works after closure of initial contract (two years).
Savalagi-Tungal (9,045)	Head works – September 2005	January 2012	7 years	• Contract was extended several times with nominal penalty, despite breach of scheduled dates.

Thus, it could be seen that the benefit of LISs could not be passed on to the farmers for a period of six to seven years as the lift works had not been completed within the scheduled dates of completion.

The Government replied (February 2017) that appropriate decisions were taken to avoid the contractors approaching the Court of law and to avoid further delay in implementation of work.

The reasons for the delay were avoidable as could be seen from the table. The delay deferred the benefit of the scheme to the farmers. Hence, the reply is not acceptable.

2.1.21. In respect of three LISs *viz.* Bhima, Guddadamallapura and Sri Rameshwara, we observed that the lift and canal works in these LISs were completed with a delay ranging from five to eight years from the scheduled dates and certain works were still under progress (October 2016) as detailed in Table No. 2.1.6. The delay had caused deferring the envisaged benefits to the farmers.

Table No.2.1.6: Delay in completion of various components of three LISs and reasons for delay

LIS/ Potential (ha)	Due date of completion	Actual date of completion	Period of delay	Reasons for delay
Bhima (24,292)	• Barrage-February 2005 • Balundagi lift and Alligi (B) lift- July 2006/ December 2006	• Barrage – March 2010 • Balundagi lift – September 2014 • Alligi (B) lift – June 2016	5 to 9 years	• Due to change in design for a private mini hydel scheme. • Delay in land acquisition • Non-payment of compensation for standing crops. • Slow progress by the contractors.

LIS/ Potential (ha)	Due date of completion	Actual date of completion	Period of delay	Reasons for delay
Guddada-mallapura (5,261)	• Intake channel, jackwell cum pump house Rising main, Gravity main and canal network – May 2007	• Intake channel, jackwell cum pump house Rising main, Gravity main – October 2015 • Canal networks in progress (October 2016)	8 years	• Change in location of the Jackwell twice. • Delay in awarding the balance works (11 months for head works and 32 months for canal works). • Non-payment of compensation for standing crops. • Non-acquisition of land in time. • Underperformance of contractors.
Sri Ramesh-wara (13,800)	Head works – March 2007	March 2013	6 years	• Change in location of jackwell cum pump house. • Delay in approval of designs and drawings. • Delay in land acquisition. • Slow progress by the contractor.

The Government replied (February 2017) that appropriate decisions are taken to avoid the contractors approaching the Court of law and to avoid further delay in implementation of work.

Change in the scope of work during implementation and delay in taking appropriate decision led to delay in implementation of the project. Hence, the reply is not acceptable.

Avoidable expenditure

2.1.22. The Company failed to invoke contractual provisions on defaulting contractors and follow WRD guidelines on technical specifications and KTPP Act resulting in avoidable expenditure on implementation of LISs. The instances noticed in audit are detailed in Paragraphs 2.1.23 to 2.1.30.

2.1.23. The LISs had been awarded on lumpsum cum turnkey basis through the bidding process. *Clause 32.2* of the bid conditions envisaged that the bills of quantity submitted by the contractor do not affect the total lumpsum price, provided there is no change in scope or specification of work described in the tender document or otherwise provided for in the contract.

We observed that there was substantial reduction in the scope of head works (13 to 24 *per cent)* in respect of five LISs due to change in location and

alignment subsequent to award of contracts. This variation in quantities was mainly due to award of contracts without conducting detailed survey. The Company did not exercise the contractual provision (*Clause 32.2)* to effect the change in lumpsum price due to change in scope of work and the contractors were paid the full amount irrespective of quantities that were executed. As a result, the Company had to incur avoidable expenditure of ₹ 141.70 crore as indicated below:

Table No.2.1.7: Reduction in quantities on head works

LIS	Item of work	Estimated quantity (rmtr*)	Executed quantity (rmtr)	Differential cost[30] (₹ crore)
Savanur LIS	Rising main	17,040	14,857	8.41
Singatalur (Left side 1st lift)	Rising main	2,200	1,800	5.55
Thubachi-Babaleshwara	Rising main	29,064	22,030	107.80[31]
Shiggaon LIS	Sprinkler/ PVC pipe line	1,38,377	1,12,512	19.94
Total				**141.70**

***rmtr – running metre**

The Government replied (February 2017) that the contracts were awarded on turnkey basis and hence excess or savings in the contract value would not arise.

The reply is not acceptable as the Company not only awarded the works without conducting detailed survey, but also failed to exercise contractual provisions, which resulted in avoidable expenditure and undue benefit to the contractors.

2.1.24. The guidelines issued (March 2003) by the WRD recommended use of Pre Stressed Concrete (PSC) pipes for Mains where the hydraulic pressure was in the range of 6 kg/cm^2 to 20 kg/cm^2. We observed that the Company while awarding (December 2014) Gravity Main for Tubachi-Babaleshwara LIS had provided for Mild Steel (MS) Pipes instead of PSC pipes for a length of 13.37 km. connecting Delivery Chamber (DC)-1 to DC-2 for a discharge of 10.86 cumecs of water to 23,045 ha of command area beyond Don River. The work was in progress (October 2016). The Technical Subcommittee of the Company, while recommending (June 2012) MS pipes had not given any justification although the guidelines stipulated use of PSC pipes. The action of the Company was in deviation from the guidelines as the hydraulic pressure in this case was only 17.05 kg/cm^2, which was well within the suggested range and hence use of PSC pipes would have been sufficient.

[30] The differential cost represents the benefit passed on to the contractors due to reduction in actual executed quantities as compared to the quantities awarded. The cost has been arrived by multiplying differential quantities with the rates as provided in the estimates of the respective LISs in the absence of breakup of quoted rates for these items in the contracts.

[31] This represents the net cost after deducting savings in gravity main where excess quantity over and above the estimated quantity was executed (1.39 km.) by ₹ 14.42 crore.

The cost of laying MS Pipes was ₹ 138.22 crore, against ₹ 35.49 crore[32] for PSC pipes. The additional expenditure of ₹ 102.73 crore incurred on MS pipes could have been avoided had the work been carried out as per the norms specified in the guidelines.

The Government replied (February 2017) that the water had to pass through Don River from RL 682 metres to RL 640 metres. As the PSC pipes involve more number of joints, frequent leakage in joints may lead to stoppage of pumps for maintenance due to heavy pressure.

The reply is not acceptable as the hydraulic pressure in the present case was within the prescribed limit. Further, the number of joints in both MS pipes and PSC pipes are the same as the standard length for both the specifications as per the Schedule of Rates is six metres.

2.1.25. The Notification issued (January 2004) by the Government of India exempted Pumping Machineries, MS Pipes and other equipments used in the LIS projects from Excise Duty.

We observed that the Schedule of Rates of WRD, followed by the Company for the purpose of preparation of estimates for LIS works, was inclusive of all taxes and duties. The Company prepared the estimates that were put for tender without eliminating the Excise Duty on structural steel used for manufacturing MS pipes in respect of all 13 test checked LISs. This stood to benefit contractors who had quoted considering the excise duty element and subsequently got exemption based on the certificate issued by the Company. One such instance in respect of Tubachi-Babaleshwara LIS was noticed in audit. The contractor was benefited to the extent of ₹ 37.67 crore by virtue of such exemption on the estimated quantity of structural steel used for MS pipes in the LIS.

The Government replied (February 2017) that exemption on Excise Duty was given as per the note in the Schedule-B before entrustment of work. As the work was entrusted on Turnkey basis, extra payment does not arise.

The reply is not acceptable as the amount put to tender in respect of MS pipes included Excise Duty, which should have been eliminated.

2.1.26. The works of the Guddadamallapura LIS consisting of intake channel, jackwell cum pump house, rising main, gravity main and canal network was awarded (September 2005) at a cost of ₹ 46.02 crore on turnkey basis to Coramandal Prestcrete (Pvt.) Ltd. The work was scheduled to be completed by May 2007.

The contractor did not complete the work despite the extension of the contract period up to March 2008 by which time financial progress achieved was ₹ 16.23 crore. The Chief Engineer recommended (December 2008) termination of the contract at the risk and cost of the contractor. The contractor failed to respond to the notices issued by the Company and the

[32] Calculated at the rates provided in the SR of WRD 2013-14 (₹ 26,542/running metre) for the length of 13.37 km. of PSC pipes.

Company decided (September 2014) to rescind the work without risk and cost to the contractor, but no action has been taken yet to close the contract (December 2016). Meanwhile, the balance works (Head works/Canal works) were awarded (January 2010/September 2011) to two contractors at a total cost of ₹ 86.47 crore. The head works were completed (October 2015) and the canal works were in progress (December 2016).

We observed that the Company awarded the balance works without closing the first contract. Further, the decision to close the contract without risk and cost would result in additional financial burden to the extent of ₹ 56.68 crore[33].

The Government replied (February 2017) that after detailed deliberations by the Technical Subcommittee and the Board, it was decided to close the contract without risk and cost to the contractor to avoid possible legal complications.

The reply is not acceptable as the CE had recommended closure of the contract with risk and cost to the contractor. This has been ignored by the Board leading to undue benefit to the first contractor.

2.1.27. The contract for head works of Karimasuti 1st stage lift, awarded (March 2004) at a cost of ₹ 14.49 crore to be completed by September 2005, was short closed (December 2008) without risk and cost due to poor progress by the contractor. It was re-awarded (April 2010) for the balance work (₹ 10.31 crore) at the cost of ₹ 49.74 crore. The works were completed in March 2012.

We observed that despite the contractor's poor progress (₹ 4.18 crore of ₹ 14.49 crore), the Company decided to close the initial contract only after a delay of three years (December 2008). There was further delay of more than one year to re-award (April 2010) the balance works after closure of the initial contract. There were no recorded reasons for such delay. The Company also failed to invoke risk and cost of the contractor while closing initial contract for non-completion. As a result, the cost of the scheme increased by ₹ 44.82 crore[34].

The Government replied (February 2017) that after detailed deliberations at Technical Subcommittee and Board, it was decided to close the contract without risk and cost to avoid possible legal complications.

The reply is not acceptable as the Company failed to invoke contractual terms and there was delay in closing and re-awarding the contract, which resulted in additional cost.

2.1.28. The works of the left bank main canal of SLIS were awarded (November 2012) in two packages (0 km. to 7 km. and 9 km. to 14.50 km.) at

[33] Difference between the value of balance works in the first contract (₹ 29.79 crore) and the re-award value (₹ 86.47 crore).

[34] Includes differential cost in re-award (₹ 49.74 crore - ₹ 10.31 crore = ₹ 39.43 crore) and price variation of ₹ 5.39 crore.

a total cost of ₹ 26.85 crore to be completed in nine months. The work progressed to the extent of ₹ 18.11 crore within the scheduled date due to delay in land acquisition. We observed that notification for acquisition of land under lift works was issued even during October 2013 and awards were passed between September 2013 and June 2015, *i.e.* after due dates of completion. The balance works (₹ 8.74 crore) were rescinded and re-awarded (January 2016) at ₹ 26.88 crore. This caused escalation in cost by ₹ 12.53 crore.

The Government replied (February 2017) that the delay was on account of non-availability of land for execution of work. The proposals for land acquisition and notifications were issued much before the actual date of inviting tenders. However, farmers were not ready to handover their lands till final payments were made.

The reply is not acceptable as the awards were passed after due dates of completion. The Company should have ensured the payment of full compensation to farmers.

2.1.29. Regulator provided at the head of canal offtake point from a river is termed as canal head regulator, which regulates the water supply entering into the canal. The Company took up the head regulator work at the left intake channel of SLIS to avoid spilling of water as the ground level of the intake channel in some of chainages was below the FRL 509 metres of Singatalur barrage constructed across river Tungabhadra. The work was completed in June 2012 at a cost of ₹ 23.40 crore.

We observed that while finalising the alignment of the intake channel, the Company had not considered its ground levels which were below the FRL of the barrage. This had necessitated construction of head regulator at an additional cost. Further, the regulator had been kept idle for the last four years pending electrification works (October 2016) of the gates and also pending water storage upto FRL due to non-completion of rehabilitation and resettlement of affected villages (December 2016). Thus, the expenditure of ₹ 23.40 crore incurred on the regulator could have been avoided had the right alignment (above FRL) of intake channel been considered.

The Government replied (February 2017) that Head Regulator was necessary for regulating the flow into the intake canal on the 1st lift and Mundwad & Hammagi lift.

However, the Head Regulator has been kept idle for the last four years and hence reply is not acceptable.

2.1.30. As per KTPP Act (Section 12), the tender inviting authority has to communicate the notice inviting tenders to the Tender Bulletin Officer[35] concerned immediately after issue of the notice for publication.

We observed that the notice inviting tender (January 2012) for construction of Halasur Diversion Weir across river Varada for Shiggaon LIS was not

[35] Officer (Deputy Secretary at State level and Deputy Commissioner of the respective Districts at district level) appointed by the State Government.

communicated to the Tender Bulletin Officer concerned for its publication in tender bulletin. As a result, the bid received (April 2012) for ₹ 23.48 crore against tendered cost of ₹ 25.55 crore had to be cancelled due to non-compliance with the provisions of KTPP Act. Subsequent tender invited in May 2012 was also cancelled as the quoted rates were on higher side (24.2 *per cent* above the amount put to tender). The contract was awarded only in January 2014 at a cost of ₹ 34.24 crore[36] to the successful bidder against the tender dated October 2012. Thus, the cost of the work had increased by ₹ 4.15 crore[37] besides time overrun of two years.

The Government replied (February 2017) that though the notification was forwarded in advance, the delay was caused at different stages of transit.

The reply is not acceptable as it was the responsibility of the tenderer to ensure that the invitation of bids was published in the tender bulletin.

Violation of safety norms

2.1.31. The Central Water Commission (CWC) issued (June 1987) dam safety norms on construction and operation of dams and barrages. We observed that the Company had not complied with these norms in respect of four barrages *viz.* Hipparagi, Singatalur, Souparnika and Bhima as observed below:

Table No.2.1.8: Violation of safety norms

Norm	Non-compliance
Initial filling of reservoir: The newly constructed dams are required to be inspected by State Dam Safety panel constituted by the State Government before initial filling to assess the soundness/readiness of the dam or barrage. (Para 4.3.2.2 of CWC norms)	• The construction of Hipparagi barrage across the river Krishna was completed (March 2004) with a gross storage capacity of six TMC and water was impounded upto the FRL 524.87 metres since its completion. • The construction of Singatalur barrage across the river Tungabhadra was completed in November 2010 with a gross storage capacity of 3.12 TMC with an FRL of 509 metres. Water was impounded upto the FRL of 505.5 metres since September 2012. • Souparnika bridge cum barrage across the river Souparnika was completed in December 2012 with a capacity of 0.01 TMC of water and FRL of 15 metres. Water was impounded in March 2013. In all these cases, the soundness/readiness of the dam or barrage through inspection was not assessed before impounding water.

[36] This included cost of ₹ 6.61 crore on hydro mechanical works which were not part of initial tender (January 2012).

[37] Difference between awarded cost (₹ 34.24 crore – ₹ 6.61 crore on extra work = ₹ 27.63 crore) and the initial offer (₹ 23.48 crore).

Norm	Non-compliance
Flood Forecasting System: A suitable gauging arrangement is to be made at the upstream of the barrage for flood forecasting to manage inflow and outflow of the water. Emergency Action Plan (EAP) has to be evolved to minimize the property damage and loss of life. (Para 7.4.5 & Chapter VIII of CWC norms)	• In none of the three barrages (Hipparagi, Singatalur, Souparnika) such flood forecasting system was established (September 2016). • EAP was prepared in case of Hipparagi which was pending approval (September 2016), while EAPs have not been prepared for the other two barrages (Singatalur, Souparnika).
Gate operation schedules: To evolve proper Gate operation schedules considering the site conditions, stages of operations at various levels and flood situations, *etc*. (Para 7.4.1 of CWC norms)	• The Company had not prepared the Gate operation Schedules in Hippargi, Souparnika and Bhima barrages. (September 2016).

Impounding of water in the barrages without assessing their soundness and readiness may endanger the lives of people living downstream in case of breach. Non-adherence to flood forecasting system and gate operation schedules showed the apathy of the Company towards safety norms which can have disastrous consequences.

We further observed that the Company's circular dated October 2011 stipulated that the Chief Engineers concerned should recommend payment of contract bills after obtaining certification from a specialised agency (third party) on the quality of works carried out in case of turnkey contracts involving electro-mechanical works. The Company, however, made the payments for the five LISs[38] without ensuring quality of the works through certification from a third party.

The Government stated (February 2017) that the audit contention was noted and all guidelines would be implemented in due course of time, duly following the safety norms.

Underutilisation of irrigation potential

2.1.32. Field Irrigation Channels (FICs) are the channels which carry water from the branch canals into the fields and are vital for achieving the intended objective of creating the targeted irrigation potential in real

Chart No.2.1.5: Field Irrigation Channel

[38] Bhima, Guddadamallapura, SLIS, Hipparagi, Souparnika.

terms. It is pertinent to quote the reference of State Water Policy, 2002 wherein it was acknowledged that there was a gap in utilisation of created irrigation potential due to delays in the construction of FICs, levelling of land and lack of farmer participation in irrigation management. Despite such acknowledgement, the scenario had not changed even now (October 2016). Even CWC had informed (October 2015) WRD, GoK that the widening gap between irrigation potential created and its utilisation was a cause of concern as large investments were lying unutilised.

The State Water Policy, 2002 also envisaged *inter alia* formation and empowerment of WUCS and Federations for participatory irrigation management. The Working Group on Water Resources for the XI Plan (2007-12) recommended (December 2006) that WUCS should also be involved in planning, budgeting, implementation and management of irrigation systems to ensure optimum utilisation of irrigation potential created.

We observed that though irrigation potential to the extent of 1.36 lakh ha was created in respect of nine LISs as of March 2016, the notification for the command area[39] was issued only for 0.41 lakh ha, which represents only 30 *per cent* of the total irrigation potential created as detailed below:

Table No. 2.1.9: Details of irrigation potential notified *vis-a-vis* created

Name of the LIS	Potential achieved		Date of notification	Potential notified (ha)	Potential to be notified (ha)
	Area (ha)	Month			
Ainapur	21,962	August 2010 to October 2013	January 2016	16,383	5,579
Bhima	16,721	March 2012 to May 2015	January 2015	3,875	12,846
Halyal	20,635	September 2011 to December 2011	January 2016	15,015	5,620
Karimasuti	23,100	January 2012 to March 2014	January 2016	2,812	20,288
Savalgi-Tungal	9,045	January 2012 to March 2014	January 2016	2,827	6,218
Shiggaon	9,900	June 2013	March 2015	Nil	9,900
Singatalur	19,588	September 2012 to January 2016	June 2016	Nil	19,588
Souparnika	1,730	December 2012	Yet to be done	Nil	1,730
Sri Rameshwara	13,800	March 2013	Yet to be done	Nil	13,800
Total	**1,36,481**			**40,912**	**95,569**

It can be seen that the command area was notified only between 2014-15 and 2016-17 for the potential created between 2010-11 and 2015-16, after a delay upto four years due to delay in completion of FICs. Thus, the farmers were deprived of their due at two stages of implementation of the LISs – first, completion of the schemes with long delay and secondly, failure to complete FICs even after creating the irrigation potential.

[39] Command area refers to the area which can be irrigated from a scheme and is fit for cultivation.

Significantly, the irrigation potential of 40,912 ha includes 28,856 ha irrigated by the farmers drawing water directly from the river through their own pipelines as observed in Paragraph 2.1.15. Hence, the potential declared as created is not in order to the extent of 28,856 ha. The notification for the balance 95,569 ha has not been carried out yet, as FICs were still under progress (December 2016).

WUCS had not been formed so far in any of the LISs except for Bhima and Shiggaon. In the absence of notification of the command area and non-formation of WUCS, effective water management as envisaged in the State Water Policy was not possible. Also, the role of CADA in conducting awareness programme was very limited as the Company had not handed over the command area fully yet (October 2016).

The Government replied (February 2017) that due to scanty rainfall Sri Rameshwara LIS area could not be notified and steps would be initiated to notify other areas under irrigation. Also, WUCSs would be set up under the guidance of the CADA concerned, wherever they have not been set up already.

Conclusions

Audit Objective-1: *Whether the LISs were planned and designed properly?*

- **The Company prepared Detailed Project Reports and the initial estimates without conducting detailed survey of field conditions which was not in line with the guidelines issued by the WRD. This had resulted in substantial variations in the scope of the works during the course of execution causing unwarranted cost and time overruns. The cost of the schemes had gone up by more than 240 *per cent* as compared to initial proposals, from ₹ 3,549.19 crore to ₹ 12,154.81 crore. Since the various components of the lift works had not been synchronised, the commissioning of LISs was delayed. Besides, the investments fell idle and farmers were unable to reap the intended benefits.**

Audit Objective-2: *Whether the LISs were executed as planned and the objectives set out in the schemes were achieved?*

- **The Company failed to create the envisaged irrigation potential within the set time frame. The completed schemes (Halyal, Karimasuti, Savalgi-Tungal, Sri Rameshwara and Souparnika) were delayed upto seven years with reference to scheduled dates of completion, while seven LISs (Bhima, Guddadamallapura, Savanur, Shiggaon, SLIS, Tiluvalli and TBLIS) were yet to be completed even after due dates.**

- **The delay in achieving the envisaged potential can be attributed to the Company's failure to take timely action to close and re-award the incomplete contracts and increase in the scope of works after award. The delay had caused deferment of benefits to the farmers.**

In addition, the Company incurred avoidable cost of ₹ 386.01 crore[40] on account of violation of contractual provisions and guidelines of WRD.

- **There was a shortfall of 55.96 *per cent* in achieving the irrigation potential in 13 LISs and underutilisation of the created potential by 70 *per cent* due to non-completion of FICs. Water User Co-operative Societies were not formed except in two LISs and therefore participatory irrigation management to promote a decentralised and self regulated efficient water management system as envisaged in the State Water Policy did not materialise.**

Recommendations

1. **The Company needs to conduct detailed survey of field conditions before awarding contracts. Scope of works should be well defined and realistic estimates should be prepared in line with the guidelines issued by WRD.**
2. **Various components of the LISs should be synchronised as to ensure that all the works are completed in tandem and the schemes are commissioned within the stipulated time frame.**
3. **Field irrigation channels may be completed in a time-bound manner so that the created irrigation potential can be utilised.**
4. **Water User Co-operative Societies as envisaged in the State Water Policy may be formed for effective water management.**

[40] Refer Paragraphs 2.1.23, 2.1.24 and 2.1.26 to 2.1.30 of the Report (₹ 141.70 crore + ₹ 102.73 crore + ₹ 56.68 crore + ₹ 44.82 crore + ₹ 12.53 crore + ₹ 23.40 crore + ₹ 4.15 crore = ₹ 386.01 crore).

2.2 Performance Audit on 'Implementation of Restructured Accelerated Power Development and Reforms Programme by the Electricity Supply Companies in Karnataka'.

Executive Summary

Introduction

The Government of India had modified the erstwhile Accelerated Power Development and Reforms Programme during XI Plan (2007-12) as 'Restructured Accelerated Power Development and Reforms Programme' (RAPDRP) with the aim of restoring the commercial viability of the distribution sector by putting in place appropriate mechanism to reduce Aggregate Technical and Commercial (AT&C) losses, establish reliable and sustainable automated systems for collection of base line data, adopt IT in the areas of energy accounting and consumer care and strengthen the distribution network.

The Programme was implemented by Electricity Supply Companies (ESCOMs) in Karnataka in two parts *viz.* Part-A and Part-B. Part-A included the projects for establishment of baseline data and IT applications for energy accounting and auditing and IT based consumer service centres. Part-B included regular distribution strengthening projects.

In Karnataka, 98 towns under Part-A and 81 towns under Part-B of the Programme were sanctioned at a total cost of ₹ 398.71 crore (February 2009) and ₹ 786.58 crore (between March 2010 and June 2010) respectively. Part-A was implemented by all the five ESCOMs *viz.* Bangalore Electricity Supply Company Limited (BESCOM), Chamundeshwari Electricity Supply Corporation Limited (CESC), Gulbarga Electricity Supply Company Limited (GESCOM), Hubli Electricity Supply Company Limited (HESCOM) and Mangalore Electricity Supply Company Limited (MESCOM), while Part-B was implemented by four ESCOMs, except MESCOM.

Audit Objectives

The Audit objectives were to assess whether:

- The planning for implementation of the Programme was adequate;
- The Programme has been implemented in an efficient, effective and economical manner to achieve the intended objectives.

Audit Findings

Implementation of the Programme without completion of pilots

The ESCOMs had taken up implementation of Part-A of the Programme in one town in each of the ESCOMs as pilot project. The ESCOMs issued Detailed Work Awards between February 2010 and May 2010 with a

stipulation to complete the same within 12 months. The pilot implementation in respect of four of the five towns selected was completed with delay ranging from two to five years from the scheduled date. On account of non-completion of pilots within the scheduled time, the ESCOMs could not gauge potential hindrances in implementation of Part-A of the Programme in other towns. Implementation in other towns had commenced simultaneously along with pilot towns without resolving the bottlenecks encountered in pilot towns. (*Paragraph 2.2.12*)

Declaration of towns 'go-live' without completion

BESCOM declared (between January 2013 and March 2014) 60 of the 98 towns 'go-live' and the balance 38 towns in March 2016 without ensuring that all the functions in the modules were operational and User Acceptance Test had been run successfully in the production environment, which was not in line with the guidelines issued by Power Finance Corporation (PFC). (*Paragraph 2.2.13*)

DTC metering

The ESCOMs failed to assess whether the existing DTC meters were Device Language Message Specification (DLMS) compliant. Non-compliance of the existing meters with DLMS was ignored by the ESCOMs while deciding (December 2009) to install meters at the unmetered Distribution Transformer Centers (DTCs). This contributed to the delay in the completion of the Programme as the non-compliant meters continued to be replaced with DLMS compliant meters until 2015-16. (*Paragraph 2.2.16*)

Feeder level metering

The ESCOMs had delayed the decision to replace the feeder level meters which act as input energy points to the project areas and are critical to ascertain AT&C losses. During installation of modems in the meters, ESCOMs observed (May 2016) that data was not being communicated by the existing meters making the assessment of accurate AT&C losses difficult. Meter reading was being taken manually every month and uploaded into the RAPDRP system for determining the AT&C losses in the project areas. Even after this exercise, AT&C loss figures continued to be erroneous due to errors in uploading the data into system. (*Paragraph 2.2.17*)

Failure of modems

Information Technology Implementing Agency (ITIA) installed (August 2010 onwards) 59,520 modems at DTCs, boundary meters and HT consumers under all the five ESCOMs. The ESCOMs found that modems were not communicating the data and perforce they had to procure (June 2015) new modems which were installed by March 2016. As a result, the replacement of meters took almost six years. The day-wise analysis of functioning of modems during the period March 2016 to July 2016 in five ESCOMs revealed that the percentage of modems that were communicating data was very poor. There was not only delay in installation of modems but the installed modems

were still to function to their potential. This had delayed the process of analysing the results of meter reading and AT&C losses. *(Paragraph 2.2.19)*

Failure to update the incremental assets

The ESCOMs failed to update the incremental assets and consumers as and when they were added. The ESCOMs took up the job of updation of assets only in January 2015 *i.e.* after a lapse of three years from the scheduled date of completion (February 2012) of Part-A of the Programme, instead of updating the assets simultaneously with their addition. The delay in updation/non-updation of assets into RAPDRP system had resulted in delay in completion of the Programme and determining accurate AT&C losses. (*Paragraph 2.2.21*)

Deficient planning

PFC sanctioned Detailed Project Reports (DPRs) of 81 towns between March 2010 and June 2010 for implementation of the works under Part-B. Considering a reasonable period of six months to finalise the tenders from the date of sanctioning of the DPRs, ESCOMs awarded the contracts after a lapse of five to 21months, which contributed to delay in completion of the works. The reasons for delay in awarding of works were inclusion of works in the estimates which were not feasible for implementation, multiple revisions of estimates and frequent amendment to terms of contracts, unwarranted cancellation of tenders, *etc*. (*Paragraphs 2.2.24 to 2.2.28*)

Ineffective implementation

The ESCOMs awarded the works under Part-B for strengthening works of electrical distribution network including replacement of consumer electro-mechanical meters with tamper proof electro-static meters between March 2011 and August 2012. The stipulated period of completion ranged from 12 to 24 months from the dates of award of works. The ESCOMs had not only released payments to the contractors in violation of contractual terms but also failed to initiate action on the contractors for the delay in completion beyond the stipulated period. The delay in completion of works ranged from 6 to 38 months. (*Paragraph 2.2.29*)

Violation of contractual provisions

The ESCOMs paid 75 to 92 *per cent* of the value of the material supplied in respect of contracts awarded in three towns *viz.* Ramanagara, Mysuru and Kollegal without the equipment being commissioned which was in violation of the contractual terms. Such extra payment amounting to ₹ 10.53 crore was made (between December 2012 and October 2014) based on the requests of the contractors concerned. (*Paragraph 2.2.32*)

Unviable investment

The guidelines issued by PFC prescribed the criterion of Return on Investment (RoI) to be not less than 10 *per cent* for a town to be eligible for inclusion under the Programme. BESCOM and HESCOM had included three towns

(₹ 63.42 crore) and six towns (₹ 14.63 crore) respectively under the Programme though RoI was less than 10 *per cent* rendering the investment possibly unviable. (*Paragraph 2.2.38*)

Avoidable borrowings at higher cost

Three ESCOMs (GESCOM, HESCOM, MESCOM) had received loan of ₹ 57.99 crore from PFC against the eligibility of ₹ 106.04 crore. The received amount was much less than the actual expenditure of ₹ 90.56 crore incurred by these ESCOMs. ESCOMs failed to pursue PFC to release the instalments due though they had spent ₹ 32.57 crore more than the disbursement. Non-receipt of amount due from PFC had forced the ESCOMs to spend out of funds borrowed at higher rate of interest. (*Paragraph 2.2.40*)

Likely financial burden on consumers

The ESCOMs were required to complete the works under Part-A and Part-B within three years from the date of sanction to avail the benefit of conversion of loan into grant. The ESCOMs had received ₹ 276.84 crore under Part-A and ₹ 109.05 crore under Part-B from PFC as of March 2016. Although the scheduled date of completion of the Programme was extended upto March 2016/September 2016, there was no commitment from the Ministry of Power, GoI on conversion of loan into grant in the changed scenario of breaching of the deadlines by ESCOMs. In the event of non-conversion of loan into grant, it is likely that the entire loan availed under the Programme would become a burden on the consumers as the cost is factored into tariff. (*Paragraph 2.2.41*)

Ineffective monitoring

There was no monitoring during 2011-12, 2014-15 and 2015-16 by Distribution Reforms Committee as it did not meet even once at the time when implementation was at critical stage. Monthly meetings held through video conferencing headed by the Energy Department did not identify bottlenecks in implementation in order to resolve them. Similarly, monthly meetings headed by the Managing Directors/Chief Engineers held at ESCOMs level for monitoring Part-B had merely noted the progress achieved and did not identify the problems in execution or resolve them. (*Paragraph 2.2.42)*

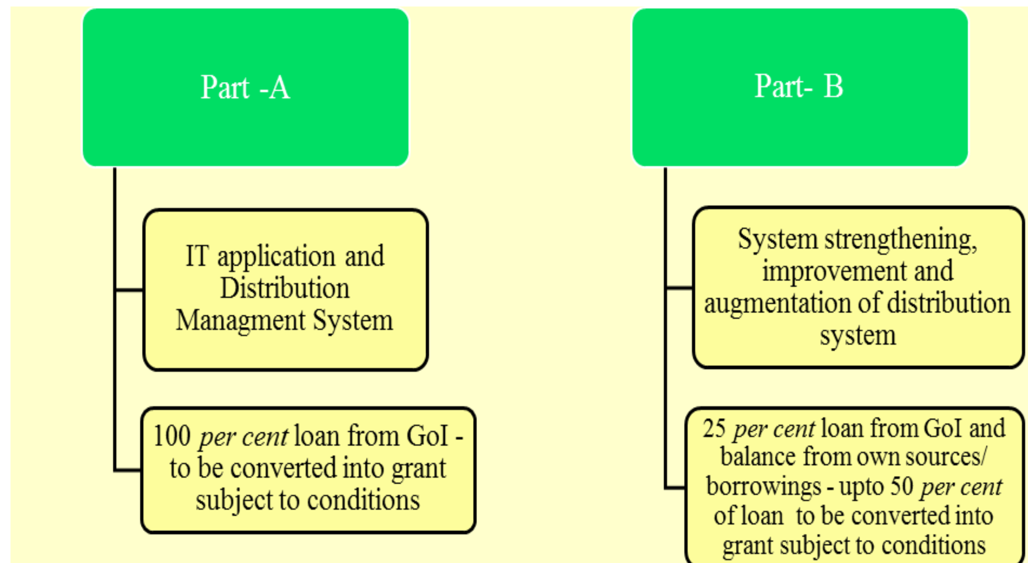
Introduction

2.2.1. As a part of the Government of India's (GoI) initiative in power sector reforms in the country, the initial focus was more on bringing about structural changes like unbundling of the State Electricity Boards and creation of independent generation, transmission and distribution companies. Ministry of Power, GoI found that power distribution was the weakest link in the entire value chain and this sector cannot achieve viability unless issues in the power distribution sector are resolved.

In this background, the Ministry of Power, GoI had modified (XI Plan: 2007-12) the Accelerated Power Development and Reforms Programme introduced in 2002-03 as "Restructured Accelerated Power Development and Reforms Programme" (RAPDRP/the Programme) with the aim of restoring the commercial viability of the distribution sector by putting in place appropriate mechanism to:

- reduce the Aggregate Technical and Commercial (AT&C) losses;
- establish reliable and sustainable automated systems for collection of base line data;
- adopt IT in the areas of energy accounting and consumer care and
- strengthen the distribution network**.**

The Programme was implemented in two parts *viz.,* Part-A and Part-B as shown below:



Implementation mechanism

2.2.2. The Programme covered towns (project) and cities with a population of more than 30,000. Power Finance Corporation (PFC) was the 'Nodal Agency' for the operationalisation and implementation of the Programme, under the overall supervision of the Ministry of Power (MoP), GoI. A Quadripartite Agreement, which was a prerequisite for release of funds under the Programme, was concluded (February 2009) between five Electricity Supply Companies[41] (ESCOMs), GoI, PFC and the Government of Karnataka (GoK).

The ESCOMs were to prepare DPRs of Part-A projects in-house or by appointing an IT Consultant through bidding from the panel of IT Consultants notified by PFC and submit them to PFC for approval. The sanctioned projects were to be implemented on turnkey basis by appointing the IT Implementing Agency (ITIA) through bidding from the panel of IT Implementing Agencies notified by PFC to ensure quality and expeditious implementation. Similarly, the sanctioned projects of Part-B were to be implemented preferably on turnkey basis.

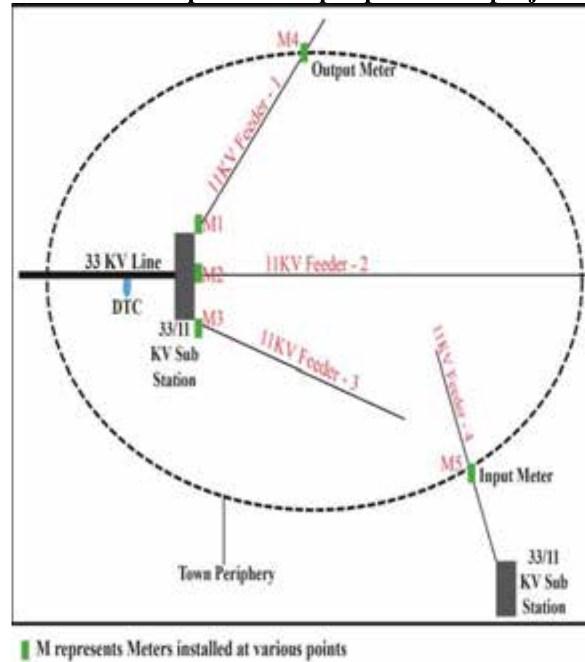
2.2.3. AT&C losses comprise of technical and commercial losses. Technical losses occur at transformation and distribution levels due to inherent resistance and poor power factor in the electrical network, while commercial losses arise mainly on account of unaccounted consumption of energy. This occurs due to discrepancy in meter reading, tampering of meters and theft by direct hooking.

In order to measure the energy supply and consumption accurately in the project area[42], ESCOMs were required to ensure that energy input points of the project area's electricity network *viz.* incoming lines of 33/11 kV sub-stations and 33 kV and 11 kV feeders supplying power to the project area were metered. ESCOMs were also to ensure that project areas were electrically ring fenced to measure net input energy (difference of energy input and output) of the project area through installation of import/export meters at the boundary of those lines that are feeding outside as well as inside project area. A schematic diagram showing the input and output points in a typical project area is depicted below:

[41] Bangalore Electricity Supply Company Limited (BESCOM), Chamundeshwari Electricity Supply Corporation Limited (CESC), Gulbarga Electricity Supply Company Limited (GESCOM), Hubli Electricity Supply Company Limited (HESCOM) and Mangalore Electricity Supply Company Limited (MESCOM).

[42] Project area is the area of the town covered under Part-A of the Programme.

Chart No:2.2.1: Input and output points in a project area



The System Requirement Specifications (SRS) issued by PFC under the Programme provide guidance for automation of the existing business processes and invoking appropriate IT resources associated with it to be implemented under Part-A of the Programme. SRS stipulated 17 essential IT modules[43] for collection of base line data, energy accounting, auditing and establishment of customer care centres.

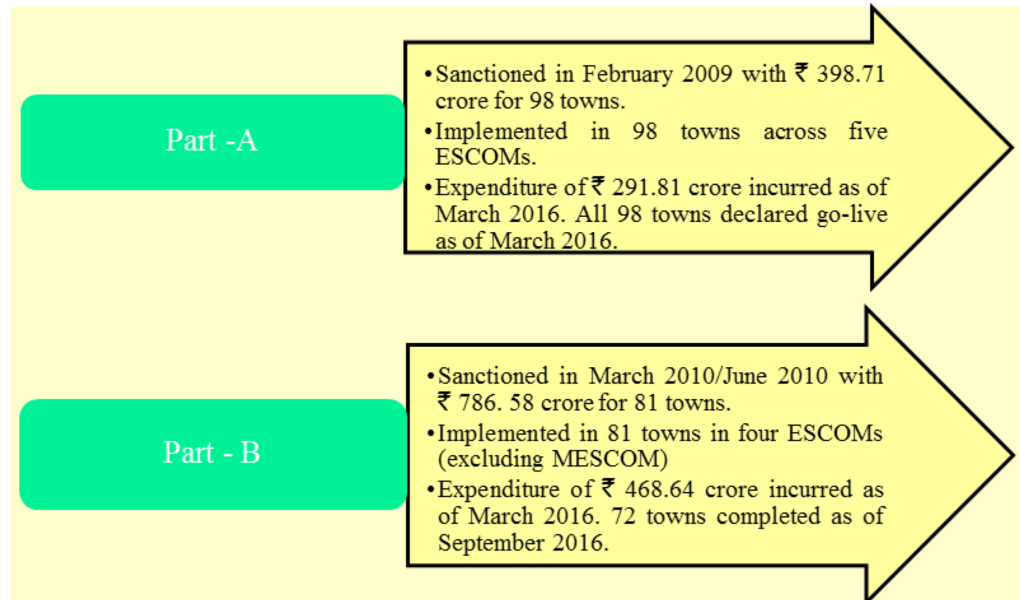
BESCOM, which was the nodal agency to implement Part-A on behalf all the five ESCOMs, appointed (December 2009) Infosys Technologies Limited as Information Technology Implementing Agency (ITIA) entrusting the following responsibilities to it:

- Ensure quality and expeditious implementation;
- Installation and configuration of software, hardware and other equipments at Data Centre and Disaster Recovery Centre and various other locations specified by ESCOMs;
- Survey, asset mapping and creation of digitised maps incorporating customer and asset information and
- Installation of data acquisition equipments at sub-stations, Distribution Transformer Centres (DTCs), sub-division offices of the ESCOMs and consumers.

[43] Meter Data Acquisition, Energy Audit, New Connection, Disconnection & Dismantling, GIS based customer indexing and asset mapping, GIS based integrated network analysis, Centralised Customer Care Services, Management Information System, Web Self Service, Identity and Access Management System, System Security Requirement, Metering, Billing, Collections, Asset Management, Maintenance Management.

Status of implementation

2.2.4. The status of implementation of the Programme is as depicted below:



The scheduled dates, February 2012 and June 2013 for completion of Part-A and Part-B respectively, were extended several times during the course of implementation, the latest deadlines being March 2016 and September 2016 for Part-A and Part-B respectively.

GoK sought (August 2016) extension of time from PFC upto March 2017 for completion of Part-A of the Programme. For Part-B, extension was given upto September 2016 for seven towns under GESCOM and two towns under CESC but further extensions were sought upto December 2016 and March 2017 respectively, which were awaited (December 2016).

Audit Objectives

2.2.5. The Audit objectives were to assess whether:

- The planning for implementation of the Programme was adequate;
- The Programme has been implemented in an efficient, effective and economical manner to achieve the intended objectives.

Scope of Audit

2.2.6. The scope of audit involved review of records at the corporate offices of the five ESCOMs and at the selected units (refer **Appendix-5)** under these ESCOMs for the period 2009-16[44]. Thirty out of 98 towns (projects) under Part-A and 26 out of 81 towns (projects) under Part-B were selected for detailed audit using monetary unit sampling prioritising projects with higher

[44] As the implementation commenced in 2009 and audit of the Programme is being taken up for the first time, the Performance Audit covered seven years upto March 2016.

cost. The sample was selected ensuring minimum of 25 *per cent* of the total towns each under Part-A and Part-B covering all the five ESCOMs except MESCOM in case of Part-B.

Audit Methodology

2.2.7. The methodology adopted for attaining the audit objectives involved discussing audit objectives with the Government and the top management, scrutiny of records at ESCOMs and their units and issue of audit observations.

We explained the objectives of the Performance Audit to the Government and to the Management of the ESCOMs during an Entry Conference[45] held on 19 June 2015. The draft Audit Report was discussed with the Government in the Exit Conference held on 16 January 2017.

Audit has been conducted in conformity with the Auditing Standards issued by the Comptroller and Auditor General of India.

Audit Criteria

2.2.8. The Audit criteria considered for assessing the achievement of the audit objectives were derived from the following sources:

- The programme guidelines issued by MoP, GoI;
- Guidelines, orders and specifications issued by PFC;
- Detailed Project Reports (DPRs), Tender conditions and Contract agreements.

Acknowledgement

2.2.9. Audit acknowledges the cooperation extended by the Energy Department of the GoK and the Managements of the ESCOMs in facilitating the conduct of Performance Audit.

Audit Findings

2.2.10. The audit findings are discussed in the succeeding paragraphs. The views of the Government and Management wherever received have been considered and suitably incorporated in the Report.

Planning and Implementation of Part-A

2.2.11. Part-A of the Programme essentially involved implementation of 17 IT modules for data acquisition, new connections/disconnections, energy accounting and audit, network analysis management, maintenance management, asset management, Management Information System (MIS), metering, billing, collection, *etc*.

[45] Entry Conference was held at the time of finalisation of all India Performance Audit. No separate Entry Conference was held with the Government for the State Report.

This entire exercise was aimed at establishing base line data collection system for the distribution utilities so that they are able to capture AT&C losses in a precise manner without manual intervention and also to plan and implement corrective measures in Part-B.

Audit findings on implementation of Part-A of the Programme are discussed in Paragraphs 2.2.12 to 2.2.22.

Implementation of the Programme without completion of pilots

2.2.12. The ESCOMs had taken up implementation of Part-A in one town in each of the ESCOMs as pilot project *i.e.* Bengaluru (W4 sub-division) (BESCOM), Mandya (CESC), Kalaburgi (GESCOM), Dharwad (HESCOM) and Shikaripura (MESCOM). As per the General Conditions of Supply, the ITIA was expected to complete the pilot implementation within 12 months from the dates of award of contract by the ESCOMs. The ESCOMs issued Detailed Work Awards (DWA) between February 2010 and May 2010 with a stipulation to complete the same within 12 months. The purpose of pilots was to assess the feasibility or otherwise of the Programme before embarking on a large scale implementation.

We observed that the pilot implementation in respect of four of the five[46] towns selected was completed with delay ranging from two to five years from the scheduled dates. The reasons for delay are given below:

Table No.2.2.1: Reasons for delay in completion of pilot projects

Town	Date of DWA	Due date of completion	Date of 'go-live'	Reasons for delay
Dharwad (HESCOM)	May 2010	May 2011	March 2016	• Issue of material (hardware and software) by ITIA started only in June 2011 • Existing data on assets and consumers were migrated to RAPDRP system only in October 2011 • ITIA delayed survey of consumers and all data generated did not match with the records of HESCOM. Even the data on commissioning of DTC were not recorded. • Consumer indexing was done in March 2012.

[46] In BESCOM, pilot project was done in a sub-division in Bengaluru town but declaration of completion was made for Bengaluru town as a whole, hence not considered for review in audit.

Town	Date of DWA	Due date of completion	Date of 'go-live'	Reasons for delay
				• Delay in installing DLMS compliant meters in DTCs, HT consumers and Boundary meters (February 2013). • Delay in migration of incremental assets. The work has not been completed (February 2017).
Kalaburgi (GESCOM)	March 2010	March 2011	March 2016	• Delay in Geographic Information System (GIS), asset mapping, consumer indexing and validation of data. The works have not been completed (February 2017). • Delay in migration of existing data to RAPDRP system. • Delay in metering DLMS compliant meters to DTCs, HT consumers and Boundary meters.
Mandya (CESC)	March 2010	March 2011	January 2013	
Shikaripura (MESCOM)	May 2010	May 2011	March 2013	• Delay in DTC metering (completed in July 2014). Delay in migration of incremental assets and non mapping of consumers to DTCs /feeders. The works have not been completed (February 2017).

On account of non-completion of the pilots within the scheduled time, the ESCOMs could not gauge potential hindrances in the implementation of Part-A of the Programme in other towns. Even though two pilot projects (Mandya and Shikaripura) were declared 'go-live', these towns were also facing the same problems as the other towns as all the functions in the Modules were not operationlised fully and User Acceptance Test (UAT) was not completed successfully.

The implementation in the other towns had commenced simultaneously with the pilot projects without resolving the bottlenecks encountered in the pilots. The ESCOMs faced problems such as missing/ drop out of consumers during uploading and downloading to the system, delay in processing of collections

received through off-line cash counter solutions, problems in bulk printing of High Tension (HT) bills, frequent failure of connectivity and link to server, issue of erroneous bills to consumers, non-user-friendly software, non-generation of Low Tension bills in the system, long pending new connections, incomplete customer history, *etc*.

These problems could have been mitigated to a greater extent and the delay in completion of the Programme in other towns avoided or reduced, had the pilots been completed first and the problems and solutions analysed before taking up full scale implementation.

The Government replied (February 2017) that the project being vast, time was needed to resolve issues and the field staff were not able to understand the software fully. Pilot implementation and go-live in particular were delayed owing to incomplete field activities in pilot towns. However, towns other than pilots were declared go-live based on completion of field activities and software solution without waiting for all the activities to be completed in the pilot towns. The reply is not correct as the towns were declared as 'go-live' even before completion of the works as explained in Paragraph 2.2.13 below.

Declaration of towns 'go-live' without completion

2.2.13. ITIA was responsible to supply, install and commission one integrated solution within the framework provided in the SRS issued by PFC. As per the SRS (Para 3.5 of General Technical Specifications), a town was to be declared 'go-live' when the software was run with actual live data at site for three months without any bugs.

We observed that BESCOM declared (between January 2013 and March 2014) 60 of the 98 towns 'go-live' and the balance 38 towns in March 2016 without ensuring that all the functions in the modules were operational and UAT had been run successfully in the production environment. The ESCOMs' action of declaring the towns 'go-live' was not in order for the following reasons:

1. As per the SRS, 1,731 functions were to be implemented in 17 modules across all ESCOMs. As per the SRS, to declare 'go live', 100 *per cent* functions were to be implemented. As of October 2016, only 11 of 17 modules had been completed to the extent of 90 to 100 *per cent* of the functions. In the remaining 7 modules, completion was between 58 and 88 *per cent* due to meter and modem issues, slowness of GIS *etc*. (refer **Appendix-6)**.

2. UAT is a software testing process where the system is tested for acceptability and validates the end to end business flow. UAT was proposed to be conducted in the production environment. As per the SRS, ITIA was to fix all errors identified from UAT and get approval from the ESCOMs before declaring 'go-live'. We observed that as per the latest UAT, 73 out of the proposed 443 tests were pending execution (October 2016), yet the towns were declared 'go-live' (refer **Appendix-7**).

3. In HESCOM, only 843 of the 4,852 modems at DTC/feeder level installed in 26 go-live towns were communicating data. HESCOM had questioned (between April 2014 and September 2014) BESCOM over the validity of declaring these towns 'go-live' without resolving such problems. Similarly, GESCOM complained (May 2014) to BESCOM on non-functioning of the modems. The billing of HT consumers was carried out manually by taking readings from consumer premises which were then uploaded into the system as the modems installed were not communicating data properly. Thus, towns had been declared 'go-live' without accounting for the deficiencies in the functioning of the system.

   In respect of the observations (Sl.No.1 and 2 above) the Government replied (February 2017) that the current status of SRS and UAT compliance was 95.84 *per cent* and 94 *per cent*, respectively, considering all the ESCOMs. The Government also stated that in CESC, the major functionalities of the core utility business were not affected and hence, declaration of go-live in other towns was taken up. The reply confirms the audit observation that works had not been completed even till date (February 2017). The Government has not replied to the observation at Sl.No.3.

4. Further analysis by Audit on the functioning of one of the modules *viz*. New Connection module implemented by the ESCOMs revealed that the module was not functioning as per the SRS. As per the SRS, when the service order for a new connection approval was generated, the system should trigger the billing module to generate a bill. Audit test check of data of two/three months[47] in each of the ESCOMs during 2015-16 and 2016-17 revealed that out of 53,212 new connections released, issue of first bill was delayed in 7,240 cases by three months to three years.

   The Government replied (February 2017) that currently in 97.56 *per cent* cases of new connections, first bill is generated and the meters were not read in respect of LT-7 and spot billing machine due to operational issues.

2.2.14. As per the SRS, the ITIA was required to provide the services through Facility Management Service (FMS) so as to manage the entire IT system and enable ESCOMs to realise the desired business objectives. Further, as per General Terms and Conditions of payment schedule, all payments for FMS should only be made after submission of the Energy Audit Reports from the date of declaration of 'go-live'. We observed that 60 towns in the five ESCOMs had been declared 'go-live' during January 2013 to March 2014. This was in spite of the problems in modems, unsuccessful User Acceptance Tests and non-generation of Energy Audit Reports. As these towns were declared 'go-live', the ESCOMs paid ₹ 2.52 crore[48] to ITIA towards FMS

[47] BESCOM (May June, July 2015/June, July, August 2016); CESC (June, July 2015/March, April 2016); GESCOM (July, August 2015/May, June, July 2016); HESCOM (April, May, June 2016); MESCOM (July, August, September 2015/March, April, May 2016).

[48] BESCOM (₹ 0. 25 crore) CESC (₹ 1.37 crore), and GESCOM (₹ 0. 90 crore).

charges for the period June 2013 to September 2014, which was irregular as the ESCOMs were yet to generate Energy Audit Reports.

The Government replied (February 2017) that the FMS for all the towns were being considered from the date of go-live, i.e. from April 2016 ending in March 2021 and ITIA had agreed for the same. The payments made earlier towards FMS were being adjusted based on Service Level Agreement Audit Report in ESCOMs.

Metering

2.2.15. The Programme envisaged installation of Automatic Meter Reading (AMR) compatible energy meters with Device Language Message Specification (DLMS) at Distribution Transformer Centers (DTCs) and feeders in the project areas. AMR is the technology of automatically collecting consumption from meters and transferring that data to a central database for billing, analysing, *etc*. DLMS is the communication standard for meter data exchange. We observed that ESCOMs had delayed the installation of these meters resulting in delay in completion of the Programme as observed in Paragraphs 2.2.16 and 2.2.17.

DTC metering

2.2.16. The supply and installation of DLMS compliant AMR meters at DTCs was in the scope of the ESCOMs. Four ESCOMs[49] (BESCOM, GESCOM, HESCOM and MESCOM) initially (December 2009) identified 23,052 unmetered DTCs and proposed to install DLMS compliant AMR meters at these DTCs. Subsequently, during the course of installation of modems in the existing meters, the ITIA found (January 2013) that the existing meters at the DTCs (34,001 Nos.) were not DLMS compliant and hence these too needed to be replaced.

We observed that the non- compliance of the existing meters with DLMS was ignored by the ESCOMs while deciding (December 2009) to install meters at the unmetered DTCs. This contributed to the delay in the completion of the Programme as the non-compliant meters continued to be replaced by DLMS compliant AMR meters until 2015-16. Audit observations on replacement of meters are discussed in the table below:

Table No.2.2.2: Observations on replacement of DTC meters

ESCOM	Date of purchase order	Date of completion	Audit remarks
BESCOM	September 2011/ April 2013/ August 2013	October 2013	• The contractor completed metering of only 11,708 unmetered DTCs out of 15,369 even after extending the contract period from December 2011 to March 2013. BESCOM had completed the work departmentally in

[49] In case of CESC, no observation was made.

ESCOM	Date of purchase order	Date of completion	Audit remarks
			October 2013. • BESCOM failed to levy penalty of ₹ 1.22 crore on HPL Electric and Power Private Limited (contractor) for the delay and non-completion of work. The Government replied (February 2017) that penalty was being levied for the delayed works. • The decision to replace the existing non-compatible meters with DLMS compliant meters was taken in April/August 2013, *i.e.* after one year and six months from the scheduled date of completion of Part-A and the work was completed only in October 2013.
GESCOM	March 2012/ August 2013	November 2012/ December 2013	• GESCOM took ten months to cancel (March 2011) the initial tender (May 2010) for metering DTCs after finding that the meters supplied by the bidder were not as per required specifications. Second tender invited (March 2011) was cancelled in July 2011 due to blacklisting of the successful bidder by Andhra Pradesh Distribution Supply Companies. The delayed decision had delayed the DTC metering further which was completed in November 2012. • The purchase order for 6,500 DLMS compliant DTC meters was placed only in August 2013 to replace the existing meters and the work was completed in December 2013. The Government replied (February 2017) that ITIA advised to replace all legacy meters with DLMS meters only after a delay of a year which led to delay in completing DTC metering.
HESCOM	September 2011	February 2013	• The initial tenders invited in December 2010 and January 2011 separately for supply of 10,100 meters and their erection were cancelled (April 2011) to invite a single tender for synchronizing the supply and erection. This post-bid decision had not only delayed

ESCOM	Date of purchase order	Date of completion	Audit remarks
			replacing the meters but also caused additional cost of ₹ 1.45 crore[50].
MESCOM	May 2013/ February 2014	July 2014	• The initial Detailed Work Award (DWA) issued in August 2012 based on the rates finalised by another ESCOM (HESCOM) was not accepted by the contractor. Hence revised DWA had to be issued with revised rates in May 2013 causing delay. • The work, which was to be completed in July 2013 was completed only in July 2014 as there was delay in line clearance by MESCOM. • The work of replacement of 2,580 existing non-compatible DTC meters, taken up in February 2014, was completed in July 2014. 194 DTCs of 250 kVA and above were still to be metered (September 2016). The Government replied (February 2017) that currently all the DTCs were metered with DLMS compatible meters, 75 *per cent* communication was established and troubleshooting exercise was in progress.

Feeder level metering

2.2.17. The ESCOMs had 2,353 numbers of 11 kV feeders as of March 2016 emanating from 220/132/110 kV sub-stations belonging to Karnataka Power Transmission Corporation Limited (KPTCL). These feeders serve as the input energy points to the project areas.

During integration of data between Supervisory Control and Data Acquisition[51] (SCADA) and DTCs to get feeder level energy audit reports, the ESCOMs observed (November 2012) that correct energy data were not available from the existing SCADA system as all the feeders were not connected to the SCADA system. Hence, meter reading was being taken manually every month and uploaded into the RAPDRP system for determining

[50] This represents differential cost on 10,100 meters quoted in the subsequent tender and initial tender {10,100 x (₹ 5,200 - ₹ 3,264) = ₹ 1.96 crore} *less* savings made on erection portion {10,100 x (₹ 7,391 - ₹ 7,899) = ₹ 0.51 crore}.

[51] SCADA is a system for remote monitoring and control that operates with coded signals over communication channels. The State Load Despatch Centre (SLDC) is responsible to ensure integrated operation of the power system in Karnataka. SLDC facilitates Real time Load Despatch functions, Operation and Maintenance of the SCADA System and Energy Accounting.

the AT&C losses in the project area. Even after this exercise, AT&C loss figures continued to be erroneous due to errors in uploading the data into system.

Replacement of the existing meters with DLMS compliant AMR meters was discussed (October 2014) between ITIA, Energy Department, GoK and ESCOMs to replace all the input meters. BESCOM, on behalf all ESCOMs, decided (April 2016) to do a Proof of Concept[52] (POC) by installing modems and Sim to the existing meters themselves. However, during the installation of modems, it was observed (May 2016) that the existing meters were not communicating data. The matter was kept unresolved as the decision to replace the existing meters with DLMS compliant AMR meters and to integrate them with the SCADA system had not materialised (September 2016).

We observed that the ESCOMs had delayed the decision to replace the feeder level meters. The ESCOMs will not be able to measure accurate AT&C losses in the towns where the Programme was implemented unless DLMS compliant AMR meters are installed at feeders.

The Government replied (February 2017) that in CESC integration of RAPDRP system with SCADA was done for 80 feeders, the extent of communication being 50 *per cent*. Further, decision had been taken to replace all non DLMS feeder meters and tender has been invited in November 2016.

Incomplete mapping of consumers

2.2.18. The feeders and DTCs had to be linked (mapped) to the connected consumers so that input and output energy from the feeders and DTCs could be assessed with reference to actual consumption and losses controlled. Consumer mapping enumerates the total number of consumers and tags them to their respective DTCs/feeders. The purpose of consumer mapping is to identify revenue leakages by way of identifying consumers who are not billed or billed under improper category and to generate a master list of consumers.

We observed that 7.41 lakh out of 85.59 lakh installations (consumers) in the MIS customer base were either not mapped or wrongly mapped to the Feeders /DTCs across five ESCOMs as of October 2016. As a result, the AT&C losses at feeder and DTC levels were not accurate as the consumption of unmapped consumers had not been taken into account. HESCOM accepted (December 2015) that all the consumers were not mapped to DTCs.

The Government replied (February 2017) that in BESCOM, around 4.5 lakh incremental consumers were updated in all modules and the remaining would be completed by March 2017. In CESC, 62,034 consumers out of 1,30,000 identified by ITIA had been mapped and the balance were under progress. In MESCOM, pending consumers would be mapped in incremental survey and in GESCOM, the process of tagging of all consumers to feeders and DTCs was still under progress.

[52] This is a method to test whether the data could be migrated to the new system.

Failure of modems

2.2.19. As per the SRS, modems were to be integrated with meters to facilitate remote reading of meter data on GPRS network as part of the Meter Data Acquisition System (MDAS) module. As per Request for Proposal (RFP), 59,520 GPRS modems had to be supplied by the ITIA for all ESCOMs. Accordingly, ITIA installed (August 2010 onwards) modems in DTCs, boundary meters and HT consumers under all the five ESCOMs.

ESCOMs found that the modems were unable to communicate data and the matter was referred (September 2013) to the Central Power Research Institute (CPRI) by BESCOM to identify the reasons for the failure of these modems. CPRI reported (January 2014) that faulty earthing at the DTCs was the reason for the failure. ITIA agreed (March 2015) in principle to pay the cost of the modems. BESCOM procured (June 2015) new modems through a tender for all ESCOMs and installation was completed by ESCOMs (March 2016). As a result, the whole process took almost six years.

The day-wise analysis of functioning of modems during the period March 2016 to July 2016 in five ESCOMs[53] revealed that the number of modems communicating data was very poor as detailed below:

Table No. 2.2.3: Range of communication of modems

ESCOM	DTC	Boundary meters	HT consumers
	Number of modems communicating data (as percentage)		
BESCOM	0-72	8-55	13-71
CESC	53-54	Meters were not read	21-72
GESCOM	38-41	Meters were not read	21-76
HESCOM	15-54	4-44	3-45
MESCOM	67-70	0-70	16-54

As seen from the above, the communication percentage under DTC in BESCOM was 0-72 which means that no modems were communicating at a given point of time and a maximum of 72 *per cent* of the modems had communicated during July 2016. Similarly, the communication percentage in other ESCOMs was very poor.

Thus, there was delay in installation of modems and the installed modems were still to function to their potential. This had delayed the entire process of analysing the results of meter reading and AT&C losses (August 2016).

The Government replied (February 2017) that the percentage of communication in respect of HT modem and DTC modem respectively was 77.54 and 69.21 in BESCOM, 88.88 and 58.57 in HESCOM, 95 and 60 in CESC, 97 and 75 MESCOM and 86 and 66 in GESCOM at present.

[53] Audit analysis was done for one month in each of the ESCOMs – BESCOM (July 2016), CESC (March 2016 and June 2016), GESCOM (June 2016), HESCOM (May 2016), MESCOM (April 2016).

Poor network services

2.2.20. The scope of ITIA included provision of Local Area Network at Data center, Customer care centers, Sub-division, Division, Circle, Headquarters and other offices of the ESCOMs as per their requirement, along with creation of Virtual Private Network/Multi Protocol Label Switching (VPN/MPLS) based Wide Area Network (WAN) solution.

A tripartite agreement was entered (May 2011/June 2011) into between ESCOMs, ITIA and Network Bandwidth Service Providers (NBSP) *i.e.* Reliance Communications Ltd. and Hughes Communications India Ltd. for primary and secondary network facilities respectively for five years with effect from May 2011. Accordingly, Reliance Communications Ltd. had established 803 links[54] in the ESCOMs. We observed that:

- Internet connectivity was very poor affecting various modules *viz.* GIS, New Connections, *etc.* and also the functioning of the cash counters at the Divisions and Sub-divisions of the ESCOMs. Based on the advice of ITIA, BESCOM, on trial basis enhanced the bandwidth from two mbps to four mbps in 15 places. Even after increasing the bandwidth at additional cost, the service was not satisfactory. Further, 107 out of the 803 links failed to function. This had affected the day-to-day activities of ESCOMs. As a result, the ESCOMs were using alternate service providers.

- Hughes Communications, the secondary NBSP who was to provide alternate network and bandwidth services in case of failure of the primary network, had also failed to provide effective alternative network solution. It had not established network services in more than 35 *per cent* of the places across all the ESCOMs as of September 2015 *i.e.* after a lapse of four years from the signing of the agreement. In BESCOM and MESCOM, it had delivered only 250 out of 399 links of which only 68 links were active. It had not delivered the balance 149 links.

- BESCOM issued (October 2015) Letter of Intent to Bharati Airtel Ltd., New Delhi for a period of five years to replace Hughes Communications as secondary NBPS for all the five ESCOMs. The other ESCOMs, however, had issued DWAs belatedly. CESC issued DWA in February 2016, MESCOM in April 2016 and HESCOM in June 2016, while GESCOM was yet to issue DWA (August 2016). Bharati Airtel Ltd. has not created infrastructure yet for secondary network (August 2016).

We observed that the ESCOMs continued to work with inadequate primary network service. As a result of poor network services, the process of declaration of 'go-live' had also been delayed.

[54] Links refer to the points where the networking is established in a particular office – section office, sub-divisions, divisions, *etc*.

The Government replied (February 2017) that in view of poor performance, the secondary NBSP was replaced with Bharti Airtel Limited and provisioning of 297 links and up-gradation of band width is in progress. In case of primary NBSP, provisioning of 88 links of ESCOMS was in progress.

Failure to update incremental assets

2.2.21. Consumer indexing and asset mapping for the existing consumers and assets were in the scope of ITIA. The GIS database for network assets and consumers up to 2010-11 was generated by ITIA. The incremental consumers and assets added during the course of implementation were to be updated by the ESCOMs and migrated to RAPDRP system. We observed the following:

- BESCOM awarded the work of updating the incremental data to North South GIS (India) Pvt. Ltd., Hyderabad at a cost of ₹ 12.49 crore on behalf of all the five ESCOMs[55] in January 2015. As per the work order, data was to be obtained and updated in the GIS on a half-yearly basis for a period of two years from the date of award of work. BESCOM, MESCOM and CESC completed the first cycle of updation of six months data in May 2016, HESCOM in June 2016 and GESCOM has not completed the first cycle in one town (Kalaburgi) against two cycles to be completed.

  We observed that the ESCOMs took up the job of updation of assets only in January 2015 *i.e.* after a lapse of three years from the scheduled date of completion (February 2012) of Part-A of the Programme, instead of updating the assets simultaneously with their addition. The delay in/non-updation of assets into RAPDPR system had resulted in delay in completion of the Programme and determining accurate AT&C losses.

  CESC replied (January 2017) that second cycle of migration into GIS data base has been completed. CESC, however, was yet to complete the balance three cycles. The reply from other ESCOMs was awaited (February 2017).

- In six[56] out of 11 towns covered by MESCOM under Part-A, the available data with MESCOM on incremental assets was handed over to ITIA in May 2011 for migration and integration with RAPDRP system. ITIA, however, belatedly found (December 2013) that the data furnished by MESCOM was available only upto 2010 and the incremental assets after 2010 needed to be furnished by MESCOM. MESCOM stated (December 2013) that many additions in the assets had been effected subsequent to handing over of the data to ITIA and furnishing the incremental data was very difficult. The Board of MESCOM decided (January 2015) to conduct a fresh survey of the assets and to invite a short term tender. Accordingly, DWA was issued

[55] In case of MESCOM, only for five out of eleven towns implemented under the Programme (Bantwal, Puttur, Shikaripura, Kadur and Tarikere) were taken up along with other ESCOMs and the balance six towns was taken up by MESCOM separately.
[56] Mangaluru, Udupi, Shivamogga, Bhadravathi, Chickmagalur and Sagar.

(May 2015) to North South GIS (India) Ltd., Hyderabad through the tender process at a price of ₹ 2.85 crore with scheduled date of completion of six months.

We observed that in the first place MESCOM delayed handing over of the data to ITIA by two years (date of commencing the Programme-February 2009 to May 2011) and secondly, it did not ensure that the existing data on six towns was updated before being handed over to ITIA. Further, there was delay of four years (May 2011 to May 2015) in deciding to go for fresh survey for which ITIA was also responsible (May 2011 to December 2013) by way of not informing MESCOM about incomplete data. As consumer indexing and asset mapping was critical for determining AT&C loss, the delay on the part of ESCOMs to update the incremental data had defeated the very purpose of the Programme. The ESCOMs could not determine accurate AT&C losses in the absence of updated data.

The Government replied (February 2017) that proposal to constitute a separate GIS cell for updating the activities of assets and consumers in GIS application was underway. Second phase updating in eleven towns was under progress in MESCOM while it was now taken up in GESCOM and 11 out of 14 substations had migrated in CESC in December 2016.

Consumer facilities

2.2.22. As a part of post go-live requirement, consumers would be able to lodge complaints relating to metering, billing, disconnections, energy theft, *etc.* by calling a toll free consumer care centre. Further, as per the SRS, Intelligent Display Management System (IDMS), touch screen and cash/cheque collection kiosks were to be installed at customer care centers.

We observed that even though ESCOMs had provided a 24x7 customer care helpline, the number provided to consumers (1912) was chargeable to the consumers. Further, the IDMS touch screen and cash/cheque collection Kiosk to be supplied by the ITIA had not been supplied.

As a result, the facilities to the consumers as envisaged in the Programme were denied.

The Government replied (February 2017) that toll free number in BESCOM was implemented in September 2016 while in GESCOM, MESCOM and CESC it has been implemented in February 2017 and in HESCOM it was in progress. It stated that the ITIA had not provided KIOSK for IDMS despite several reminders.

Implementation of Part-B

2.2.23. Part-B of the Programme involved identification of high loss areas, preparation of investment plans for identified areas, implementation of the plan and monitoring of losses. The works under Part-B included strengthening of distribution net work involving renovation, modernisation and strengthening of 11 kV level substations and DTCs, reconductoring of lines at 11kV level and below, replacement of electro-magnetic energy meters with tamper proof electro-static meters, *etc*. The ESCOMs envisaged total energy savings of ₹ 197.26 crore after completion of the works under Part-B in 81 towns sanctioned under the Programme. The guidelines also stipulated that the ESCOMs should pass on part of the financial benefits arising out of reduction in AT&C losses to the consumers of the project area.

We observed that ESCOMs had failed to prepare proper estimates causing revision more than once and delay in awarding contracts. They had further failed to complete the works within the scheduled time. The envisaged energy savings have not been achieved so far due to non-completion of works depriving the consumers the financial benefit thereof. Audit findings on implementation are discussed in the succeeding Paragraphs 2.2.25 to 2.2.37.

Deficient planning

2.2.24. PFC sanctioned DPRs of 81 towns between March 2010 and June 2010 for implementation of the works under Part-B. We observed that considering a reasonable period of six months to finalise the tenders from the date of sanctioning of the DPRs, the ESCOMs awarded the contracts after a lapse of five to 21 months, which contributed to delay in completion of the works (refer **Appendix-8).** The reasons for the delay as analysed by Audit revealed the following lapses.

Improper decision

2.2.25. The initial estimate prepared (March 2010) for executing the works in 21 towns of GESCOM was revised (December 2010) by including a new work of shifting existing consumer meters from the premises of the consumers to the nearest distribution pole to reduce theft of power. Accordingly, tenders were invited (April 2011) and work was awarded (February 2012). The Board of GESCOM, however, decided (April 2013) to drop this new work as meter reading would be impractical if the meters were shifted to the poles. As a result, these works were removed from the scope of the contract subsequent to award of the contract.

We observed that the decision to shift the consumer meters to the poles was taken without assessing its feasibility. Further, the decision to drop the work of shifting consumer meters to the poles from the contract, taken after 14 months of awarding the work, was not communicated to the contractor. As a result, the contractor supplied (March 2014) pole mounted meter boxes worth ₹ 0.62 crore, which were not put to use resulting in unfruitful expenditure.

The Government replied (February 2017) that instructions have now been issued to all offices for making use of tamper proof boxes but the reply was silent on the removal of pole mounting work from the scope of work.

Poor estimation

2.2.26. In CESC, DPRs were sanctioned (March 2010) for an estimated cost of ₹ 179.57 crore for all the 12 towns. Tenders were invited in July 2010 at a cost of ₹ 167.97 crore for strengthening of the electrical distribution network (Tender Enquiry No.30 to 36) and replacing the existing consumer electro-mechanical meters (Tender Enquiry No.37 to 40) with tamper proof electro-static meters.

The award of contract was, however, delayed by 13 to 20 months (refer **Appendix-8**) as the sanctioned DPRs were revised subsequently due to improper estimates, amendments to bid conditions, multiple extension of bid validity, *etc.* as detailed below:

- Huge variations in estimates amongst the towns and revision of the estimate to ₹ 149.67 crore, retendered in August 2010;
- Amendments to tender (August 2010/September 2010/November 2010/December 2010);
- Revisions of terms of payment clauses, taxes and duties and general and special conditions of the bid (October 2010/November 2010);
- Extension of time for submission of tenders continuously between November 2010 and February 2011 based on the request of the bidders and
- Modification of specifications of mounting structures to be used for transformers (December 2010).

The Government replied (February 2017) that amendments to tender conditions were issued to ensure competitive bidding for effective implementation of the Programme which resulted in delay. The reply is not acceptable as the amendments were the results of poor estimation by CESC.

Unwarranted cancellation of tender

2.2.27. The tenders invited (July 2010) for strengthening works of the distribution network in CESC covered three towns *viz.,* Channarayapatna, Arasikere and Hassan at an estimated cost of ₹ 9.36 crore. The lowest bid of ₹ 11.67 crore, when placed (July 2011) before the Board of CESC, raised the issue of abnormal quantities in the estimates. The matter was referred to a subcommittee which observed (July 2011) that the estimates based on which the tenders had been called were reasonable and fairly accurate. The Board, however, decided (November 2011) to cancel the tender without assigning reasons. The work was retendered (January 2012) and awarded (August 2012) at ₹ 16.41 crore while the lowest offer received in the initial tender was ₹ 11.67 crore.

We observed that the Board had decided to cancel the initial tender without recording any reasons despite the Subcommittee's feedback stating that the variations were within the permissible limits. The decision of the Board not only resulted in delay in awarding of the contract by one year (July 2011 to August 2012) but also caused extra financial burden of ₹ 4.74 crore.

The Government replied (February 2017) that the re-tender was due to dissent of one of the subcommittee members (out of total 3 members). The Government's reply is not acceptable as the dissent note was not on record.

Revision of estimates

2.2.28. HESCOM invited (December 2011) tenders for executing the works in 24 towns on partial turnkey basis with the stipulation that transformers be procured from Karnataka Vidyuth Karkhane Limited, a State PSU and single phase/three phase meters from retail outlets authorized by HESCOM. As there was no response for the tender, HESCOM re-invited (January 2012) the bids for executing the works in 24 towns by amending the tender conditions from partial turnkey to total turnkey basis. The works were awarded in June 2012 at a cost of ₹ 50.61 crore.

We observed that HESCOM invited tenders in December 2011 *i.e.* after a lapse of one and half years from the date of approval (March 2010/June 2010) of DPRs. The delay in inviting tender was due to multiple revisions in the estimates. Third party evaluation of base line AT&C losses of the towns included in the Programme done by CPRI revealed (November 2011) that six towns included in the Programme were not eligible for inclusion[57]. This caused revision in estimates as number of towns was reduced to 24 from 31 towns[58]. Further, HESCOM had reduced the quantities due to duplication of works included in the estimates which again caused reduction in estimated quantities. As a result, the initial sanctioned (March 2010) cost of ₹ 205.47 crore for 31 towns was revised thrice (between 2010-11 and 2011-12) and the cost had come down to ₹ 38.23 crore for 24 towns.

Thus, multiple revisions in estimates resulted in delay in awarding the contracts by more than one and half years from the date of sanctioning of DPRs. Further, reduction in estimated quantities had also resulted in avoidable payment of interest as commented on in Paragraph 2.2.39.

The Government replied (February 2017) that delay due to recalling the tender was only 25 days. The reply is not correct as the Government had considered the date of third party inspection (November 2011) to the date of inviting tenders (December 2011) instead of considering the date of approval of DPRs (March/June 2010) to the date of inviting tenders (December 2011).

[57] HESCOM calculated average AT&C losses for the whole year against the stipulation of continuous three billing cycles in a year.

[58] The initial estimated 31 towns were reduced to 30 towns by clubbing two towns (Rabkavi and Banahatti) into one.

Ineffective implementation

2.2.29. The ESCOMs awarded the works under Part-B for strengthening works of electrical distribution network including replacement of consumer electro-mechanical meters with tamper proof electro-static meters between March 2011 and August 2012. The stipulated period of completion ranged from 12 months to 24 months from the dates of award of works. The completion of works was delayed ranging from six months to 38 months (refer **Appendix-9),** besides cost escalation as discussed *infra*.

Delay in procurement of materials

2.2.30. GESCOM awarded (between February 2012 and May 2012) the contracts (nine packages) for executing Part-B works in 21 towns on partial turnkey basis at a total cost of ₹ 116.27 crore. The contracts involved reconductoring of 11 kV lines, installation of additional DTCs, replacement of existing meters with electro-static meters, *etc*. The works were to be completed within 11 months from the date of award. As per the contract, GESCOM had to supply electro-static meters and transformers for their erection.

We observed that GESCOM placed purchase orders for supply of meters in September 2013 at a cost of ₹ 25.25 crore, *i.e.* after the due date of completion of the contract period. The delay in placing the purchase orders was on account of delay in getting the test results of the sample electro-static meters from CPRI. The test results were received only in February 2013. GESCOM failed to get the test results expedited by not pursuing the issue and thereby caused delay in placing of purchase orders and completion of contracts.

Similarly, the orders for supply of transformers were placed in May 2012 at a cost of ₹ 7.49 crore with a scheduled completion of delivery upto November 2012 which was extended to February 2013. Supply of transformers was, however, made upto June 2014. We observed that the delay in placing purchase orders for supply of transformers was due to delay in deciding on type of transformers to be erected. GESCOM requested (August 2011) the Ministry of Power for accepting erection of conventional transformers instead of three star rated transformers as stipulated in the guidelines issued under the Programme. The Ministry of Power, however, did not respond to the request of GESCOM. Although the guidelines under the Programme stipulated that the distribution transformers should have efficiency level equivalent or better than that of three star ratings of Bureau of Energy Efficiency, GESCOM decided to erect conventional transformers which had delayed completion of work.

The Government replied (February 2017) that tenders were invited by GESCOM in November 2011 and that there was delay in getting the meters tested by CPRI. GESCOM wanted to match the lowest rates of CESC, hence Purchase Order was placed in September 2013. The reply is not acceptable as GESCOM failed to follow up with CPRI and delay in placing purchase order to match CESC rates was not a prudent decision.

Unfruitful expenditure on material

2.2.31. Autorecloser[59] and Sectionaliser[60] supplied at a cost of ₹ 6.11 crore to prevent the tripping of transformers in Davanagere town were not functioning. We observed that despite certification by the Executive Engineer of Davanagere division stating that Autorecloser and Sectionaliser were not functioning, BESCOM released (March 2016) payments to the contractors.

Similarly, the contracts in Ramanagara and Doddaballapura towns of BESCOM included laying Under Ground (UG) cable worth ₹ 1.89 crore, which were executed by the contractors (Shakala Infratech Pvt. Ltd. and Skill Tech Engineers & Contractors Pvt. Ltd.) in March 2012 and May 2012 respectively. The cable was found damaged during inspection by the Executive Engineer/Assistant Executive Engineer concerned as the work had not been done as per the specified norms. The payment against supply, however, was made (December 2011/February 2012/April 2012) in violation of contract conditions.

The Government replied (February 2017) that the work had been completed in January 2017. Regarding damaged UG cable in Ramanagara and Doddaballapura, it was replied that ₹103.09 lakh and ₹10 lakh respectively would be recovered from the pending bills of the Agency. However, the reply was silent on the issue of making payment before completion of the work.

Violation of contractual provisions

2.2.32. The turnkey contracts under Part-B awarded by the ESCOMs included supply and erection portion[61]. As per *Clause*-8 of the terms of the contracts on payment of supply portion, 50 *per cent* of the ex-works price of the material supplied should be paid on supply of the material and the balance on erection and commissioning of the equipment.

We observed that ESCOMs paid 75 to 92 *per cent* of the value of the material supplied in respect of contracts awarded in three towns *viz.* Ramanagara, Mysuru and Kollegal without the equipment being commissioned which was in violation of the contractual terms. Such extra payment amounting to ₹ 10.53 crore was made (between December 2012 and October 2014) based on the request of the contractors concerned as detailed below:

[59] Reclosers are used on overhead power distribution systems to detect and interrupt momentary faults. They improve service continuity by automatically restoring power to the line after a momentary fault.

[60] The sectionaliser is a self-contained, circuit-opening device used in conjunction with source-side protective devices, such as reclosers or circuit breakers, to automatically isolate faulted sections of electrical distribution systems.

[61] Included 11 kV reconductoring, installation and enhancement of DTCs, replacement of poles and LT phase conversion, *etc*.

Table No.2.2.4: Excess payment to contractors in violation of contract terms

Town	Contractor	Value of material supplied (₹ crore)	50 *per cent* of value of material (₹ crore)	Actual paid (₹ crore)	Excess payment (₹ crore)
Ramanagara	Skill Tech Engineers & Contractors Pvt. Ltd., Mysuru	6.43	3.22	5.92 (92 *per cent*)	2.70
Mysuru	Chadalavada Infratech Ltd., Hyderabad	29.08	14.54	21.80 (75 *per cent*)	7.26
Kollegal	Rajashekhar & Associates, Bengaluru	1.88	0.94	1.51 (80 *per cent*)	0.57

It was observed that taking advantage of receipt of payment in advance, these contractors had abandoned the works after payment without completing the erection portion. As a result, the contracts had to be short closed and awarded to other contractors contributing to the delay in completion and cost escalation as observed below:

- The contract of Part-B works in Ramanagara town of BESCOM was awarded in April 2011 at a cost of ₹ 12.04 crore with a stipulation to complete by March 2013. The contractor (Skill Tech Engineers & Contractors Pvt. Ltd., Mysuru) supplied material worth ₹ 6.43 crore and did not execute erection work. The balance work was re-awarded in June 2014 which had resulted in additional cost of ₹ 1.30 crore for their completion. BESCOM, however, failed to invoke risk clause and recover the additional cost from the first contractor. Penalty of ₹ 0.76 crore out of ₹ 1.20 crore leviable was also not recovered.

  The Government replied (February 2017) that due to non performance of works by Skilltech Engineers and Contractors Private Ltd., the work was short-closed. Liquidated damages of ₹ 2.15 crore would be recovered from the agency.

- In respect of Mysuru town of CESC, the contractor (Chadalavada Infratech Ltd., Hyderabad) completed only 25 *per cent* of the work (out of ₹ 98.36 crore awarded in January 2012) within due date (July 2013). CESC failed to terminate the contract despite poor progress. The contract was terminated only in June 2015 *i.e.* after more than one and half years from the scheduled date and balance work was re-awarded (October 2015) at an additional cost of ₹ 49.41 crore.

  The Government replied (February 2017) that action had been initiated to recover the assessed additional burden for re-tendering works, including penalty and liquidated damages for ₹ 80.41 crore.

- In Kollegal town of CESC, the contract awarded (January 2012) at ₹ 5.27 crore to be completed by January 2013, was short closed without risk and cost in March 2016 as the contractor (Rajashekar & Associates) did not show the required progress (financial progress as of March 2014 was only 54 *per cent*). CESC issued (between July 2013 and October 2015) several notices on shortfall in progress, but failed to either encash or renew the bank guarantee of ₹ 0.53 crore which was valid upto September 2015.

  The Government replied (February 2017) that action has since been initiated to recover the assessed additional burden for re-tendering works, including penalty and liquidated damages for ₹ 2.6 crore.

2.2.33. GESCOM and HESCOM did not invoke contractual provisions to penalise the defaulting contractors despite poor progress, which had resulted in non-completion of works within the scheduled date as discussed below:

- The Letter of Intent for the contract in Sindhanur town of GESCOM was issued in September 2011 with a stipulation to complete by August 2012 at a cost of ₹ 2.05 crore. The contractor (A2Z Maintenance & Engineering Services Limited, Haryana) did not commence the work even after the scheduled date of completion had passed. However, GESCOM allowed the contractor to continue to work without levying penalty for the delay. Further, the contractor was rewarded with (March 2016) additional quantities of ₹ 0.71 crore. The financial progress as of July 2016 was only ₹ 1.11 crore.

  The Government replied (February 2017) that works were allowed to be completed by the contractor in spite of delay by him as short-closing and getting the balance works done through another agency would have invited several bottlenecks. The reply is not acceptable as the work had still not been completed till December 2016.

- The works valuing ₹ 50.61 crore in 24 towns of HESCOM started in June 2012 were completed in March 2015/June 2015 against the scheduled completion date of June 2013. A Committee formed (July 2015) to analyse the reasons for the delay in completion found (September 2015) that the delay was attributable to the contractor. HESCOM, however, had neither assessed the quantities that were delayed by the contractor nor levied the penalty as required under the terms of contract.

  The Government replied (February 2017) that considering the field difficulties, PFC had revised the date of completion of Part-B work to 19 March 2015. Considering this date, the delay ranged from 27 days to four months and ₹ 17.25 lakh towards liquidated damages had been recovered.

Works declared completed without completion

2.2.34. The distribution strengthening works *viz.* reconductoring of LT lines, enhancement of capacity of existing DTCs, *etc.* were undertaken mainly to reduce technical losses due to overload in the existing capacity. We observed that BESCOM, GESCOM and HESCOM had declared the works in towns as completed even before completing the proposed works resulting in non-achievement of envisaged reduction in technical losses as observed at Paragraphs 2.2.35 to 2.2.37.

2.2.35. BESCOM had intimated (August 2016) PFC that Part-B works in all 24 towns were completed between March 2014 and June 2016. Audit review of works in the test checked towns showed that some of the works in Davangere, Tiptur and Tumakuru towns declared as completed were not completed (September 2016). In Tiptur town, the works of 11 kV lines and LT reconductoring were pending completion. Similarly, 90 *per cent* of the works were completed in Tumakuru, while the equipments *viz.* Auto reclosures and Sectionalisers were not commissioned in Davanagere.

The Government replied (February 2017) that the works were completed by the contractor as per his field survey inventory quantity. The reply is not acceptable as the quantity of work as per Detailed Work Award had not been executed.

2.2.36. GESCOM informed (March 2016) PFC that Part-B works in 14 out of 21 towns were completed between January 2015 and November 2015. We observed that some of the left out works *viz.* LT reconductoring, LT conversion and enhancement of DT capacity in these 14 towns were taken up only in April 2016/May 2016 and these works were still under progress (September 2016).

The Government replied (February 2017) that the works were completed in December, 2016. The fact remains that due to delay in awarding the work, the completion of Part-B works were abnormally delayed.

2.2.37. Works in four towns *viz.* Rabakavi, Banahatti, Mahalingpur and Athani in HESCOM were certified as completed between December 2013 and June 2014. We, however, observed that the materials such as PVC pipes, PSC/RCC poles, cross arms, 11 kV insulators, *etc.* required to be used in these towns were received only in August 2014 *i.e.* after the works were certified to be completed. In Athani town, the approval for commissioning of DTCs was given by Directorate of Electrical Inspectorate in August 2014, which was eight months after the declared completion date (18 December 2013).

The Government accepted (February 2017) that the DTCs were commissioned in August 2014.

Fund management

Unviable investment

2.2.38. The guidelines issued by PFC prescribed the criterion of Return on Investment (RoI) to be not less than 10 *per cent* for a town to be eligible for inclusion under the Programme.

We observed that BESCOM and HESCOM had included three towns (₹ 63.42 crore) and six towns (₹ 14.63 crore) respectively under the Programme though RoI was less than 10 *per cent* as detailed below:

Table No.2.2.5: Towns having less than 10 *per cent* of RoI

Sl. No	Town	RoI	Amount invested[62] (₹ crore)
BESCOM			
1	Davangere	6.74	49.86
2	Harappanahalli	8.95	3.52
3	Harihara	9.50	10.04
HESCOM			
1	Dandeli	Not calculated	4.87
2	Lakshmeshwar	2.64	1.69
3	Naragund	0.07	2.08
4	Nippani	4.30	1.80
5	Ranebennur	4.28	2.00
6	Savanur	7.44	2.19
	Total investment		**78.05**

Inclusion of above towns without considering RoI would possibly render the investment of ₹ 78.05 crore unviable. The reasons for inclusion of these towns despite lower RoI were not record.

The Government replied (February 2017) that PFC considered Internal Rate of Returns instead of ROI for approval. Since the investment was unviable as per the guideline issued by PFC, it was not a prudent fund management decision.

Avoidable financial burden

2.2.39. HESCOM submitted (March 2010) DPRs for 31 towns at ₹ 205.47 crore under Part-B to PFC, which released (May 2011) ₹ 41.75 crore at 15 *per cent* of the cost. Subsequently, as six[63] towns were found (December 2011) to be ineligible by the third party independent evaluation agency due to error in calculation of base line AT&C losses and also as there was duplication of works in the previous estimates, the cost was reduced to ₹ 38.23 crore. As a result, the Company had to refund the excess amount of loan received along with interest of ₹ 6.55 crore. Considering the interest of ₹ 1.55 crore earned on this excess drawal, the net avoidable interest paid was ₹ 5 crore. The issue of inclusion of ineligible towns and duplication of works resulting in

[62] Represents actual expenditure incurred on the works in the respective towns.

[63] Hubballi, Dharwad, Belagavi, Bagalkot, Ilkal and Haveri.

avoidable interest has already been commented in the Audit Report of the Comptroller and Auditor General of India on Public Sector Undertakings of Government of Karnataka for the year ended March 2014 vide Paragraph 3.15.

The Government replied (February 2017) that PFC would be requested to withdraw the claim.

Avoidable borrowings at higher cost

2.2.40. As per the terms of sanction of loan for implementation of Part-A of the Programme, PFC was to release the sanctioned cost in the form of a loan to the ESCOMs in four instalments *viz.,* 30 *per cent* each in the first three tranches and the balance 10 *per cent* after full utilisation of loan disbursed in earlier tranches. The details of sanctioned cost, amount disbursed by PFC and the actual expenditure incurred by ESCOMs as at 31 March 2016 are given below:

Table No.2.2.6: Details of sanctioned cost, amount disbursed by PFC, actual expenditure of three ESCOMs as at 31 March 2016.

(₹ in crore)

ESCOM	Sanctioned Cost	Amount disbursed	Percentage of disbursement to sanction	Actual expenditure	Percentage of expenditure to sanction
HESCOM	54.66	31.54	58	46.40	85
GESCOM	34.11	19.21	56	23.80	70
MESCOM	29.05	7.24	25	20.36	70
Total	**117.82**	**57.99**	**49**	**90.56**	**77**

We observed that

- Though the above three ESCOMs[64] were eligible for release of ₹ 106.04 crore, being 90 *per cent* of the total sanctioned cost (₹ 117.82 crore), they had received only ₹ 57.99 crore, which was much less than even the actual expenditure of ₹ 90.56 crore incurred by them. ESCOMs failed to pursue PFC to release the amount due though they had spent ₹ 32.57 crore[65] more than the disbursement. Non-receipt of amount due from PFC had forced the ESCOMs to spend out of funds borrowed at higher rate of interest (more than 10.5 *per cent* per annum), while the funding received under the Programme was available at a lesser rate (9 *per cent* per annum).

- PFC raised (March 2014/November 2015) demand twice on ESCOMs for repayment of principal and interest from April 2014 as the works under Part-A were not completed within scheduled/extended period. Meanwhile BESCOM, the nodal agency for Part-A, had requested (July 2014) deferment of repayment schedule in line with the extended scheduled completion period, which was agreed (February

[64] The other two ESCOMs (BESCOM and CESC) had received the funds equivalent to expenditure incurred by them; hence no comment is made on these ESCOMs.

[65] Difference between disbursed amount (₹ 57.99 crore) and actual expenditure (₹ 90.56 crore) of three ESCOMs.

2015/February 2016) to by PFC. Three ESCOMs (HESCOM, GESCOM and MESCOM), however, repaid the loan of ₹ 27.74 crore. Considering the fact that the actual expenditure incurred by these three ESCOMs was more than the amount received[66] and the repayment was made out of borrowings at higher cost, they should have waited for the response from the PFC to the request made by BESCOM before repayment.

Thus, non-receipt of funds due under the Programme had resulted in borrowings at higher cost leading to avoidable financial burden on ESCOMs and the consumers as this additional expenditure would be factored into tariff.

Likely financial burden on consumers

2.2.41. PFC sanctioned (February 2009/ March 2012) ₹ 398.71 crore and ₹ 786.58 crore for Part-A and Part-B of the Programme respectively. The ESCOMs were eligible for loan at 100 *per cent* of the sanctioned cost under Part-A and 25 *per cent* under Part-B. The ESCOMs were required to complete the works under Part-A and Part-B within three years from the date of sanction to avail the benefit of conversion of loan into grant. The ESCOMs had received ₹ 276.84 crore under Part-A and ₹ 109.05 crore under Part-B from PFC as of March 2016. Although the scheduled date of completion of the Programme was extended from time to time, the latest being March 2016/September 2016, there was no commitment from the Ministry of Power, GoI on conversion of loan into grant in the changed scenario of breaching of the deadlines by ESCOMs. It is pertinent to note here that the PFC had raised demand on ESCOMs on two occasions (June 2014/November 2015) for repayment of loan along with interest. In fact, three ESCOMs had made partial repayment of loan to the PFC (refer Paragraph 2.2.40). The ESCOMs had not taken up the matter of conversion of loan into grant either with the PFC or Ministry so far (December 2016).

Thus, in the event of non-conversion of loan into grant, it is likely that the entire loan availed and incurred under the Programme would become a burden on the consumers as the cost is factored into tariff.

The Government replied (February 2017) that CESC had met the project time line as specified by PFC. Extension had been accorded by PFC upto June 2016 for completion of the Project. Response to the requests for converting loan into grant was yet to be received from PFC.

Ineffective monitoring

2.2.42. In line with the guidelines issued under the Programme, GoK constituted (November 2008) the Distribution Reforms Committee (DRC) headed by the Chief Secretary to the Government at the State level to monitor the implementation of the Programme. DRC was formed with the task of recommending project proposals of ESCOMs, monitoring compliance to the conditionalities and achieving mile stones and targets under the Programme.

[66] Advance was received in July 2009 and 1st instalment was received in February 2014 (HESCOM), March 2014 (MESCOM), May 2014 (GESCOM).

We observed that:

- DRC met during 2008-09, 2009-10, 2010-11 and 2013-14 for discussing implementation issues, the last such meeting being held in May 2013. The DRC, during the meeting held in May 2013, directed ITIA to roll out all modules across all the towns by September 2013 and the Managing Directors of ESCOMs and ITIA to jointly review the progress on a daily basis. But there was no follow up on these directives as no meetings were held subsequent to these directions;

- There was no monitoring during 2011-12, 2014-15 and 2015-16 by DRC as it did not meet even once at the time when implementation was at critical stage;

- Monthly meetings held through video conferencing headed by the Energy Department did not identify bottlenecks in implementation in order to resolve them. Similarly, monthly meetings headed by the Managing Directors/Chief Engineers held at ESCOMs level for monitoring Part-B had merely noted the progress achieved and did not identify the problems in execution or resolve them.

CESC replied (January 2017) that it had requested for DRC level meeting to be conducted once in two to three months for monitoring the project. Accordingly, 13 meetings were conducted between 2008-09 and 2015-16. Reply is not acceptable as the DRC did not conduct any meetings during 2011-12, 2014-15 and 2015-16 to monitor the project.

2.2.43. As per the guidelines, ESCOMs were to create IT Cell comprising a team of IT experts having relevant qualifications, experience and background in the field of system integration and IT implementation to guide the implementation of Part-A right from the preparation of DPRs.

We observed that the ESCOMs created IT Cell (BESCOM, HESCOM, MESCOM) between December 2013 and February 2015 *i.e.* after a lapse of four to six years from the date of sanction of Part-A of the Programme, while GESCOM never created one. CESC appointed Track Leaders for each module in February 2015. Creation of IT Cell in time as stipulated could have reduced the problems faced by ESCOMs in the implementation of Part-A of the Programme, which comprised mainly IT components.

The Government replied (February 2017) that the IT cell, with track leads in each of the modules, had been functioning in BESCOM since 2009. Formation of separate IT cadre to meet all IT requirements including RAPDRP was in process. The reply is not acceptable as BESCOM did not have IT experts in the IT Cell stated to have been functioning since the beginning. As the IT Cell was expected to play a crucial role, priority should have been accorded to its formation and proper staffing.

2.2.44. The guidelines stipulated appointment of IT Consultant by the ESCOMs within 15 to 25 days from the date of sanction. The role of the IT Consultant *inter-alia* included assisting the ESCOMs to customize project level bid documents for Part-A**,** handholding of ESCOMs for implementation from concept to commissioning of the project, project management including participation in testing and commissioning till complete go-live, *etc*.

BESCOM appointed (June 2009) Reliance Infrastructure Limited (RIL) as IT consultant of all the ESCOMs for a period of four years. As RIL did not agree to continue beyond the contract period, BESCOM appointed (March 2015) Ernst & Young LLP (E&Y) as IT Consultant.

We observed that there was a time lag of 21 months in the appointment (March 2015) of E&Y. Thus, the ESCOMs did not have an IT Consultant during the critical phase of implementation. Presence of an IT consultant could have possibly mitigated bottlenecks in implementation of Part-A.

The Government replied (February 2017) that during the intermediate period, the project implementation was monitored by RAPDRP Cell and by the Managing Directors of ESCOMS through weekly video conference. KPMG consultants and IT Advisor were also assisting BESCOM. The reply is not acceptable as the ESCOMs did not have an IT Consultant during this crucial phase for project management to ensure the successful commissioning till go-live, which was required as per the guidelines issued by PFC.

CESC replied (January 2017) that the bottlenecks were resolved after appointing E&Y as consultant. Reply is not acceptable as the issues on communication of modems fixed to the DTC and Feeder meters were not resolved yet.

Conclusions

Audit Objective-1: *Whether the planning for implementation of the Programme was adequate.*

- **The ESCOMs failed to plan the completion of the pilots under Part-A as scheduled. As a result of taking up of Part-A on a large scale without completing the pilots, the bottlenecks in implementation remained unresolved even after a lapse of more than four years beyond the scheduled dates of completion;**

- **The ESCOMs delayed the award of contracts by five months to 21 months. Inclusion of new items of work without feasibility, frequent amendments to the estimates and bid conditions and cancellation of tenders without justified reasons were the reasons for the delay;**

- **BESCOM and HESCOM made investments in three and six towns respectively under Part-B although return on investment was less than 10 *per cent* stipulated under the guidelines.**

Audit Objective-2: *Whether the Programme has been implemented in an efficient, effective and economical manner to achieve the intended objectives.*

- **The IT applications under Part-A have not been stabilized and the ESCOMs were yet to reap the desired benefits *i.e.* establishing reliable and automated sustainable systems for collection of base line data and adopting IT in the areas of energy accounting and consumer care, even after a lapse of four years from the scheduled date. This was owing to pending consumer indexing and asset mapping in respect of incremental consumers and assets, poor functioning of modems fitted at DTCs and Feeders, pending installation of input energy meters at feeder level, *etc.*;**

- **Owing to incomplete works under Part-A, the ESCOMs were not in a position to assess whether distribution strengthening works done under Part-B had actually yielded the desired results in terms of reduction in AT&C losses and envisaged savings;**

- **The ESCOMs had violated contractual provisions in making payments towards supply of materials and failed to penalise the contractors for delay in completion or non-completion of the contracts under Part-B. This had not only caused delay in completion of the works ranging from six months to 38 months from the stipulated dates but also caused additional burden on the ESCOMs due to increase in cost;**

- **The ESCOMs failed to impress upon PFC to release the instalments due in time, which had resulted in avoidable borrowings at higher cost for implementation;**

- **The Distribution Reforms Committee, responsible for overseeing the implementation of the Programme at State Level, had failed to address the bottlenecks in implementation. The review meetings held at ESCOMs level had merely discussed the progress rather than identifying the problems and resolving them.**

Recommendations

1. **The ESCOMs may ensure that pilots are completed as per schedule before embarking on large scale implementation of a Programme or Scheme so that any hindrances or bottlenecks can be resolved at the initial stages. The learning from the pilots should be utilised during full scale implementation;**

2. **Incremental assets and consumers need to be mapped and added to the data base for accurate assessment of AT&C losses;**

3. **The estimates may be proposed based on the field conditions before inviting tenders;**

4. **The compliance mechanism to contractual terms should be strengthened;**

5. **The ESCOMs may ensure proper assessment of viability or otherwise of future capital investments;**

6. **Various authorities/committees constituted for monitoring the implementation, both at the State and ESCOMs levels, should identify the bottlenecks and resolve the issues in a time bound manner.**

Chapter - III

Compliance Audit Observations

Chapter - III

3. Compliance Audit Observations

Important findings emerging from audit that highlight deficiencies in planning, investment and activities of the Management in the State Government Companies and Statutory Corporations, which had financial implications are included in this Chapter. These include observations on unproductive investment, violation of contractual obligations, undue favours to contractors, extra/avoidable expenditure, non-recovery of dues and cases where the intended objective of the projects of the Government were not achieved.

Government Companies

Karnataka Power Transmission Corporation Limited

3.1. Violation of KERC Regulations resulting in undue favour to a private firm

Sanctioning Open Access facilities to Shantha Projects Limited without ensuring payment security mechanism had resulted in non-recovery of ₹ 2 crore from a private firm.

The State Load Dispatch Centre (SLDC) headed by the Chief Engineer (Electrical), functions under the administrative control of Karnataka Power Transmission Corporation Limited (Company). SLDC was responsible for sanctioning Open Access[67] to the power generators/suppliers for use of intra-state transmission and distribution system in accordance with the regulations specified in Karnataka Electricity Regulatory Commission (Terms and Conditions for Open Access) Regulations, 2004, Central Electricity Regulatory Commission (Open Access in inter-State Transmission) Regulations, 2008 and Central Electricity Regulatory Commission (Unscheduled Interchange charges and related matters) Regulations, 2009.

Open Access charges[68] are levied on Open Access customers as per the KERC Regulations. Customers intending to avail Open Access should enter into an agreement with the transmission licensee (Company). The Regulations stipulated that SLDC should prepare a standard agreement format with the approval of the KERC for the purpose of concluding an agreement with Open Access customers and such agreements should contain a clause for ensuring

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[67] Open Access, as defined in the Karnataka Electricity Regulatory Commission (Terms and Conditions for Open Access) Regulations, 2004, refers to a non-discriminatory provision for the use of transmission lines or distribution system or associated facilities by any licensee or consumer or a person engaged in generation.

[68] Open Access charges include transmission charges, wheeling charges, charges for arranging backup supply (for start up of generating plant), Unscheduled Interchange (UI) charges (towards maintaining grid discipline) and any other charges specified from time to time.

payment security mechanism. SLDC should confirm the sanction of Open Access only after agreement has been entered into with the Company.

The Chief Engineer of SLDC sanctioned Open Access facilities to Shantha Projects Limited (SPL), a power generating firm, between October 2013 and June 2014. SPL was one of the generators with whom TATA Power Trading Company Limited[69] (TATA) had contract for supplying power to the Electricity Supply Companies (ESCOMs).

SPL, however, failed to supply power to the grid as per the agreed schedule thereby attracting Unscheduled Interchange[70] (UI) charges as per the KERC Regulations. SLDC raised bills (between January 2014 and August 2014) towards UI charges for short supply of 9,412.194 MW for the period between October 2013 and June 2014. The dues, as of March 2016, had accumulated to ₹ 2.47 crore. SPL, however, did not pay the dues.

We observed the following lapses:

1. SLDC sanctioned Open Access to SPL without entering into any formal agreement. It also failed to put in place any payment security mechanism by way of Bank Guarantee or Security Deposit before sanctioning;

2. SLDC failed to raise bills on all seven occasions when open access was sanctioned. Delay in raising bills ranged from 40 days to 85 days[71] from the date of availing Open Access during October 2013 to June 2014. For instance, the first bill (for the period 21 October 2013 to 31 October 2013) was raised on 9 January 2014 *i.e.* after a lapse of 70 days;

3. SLDC sanctioned Open Access on all the six subsequent occasions between November 2013 and June 2014 despite non-payment of dues for the immediate previous periods. For instance, against the bill dated 13 March 2014, outstanding cumulative dues stood at ₹ 1.12 crore for the Open Access availed between October 2013 and December 2013. The Open Access was, however, sanctioned subsequently in February 2014 without collecting the dues. As there was delay in raising bills and SLDC had no other mechanism to keep a watch on outstanding dues, Open Access was sanctioned for the subsequent periods without collecting dues of previous periods.

[69] TATA Power Trading Company Limited had entered into Power Purchase Agreement with Electricity Supply Companies for supply of power. TATA Power had in turn concluded a contract with SPL for meeting the obligation of power supply.

[70] 'Unscheduled Interchange' for a generating station or a seller refers to its total actual generation *minus* its total scheduled generation. UI charges are levied to maintain grid discipline as envisaged in the Grid Code by controlling the users of the grid in scheduling, dispatch and drawal of electricity.

[71] The delay was considered after giving leverage of 30 days from the date of availing open access for preparation of the bill as per the assessment of the Company.

A similar lapse was pointed out in the earlier Audit Report[72] wherein non-realisation of ₹ 29.21 crore from two Open Access customers was highlighted. The Company had not taken any corrective action.

The Government[73] forwarded the reply as furnished by the Company (January 2017) which stated that:

- As per CERC Open Access Regulations, SLDC had to satisfy only two conditions *viz.* infrastructure required for energy metering and availability of surplus transmission capacity in the State network before sanctioning open access;

- The process of verification of dues was followed by SLDC and No Objection Certificate (NOC) was issued every month only after ascertaining that there were no outstanding dues. NOC was stopped on 3 June 2014. Presently, Letter of Credit is insisted on for maintenance of UI pool account as per the Regulations;

- Based on the request of SLDC, Bangalore Electricity Supply Company Limited, which had entered into Power Purchase Agreement with TATA, recovered (May 2015) ₹ 1.56 crore from TATA. Further, ₹ 46.79 lakh had been recovered from SPL out of the bills payable towards supply of power between November 2015 and December 2015. SLDC is under process of filing a petition before KERC for recovering balance dues of ₹ 44.22 lakh.

The reply is not acceptable for the following reasons:

- The reply is silent about SLDC's failure to put in place a payment security mechanism. Further, there is a provision in the CERC Regulations, 2008 for refusal of NOC after giving reason for such refusal. SLDC had not exercised this option even though SPL had defaulted on payment of UI charges.
- The reply that Open Access was sanctioned after ascertaining there were no outstanding dues is factually incorrect as SLDC had issued NOC on six occasions without considering the outstanding dues.
- The recovery of ₹ 1.56 crore is under dispute as TATA had appealed (February 2016) before the Karnataka Electricity Regulatory Commission against the recovery, which was pending for disposal.

Thus, absence of control systems in sanctioning Open Access and non-compliance with KERC Regulations on payment security mechanism led to non-recovery of ₹ 2 crore[74] from SPL. Disregard to KERC regulations calls for fixing of responsibility by Government.

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[72] Paragraph 3.1 of the Audit Report of the Comptroller and Auditor General of India, on Public Sector Undertakings, Government of Karnataka for the year ended March 2015.

[73] Reply furnished by Deputy General Manager (Tech) of the Company was forwarded by the Additional Chief Secretary, Energy Department.

[74] Total outstanding dues ₹ 2.47 crore *less* ₹ 0.47 crore recovered from SPL. The amount of ₹ 1.56 crore recovered from TATA is not considered as the recovery is disputed by TATA.

Karnataka Power Transmission Corporation Limited

3.2. Avoidable additional financial burden

Failure to allocate high cost and low cost power optimally resulted in additional expenditure and payment of avoidable compensation. Consequently, the electricity consumers had suffered avoidable additional financial burden of ₹ 1.29 crore.

The State Load Despatch Center (SLDC) functioning under the administrative control of Karnataka Power Transmission Corporation Limited (KPTCL) is responsible *inter-alia* for ensuring integrated operation of the power system in the State and optimum scheduling and despatch of electricity within the State in accordance with the contracts entered into with the licensees or the generating companies operating in the State[75]. The Power Company of Karnataka Limited[76] (PCKL) procures power on behalf of the Electricity Supply Companies (ESCOMs) in order to bridge the demand and supply gap in the State.

Considering the requirement, PCKL finalised the bids for procurement of power through tender (December 2012 / July 2013) for the periods 1 August 2013 to 30 June 2015 on medium term basis at ₹ 5.20 per unit and 1 September 2013 to 30 June 2014 on short term basis at ₹ 5.50 per unit. The Letters of Intent were issued (March 2013 and August 2013) to the successful bidder, *viz.* JSW Power Trading Company Limited (JSW).

Accordingly, the ESCOMs[77] concluded Power Purchase Agreements (PPA) with JSW. The contracted capacity for medium term was 450 MW to be supplied from Thoranagallu generating source and 115 MW for short term power to be supplied from three generating sources[78].

The terms of the PPA on medium term power stipulated that if the scheduled power[79] was less than the minimum off take of 85 *per cent* of the contracted capacity during a contract year[80], the ESCOMs were liable to pay compensation to the seller (JSW) at the rate of ₹ 1 per unit for the quantum of power drawn short. Similarly, the terms of PPA on short term power stipulated that both procurer and the seller should ensure that actual scheduling did not

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[75] SLDC is responsible for ensuring grid discipline as per Indian Electricity Grid Code.

[76] A Government of Karnataka undertaking.

[77] Bangalore Electricity Supply Company Limited, Chamundeshwari Electricity Supply Corporation Limited, Gulbarga Electricity Supply Company Limited, Hubli Electricity Supply Company Limited and Mangalore Electricity Supply Company Limited.

[78] 50 MW for September 2013 to December 2013 and 100 MW for January 2014 to June 2014 from JSW plant at Thoranagallu; 7.5 MW for December 2013 to June 2014 from Haveri Bioenergy Pvt. Ltd; 7.5 MW for October 2013 to June 2014 from Dharwad Bio Energy Pvt. Ltd.

[79] Scheduled power refers to the quantum of power that has been allocated/drawn from the Grid.

[80] Contract year refers to the period commencing on the effective date and ending on the immediate succeeding 31 March. In the instant case, contract year starts from August 2013 and ends with March 2014, and thereafter each period of 12 months commencing in April and ending on 31 March.

deviate by more than 15 *per cent* of the contracted power. Liquidated damages were payable in case of deviation beyond the stipulated norm specified therein.

We observed that during the period September 2013 to June 2014 when both medium and short term PPAs were operational, SLDC had allocated short term power beyond minimum required off take (85 *per cent* of the contracted capacity) to the extent of 14.88 Million Units (MUs), while the cheaper medium term power was allocated at less than minimum off take during the same period, thereby attracting compensation.

Allocation of short term power beyond the minimum off take of 85 *per cent* was not justified since short term power was more expensive than medium term power. Further, as the allocation of medium term power during the same period was less than the minimum off take of 85 *per cent*, the excess short term power of 14.88 MUs should have been allocated under the medium term.

As a result, the ESCOMs had to incur additional cost of ₹ 44.64 lakh[81] towards procurement of excess short term power to the extent of 14.88 MUs. Further, the ESCOMs had to pay compensation of ₹ 84.80 lakh[82] to JSW for their failure to offtake the minimum 85 *per cent* under medium term.

Thus, as a result of SLDC's action, the ESCOMs in particular and the consumers[83] at large had to suffer avoidable additional financial burden of ₹ 1.29 crore. Besides, JSW was unduly benefited by that amount.

The Government forwarded[84] (January 2017) the reply of the Company and stated that the number of short term open access generators was more and in real time, requesting them to back down would be near impossible as regulation did not allow backing down of short term open access generator. It was also stated that the medium term open access supplier being large and single generator, addressing one medium term open access during system contingency will be more effective in managing the system.

The reply is silent on the audit point raised in the paragraph. The question of backing down of either medium or short term generators would not arise, as the allocation of power between medium and short term was done manually at SLDC's discretion at the time of billing for the contract period and not at the time of grid operations. Further, the PPA which specified the contracted capacities for medium term and short term power was meaningless in view of SLDC's arbitrary allocation. Thus, uneconomical allocation of power had resulted in avoidable financial burden of ₹ 1.29 crore.

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[81] 14.88 MUs x ₹ 0.30 per unit (difference of short and medium term ₹ 5.50 and ₹ 5.20).

[82] This has been arrived by multiplying number of units scheduled beyond 85 *per cent* under short term (*i.e.* 8.48 million units – JSW, Thoranagallu – 6.05 MUs & JSW, Haveri-2.43 MUs) at the rate of ₹ 1 per unit.

[83] As the cost of power purchase would go into the tariff fixation.

[84] Additional Chief Secretary, Energy Department forwarded the reply furnished by Deputy General Manager (Tech) of the Company.

Karnataka Power Transmission Corporation Limited

3.3. Loss of ₹80.22 lakh on account of violation of Board's directive

The Chief Engineer, Tendering and Procurement of Karnataka Power Transmission Corporation Limited, awarded a contract for establishing a substation disregarding the directives issued by the Board of Directors, as a result of which the Company incurred loss of ₹ 80.22 lakh.

The Chief Engineer, Tendering and Procurement (CE (T&P)) of Karnataka Power Transmission Corporation Limited (Company), invited (May 2011) bids for establishing 400/220 kV substation at Mylasandra in Bengaluru Urban District on turnkey basis at an estimated cost of ₹ 176.70 crore. M/s L&T Limited, Chennai, (Contractor) who quoted ₹ 167.88 crore, was the lowest bidder.

The Board of Directors (Board) of the Company approved (January 2012) the award to the Contractor with the condition that the possession of land required (27 acres 26 guntas) for establishing the proposed substation should be ensured before issuing Letter of Intent (LoI) and Detailed Work Award (DWA) to the contractor.

The Government of Karnataka, conveyed (March 2012) approval to the District authorities of Bengaluru District for allotment of land to the extent of 27 acres 26 guntas[85] to the Company. The CE (T&P) issued (March 2012) LoI and concluded (April 2012) an agreement with the Contractor. Subsequently, the DWA was issued to the contractor in May 2012.

The Company, however, could get the possession of only 9 acres 15 guntas out of the total allotted land as of July 2012. The balance land (18 acres 11 guntas) was not handed over to the Company by the Revenue Authorities as the allotment of the said land to the Company was disputed (July 2013) by the land owners in the High Court of Karnataka and the case was pending for disposal (June 2016).

Owing to the inability of the Company to hand over the required land for commencement of the work even after a lapse of two years from the date of DWA (May 2012), the contractor claimed (August 2014) compensation of ₹ 1.43 crore under Clause 46 of General Conditions of the Contract towards expenses incurred on tender submission, bank guarantee, insurance, staff, *etc*. The CE (T&P), acceding to the request and after holding negotiation (October 2014) with the contractor, approved (December 2014) compensation of ₹ 80.22 lakh as full and final settlement absolving either party of the contract obligations. The contract was then short closed (December 2014).

We observed that LoI was issued merely on the basis of Government's intimation (March 2012) to the District authorities. As per the Karnataka Land Grant Rules, 1969, the District Commissioner is the authority who can issue

[85] 18 acres 11guntas at Bettadasanapura of Bengaluru South Taluk and 9 acres 15 guntas at Mylasandra.

'grant of land'. In the present case, only a part of the land (9 acres 15 guntas) was transferred to the Company in July 2012 *i.e.* after the issue of DWA. Thus, the issue of LoI and DWA before possession of the land in violation of Board's directive resulted in avoidable payout of ₹ 80.22 lakh without creation of any concrete asset.

The Government[86] replied (January 2017) that the Company had issued LoI to the agency after the Revenue Department intimated allotment of 27.26 acres of land. Deputy Commissioner (DC), Bengaluru allotted 27 acres 26 guntas of land on 10 April 2012. But, DC, Bengaluru could not hand over the entire land due to dispute in the High Court.

The reply is not acceptable as the Company acted on mere intimation of allotment by the District Commissioner, which was in violation of the Board's directive that before issue of LoI, possession of required land shall be ensured and in the event of non-availability of required land, issue of LoI shall be after ensuring possession of required land. The Company issued LoI without ensuring possession of land and hence its action was in violation of Board's directive resulting in avoidable payment of ₹ 80.22 lakh.

Cauvery Neeravari Nigama Limited

3.4. Unjustified waiver of dues receivable from a contractor

The decision of the Managing Director that the contractor had suffered loss due to reduction in number of visitors to Brindavan Gardens during the contract period without material evidence on record led to undue financial benefit of ₹ 3.31 crore to the contractor.

Cauvery Neeravari Nigama Limited (Company) invited tenders in May 2009 for selection of an agency to collect entry fee and toll fee from July 2009 to June 2010 at Brindavan Gardens, Mysore. The successful bidder *viz.* Shri T.N. Paramesh (contractor), who had quoted ₹ 40.86 lakh per month for entry fee and ₹ 8.96 lakh per month for toll fee, was entrusted (July 2009) with the job of collection of entry fee and toll fee. The contractor furnished (August 2009) performance guarantee of ₹ 99.64 lakh as required by the terms of contract.

As per the terms of contract, the payment of ₹ 49.82 lakh fell due on the 1st of every month starting from July 2009. The contractor paid an amount of ₹ 2.67 crore as against the dues of ₹ 5.98 crore for the period July 2009 to June 2010 leaving a balance of ₹ 3.31 crore unpaid. The contractor, without clearing the balance dues, submitted (October 2012) a representation to the Managing Director (MD) stating that he had sustained a loss of ₹ 3.25 crore on account of non-revision of entry fee, absence of provision for charging mobile phones with camera at the gardens, drop in number of visitors due to global recession, spread of H1N1 disease, riots in Mysore, bomb blast threat to KRS Dam, *etc*.

[86] Additional Chief Secretary, Energy Department.

The MD rejected (November 2012) his claims stating that the facts presented by the contractor had already been considered and rejected (April 2010) by the Board of Directors. The contractor was directed to pay the dues of ₹ 3.31 crore along with interest as per the terms of the contract, within 30 November 2012. Since the contractor failed to pay the dues, the Company encashed (November 2012) the performance guarantee of ₹ 99.64 lakh and filed (January 2013) a suit in the City Civil Court, Bengaluru for recovering the balance dues. The Company also recovered (March 2014) ₹ 26.24 lakh through Krishna Bhagya Jala Nigam Limited[87] (KBJNL) with whom the contractor had transactions.

Aggrieved by the action of the Company, the contractor filed a Writ Petition before the High Court of Karnataka which was disposed (January 2014) by setting aside the order passed (November 2012) by the MD with a direction to reconsider the matter with reference to the documents relied on and after providing opportunity to the contractor to submit relevant documents.

The MD, after reconsidering the contractor's claim on the basis of newspaper clippings, concluded (June 2014) that the reduction in revenue was squarely attributable to the factors referred to by the contractor and that they fell within the ambit of *force majeure* as per the terms of contract. Accordingly, the Company refunded ₹ 1.26 crore to the contractor, waived the balance dues and withdrew (June 2014) the civil suit filed against the contractor.

We observed that:

1. The contractor submitted the same evidence on all the three occasions *i.e.,* before the Board in April 2010, before the MD in October 2012 and in June 2014. Thus, no new evidence was produced which could warrant a reversal of the earlier decision.

2. The MD, while passing the order in November 2012, had refuted the contractor's claim of reduction in visitors as the contractor had not maintained the details of tickets issued to the visitors nor was there any other evidence to substantiate his claim. Hence, the subsequent conclusion (June 2014) that there was reduction in the number of visitors merely on the basis of newspaper reports amounted to favouring the contractor.

3. Verification carried out by the Assistant Executive Engineer (AEE) of the Company revealed that the actual revenue collection for the month of March 2010 was ₹ 32.47 lakh against ₹ 21.48 lakh shown by the contractor. Thus, though the contractor had furnished fudged data to the Company, the fact was ignored by the MD while taking the decision in June 2014.

4. The contract agreement (Clause 8.2(h)) provided for maintenance of records in electronic form showing the number of visitors to Brindavan Gardens and their submission to the Company in the form of a printed report along with monthly contractual payment by the contractor.

[87] A Government of Karnataka Undertaking.

However, the contractor did not maintain such data nor did the Company demand the same from him. Enforcement of this contract provision could have averted the dispute and provided reliable evidence on the actual number of visitors.

The Company replied (September 2016) that the High Court of Karnataka had set aside the order passed by the earlier MD with a direction to reconsider the matter. There were no directions from the Court that the MD had to consider only new reasons or not to pass the orders relying upon the records already submitted by the contractor. While passing the orders, the MD considered *force majeure* clause in the agreement and the impact of H1N1, damages due to heavy rain, *etc*. Therefore, the Audit presumption that the present order passed by the MD was not supported by new facts was not correct.

The reply is not acceptable as the Honourable Court had directed the Company only to reconsider the earlier decision and not necessarily to reverse it. No new evidence was available with the MD that would justify reversing the earlier decision. The MD relied on news paper reports alone to contest and overturn the earlier order, disregarding the records on the basis of which the earlier order was passed. Mere newspaper coverage of existence of H1N1, *etc.* cannot be conclusive evidence to infer that there was a reduction in the number of visitors, as there was no other corroborative evidence with the Company to arrive at such a conclusion. Hence, the invoking of *force majeure* clause was not in order.

Thus, the decision of the MD (June 2014) resulted in undue financial benefit of ₹ 3.31 crore to the contractor. The Company also lost the opportunity of recovering ₹ 1.26 crore[88] which was available with it but was refunded.

The paragraph was issued to the Government during August 2016; the reply of the Government was awaited (February 2017).

Cauvery Neeravari Nigama Limited

3.5. Avoidable extra expenditure

Company's failure to deposit the amount before award and SLAOs failure to pass the award within two years, as specified in the Land Acquisition Act, 1894 resulted in avoidable extra expenditure of ₹ 0.97 crore.

Section 11 A of the Land Acquisition Act, 1894 (Act) clearly lays out that 'the Collector shall make an award under Section 11 within a period of two years from the date of publication of the declaration and if no award is made within that period, the entire proceedings for the acquisition of the land shall lapse'.

The Divisional Commissioner, Bengaluru Division passed (December 2011) an award acquiring 17 acres and 25 guntas of land at Bidanagere village, Tumakuru District on behalf of Cauvery Neeravari Nigama Limited (Company), for ₹ 1.14 crore. The land was acquired by the Special Land

[88] Bank guarantee (₹ 99.64 lakh) and amount received from KBJNL (₹ 26.24 lakh).

Acquisition Officer, Hemavathi Canal Division, Tumakuru (SLAO) on behalf of the Company for construction of Hemavathi Canal Project.

Scrutiny of the records revealed that SLAO had issued notification (June 2004) under Section 4(1)[89] and notification under Section 6(1)[90] of the Act was issued on 1 August 2005 for acquisition of 41 acres and 11 guntas of land at Bidanagere Village, Tumakuru District for the purpose of construction of the Hemavathi Canal. Aggrieved by the notification, one of the land losers approached (January 2006) the Hon'ble High Court of Karnataka, and got an interim order of stay for the acquisition of land to the extent of 2 acres and 15 guntas. The Hon'ble High Court upheld the acquisition and dismissed (November 2008) the petition as well as the writ appeal (June 2009) filed by the land loser.

We observed that the Hon'ble High Court had given an interim stay only to the extent of 2 acres 15 guntas and the *malki*[91] values in respect of 6 acres and 8 guntas of land were delayed by Forest Department. The balance land available for acquisition was 32 acres and 28 guntas. However, the SLAO did not proceed with the acquisition of the balance land until the clearance of the stay order. The Deputy Commissioner issued award (August 2009) acquiring 41 acres and 11 guntas at an amount of ₹ 0.46 crore, only after final decision (June 2009) of the court cases.

Aggrieved by the acquisition of their lands, the owners of 17 acres and 25 guntas of land out of the 32 acres and 28 guntas, approached (August 2009) the Hon'ble High Court of Karnataka stating that the award passed by the Deputy Commissioner was in violation of Section 11A of the Act, as the award for acquisition was passed by the Collector on 17 August 2009, *i.e.* after expiry of the stipulated two years from 26 June 2004. The Court quashed the preliminary and final notifications and the award dated 17 August 2009 relating to the petitioners. Hence, the Divisional Commissioner, Bengaluru Division once again acquired 17 acres and 25 guntas land and passed (December 2011) the award for ₹ 1.14 crore, incurring an additional expenditure of ₹ 0.97 crore[92]. This additional expenditure was due to increase in the land value between 2009 and 2011.

The Company also failed to deposit the compensation amount within the two year time limit of the award from the date of 6(1) notification. Revenue Department confirmed (January 2009) that it would not be possible to complete the legal formalities of acquisition without the deposit of the requisite compensation.

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[89] Notification under Section 4(1) is a preliminary notification issued by the Government whenever a land is needed or is likely to be needed for any public purpose. This facilitates the Government to make survey and set out boundaries of the land intended to be acquired.

[90] Notification under Section 6(1) is issued after considering the objections, if any, received from the public under Section 5A. The notification shall be the conclusive evidence that the land is needed for a public purpose and the Government may acquire such land.

[91] Value for the structures, trees and plants.

[92] The difference between the cost as per the latest award for 17 acres 25 guntas (₹ 1.14 crore) and the corresponding cost as per the original award (₹ 0.17 crore).

The Company confirmed[93] (July 2016) that as per Section 11A of the Act, the award for all the survey numbers, excluding court cases, was to be made by December 2007 and stated that due to non deposit of the compensation amount for passing the award, delay in getting the records from the Advocate General, and delay by the Forest Department in furnishing the *malki* value (as landholders did not permit them to enter the land due to court cases), the award was delayed.

The reply does not address the delay in acquisition of balance land against which there was no stay order. Further, the Company failed to deposit the compensation before August 2007 and deposited it only in August 2009. The claim regarding delay in getting the *malki* value was not correct, as the survey numbers for which *malki* value was not given were different from the survey numbers related to the court case.

Thus, delay in acquisition of balance land resulted in avoidable extra expenditure of ₹ 0.97 crore by the Company in acquiring 17 acres 25 guntas of land.

The paragraph was issued to the Government during August 2016; the reply of the Government was awaited (February 2017).

Cauvery Neeravari Nigama Limited

3.6. Undue favour to a contractor

Cauvery Neeravari Nigama Limited, in violation of the conditions of contract, extended undue favour of ₹ 0.79 crore to a contractor.

Cauvery Neeravari Nigama Limited (Company), with the approval (June 2010) of its Board, entrusted a contract (September 2010) for 'Design, supply, installation, testing and commissioning of Kyathanahalli Lift Irrigation Scheme 1st Stage in Salagame Hobli, Hassan' to Kirloskar Brothers Limited, Bengaluru on turnkey basis at a total cost of ₹ 11.40 crore against the estimated cost of ₹ 10.55 crore. The work order was issued (September 2010) to the contractor with the stipulation to complete the work by 17 March 2012.

Clause 2 (d) of the General Conditions of Contract envisaged levy of penalty of an amount equivalent to one *per cent* of the estimated cost of the balance work assessed according to the approved programme for every day subject to a maximum of 7.5 *per cent* of the estimated cost of the entire work as shown in the tender for any shortfall in the progress of work.

The contractor completed the work on 17 December 2012 as against the due date of 17 March 2012. The Company paid (March 2015) ₹ 11.40 crore as full and final settlement to the contractor. The Assistant Executive Engineer (AEE), Yagachi Subdivision, considering unavoidable reasons not attributable to the contractor for the delay, proposed (August 2014) to the Executive Engineer (EE), Yagachi Division for extension of contract period upto 31 July

[93] General Manager (Finance) of the Company had forwarded the reply of the SLAO.

2012 without penalty and from 1 August 2012 to 17 December 2012 with penalty.

The EE, recommended (August 2014) for extension of contract period upto 31 July 2012 without penalty and levy of penalty of ₹ 300 per day from 1 August 2012 to 17 December 2012. Accordingly, the proposal was approved (September 2014) by the Superintending Engineer (SE) and by the Chief Engineer (CE), Hemavathi Project Zone, Gorur (January 2015).

We observed that though the scheduled date of completion was 17 March 2012, and the work was completed on 17 December 2012, the Company failed to arrive at the value of work done till the extended date of completion (31 July 2012). The work measurement was taken on 5 October 2012 and 30 January 2015. Thus, the CE and EE, who were responsible for reviewing the progress of the work, failed to assess the progress of the work on the extended date of completion.

We further observed that the cost of the balance work that was not yet executed as recorded in the fifth Running Account bill[94] (work measurement dated 5 October 2012) was ₹ 1.18 crore. Considering ₹ 1.18 crore as the balance work, penalty of ₹ 79.13 lakh[95] at the rate of one *per cent* per day for 139 days (1 August 2012 to 17 December 2012) limited to 7.5 *per cent* of estimated amount (₹ 10.55 crore) should have been levied on the contractor. As against this, the penalty approved (January 2015) by the CE worked out to ₹ 0.42 lakh only.

Thus, the recommendation and approval of an adhoc penalty of ₹ 300 per day for the delayed period was in violation of General Conditions of Contract. The EE, while recommending the lesser penalty, did not record the justification for deviating from the conditions of the contract. Further, neither SE nor CE had sought any reason for such deviation before approving the proposals of EE.

Thus, the deviation from the conditions of the contract approved by the Board of Directors, which was not within the powers of the CE, had resulted in extension of undue favour to the contractor by ₹ 78.71 lakh (₹ 79.13 lakh – ₹ 0.42 lakh).

The Government[96] forwarded (July 2016) the reply of the Company stating that the cumulative financial claims as on 5 October 2012 was ₹ 10.22 crore which almost covered the contract value of ₹ 10.75 crore and this proved that the work was physically completed in all respects by that date. It was not possible to assess the financial progress as at the end of July 2012 as the contractor had not preferred any claims. However, exercising discretion, the Company had

[94] The date of measurement for fourth and fifth Running Account bills was 26 June 2012 and 5 October 2012 respectively. As the measurement was not done as on 31 July 2012, the balance work to be done after 5 October 2012 is considered for calculating penalty.

[95] Penalty is leviable at one *per cent* of the balance work (₹ 1.18 crore) for 139 days (1 August 2012 to 17 December 2012) *i.e.* ₹ 1.64 crore. This has been limited to maximum of 7.5 *per cent* of the total estimated cost (₹ 10.55 crore) *i.e.* ₹ 79.13 lakh.

[96] Secretary to the Government of Karnataka, Water Resource Department.

levied a nominal penalty of ₹ 300 per day which covered petty works such as casting slabs, test for rising main, *etc*.

The reply is not acceptable as the total contract value was ₹ 11.40 crore and not ₹ 10.75 crore as claimed by the Company. Further, the cumulative value of work done as per 5th Running Account bill (measurement dated 5 October 2012) was only ₹ 10.22 crore and hence the penalty was leviable on the balance value of work (₹ 1.18 crore) as per the contract conditions.

Thus, the Company extended undue favour to the Contractor in violation of contract conditions.

Karnataka State Electronics Development Corporation Limited

3.7. Undue favour to franchisees

Karnataka State Electronics Development Corporation Limited had lost potential revenue of ₹ 15 crore by extending undue favour to franchisees.

3.7.1. Karnataka State Electronics Development Corporation Limited (Company) was established with the objective of promoting electronic industries in Karnataka and was also involved in providing ERP solutions, web portals, software development, IT consultancy, IT Education Services and networking. With the objective of training manpower, especially rural youth in computer operations and IT field at subsidized fees, the Company started the IT Education Services Division (Division). The Company had a network of 11 own training centres and 299 Franchisee Training Centres (FTCs) across the State. It also implemented various IT related training programmes sponsored by GoI and GoK for specific sections of the society, such as unemployed youth, women, SC/ST students, economically weaker sections, *etc*. FTCs entered into agreement with the Company for conducting training programmes entrusted to them. The Company, with the approval of its Board of Directors, issued (April 2012) Standard Instructions Manual (Manual) which laid down instructions on operational standards of training centres, fee structure, *etc.* to be followed by the own training centres and FTCs. Review of functioning of 31 of the 299 FTCs revealed the following lapses.

3.7.2. The Division, despite continuous operational losses of its own training centres, had entrusted (between November 2014 and December 2016) the training programmes under Government sponsored schemes to 25 FTCs (for a commission of 20 *per cent*) even at places where the Company's own training centres were functioning. The value of these training programmes was ₹ 2.33 crore. By favouring 25 FTCs with such entrustment without justification, the Division had lost a revenue of ₹ 1.86 crore (80 *per cent* of ₹ 2.33 crore).

3.7.3. The Directorate of Municipal Administration, GoK under GoI sponsored National Urban Livelihood Mission for the year 2015-16, entrusted (September 2015) training programmes valued ₹ 6.39 crore to the Division to train 8,887 candidates with a condition that the training should be conducted only in Company's own training centers and should not be sub-contracted or outsourced. We observed that the Division, violating the conditions of GoK,

entrusted these training programmes to 70 FTCs, though the own training centers had the necessary infrastructure. By favouring FTCs the Division had not only lost a potential revenue of ₹ 5.11 crore (excluding commission at 20 *per cent* of ₹ 6.39 crore) but also unduly benefited FTCs.

3.7.4. *Clause 6.0* of the Manual *inter-alia* provides for the amount of fee to be charged for each course. We observed that the Division released the fees to FTCs as provided in the respective sponsored schemes[97] instead of restricting the payment as per the Manual. Such excess release ranged from ₹ 1,700 to ₹ 6,800 per student in respect of six sponsored schemes which amounted to ₹ 5.52 crore[98] (excluding ₹ 1.38 crore at 20 *per cent* commission) during 2012-13 to 2015-16. Thus, the FTCs were unduly benefited.

3.7.5. *Clause 2.16* of the Manual stipulates that the Division was entitled for a commission of 20 *per cent* from the FTCs unless otherwise specifically indicated. We observed that the Division, during 2011-12 to 2015-16, had collected commission on the course fees in respect of sponsored schemes at lesser rate than prescribed which was in the range of 9.76 to 17.61 *per cent* resulting in loss of revenue of ₹ 2.51 crore[99].

3.7.6. Franchisees desirous of conducting Company accredited courses were required to meet the operational standards set in the Manual. We observed the following non-compliance issues:

Table No.3.7.1: Details of non-compliance to standards

Clause no	Operational Standards	Status of adherence
1.1	A valid agreement between the Company and the Franchisee centre must exist. Franchisee must contact the Company three months in advance for renewal of the franchisee agreement.	• In nine training centers, the agreements with the franchisees had expired in March 2016 and had not been renewed as of September 2016. • In eight cases, the agreements were renewed retrospectively after a delay of 17 to 108 days. • In 10 cases, franchisee certificates to operate new centers were issued before concluding a valid agreement.
1.3	Training centers should have minimum infrastructure requirements such as floor space, separate counseling/ help desk, library facility, internet facility, legal software, *etc.* and	• In five centers, infrastructure like networking, internet facility, library, UPS backup, counseling desk was missing besides lack of floor space.

[97] Women's Development Corporation, Ministry of Social Justice and Employment, National Safai Karmachari Finance and Development Corporation, National Urban Livelihood Mission, State Urban Livelihood Mission and Skill Development Plan.

[98] This represents the difference in fee actually paid to the FTCs and that stipulated in the Manual in respect of sponsored schemes.

[99] Difference between 20 *per cent* of total course fees charged by FTCs (*i.e.* 20 *per cent* of ₹ 38.25 crore = ₹ 7.65 crore) and actual commission received by Division (₹ 5.14 crore) during 2011-12 to 2015-16.

Clause no	Operational Standards	Status of adherence
	should ensure proper working conditions.	• In three centers there were inadequate instructions for use of legal software.
2.28	Franchisees should have Service Tax Registration and remit service tax regularly.	• 12 centers were issued Franchisee Certificates without details of service tax registrations. • One centre had conducted training courses even before valid service tax registration.
3.10	The centre head should maintain feedback from trainees for verification.	• In 31 training centres surveyed, only 6 FTC had maintained the records of feedback received from the trainees, while others had not.

Thus, the Company failed to adhere to its own operational standards. The fact that the Company ignored renewal of agreements which had expired, failed to ensure adequate infrastructure at the training centers and allowed FTCs without service tax registration to function, shows its lackadaisical approach in ensuring adherence to operational standards and monitoring.

The paragraph was issued to the Government during November 2016; the reply of the Government was awaited (February 2017).

Karnataka State Electronics Development Corporation Limited

3.8. Poor implementation of IBM Mainframe training project

Poor implementation of IBM Mainframe training project without analysing the market demand resulted in non-achievement of the intended objectives and a cumulative loss of ₹ 5.78 crore.

Karnataka State Electronics Development Corporation Limited (the Company) is a State IT nodal agency for IT consulting and education with a network of over 250 training centres all over the State, offering low-end software training programmes. The Company was approached (December 2007) by Broadline Computer Systems, Chennai, a business partner of IBM India Private Limited (IBM) to start an IT system called z-platform for providing Linux based development environment to the staff of the Company, impart training to the student community as well and act as a data centre to other Government departments. The Board approved (August 2009) the project based on the assurance given by Broadline Computer Systems that bank guarantee in favour of the Company would be given against any failure to mobilize the minimum number of candidates. The Expert Committee (a Subcommittee of the Board of the Company) too had recommended (October 2009) that guarantee should be obtained from IBM for sourcing and placement of trainees in the initial years. The Government, relying on the assurance by IBM of identifying 500, 1,250 and 2,000 students for training during the first three years, handholding and placing them, approved (July 2010) the project.

The Company, on the recommendation of the Subcommittee of the Board, decided (August 2009/ November 2009) to procure IBM Mainframe z-10 series, estimated to cost ₹ 6.10 crore, from IBM out of its own funds on deferred payment basis.

Memorandum of Understanding (MOU) signed (August 2010) with IBM *inter-alia* required IBM to offer trainers initially, train future trainers, hand hold trainers and use globally accepted evaluation / certification schemes so that those trained by KEONICS-IBM centre would find global opportunities.

The Company entered (August 2010) into an agreement (customer agreement) with IBM for the supply of the Main frame server and for providing services such as learning, co-location and installation and maintenance at a cost of ₹ 6.17 crore. The server was supplied in September 2010 and installed at Indian Telephone Industries (ITI) Data Centre in October 2010. The first batch of training in mainframe for the staff and students was commenced in December 2010.

The Company upgraded (February 2014) the older version (z10BC) with a new version (zBC12) for starting other services such as cloud and hosting services at a cost of ₹ 2.00 crore. The storage capacity, hardware and software of the system were upgraded once again during January 2016 at a cost of ₹ 1.32 crore.

We observed that:

1. The Company which was handling entry level low-end training embarked on a project involving large capital expenditure focusing on high-end advanced training without conducting a feasibility study to ascertain the financial viability of the project. The Company also did not follow due process in the selection of the project and instead merely proceeded on the advice of IBM's business partner.

2. The project was envisaged to earn income of ₹ 13.13 crore over a period of three years (2010-11 to 2012-13) against a total cash outflow of ₹ 9.57 crore. However, the Company could recover only ₹ 1.33 crore (10 *per cent* of the projected income) during this period. It was projected that the Company could recover the capital investment within 18 months of the start of the project and earn surplus from the year 2015-16 after up-gradation. However, during the period 2010-11 to 2015-16 only 61.96 *per cent* of the capital cost of the project was recovered. The project had incurred a cumulative loss of ₹ 5.49 crore in the initial three years mainly due to failure of IBM to provide stipulated number of candidates for training during that period (570 were trained against stipulated 3,750 students).

3. The Company had not included the conditions regarding bank guarantee and assurance of minimum number of trainees in the agreement/MOU entered into with IBM before implementing the project. We observed that only 46 students (21 were placed in jobs by IBM) in 2010-11 (first year), 524 candidates under corporate training in the second year and none in the third year were trained due to fluctuating market demand for

mainframe skills. During 2013-14, 2014-15 and 2015-16, only 205 departmentally sponsored candidates were trained. Of the 205 trained, 20 were given placements.

4. The initial training for trainers offered by IBM was not utilised by the Company to develop expertise in IBM Mainframe. Currently (July 2016), the Company has only one trainer exclusively trained for conducting training sessions on IBM Mainframe.

5. With a dwindling response to the training and realising that it would be difficult to recover the cost of investment, the Company decided to start other services such as cloud and hosting services. As the machine procured (z10BC) was for training purpose, it was upgraded to zBC12 by spending ₹ 3.32 crore. The prudence of this decision was doubtful as the Karnataka State Data Centre and the E-Governance Department were already offering such services to the State Departments and PSUs.

The Government replied[100] (November 2016) that the substantial reduction of new projects being taken on Mainframe technology had resulted in reduced market demand. As the machine was undersized even with respect to training, the machine was upgraded in 2014. It stated that the Company launched a set of solutions on Software as a Service Model which would address large communities and hoped to generate substantial revenue.

From the reply, it is evident that the Company invested in Mainframe technology without first analysing market demand. The Expert Committee recommendation that 'the sourcing and placement of trainees must also be guaranteed by IBM at least in the initial years' was also not implemented.

Thus, failure of the Company in taking up a training project without analysing market demand and its lack of experience in high end training resulted in non-achievement of the intended objectives and a cumulative loss of ₹ 5.78 crore during the six years period ending 2015-16.

Hubli Electricity Supply Company Limited

3.9. Irregular award of contracts

The Central Purchase Committee approved and awarded contracts worth ₹ 37.50 crore to an ineligible contractor overlooking the delegated financial powers and violating KTPP Act and Rules.

Hubli Electricity Supply Company Limited (Company) invited (May 2014) short term tenders for implementation of 'Condition Monitoring and Asset Management Software System' in its 22 Operating and Maintenance Divisions at a total estimated cost of ₹ 31.94 crore[101]. The Company prepared individual estimates for each of the 22 Divisions and assigned indent number[102] for

[100] Principal Secretary to Government, Department of Information Technology Biotechnology and Science and Technology.
[101] Amount put to tender.
[102] IT-1, IT-2,... IT-22.

identification of the Division concerned and control over costs. Bid Enquiries inviting quotations against each of the indent numbers were issued.

The conditions of the tenders *inter-alia* stipulated that the bidder must have an annual turnover of not less than 50 *per cent* of the amount put to tender in any one of the previous financial years (2010-11, 2011-12 and 2012-13) and should have a credit facility in any scheduled bank on or after the bid date not less than the amount put to tender.

The Central Purchase Committee (CPC) chaired by the Managing Director of the Company approved (November 2014) the award of contracts in all the 22 Divisions to the lone bidder *viz.,* Prasanna Technologies Private Limited (PTPL), at a total cost of ₹ 37.50 crore. Accordingly, the Detailed Work Awards (DWA) for each of the 22 Divisions specifying the terms of the contracts were issued (February 2015) to PTPL. The contracts were for a period of three years and ten months from the date of award of contracts. The work, scheduled to be completed during December 2018 as per the contract, was under progress (December 2016).

We observed that the contracts were awarded violating the provisions of Karnataka Transparency in Public Procurement (KTPP), Act 1999 and Rules made thereunder as well as the circular issued by the Government in this regard. Our observations are brought out below:

1. The Circular dated 3 December 2002 issued by the Government of Karnataka and provisions of KTPP Act stipulated that the prequalification documents and the tender documents following two-cover system should have stipulations to check the aggregate of the qualifying criteria of the individual contracts, when the tenderer is the lowest for more than one contract. Further, the tenderer should be prequalified/awarded a contract only if he satisfies the aggregate qualification criteria. The Company, however, had not included this condition which was in violation of the Act and hence the subject tender was invalid *ab initio*. By not including this condition in the tender, the Company facilitated PTPL to bag the contracts in all the 22 Divisions as the firm was evaluated successful, despite not meeting the aggregate qualification criteria.

2. The Tender Scrutiny Committee (TSC) headed by the Director (Technical) certified (July 2014) that the bid of PTPL was *'Responsive'* although PTPL[103] had a turnover of ₹ 6.49 crore only against the requirement of ₹ 15.97 crore[104] and credit facility of ₹ 7.50 crore only against ₹ 31.94 crore[105] required under the KTPP Act.

3. The KTPP Act provided that in case of single bids and where the quoted rates are substantially above (10 *per cent* above) the estimated cost, tenders should preferably be rejected and fresh tenders invited. The Managing Director, (MD) who headed the price negotiation meeting

[103] The actual turnover and credit facility of PTPL is taken from the bid documents.
[104] 50 *per cent* of the amount put to tender (₹ 31.94 crore).
[105] Equivalent to amount put to tender.

(October 2014), went ahead with negotiating the prices with PTPL even though all the 22 bids were single bids and the quoted rates were substantially above the estimated cost[106].

4. As per the delegation of financial powers, the CPC was empowered to approve contracts costing upto ₹ 5 crore and any contract above such amount was to go to the Board of Directors for approval. Though the aggregate value of all 22 contracts worked out to ₹ 37.50 crore, they had been split up to be within the limits of approval (November 2014) by the CPC in violation of delegation of powers and to avoid Board's approval. The contract value of each of the divisions ranged from ₹ 96.06 lakh to ₹ 2.44 crore. Further, the nature of works *viz*. GIS survey, mapping of DTCs and establishment of asset management software, user requirement, *etc.* was similar across all the 22 Divisions.

5. In respect of two cover tender system (Technical and Financial) as in the instant case, the time gap between opening of Technical Bid and that of the Financial Bid should not in any case exceed 60 days and if it does, the KTPP Act stipulated re-tendering. The tender was not cancelled despite the gap between the two bids being 97 days (17 June 2014 to 23 September 2014) which favoured PTPL to bag the contracts.

The Government[107] forwarded (August 2016) the Company's reply that Clause No.3.4 of the GoK circular dated 3 December 2002 provides negotiation instead of cancellation and re-invitation of tenders. Division-wise tender led to more participation, splitting of contract did not arise as individual tenders were called Division-wise and the projects costing less than ₹ 2 crore were within the sanctioning powers of the MD. No preference was given to PTPL because the tenders were floated through e-procurement portal.

The reply is not acceptable as *Clause No.3.4* of the Circular dated 3 December 2002 did not allow negotiation if the contracts were 'substantially high' *i.e.* 10 *per cent* above the estimated cost and the present contracts were covered under this category. Further, the aggregate criterion was stipulated as per Circular dated 3 December 2002 and the award of contracts should have been placed before the Board as the MD or CPC were not empowered to take decision. Also, the Company ended up with single tender as against the claim of wide participation.

Thus, violation of the provisions of KTPP Act including splitting of work to the benefit of a private agency rendered the procurement non-transparent and reduced competition. It also resulted in the contract worth ₹ 37.50 crore being awarded to an ineligible contractor having substantially inadequate turnover as well as credit facility.

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[106] The quoted rates of PTPL ranged from 10.05 to 31.63 *per cent* above the estimated cost.

[107] Additional Chief Secretary to the Government of Karnataka, Energy Department.

Krishna Bhagya Jala Nigam Limited

3.10. Unfruitful expenditure

The objective of providing drinking water to five Rehabilitation Centres in Jamakhandi Taluk was yet to be achieved and expenditure of ₹ 4.61 crore was rendered unfruitful due to the failure of the Company to conclude agreements with the authorities concerned.

The Krishna Bhagya Jala Nigam Limited (Company) awarded (August 2012) the work of providing drinking water supply to the inhabitants of Maigur, Muttur, Shiraguppi, Kadkol and Kanakanawadi Rehabilitation Centres (RC)[108] of Jamakhandi Taluk in Bagalkot District to the successful bidder Shonan Engineering Works Private Limited, Pune at a cost of ₹ 5.56 crore. The work was to be completed within 12 months *i.e.* August 2013.

The Jamakhandi Municipal Corporation (JMC) communicated (July 2014) that it was not possible to supply water to the RCs and that the work would be considered only after the completion of the planned 24x7 water supplies to Jamakhandi Town. JMC also requested the Company to construct a separate Water Treatment Plant (WTP) for the RCs. However, by that time the Company had already spent ₹ 4.61 crore on related works and only the hydraulic test of the pipeline was under progress as of October 2016.

Our scrutiny revealed the following:

1. On the request (December 2005) of the Company, the Karnataka Urban Water Supply & Drainage Board (KUWS&DB)[109] agreed (April 2006) to supply water to the RCs subject to the conditions that the Company would deposit ₹ 1.40 crore towards pro-rata cost of the scheme and make tapping arrangements in consultation with KUWS&DB and JMC (the owner of the project). KUWS&DB forwarded (September 2008) a pro-forma bill for ₹ 1.40 crore but the Company did not deposit the amount.
2. JMC forwarded (October 2008) a draft Memorandum of Understanding and agreement for supplying drinking water. This Memorandum reiterated the conditions stipulated by KUWS&DB. However, the Company did not conclude the agreement with JMC.
3. The estimate prepared by the Company in October 2008 was approved by the Technical Subcommittee of its Board only in March 2011. Meanwhile, the JMC agreed to supply water (November 2010) for 10-12 hours a day. Tenders for award of work were invited in May 2011. The work was awarded only in August 2012.
4. In September 2013 the Company finally attempted payment of ₹ 1.40 crore to JMC and signing of an agreement with them, but could not get the JMC to sign the agreement.

[108] People displaced from villages which were liable to be submerged in the backwaters of the Almatti Dam of the Upper Krishna Project were rehabilitated in various Rehabilitation Centres (RCs) as per approved packages for rehabilitation.

[109] A body which regulates and develops drinking water and drainage facilities in the urban areas of the State of Karnataka.

Thus, the Company's failure to exercise due urgency and quickly initiate the work led to idling of assets of ₹ 4.61 crore and non-achievement of the objective of providing drinking water to the RCs.

The Government[110] replied (August 2016) that the delay was due to multiple checks and balances, lengthy procedures, revision of estimates several times, multiple tendering of work and involvement of various public and private institutions. It also stated that though JMC had resolved (October 2008) to supply water and enter into an agreement with the Company, due to changes in its administrative set-up, tapping was not allowed (June 2015) by the JMC. Further, it was stated that water was supplied on 14 July 2016 and the pro-rata deposit was being deposited.

The reply of the Government is not acceptable as there was no valid reason for the initial delay of two and half years to even start preparing the initial estimate. The reply that water had been supplied on 14 July 2016 was not correct, as the water had not been let out for drinking purposes, the hydraulic test of pipeline being under progress (5 October 2016).

Karnataka Silk Industries Corporation Limited

3.11. Avoidable payment of interest

Underestimation and delay in estimation of profit, wrong application of tax rates and delay in remittance of advance tax resulted in avoidable payment of interest of ₹ 94.40 lakh.

According to the provisions of Section 208 read with Section 211 of the Income Tax Act, 1961 (Act), every company is required to pay, for each financial year, quarterly instalments of advance tax at the prescribed rates[111] within the due dates, if the amount of income tax payable during the financial year exceeds ₹ 10,000. If the instalments of advance tax deposited were less than the prescribed percentages, the assessee company was liable to pay interest under the provisions of Sections 234B[112] and 234C[113] of the Act. This interest was to be calculated and deposited with the balance tax determined on self assessment.

Karnataka Silk Industries Corporation Limited (Company) made profits during the period 2010-11 to 2014-15 and hence the provisions of the Act shall apply to the Company. Audit scrutiny of annual profit estimation and payment of advance tax for the financial years 2010-11 to 2014-15 revealed that the Company paid an avoidable interest of ₹ 94.40 lakh on short remittance of advance tax on account of the following lapses:

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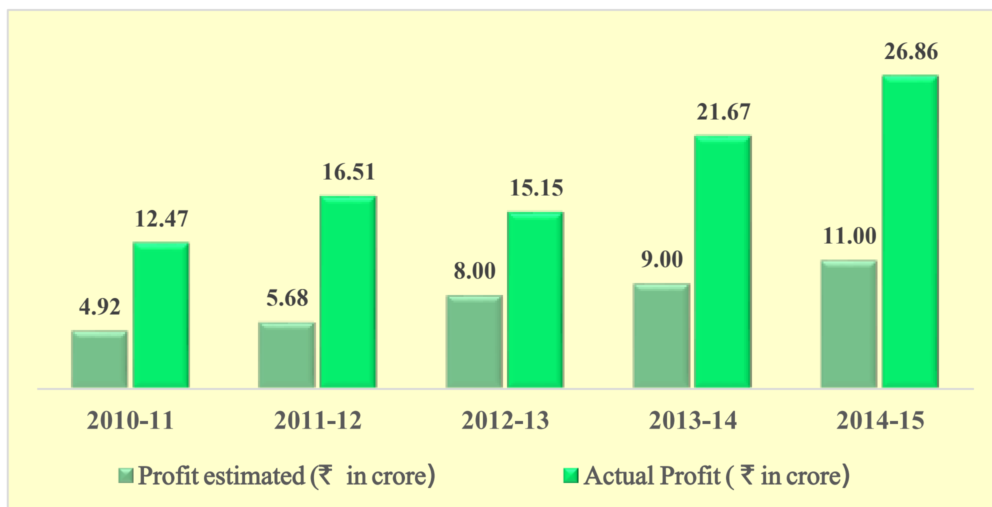
110 Principal Secretary to Government, Water Resources Department.

111 15 *per cent*, 45 *per cent*, 75 *per cent* and 100 *per cent* of assessed tax by 15 June, 15 September, 15 December and 15 March respectively.

112 If advance tax paid was less than 90 *per cent* of the assessed tax, interest was payable at the rate of one *per cent* per month or part thereof on the amount by which the advance tax paid fell short of assessed tax.

113 Interest at the rate of one *per cent* per month or part thereof on the amount short deposited against cumulative instalments of advance tax for the period of three months.

1. The profit estimated by the Company for the financial years 2010-11 to 2014-15 was much less than the actual profit recorded in the respective years. Further, the estimation was not in line with the trend of profitability in the immediate previous years. The shortfall in assessment ranged from 47 to 66 *per cent* of the actual profit earned during the said period. The Company failed to arrive at profit reasonably closer to actual even after revising the initial estimated profit thrice in 2012-13, 2013-14 and 2014-15, shortfall in estimation being 47 to 59 *per cent.* The details of estimated *vis-à-vis* actual profit are depicted in the graph below:



(Chart No.3.11.1: Estimated profit and actual profit recorded during 2010-11 to 2014-15)

2. The Company failed to carry out the estimation at the beginning of the financial year for two years in 2010-11 and 2011-12 and consequently failed to pay the installments of advance tax on due dates. The estimate was made only in March 2011 and December 2011 respectively for these two years. As a result, interest under Section 234B and 234C was levied on short remittance of assessed tax.

3. The tax for the financial years 2011-12 to 2014-15 was assessed at the rate of 18.50 *per cent* which was applicable in case of Minimum Alternate Tax (MAT) payable under Section 115JB[114]. The Company, however, was liable for Corporate Tax at higher rates[115] as the tax payable by the Company was more than that under MAT since 2009-10.

The Government[116] replied (June 2016) that:

- The variation between the estimated and actual profit was bound to happen after finalisation of accounts and its audit;

[114] As per this section, if the tax payable of a company computed is less than 30 *per cent* (revised to 18.50 *per cent* with effect from Assessment Year 2015-16) of its book profits, then such book profit shall be deemed to be the total income and tax payable on such total income shall be the amount of income tax.

[115] 30 to 33.99 *per cent.*

[116] Principal Secretary, Horticulture and Sericulture Department.

- The variation between the estimated and the actual profits had arisen mainly under the head sales and discount, accretion and decretion to stock, consumption of raw material, employees' benefits and abnormal sales in the month of March;

- During the year 2010-11 unabsorbed depreciation of ₹ 8.30 crore was available for setting off against profit and hence no advance tax was paid for the first two quarters of the financial year. For the subsequent financial years, the advance tax was paid on due dates based on the initial estimated profits and the differential tax was paid based on the revised profits arrived at after finalisation of annual accounts and audit.

The reply is not acceptable for the following reasons:

- The variation in estimation ranged between 47 and 66 *per cent* which indicated that the estimation was far from closer to reality. Further, the trend of increase in sales[117] in the month of March was a regular phenomenon every year as seen from the sales turnover during 2010-15.

- The presumption of availability of unabsorbed depreciation reflected a casual approach. The Income Tax Department rejected (December 2013) the Company's claim of unabsorbed depreciation related to assessment year 1987-88 to set off against the income for the financial year 2010-11 as it was time barred.

- The Company's claim that it had paid tax on due dates except in 2010-11 was not correct as the Company paid penalty even for the subsequent years either due to delay in payment of tax or wrong estimation of tax liability.

Thus, unrealistic estimation and delays in remittance of advance tax resulted in avoidable payment of interest of ₹ 94.40 lakh.

Karnataka Government Insurance Department

3.12. Avoidable payment of interest on service tax

Karnataka Government Insurance Department paid interest of ₹ 86.34 lakh as it failed to pay service tax on due dates.

Karnataka Government Insurance Department, Motor Branch (Department) provides insurance to motor vehicles owned by the Government of Karnataka (GoK) and vehicles in which the GoK has financial interest. The Department issues insurance policies on annual basis and the insurance premium is collected by the respective District branch offices of the Department or through the Government Treasury.

The services of General Insurance were brought into the ambit of service tax rules with effect from July 1994 through a notification (June 1994) by the

[117] The sales recorded in the month of March ranged from 1.66 to 3.14 times of the average sales of April to February during every year.

Government of India. Service tax was to be paid to the credit of the Central Government within a stipulated date[118] as prescribed in the Service Tax Rules, 1994, failing which the assessee was liable to pay interest on the tax due at the rates fixed from time to time. The premium collected from Bengaluru branch constituted 97 *per cent* of the annual premium collection of the Department.

We observed that the Department failed to remit the service tax due on the premium collected from the insured within the stipulated dates. The Department paid interest of ₹ 30.38 lakh on the service tax for the period 2005-06 to 2009-10. The Department had not taken corrective action despite having the issue of delay in remittances brought to its notice twice by Audit in the Inspection Reports for the periods 2003-06 and 2008-09.

The delay in remittance of service tax continued even for the subsequent period *i.e.* 2010-11 to 2014-15 and the Department paid an avoidable interest of ₹55.96 lakh for the said period. The delay in remittance was mainly on account of not calculating service tax liability on monthly basis. It was observed that the Department was compiling the data on premium collected from its branch offices after a lapse of more than one and half years from the date of receipt, while the due date for remittance of service tax was the 6th of the following month. It was further observed that the Department renewed insurance policies on the basis of post-dated cheques and without realising the premium on the date of renewal, thereby rendering discharge of service tax liability difficult.

The Government[119] forwarded (July 2016) the reply as furnished by the Director, Karnataka Government Insurance Department which stated that the receipt of premium was spread over all District Treasuries and Sub-Treasuries throughout the State. The District Insurance Officers concerned were required to collect premium receipt details from the respective Treasuries and forward to the Head Office. Hence, it was very difficult to collect the premium receipts immediately and pay service tax by the 6th of the following month. Therefore, the Department was constrained to pay service tax on provisional basis and pay the difference while finalising the accounts. It was also stated that once Khajane-2 software rolled out by the GoK becomes operational, the Department would be able to pay service tax before the due dates.

The Government's reply that it was very difficult to collect the premium receipts and pay tax before 6th of every month is not acceptable as 97 *per cent* of the total premium collected was from Bengaluru branch. Further, service tax on insurance premium came as long ago as July 1994 and the Department should have evolved a suitable mechanism to collect centralised data on all premium receipts.

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[118] Rule 6 provides that the service tax shall be paid to the credit of the Central Government by 6th day of the month, if the duty is deposited electronically and by 5th day of the month, in any other case, immediately following the calendar month in which the service is deemed to be provided.

[119] The reply as furnished by the Director, Karnataka Government Insurance Department was forwarded by the Under Secretary to the Government, Finance Department.

Thus, failure to quantify the service tax liability and pay on the due dates resulted in avoidable payment of interest on service tax to the extent of ₹ 86.34 lakh.

Karnataka State Handicrafts Development Corporation Limited

3.13. Loss of revenue

Karnataka State Handicrafts Development Corporation Limited suffered loss of potential revenue of ₹ 2.32 crore due to its failure to conclude an agreement with the Mysore Palace Board.

Karnataka State Handicrafts Development Corporation Limited (the Company), a fully owned undertaking of the Government of Karnataka, is involved in marketing and selling the handicrafts such as sandalwood carvings, rosewood handicrafts, lacquer ware and toys, *etc.* produced by the craftsmen in the State. In order to market and sell its products, the Company established showrooms, popularly known as 'Cauvery', within and outside Karnataka. One such showroom[120] was set up (October 1993) within the premises of the Mysore Palace[121] at Mysuru.

The Mysore Palace Board (Board) headed by the Executive Officer[122], which was the authority for running the day-to-day affairs of the Palace, requested (September 2012) the Company to relocate the showroom from the existing location within the premises of the Palace. The assigned reason for such a decision of the Board was security concerns to the Palace reportedly suggested by the National Security Guards (NSG). Accordingly, the Company relocated (November 2012) its showroom to another location within the premises of the Palace.

We observed the following:

1. The Company was asked to relocate its showroom on security concerns to the Palace as per the NSG report. The Company, however, failed to verify the veracity of the Board's claim on NSG suggestion. We observed that no such report was on record. This lapse on the part of the Company turned out to its disadvantage as the Board, in the very next month of requesting for relocating the Company's showroom, allotted (October 2012) the same place to a private entity *viz.* Sri Srikanteshwara Multipurpose Co-operative Society (SSMCS).
2. The Company did not enter into any agreement with the Board while hiring the showroom and operating it in the Palace premises for more than two decades. It is pertinent to mention that the Company had entered into agreements in respect of all its other showrooms including those in Government establishments. This failure deprived the Company an opportunity of initiating legal action against the Board's decision. This

[120] The Company is operating show rooms at seven cities (four in Karnataka and three outside the State).

[121] The Palace of Mysuru is a historical palace in the city of Mysuru in Karnataka. It is one of the most famous tourist attractions in India and has several million visitors annually.

[122] District Commissioner of Mysuru usually acts as the Executive Officer of the Board.

was evident from the fact that SSMCS obtained (March 2016) stay from the High Court of Karnataka on the basis of breach of conditions of agreement when the Board took action (February 2016) to vacate SSMCS after we issued (March 2015) a letter to the Government in this regard.

3. The earlier showroom of the Company was located strategically in an advantageous place, which was prominently visible and accessible to the visitors of the Palace. The location of the current showroom was relatively hidden and the sales turnover of the showroom had drastically declined after its relocation from ₹ 2.90 crore in 2011-12 to ₹ 1.38 crore in 2015-16 (48 *per cent* reduction).

Thus, failure of the Company to verify the veracity of the NSG report and to conclude an agreement with the Board deprived it of an opportunity to enforce its legal rights over the occupancy of its show room and also resulted in losing potential revenue year after year. The Company suffered loss of revenue of ₹ 2.32 crore[123] during 2013-14 to 2015-16 as compared to the average sales of previous five years (2007-12).

The Government[124] replied (September 2016) that the matter was taken up (February 2016) with the Minister for Small Scale Industries of GoK and the Government had addressed (July 2016) letter to the District Commissioner in this regard.

Statutory Corporations

Karnataka State Road Transport Corporation and Bangalore Metropolitan Transport Corporation

3.14. Functioning of Workshops

KSRTC and BMTC failed to produce new buses as planned as the existing production capacity of Regional Workshops was not sufficient to meet the stipulated targets. The purchase orders for procuring chassis were initiated after commencement of the financial year contributing to shortfall in production of new buses. The Corporations had also failed to undertake repair and reconditioning within the prescribed time, which resulted in cancellation of scheduled kilometres and consequent loss of contribution of ₹ 85.70 crore during 2011-12 to 2015-16.

Introduction

3.14.1. In Karnataka, four Road Transport Corporations *viz.,* Karnataka State Road Transport Corporation (KSRTC), North Western Karnataka Road Transport Corporation (NWKRTC), North Eastern Karnataka Road Transport Corporation (NEKRTC) and Bangalore Metropolitan Transport Corporation

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[123] The actual sales recorded during 2013-14 (₹ 1.30 crore), 2014-15 (₹ 1.57 crore) and 2015-16 (₹ 1.38 crore) have been deducted from the average annual sale during 2007-12 (₹ 2.19 crore).

[124] Secretary to the Government of Karnataka, Commerce and Industries Department.

(BMTC) were set up under the provisions of Road Transport Corporation Act, 1950.

KSRTC, NWKRTC and NEKRTC provide public transport in Southern, North Western and North Eastern parts of the State respectively, while BMTC provides transport service for urban, sub-urban and rural areas of Bengaluru city.

Organisational setup

3.14.2. The Corporations come under the overall administrative control of the Transport Department of the Government of Karnataka (GoK). The affairs of each of the Corporations are managed by the Board of Directors appointed by the GoK. The Managing Directors, who assist the Board of Directors, look after the day-to-day administrative matters. The Regional Workshops (RWS) are headed by the Works Managers assisted by the Deputy Works Managers. The Divisional and Depot Workshops are managed by the Assistant Mechanical Engineers and Managers respectively.

Operations

3.14.3. The Corporations operate on three-tier system *viz*. Central Offices, Divisions and Depots. Besides, Regional Workshops/Central Workshops were set up for new bus body construction, reconditioning of engines, major accident repairs and disposal of scrap. The workshops at Divisions and Depots carry out heavy bus body and minor repairs, fitness renewal, reconditioning of assemblies other than engines, tyre retreading and periodical preventive maintenance works.

The Workshops function within the ambit of Technical Manual 2003 issued by KSRTC, which prescribes norms for various activities of the Workshops including duties and responsibilities of the staff concerned. The Stores and Purchase Manual 2003 of the Corporations also prescribe procedures and practices to be followed by the Workshops including maintenance of records.

Audit Objective

3.14.4. The Audit Objective was to assess whether the workshops were functioning as per the provisions of the Technical Manual and other prescribed manuals and whether the instructions issued by the competent authority from time to time were complied with.

Audit Criteria

3.14.5. The following sources of criteria were adopted for assessing the Audit findings:

- Technical Manual 2003 and Stores and Purchase Manual 2003;
- Technical specifications and other operational norms issued by the Corporations and
- Guidelines, circulars, instructions and orders issued by GoK and the Corporations from time to time.

Audit scope and methodology

3.14.6. As of 31 March 2016, KSRTC was operating two RWS *viz*. RWS, Kengeri and RWS, Hassan, which were involved in new bus body building and major accident repairs. BMTC was operating two Central Workshops (CWS) *viz*. CWS-1 involved in new body building, reconditioning of engines, radiators, *etc.* and CWS-2 involved in repairs and reconditioning of minor parts.

KSRTC being the controlling Corporation and BMTC being different[125] from the other three corporations were selected for detailed Audit. The two RWS of KSRTC and two CWS of BMTC[126], four out of 14 Divisional Workshops[127] of KSRTC and 12 out of 118 Depot Workshops[128] were selected for detailed Audit. The transactions related to the period 2011-12 to 2015-16 were covered in Audit.

Audit Findings

Production of new buses

3.14.7. As prescribed in the Technical Manual (Clause 1.1 of Part A), the requirement for new buses was planned every year based on two factors, *viz.* augmentation of schedules (trips) and replacement of aged buses. The new buses so planned were produced partially in-house at the RWS in case of KSRTC and the CWS-1 in case of BMTC. The remaining requirement of buses was met by outsourcing the construction of new buses and purchasing ready built buses. Audit observations on production of new buses are detailed in Paragraphs 3.14.8 and 3.14.9.

3.14.8. Audit scrutiny revealed that KSRTC had planned to produce 3,377 buses during 2011-12 to 2015-16 by way of both in-house production and outsourcing. The planned and actual buses produced are detailed below:

Table No.3.14.1: Details of planned and actual buses built in KSRTC

Year	Planned number of new buses			Actual buses built			Overall shortfall (Nos)	Cancellation of scheduled km. (lakh)
	RWS, Kengeri	RWS, Hassan	Outsource	RWS, Kengeri	RWS, Hassan	Outsource		
2011-12	300	193	397	306	157	182	245	11.56
2012-13	275	191	378	246	134	178	286	17.92
2013-14	316	171	352	225	117	71	426	22.99
2014-15	220	144	255	220	75	146	178	24.83
2015-16	136	49	Not outsourced	127	49	Not outsourced	9	25.46
Total	**1,247**	**748**	**1,382**	**1,124**	**532**	**577**	**1,144**	**102.76**

(Source: Performance Appraisal Reports of the Corporation)

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[125] BMTC operations were restricted to Bengaluru city and its urban agglomeration, while other Corporations including KSRTC operated intra and inter-state.

[126] Regional Workshop, Kengeri and Regional Workshop, Hassan of KSRTC; Central Workshop-1 and Central Workshop-2 of BMTC (100 *per cent* selection).

[127] Tumukuru, Davanagere, Mysuru Urban and Ramanagara of KSRTC (25 *per cent* selection). No divisional workshops were in operation in BMTC.

[128] Tumukuru-1, Turuvekere, Davanagere-1, Harihara, Bannimantapa, Sattagalli, Channapatna, and Kanakapura of KSRTC; Depot No.2, 3, 8 and 22 of BMTC (10 *per cent* selection).

Against the planned number of 3,377 buses, the Corporation could produce only 2,233 buses (66 *per cent* of planned). Given its existing capacity, RWS, Hassan could produce a maximum of 157 buses per annum without repairs and reconditioning. Thus the existing production capacity of RWS was insufficient to meet the stipulated targets during 2011-12 to 2013-14. Failure to induct new buses resulted in cancellation of 102.76 lakh kilometres during 2011-12 to 2015-16 and resultant loss of contribution of ₹ 9.78 crore[129]

The Government replied (December 2016) that KSRTC had slowed down the induction of new buses in view of the modified scrapping policy (7.5 lakh kilometres to 9 lakh kilometres) and in place of new vehicles, the workshops were asked to take up the heavy body repairs and accident repairs of the vehicles.

The Government's reply is not acceptable because even the reduced targets of 2014-15 and 2015-16 were not met by the Corporation. The decision of KSRTC to slow down the production of new buses may need rethinking as the corporation had to cancel 102.76 lakh scheduled kilometres for want of vehicles which had resulted in loss of contribution of ₹ 9.78 crore during 2011-12 to 2015-16.

3.14.9. The details of planned and actual buses built/purchased by BMTC during 2011-16 are given in the table below:

Table No. 3.14.2: Planned and actual buses built/purchased by BMTC

Year	Planned	Achievement			
		In-house	Outsource	Purchase	Total
2011-12	825	23	Nil	366	389
2012-13	854	172	240	133	545
2013-14	825	91[130]	211	539	841
2014-15	204	Nil	65	129	194
2015-16	658	Nil	Nil	Nil	Nil
Total	**3,366**	**286**	**516**	**1,167**	**1,969**

(Source: Information as furnished by the Corporation)

Audit analysis revealed the following:

- CWS-1 could produce new buses as planned during 2013-14 and 2014-15 but there was a shortfall to the extent of 53 *per cent* in 2011-12 and 36 *per cent* in 2012-13. Further, no new bus body construction was taken up in 2015-16 despite fixing of a target of 658 buses.
- Though the Corporation had 'Nil' stock of chassis at the beginning of every financial year from 2011-12 to 2015-16, purchase orders (POs) for chassis were placed much after commencement of the financial year during 2011-12 to 2015-16 as detailed below:

[129] Corporations, being in service industry, should have recovered at least contribution for its sustenance and hence audit comment is restricted to loss of contribution. Contribution is arrived at by reducing variable cost from the total operational revenue during the respective years. 2011-12: revenue per km.-₹ 22.82, variable cost per km.-₹ 15.10; 2012-13: revenue per km.-₹ 24.61, variable cost per km.-₹ 16.41; 2013-14: revenue per km.-₹ 26.39, variable cost per km.-₹ 18.33; 2014-15: revenue per km.-₹ 28.75, variable cost per km.-₹ 18.98; 2015-16: revenue per km.-₹ 28.69, variable cost per km.-₹ 16.95.

[130] BMTC took a decision in September 2013 not to undertake construction of new buses at CWS-1 due to insufficient man power. The available man power was devoted for repair and reconditioning.

Table No. 3.14.3: Purchase orders placed against planned new buses in BMTC

Year	Planned new buses	POs placed	Date of POs
2011-12	825	675	December 2011/January 2012
2012-13	854	630	September 2012/November 2012/ January 2013
2013-14	825	550	July 2013/September 2013/ November 2013/ March 2014
2014-15	204	38	July 2014
2015-16	658	10	July 2016

(Source: Information as furnished by the Corporation)

Thus, BMTC failed to procure adequate number of chassis well in time which badly affected the production of new buses.

- In 2011-12 the supplier (TATA Motors) did not supply chassis citing manufacturing problems. 112 of 675 chassis were supplied during 2012-13 and the balance in 2013-14. The short supply of chassis had resulted in shortfall in production of new buses and consequently scheduled kilometres to the extent of 22.08 lakh and 19.51 lakh kilometres were cancelled during 2011-12 and 2012-13 respectively.

- In 2015-16, BMTC initiated tenders for procuring chassis only in May 2015. This tender was withdrawn later (July 2015) because of a decision of KSRTC to place orders for both KSRTC and BMTC together. But KSRTC later backed out (January 2016) and intimated BMTC to procure on its own. Hence, BMTC placed purchase order for procuring 158 chassis on V.E.Commercial Vehicles Limited only in July 2016. Eventually, there was no procurement of chassis during 2015-16 as a result of which the production of new buses had come to a standstill. As a result, BMTC had to cancel the scheduled kilometres to the extent of 81.19 lakh kilometres, which was an increase in cancellations by 250 *per cent* over the previous year (23.18 lakh kilometres).

- The details of cancelled kilometres on account of lack of sufficient buses in BMTC and consequent loss of contribution during 2011-12 to 2015-16 are given below:

Table No. 3.14.4: Details of cancelled kilometres and loss of contribution in BMTC

Year	Cancelled kilometers (lakh km.)	Revenue per km. (₹)	Variable cost per km. (₹)	Contribution loss[131] (₹ crore)
2011-12	22.08	30.04	17.57	2.75
2012-13	19.51	32.93	19.63	2.59
2013-14	7.92	36.39	22.64	1.09
2014-15	23.18	42.43	23.95	4.28
2015-16	81.19	42.90	21.13	17.68
Total	**153.88**			**28.39**

(Source: Performance Appraisal Reports of the Corporation)

[131] Contribution is arrived at by reducing variable cost from the total operational revenue during the respective years.

Thus, the cancellation of scheduled kilometres because of non-induction of new buses had resulted in loss of contribution to the extent of ₹ 28.39 crore during 2011-12 to 2015-16.

The Government in its reply (December 2016), while confirming the audit observations, stated that BMTC could not procure chassis during 2011-12 and 2012-13 as planned due to non-supply by the manufacturer. During 2015-16, as the decision to procure chassis together by KSRTC and BMTC did not fructify, BMTC placed orders on its own in July 2016.

The fact remained that BMTC had to cancel 153.88 lakh scheduled kilometres during 2011-12 to 2015-16 on account of non-induction of new buses as planned due to its failure to make available the required chassis on time to ensure construction of buses as per stipulated targets. This caused a loss of contribution of ₹ 28.39 crore. In addition, non-induction of new buses resulted in increase in maintenance cost of over-aged buses as commented upon in Paragraph 3.14.10.

Operation of over-aged buses

3.14.10. As per the policy in vogue in BMTC, buses were to be declared scrap after running 8 lakh kilometres which was revised to 8.5 lakh kilometres with effect from September 2015. Operations beyond this distance were considered uneconomical as this would result in increased maintenance expenditure.

Audit scrutiny revealed that BMTC had resorted to operating of over-aged buses *i.e.* beyond the stipulated 8.5 lakh kilometres consequent to non-induction of new buses as shown in the table below. The corporation had deferred scrapping buses every year and during the period 2011-12 to 2015-16, only 1,502 buses had been scrapped against the 2,131 planned.

Table No. 3.14.5: Number of over-aged buses operated by BMTC

Kilometers run (in lakh)	2011-12	2012-13	2013-14	2014-15	2015-16
	Number of buses				
8 to 8.5	128	113	270	276	Nil
8.5 to 9.5	178	102	168	204	499
9.5 to 10.5	210	32	57	28	116
10.5 to 11.5	72	22	23	Nil	17
>11.5	14	14	19	Nil	Nil
Total	**602**	**283**	**537**	**508**	**632**

(Source: MIS data of BMTC)

It was also observed that there was an increase in maintenance expenditure especially on auto parts consumption, reconditioning of vehicles and lubricant consumption during 2011-12 to 2015-16 despite there being no significant increase in fleet strength[132] as detailed below:

Table No. 3.14.6: Increase in cost on stores consumption during 2011-16 in BMTC

Sl. No.	Items	2011-12 (₹ crore)	2015-16 (₹ crore)	Percentage increase in cost
1	Auto part consumption	32.15	64.20	100
2	Lubricant consumption	8.63	13.09	52
3	Recondition of vehicles	13.31	18.22	37

(Source: Information furnished by BMTC)

[132] 2011-12: 6,131; 2012-13: 6,425; 2013-14: 6,695; 2014-15: 6,522; 2015-16: 6,401

One of the reasons for the increase in maintenance expenditure was operation of over-aged buses.

The Government in its reply (December 2016) accepted the audit observation stating that there was a gradual increase in the average age of the fleet from 4.99 years in 2011-12 to 6.9 years in 2015-16 due to non-availability of new buses. It also admitted that there was increase in the breakdowns due to the increased average age of the vehicles.

Delay in carrying out reconditioning and repairs

3.14.11. As per the Stores and Purchase Manual (Clause 22 of Part III of Chapter 3), the Stores Officer/Assistant Stores Officer concerned is responsible for maintaining proper inventory levels and monitoring supplies to ensure that no vehicle is kept off-road for want of spares and assemblies. Further, as per the circular instructions issued (May 2008) by KSRTC, a maximum of 20 days were allowed for heavy bus body repairs, while no norms were fixed by BMTC.

A test check of reconditioning and repairs of assemblies at CWS-1 and CWS-2 of BMTC, accident and heavy bus body repairs and minor repairs carried out at Divisional workshops of KSRTC revealed that there were significant delays in reconditioning and repairs as detailed below:

Table No. 3.14.7: Cases of delays on reconditioning/repairs in excess of norms

Sl. No.	Workshops	Total test checked cases	Total cases delayed	21 to 50 days	51 days and above
1	CWS-1	44,477	11,471	6,245	5,226
2	CWS-2	5,781	248	231	17
3	Tumakuru Division	336	74	63	11
4	Ramanagara Division	568	229	181	48
5	Davanagere Division	159	102	83	19
6	Mysore Division	145	29	28	1
	Total	**51,466**	**12,153**	**6,831**	**5,322**

(Source: MIS data of BMTC and KSRTC)

Audit scrutiny revealed that the reason for the delays was delay in placing purchase orders in KSRTC and BMTC. For procuring material, there was a defined consumption period for each item and KSRTC placed orders for material centrally for both KSRTC and BMTC for each consumption period. The details of purchase orders placed for Brake linings, Clutch facings with rivets and Hubs and brake drums during 2011-12 to 2015-16 were as follows:

Table No. 3.14.8: Dates of Purchase orders against the consumption period in KSRTC and BMTC

Consumption period	Date of purchase order for Brake linings, Clutch facings with rivets	Date of purchase order for Hubs and brake drums
July 2011 to June 2012	July 2011/September 2011	February 2012
July 2012 to June 2013	January 2013	January 2013
July 2013 to June 2014	April 2014	Nil
July 2014 to June 2015	June 2015	November 2014
July 2015 to June 2016	April 2016	January 2016

(Source: Information as furnished by the Corporation)

It can be seen that the purchase orders were placed almost at the end of the respective consumption period in all the years except in 2011-12 in respect of Brake linings and Clutch facings with rivets. Similarly, in respect of Hubs and brake drums, the purchase orders were placed around the middle of the consumption period.

As a result of the delay in attending to repairs, the Corporations had to cancel 352.26 lakh scheduled kilometres during the period 2011-12 to 2015-16 leading to loss of contribution of ₹ 47.53 crore as detailed in Table No.3.14.9:

Table No. 3.14.9: Loss of contribution due to cancellation of scheduled kilometres in KSRTC and BMTC

Year	Cancelled km. (lakh)		Contribution per km. (₹)		Loss of contribution (₹ in crore)	
	KSRTC	BMTC	KSRTC	BMTC	KSRTC	BMTC
2011-12	28.39	16.64	7.72	12.47	2.19	2.07
2012-13	29.64	35.36	8.20	13.30	2.43	4.70
2013-14	35.97	35.33	8.06	13.75	2.90	4.86
2014-15	34.74	46.79	9.77	18.48	3.39	8.65
2015-16	33.19	56.21	12.34	21.77	4.10	12.24
Total	**161.93**	**190.33**			**15.01**	**32.52**

(Source: Performance Appraisal Reports)

The Government replied (December 2016) that vehicles in the Depots of KSRTC were not kept off-road for want of spare parts, assemblies and other materials. Renewal of Fitness Certificate, accident / heavy body repairs would take two to fifteen days depending on the nature of damages. It was also stated that the Corporation maintained spare fleet of eight *per cent* to prevent cancellation of schedules and hence there was no cancellation of schedules for want of vehicles. In case of BMTC, it was stated that the stores and purchase department maintained continuous flow of spares and assemblies to the depots and the workshops to avoid off-road buses and holding up of production. However, the supplies were hampered due to factors not in control of the stores and purchase department *viz.* delay in supply of spares required for the latest model vehicles and non-supply due to delay in release of payments to the suppliers.

The reply of the Government in case of KSRTC is contradictory to the facts available. The depots and divisions in KSRTC took more than the stipulated norm of 20 days as shown in Table No.3.14.7 as a result of which 161.93 lakh kilometres had to be cancelled during 2011-12 to 2015-16 due to non-availability of buses which were stranded at the divisions for repairs. The statement that spare fleet was maintained at eight *per cent* is factually incorrect as the data available with audit shows that the average spare fleet was 5.1 *per cent* in the eight selected depots during 2015-16. The reply that continuous flow of materials to the depots and workshops was ensured by BMTC was also not acceptable as seen from the purchase orders which were placed long after the commencement of consumption periods and the stock position was 'nil' at the time of placing the orders.

Non-categorisation of inventory

3.14.12. Categorisation[133] of stores inventory into A, B and C based on their consumption and maintenance of re-order levels as stipulated in the Stores and Purchases Manual (Clause 21 of Chapter 3 of Part III) and circular instructions (September 1994) were not complied with at any of the test checked Depots, Divisions and Workshops. In the absence of categorisation, there was no control system in place to maintain the required level of inventory. Audit test check of stock availability in respect of certain items during 2011-16 revealed that the indents were placed when the stock was 'nil' as shown in the following table.

Table No. 3.14.10: Cases where stock was 'nil' when indents were placed in KSRTC and BMTC

KSRTC	**Date of indent**				
Brake Linings	January 2011 to February 2011	January 2012 to March 2012	January 2013 to February 2013	December 2013 to January 2014	January 2015
Air Filter	November 2011/ December 2011	November 2012 /January 2013	October 2013	November 2014	December 2015
Hubs and Brake Drums	April/March 2011/ February 2012	February 2013	February 2014	Nil	May 2015
Spring Leaves	May 2011/March 2012	November 2012	November 2013	September 2014	May 2015
Clutch and clutch parts	January 2012	Nil	January 2014	December 2014	February 2016
BMTC	**Date of Indent**				
Brake Linings	January 2012	January 2013	January 2014	January 2015	January 2016
Clutch and clutch parts	February 2011	November 2012	November 2013	November 2014	December 2015
Tail assemblies	August 2011	August 2012	August 2013	Nil	Nil
Air Cleaner Assembly (H)	November 2011	November 2012	November 2013	October 2014	Nil
Indicator Glass	August 2011	August 2012	August 2013	Nil	Nil

(Source: Information as furnished by the Corporation)

The Government replied (December 2016) that KSRTC had directed its Divisions and Regional Workshops to maintain the inventory level and BMTC had implemented 'Inventory Management Software' with facilities to track consumption of materials and categorise the same into 'A', 'B', 'C' groups.

Delay in preventive maintenance

3.14.13. Preventive maintenance of buses is carried out at depots to reduce cost of operation and cancellation of kilometres and reduce rate of breakdowns and

[133] The materials are classified in to A, B or C category based on the consumption value for a half year. The materials constituting highest consumption value are classified under 'A' category and lowest consumption value under 'C' category.

accidents due to mechanical defects. Docking[134], which is a part of preventive maintenance, should be carried out at an interval of 20,000 kilometres of running the buses (Clause 2.3 of the Technical Manual).

We observed that docking was done at the four depots[135] of BMTC long after completion of the specified distance during 2011-12 to 2015-16 as detailed in the Table No.3.14.11.

Table No. 3.14.11: Cases of delay in docking in depots of BMTC

Docking-1		Docking-2		Docking-3		Docking-4	
Range of km.	**No of cases**	**Range of km.**	**No of cases**	**Range of km.**	**No of cases**	**Range of km.**	**No of cases**
20,500-22,000	326	40,500-42,000	347	>60,000-62,000	305	80,000-82,000	339
>22,000-24,000	131	>42,000-44,000	160	>62,000-64,000	144	>82,000-84,000	139
>24,000-26,000	44	>44,000-46,000	50	>64,000-66,000	49	>84,000-86,000	38
>26,000-28,000	12	>46,000-48,000	22	>66,000-68,000	24	>86,000-88,000	15
>28,000	32	>48,000	13	>68,000	13	>88,000	12
Total	**545**		**592**		**535**		**543**

(Source: Docking Registers maintained at Depots of BMTC)

Similar delays in docking were noticed in six depots of KSRTC, the number of such cases ranging between 351 and 867 during 2011-12 to 2015-16.

Delay in docking may reduce operational fitness of vehicles and increase the likelihood of breakdowns and accidents apart from rising maintenance cost. Since the Corporations are operating over-aged buses (refer Paragraph 3.14.10), the provision for docking must be complied with rigorously, even before the interval of 20,000 kms, so as to ensure preventive maintenance.

The Government replied (December 2016) that the delay in docking in KSRTC was due to diversion of buses for weekends and Government holidays, festival occasions and also shortage of mechanical staff in the depots. In case of BMTC the delay was attributed to shortage of mechanical staff in depots, in addition to shortage of spare vehicles in the depot for operations due to non-induction of new buses as planned.

Disposal of scrap

3.14.14. The Stores and Purchase Manual (Clause 7 of Part IV) stipulated that the scrap lots should be arranged and segregated under groups assigning lot serial number and kept in separate locations within the workshops. Also care should be taken to see that the items kept in the open yard do not deteriorate in quality due to exposure to the weather and high value items such as gear parts,

[134] Docking refers to a form of preventive maintenance programme carried out at an interval of every 20,000 kilometres of operation to render the vehicles mechanically fit for operation, to reduce the cost of operation, cancellation of km., rate of breakdowns and accidents due to mechanical defects.

[135] Depot No.2, 3, 8 and 22 of BMTC.

bearing scrap, crown wheel, non-ferrous materials, *etc*. shall be kept separately under lock and key.

On physical inspection (June 2016) of the stockyard at four test checked Divisional workshops of KSRTC, we observed the following discrepancies at Ramnagar and Mysore Divisional Workshops:

- Materials were not segregated, instead all the materials *i.e.* Mild Steel Scrap, Rubber Scrap, Brake liners, Scrap Gear motors, Aluminium beading, Scrap Tubes, Scrap starter pinions, Tyres, *etc.* were kept together.

Chart No. 3.14.1:.Photo dated June 2016 at Ramnagar Divisional workshop showing scattered scrap

- None of the scraps bore a serial number of the lot.
- Items were kept in open space allowing room for further deterioration.
- Released engine oil was stored in 210 litre barrels for auction and the barrels were kept in the open without any seal.
- High value items like gear parts, pinion, non-ferrous materials, *etc*. were not kept separately under lock and key.

Because of non-compliance to the manual provisions, the Divisions had no control on the quantity of scrap available and its value at a given point of time. This may lead to misappropriation of valuable scrap materials.

The Government replied (December 2016) that in case of Ramnagar Division corrective action had been taken to segregate the scrap and assign lot numbers. The released engine oil was also kept in closed cap condition. Reply is silent in respect of Mysore division.

Conclusion

We conclude that:

KSRTC and BMTC failed to meet production targets for new buses due to lack of planning since the existing production capacity of Regional Workshops was not sufficient. BMTC failed to ensure availability of

chassis for production of new buses contributing to shortfall in production. The Corporations had also failed to undertake repair and reconditioning within the prescribed time, which resulted in cancellation of scheduled kilometres and consequent loss of contribution of ₹ 85.70 crore (Paragraphs 3.14.8, 3.14.9, 3.14.11) during 2011-12 to 2015-16.

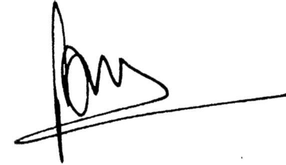
Recommendations

We recommend that in order to prevent cancellation of scheduled kilometres, operation of over-aged buses and loss of revenue, the Corporations may ensure that:

1. **Annual production targets for new buses are fixed on the basis of the capacity of the Regional Workshops;**

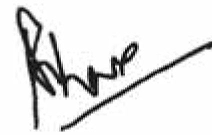
2. **Chassis are made available to the workshops well in time and in adequate numbers;**

3. **Preventive maintenance and inventory management are strengthened.**



Bengaluru **(Bijit Kumar Mukherjee)**
The **Accountant General**
Economic and Revenue Sector Audit
Karnataka

Countersigned



New Delhi **(Shashi Kant Sharma)**
The **Comptroller and Auditor General of India**

Appendices

Appendix-1
Statement showing investments made by the GoK in PSUs whose accounts are in arrears
(Referred to in Paragraph 1.12)

(Figures in columns 4 & 6 to 8 - ₹ crore)

Sl. No.	Sector/ Name of the Public Sector Undertaking	Year up to which accounts finalised	Paid up capital as per the latest finalised accounts #	Period of accounts pending finalisation	Investment made by the State Government during the year of which accounts are in arrears		
					Equity and Share Deposit	Loans	Grants/Subsidy
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
A. WORKING GOVERNMENT COMPANIES							
AGRICULTURE AND ALLIED SECTOR							
1	Karnataka State Agro Corn Products Limited (KSACPL)	2014-15	2.73	2015-16	-	-	-
2	Karnataka State Agricultural Produce Processing and Export Corporation Limited (KAPPEC)	2014-15	0.50	2015-16	-	-	9.93
3	Karnataka TogariAbhivridhiMandali Limited (KTAML)	2014-15	5.00	2015-16	-	-	-
4	Karnataka Sheep and Wool Development Corporation Limited (KSWDCL)	2013-14	6.05	2014-15 2015-16	-	-	-
5	The Karnatak State Forest Industries Corporation Limited (KSFIC)	2014-15	2.67	2015-16	-	-	-
6	Karnataka State Seeds Corporation Limited (KSSCL)	2014-15	3.61	2015-16	-	-	-
7	Karnataka State Mango Development and Marketing Corporation Limited (KSMDMCL)	2013-14	0.01	2014-15 2015-16	-	-	7.54
FINANCING SECTOR							
8	The Karnataka Handloom Development Corporation Limited (KHDCL)	2014-15	51.88	2015-16	-	-	14.48
9	Karnataka State Women's Development Corporation (KSWDC)	2014-15	13.56	2015-16	0.65	-	93.16
10	Karnataka Maharshi Valmiki Scheduled Tribes Development Corporation Limited (KMVSTDC)	2014-15	20.00	2015-16	4.31	-	-
11	The Karnataka Minorities Development Corporation Limited (KMDC)	2013-14	99.78	2014-15 2015-16	57.41	-	-
12	Karnataka State Industrial Infrastructure and Development Corporation Limited (KSIIDC)	2014-15	747.96	2015-16	140.11	-	-
13	Sree Kanteerava Studios Limited (KSL)	2014-15	0.88	2015-16	0.05	-	-

Sl. No.	Sector/ Name of the Public Sector Undertaking	Year up to which accounts finalised	Paid up capital as per the latest finalised accounts #	Period of accounts pending finalisation	Investment made by the State Government during the year of which accounts are in arrears		
					Equity and Share Deposit	Loans	Grants/Subsidy
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
14	Karnataka Thanda Development Corporation Limited (KTDCL)	2014-15	0.01	2015-16	-	-	-
15	Karnataka Vishwakarma Community Development Corporation Limited (KVCDCL)	2014-15	0.01	2015-16	-	-	10.00
INFRASTRUCTURE SECTOR							
16	Karnataka State Construction Corporation Limited (KSCCL)	2012-13	2.05	2013-14 2014-15 2015-16	-	-	-
17	Karnataka Rural Infrastructure Development Limited (KRIDL)	2014-15	12.25	2015-16	-	-	-
18	Rajiv Gandhi Rural Housing Corporation Limited (RGRHCL)	2014-15	3.00	2015-16	-	-	2,820.15
19	Krishna Bhagya Jala Nigam Limited (KBJNL)	2014-15	7,095.01	2015-16	-	-	2,545.73
20	Karnataka Neeravari Nigam Limited (KNNL)	2014-15	18,088.40	2015-16	2,721.68	-	321.72
21	Cauvery NeeravariNigama Limited (CNNL)	2014-15	1,243.88	2015-16	447.01	-	108.97
22	Hubli Dharwad BRTS Company Limited (HDBRTS)	2014-15	17.00	2015-16	-	-	201.64
23	Bangalore Suburban Rail Company Limited (BSRCL)	First accounts not finalised					
MANUFACTURING SECTOR							
24	Dr. BabuJagjivan Ram Leather Industries Development Corporation Limited (LIDKAR)	2014-15	6.85	2015-16	-	-	55.00
25	Karnataka State Small Industries Development Corporation Limited (KSSIDC)	2014-15	26.02	2015-16	-	-	76.79
26	The Mysore Paper Mills Limited (MPM)	2013-14	118.89	2014-15 2015-16	-	-	-
27	Karnataka Vidyuth Karkhane Limited (KAVIKA)	2014-15	5.62	2015-16	-	-	-
28	The Mysore Electrical Industries Limited (MEI)	2014-15	9.99	2015-16	-	-	-
29	Karnataka Silk Industries Corporation Limited (KSIC)	2014-15	58.00	2015-16	-	-	4.78
30	Karnataka Silk Marketing Board Limited (KSMB)	2014-15	31.45	2015-16	-	10.00	-

Sl. No.	Sector/ Name of the Public Sector Undertaking	Year up to which accounts finalised	Paid up capital as per the latest finalised accounts #	Period of accounts pending finalisation	Investment made by the State Government during the year of which accounts are in arrears		
					Equity and Share Deposit	Loans	Grants/Subsidy
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
31	The Mysore Sugar Company Limited(MYSUGAR)	2012-13	8.73	2013-14 2014-15 2015-16	-	-	-
32	Mysore Sales International Limited (MSIL)	2014-15	20.18	2015-16	-	-	-
POWER SECTOR							
33	Karnataka Renewable Energy Development Limited (KREDL)	2014-15	0.50	2015-16	-	-	-
34	Hubli Electricity Supply Company Limited (HESCOM)	2014-15	707.53	2015-16	69.97	-	151.47
35	Gulbarga Electricity Supply Company Limited (GESCOM)	2014-15	305.14	2015-16	99.61	-	1,902.82
SERVICE SECTOR							
36	Karnataka Food and Civil Supplies Corporation Limited (KFCSCL)	2014-15	3.25	2015-16	-	-	-
37	The Karnataka State Tourism Development Corporation Limited (KSTDC)	2014-15	6.41	2015-16	-	-	4.93
38	Jungle Lodges and Resorts Limited (JLR)	2014-15	0.92	2015-16	-	-	1.50
39	Karnataka Tourism Infrastructure Limited (KTIL)	First accounts not finalised					
MISCELLANEOUS SECTOR							
40	Karnataka Vocational Training and Skill Development Corporation Limited (KVTSDCL)	2013-14	0.01	2014-15 2015-16	-	-	15.00
41	Karnataka Public Land Corporation Limited (KPLCL)	2014-15	0.05	2015-16	-	-	3.16
	Total A (Working Government Companies)	**-**	**28,725.78**	**-**	**3,540.80**	**10.00**	**8,348.77**
B. WORKING STATUTORY CORPORATIONS							
AGRICULTURE AND ALLIED SECTOR							
1	Karnataka State Warehousing Corporation (KSWC)	2014-15	7.80	2015-16	-	-	160.90
FINANCING SECTOR							
2	Karnataka State Financial Corporation (KSFC)	2014-15	658.56	2015-16	75.00	-	-
SERVICE SECTOR							
3	Karnataka State Road Transport Corporation (KSRTC)	2014-15	290.89	2015-16	-	-	42.37

Sl. No.	Sector/ Name of the Public Sector Undertaking	Year up to which accounts finalised	Paid up capital as per the latest finalised accounts #	Period of accounts pending finalisation	Investment made by the State Government during the year of which accounts are in arrears		
					Equity and Share Deposit	Loans	Grants/Subsidy
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
4	Bangalore Metropolitan Transport Corporation (BMTC)	2014-15	104.59	2015-16	-	-	217.11
5	North Western Karnataka Road Transport Corporation (NWKRTC)	2014-15	142.31	2015-16	-	-	184.96
6	North Eastern Karnataka Road Transport Corporation (NEKRTC)	2014-15	99.15	2015-16	-	-	143.69
	Total B (Working Statutory Corporations)	**-**	**1,303.30**	**-**	**75.00**	**-**	**749.03**
	Grand Total (A + B)	**-**	**30,029.08**	**-**	**3,615.80**	**10.00**	**9,097.80**

Paid-up Capital does not include Share Deposits / Share Application Money pending allotment

Appendix-2

Summarised financial position and working results of Government Companies and Statutory Corporations as per their latest finalised financial statements/accounts.

(Referred to in Paragraphs 1.16, 1.29)

(Figures in column 5 to 12-₹ crore)

Sl. No.	Sector / Name of the Public Sector Undertaking	Period of accounts	Year in which accounts finalised	Paid-up capital^^	Loans outstan-ding at the end of year	Accumu-lated Profit(+)/ loss (-)	Turnover	Net profit (+)/loss (-) (x)	Net impact of Audit comments#	Capital employed @	Return on capital employed $	Percentage of return on capital employed	Manpower(No. of employees) (as on 31.3.2016)
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)
A. WORKING GOVERNMENT COMPANIES													
AGRICULTURE AND ALLIED SECTOR													
1	Karnataka State Agro Corn Products Limited (KSACPL)	2014-15	2015-16	2.73	24.32	-28.80	-	-0.22	1.36	-1.51	-0.22	-	31
2	Karnataka State Agricultural Produce Processing and Export Corporation Limited (KAPPEC)	2014-15	2015-16	0.50	-	15.64	5.01	0.61	-	78.07	0.63	0.81	17
3	Karnataka Togari Abhivridhi Mandali Limited (KTAML)	2014-15	2016-17	5.00	-	-17.27	127.11	13.09	-	-12.27	13.09	-	7
4	The Karnataka Fisheries Development Corporation Limited (KFDC)	2015-16	2016-17	16.16	1.70	-2.10	154.20	2.87	-	19.09	2.87	15.03	109
5	Karnataka Sheep and Wool Development Corporation Limited (KSAWDCL)	2013-14	2015-16	6.05	-	-4.72	10.09	0.02	-0.55	18.48	0.02	0.13	70
6	Karnataka Compost Development Corporation Limited (Subsidiary of Company at C-1) (KCDCL)	2015-16	2016-17	0.50	2.05	-1.77	3.51	-1.75	-0.51	4.44	-1.63	-	22
7	Karnataka Cashew Development Corporation Limited (KCDC)	2015-16	2016-17	7.59	-	1.59	5.23	5.79	-12.07	9.18	5.79	63.07	81
8	Karnataka Forest Development Corporation Limited (KFDCL)	2015-16	2016-17	9.31	-	223.68	93.20	30.63	-4.49	202.93	30.63	15.09	462
9	The Karnatak State Forest Industries Corporation Limited (KSFIC)	2014-15	2015-16	2.67	-	16.39	40.60	6.23	-7.92	19.07	6.23	32.67	81
10	Karnataka State Seeds Corporation Limited (KSSCL)	2014-15	2015-16	3.61	0.04	27.09	153.30	1.51	-	36.40	1.53	4.20	217
11	Food Karnataka Limited (FKL)	2015-16	2016-17	0.10	-	1.74	-	0.01	-	1.84	0.01	0.54	2
12	Karnataka State Mango Development and Marketing Corporation Limited (KSMDMCL)	2013-14	2015-16	0.01	-	0.66	-	0.35	-	20.48	0.35	1.71	11
	Sector-wise total			**54.23**	**28.11**	**232.13**	**592.25**	**59.14**	**-24.18**	**396.20**	**59.30**	**-**	**1,110**
FINANCING SECTOR													
13	The Karnataka Handloom Development Corporation Limited (KHDCL)	2014-15	2015-16	51.88	15.43	-105.86	143.25	-15.16	-4.48	11.73	-4.61	-	627

Sl. No.	Sector / Name of the Public Sector Undertaking	Period of accounts	Year in which accounts finalised	Paid-up capital^^	Loans outstanding at the end of year	Accumulated Profit(+)/ loss (-)	Turnover	Net profit (+)/loss (-) (x)	Net impact of Audit comments#	Capital employed @	Return on capital employed $	Percentage of return on capital employed	Manpower(No. of employees) (as on 31.3.2016)
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)
14	Karnataka State Handicrafts Development Corporation Limited (KSHDCL)	2015-16	2016-17	6.56	0.98	32.37	54.17	5.16	-	44.11	5.16	11.70	129
15	D. Devaraj Urs Backward Classes Development Corporation Limited (DUBCDCL)	2015-16	2016-17	199.21	115.39	127.10	7.58	34.99	-	872.05	36.91	4.23	46
16	Karnataka State Women's Development Corporation (KSWDC)	2014-15	2015-16	13.56	-	18.07	5.50	0.95	-	31.96	0.95	2.97	43
17	Dr.B.R. Ambedkar Development Corporation Limited (BRADCL)	2015-16	2016-17	199.39	168.01	116.92	5.28	54.36	-	484.32	62.73	12.95	269
18	Karnataka Maharshi Valmiki Scheduled Tribes Development Corporation Limited (KMVSTDC)	2014-15	2016-17	20.00	89.28	58.61	0.75	20.22	-0.07	174.07	23.37	13.43	21
19	The Karnataka Minorities Development Corporation Limited (KMDC)	2013-14	2015-16	99.78	24.75	-23.55	0.35	8.80	-241.39	183.13	10.44	5.70	42
20	Karnataka State Industrial Infrastructure and Development Corporation Limited (KSIIDC)	2014-15	2015-16	747.96	15.58	-251.14	30.21	56.77	5.32	512.40	67.38	13.15	74
21	Karnataka Urban Infrastructure Development and Finance Corporation Limited (KUIDFC)	2015-16	2016-17	8.06	-	13.98	5.99	**	-	41.01	-	-	352
22	Sree Kanteerava Studios Limited (KSL)	2014-15	2015-16	0.88	0.21	1.72	1.55	0.40	-	2.81	0.40	14.23	10
23	Karnataka Asset Management Company Private Limited (KAMCPL)	2015-16	2016-17	0.50	-	2.05	1.79	0.76	-	2.55	0.76	29.80	5
24	Karnataka Trustee Company Private Limited (KTCPL)	2015-16	2016-17	0.01	-	0.30	0.09	0.07	-	0.31	0.07	22.58	1
25	Karnataka Thanda Development Corporation Limited (KTDCL)	2014-15	2015-16	0.01	-	2.84	-	-0.08	-	2.85	-0.08	-	0
26	Karnataka Vishwakarma Community Development Corporation Limited (KVCDCL)	2014-15	2015-16	0.01	5.00	0.03	-	0.03	-	14.70	0.03	0.20	5
	Sector-wise total			**1,347.81**	**434.63**	**-6.56**	**256.51**	**167.27**	**-240.62**	**2,378.00**	**203.51**	**-**	**1624**
INFRASTRUCTURE SECTOR													
27	Karnataka State Construction Corporation Limited (KSCCL)	2012-13	2015-16	2.05	5.53	19.39	4.03	-4.14	-	26.98	-3.66	-	129
28	Karnataka Rural Infrastructure Development Limited (KRIDL)	2014-15	2015-16	12.25	-	302.56	1,824.99	113.65	-7.13	330.88	113.65	34.35	892

Sl. No.	Sector / Name of the Public Sector Undertaking	Period of accounts	Year in which accounts finalised	Paid-up capital^^	Loans outstan-ding at the end of year	Accumu-lated Profit(+)/ loss (-)	Turnover	Net profit (+)/loss (-) (x)	Net impact of Audit comments#	Capital employed @	Return on capital employed $	Percentage of return on capital employed	Manpower(No. of employees) (as on 31.3.2016)
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)
29	Karnataka State Police Housing Corporation Limited (KSPHCL)	2015-16	2016-17	0.12	44.90	54.85	35.42	21.52	-	189.36	21.52	11.36	279
30	Rajiv Gandhi Rural Housing Corporation Limited (RGRHCL)	2014-15	2015-16	3.00	1,989.72	-	##	£	-	2,833.16	-	-	35
31	Karnataka Road Development Corporation Limited (KRDCL)	2015-16	2016-17	310.00	182.36	-115.83	##	-16.09	-3.77	376.53	3.66	0.97	80
32	Krishna BhagyaJala NigamLimited (KBJNL)	2014-15	2015-16	7,095.01	2,511.20	-510.75	15.09	-135.44	-	12,700.23	76.79	0.60	2,312
33	Karnataka Neeravari Nigam Limited (KNNL)	2014-15	2015-16	18,088.40	1,562.81	-2,013.55	5.21	-970.77	-4.48	17,637.66	-903.50	-	3,002
34	Cauvery Neeravari Nigama Limited (CNNL)	2014-15	2015-16	1,243.88	835.49	-	##	$$	-	2,079.37	20.20	0.97	2,304
35	Bangalore Airport Rail Link Limited (Subsidiary of Company at A-20) (BARL)	2015-16	2016-17	5.00	-	-3.20	-	0.12	-	1.80	0.12	6.67	11
36	Tadadi Port Limited (Subsidiary of Company at A-20) (TPL)	2015-16	2016-17	0.05	-	-0.02	-	$$	-	0.03	-	-	-
37	Hubli Dharwad BRTS Company Limited (HDBRTS)	2014-15	2015-16	17.00	-	1.54	-	-0.98	-	292.38	-0.98	-	32
38	Bangalore Suburban Rail Company Limited (BSRCL)	First Accounts not finalised											
	Sector-wise total			**26,776.76**	**7,132.01**	**-2,265.01**	**1,884.74**	**-992.13**	**-15.38**	**36,468.38**	**-672.20**	**-**	**9,076**
MANUFACTURING SECTOR													
39	Dr. Babu Jagjivan Ram Leather Industries Development Corporation Limited (LIDKAR)	2014-15	2016-17	6.85	13.58	-27.33	8.56	0.21	-	-5.71	1.19	-	80
40	Karnataka Soaps and Detergents Limited (KSDL)	2015-16	2016-17	31.82	3.50	172.36	366.76	47.10	-6.53	108.83	47.10	43.28	603
41	Karnataka State Coir Development Corporation Limited (KSCDCL)	2015-16	2016-17	3.01	2.41	-2.22	19.41	-0.78	-0.13	12.38	-0.49	-	47
42	Karnataka State Small Industries Development Corporation Limited (KSSIDC)	2014-15	2015-16	26.02	12.70	107.45	76.65	14.82	-	137.89	14.82	10.75	214
43	The Mysore Paper Mills Limited (MPM)	2013-14	2014-15	118.89	166.25	-425.94	383.71	-78.16	-15.31	-138.02	-45.64	-	1,710
44	Karnataka Vidyuth Karkhane Limited (KAVIKA)	2014-15	2015-16	5.62	7.84	10.47	160.48	4.87	-	102.28	5.83	5.70	171
45	The Mysore Electrical Industries Limited (MEI)	2014-15	2015-16	9.99	28.54	-9.37	48.52	4.79	-2.49	64.58	6.75	10.45	129

Sl. No.	Sector / Name of the Public Sector Undertaking	Period of accounts	Year in which accounts finalised	Paid-up capital^^	Loans outstan-ding at the end of year	Accumu-lated Profit(+)/ loss (-)	Turnover	Net profit (+)/loss (-) (x)	Net impact of Audit comments#	Capital employed @	Return on capital employed $	Percentage of return on capital employed	Manpower(No. of employees) (as on 31.3.2016)
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)
46	NGEF (Hubli) Limited (Subsidiary of Company atC-10) (NGEFH)	2015-16	2016-17	3.20	12.00	-17.63	10.25	-4.87	-	9.46	-3.97	-	137
47	Karnataka State Electronics Development Corporation Limited (KEONICS)	2015-16	2016-17	22.37	-	76.76	236.71	6.17	0.04	99.13	6.17	6.22	134
48	Karnataka Silk Industries Corporation Limited (KSIC)	2014-15	2015-16	58.00	-	32.60	118.02	16.26	0.63	92.73	16.83	18.15	607
49	Karnataka Silk Marketing Board Limited (KSMB)	2014-15	2015-16	31.45	12.50	-43.48	23.13	-4.39	-	0.47	-4.35	-	65
50	Karnataka State Textile Infrastructure Development Corporation Limited (KSTIDCL)	2015-16	2016-17	3.22	-	11.88	12.96	0.72	-	18.31	0.72	3.93	10
51	Mysore Minerals Limited (MML)	2015-16	2016-17	6.00	-	1,773.36	21.01	245.47	29.34	1,107.80	246.88	22.29	882
52	The Hutti Gold Mines Company Limited (HGML)	2015-16	2016-17	2.96	-	1,086.13	350.41	6.33	-1.36	1,027.62	6.50	0.63	4,250
53	The Mysore Sugar Company Limited (MYSUGAR)	2012-13	2015-16	8.73	184.63	-416.67	109.79	-50.27	-9.22	-96.06	-33.46	-	828
54	The Mysore Paints and Varnish Limited (MPVL)	2015-16	2016-17	1.04	-	37.50	34.07	8.14	-0.47	38.54	8.37	21.72	59
55	Karnataka State Beverages Corporation Limited (KSBCL)	2015-16	2016-17	12.00	-	195.77	104.82	26.15	-	207.79	26.15	12.59	437
56	Mysore Sales International Limited (Subsidiary of Company atA-20) (MSIL)	2014-15	2015-16	20.18	-	225.41	1,235.31	33.56	0.02	245.59	34.41	14.01	244
57	Marketing Communication and Advertising Limited (Subsidiary of Company at A-56) (MCA)[δ]	2015-16	2016-17	3.57	-	82.58	171.96	12.38	-	88.61	12.38	13.97	42
	Sector-wise total			**374.92**	**443.95**	**2,869.63**	**3,492.53**	**288.50**	**-5.48**	**3,122.22**	**346.19**	**-**	**10,649**
POWER SECTOR													
58	Karnataka Power Corporation Limited (KPCL)	2015-16	2016-17	4,346.45	5,530.57	3,899.19	7,996.73	181.63	-702.44	13,859.58	1,486.55	10.73	5,214
59	Karnataka Renewable Energy Development Limited(KREDL)	2014-15	2015-16	0.50	-	107.47	24.25	15.47	-	107.97	15.47	14.33	61
60	Karnataka Power Transmission Corporation Limited (KPTCL)	2015-16	2016-17	2,075.32	4,825.44	577.47	2,758.93	178.11	-	7,485.68	620.04	8.28	8904
61	Bangalore Electricity Supply Company Limited (BESCOM)	2015-16	2016-17	546.92	3,349.78	-367.76	14,148.23	108.00	-	5,588.69	562.51	10.07	14,189

[δ] Formerly Marketing Consultants and Agencies Limited.

Sl. No.	Sector / Name of the Public Sector Undertaking	Period of accounts	Year in which accounts finalised	Paid-up capital^^	Loans outstanding at the end of year	Accumulated Profit(+)/ loss (-)	Turnover	Net profit (+)/loss (-) (x)	Net impact of Audit comments#	Capital employed @	Return on capital employed $	Percentage of return on capital employed	Manpower(No. of employees) (as on 31.3.2016)
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)
62	Hubli Electricity Supply Company Limited (HESCOM)	2014-15	2015-16	707.53	926.10	-1,189.33	4,851.58	30.26	-	477.28	378.69	79.34	7,496
63	Mangalore Electricity Supply Company Limited (MESCOM)	2015-16	2016-17	266.36	477.37	96.68	2,691.75	11.11	-96.84	1,165.54	121.71	10.44	3,235
64	Chamundeshwari Electricity Supply Corporation Limited (CESC)	2015-16	2016-17	508.57	671.24	-634.27	2,775.83	7.92	-761.45	1,144.70	158.22	13.82	5,548
65	Gulbarga Electricity Supply Company Limited (GESCOM)	2014-15	2015-16	305.14	725.92	-420.84	3,125.22	-109.86	-	1,120.81	-35.34	-	5,968
66	KPC Bidadi Power Corporation Private Limited (Subsidiary of Company atA-58) (KPCB)	2015-16	2016-17	14.05	7.51	-8.37	0.01	-0.57	-	13.19	-0.57	-4.32	10
67	Power Company of Karnataka Limited (PCKL)	2015-16	2016-17	20.05	-	4.96	0.28	0.80	-	25.02	0.80	3.20	29
68	Raichur Power Corporation Limited (RPCL)	2015-16	2016-17	2,155.34	8,428.45	-	-	$$	-	10,583.79	856.68	8.09	100
	Sector-wise total			**10,946.23**	**24,942.38**	**2,065.20**	**38,372.81**	**422.87**	**-1,560.73**	**41,572.25**	**4,164.76**	**-**	**50,754**
SERVICE SECTOR													
69	Karnataka Food and Civil Supplies Corporation Limited (KFCSCL)	2014-15	2015-16	3.25	-	2.78	854.05	*	-314.02	216.25	59.65	27.58	892
70	The Karnataka State Tourism Development Corporation Limited (KSTDC)	2014-15	2015-16	6.41	5.79	-22.41	52.74	0.28	-	23.10	3.44	14.89	256
71	Jungle Lodges and Resorts Limited (JLR)	2014-15	2015-16	0.92	-	56.68	48.35	7.26	-	67.27	7.61	11.31	550
72	Karnataka Tourism Infrastructure Limited (KTIL)	First Accounts not finalised											
	Sector-wise total			**10.58**	**5.79**	**37.05**	**955.14**	**7.54**	**-314.02**	**306.62**	**70.70**	**-**	**1,698**
MISCELLANEOUS SECTOR													
73	Karnataka Vocational Training and Skill Development Corporation Limited (KVTSDCL)	2013-14	2015-16	0.01	-	4.20	1.70	*	-	83.86	-	-	24
74	Karnataka Public Lands Corporation Limited (KPLCL)	2014-15	2015-16	0.05	-	1.79	0.71	0.59	-	1.84	0.59	32.07	21
75	Karnataka Mining Environment Restoration Corporation Limited (KMERCL)	2015-16	2016-17	0.01	-	- 0.15	0.01	- 0.09	-	-0.14	-0.09	-	1
	Sector-wise total			**0.07**	**-**	**5.84**	**2.42**	**0.50**	**-**	**85.56**	**0.50**	**-**	**46**
	TOTAL A (All sector-wise Government Companies)			**39,510.60**	**32,986.87**	**2,938.28**	**45,556.40**	**-46.31**	**-2,160.41**	**84,329.23**	**4,172.77**	**-**	**74,957**

Sl. No.	Sector / Name of the Public Sector Undertaking	Period of accounts	Year in which accounts finalised	Paid-up capital^^	Loans outstanding at the end of year	Accumulated Profit(+)/ loss (-)	Turnover	Net profit (+)/loss (-) (x)	Net impact of Audit comments#	Capital employed @	Return on capital employed $	Percentage of return on capital employed	Manpower(No. of employees) (as on 31.3.2016)
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)
B.WORKING STATUTORY CORPORATIONS													
AGRICULTURE AND ALLIED SECTOR													
1	Karnataka State Warehousing Corporation (KSWC)	2014-15	2015-16	7.80	195.38	110.45	106.49	33.72	-15.96	319.81	47.22	14.77	364
	Sector-wise total			**7.80**	**195.38**	**110.45**	**106.49**	**33.72**	**-15.96**	**319.81**	**47.22**	**-**	**364**
FINANCING SECTOR													
2	Karnataka State Financial Corporation (KSFC)	2014-15	2015-16	658.56	1,675.81	-469.75	263.52	44.47	-0.94	2,621.43	203.10	7.75	960
	Sector-wise total			**658.56**	**1,675.81**	**-469.75**	**263.52**	**44.47**	**-0.94**	**2,621.43**	**203.10**	**-**	**960**
SERVICE SECTOR													
3	Karnataka State Road Transport Corporation (KSRTC)	2014-15	2015-16	290.89	206.86	-54.75	2,840.57	-43.49	-4.95	647.20	-5.81	-	37,129
4	Bangalore Metropolitan Transport Corporation (BMTC)	2014-15	2015-16	104.59	594.71	302.60	2,211.91	-64.90	-2.15	1,134.15	4.65	0.41	35,554
5	North Western Karnataka Road Transport Corporation (NWKRTC)	2014-15	2015-16	142.31	221.44	-562.17	1,512.78	-53.08	-	-138.17	-15.88	-	23,475
6	North Eastern Karnataka Road Transport Corporation (NEKRTC)	2014-15	2015-16	99.15	66.53	-432.74	1,296.22	-15.12	-2.40	24.87	11.79	47.41	20,341
	Sector-wise total			**636.94**	**1,089.54**	**-747.06**	**7,861.48**	**-176.59**	**-9.50**	**1,668.05**	**-5.25**	**-**	**1,16,499**
	TOTAL B (All sector-wise Statutory Corporations)			**1,303.30**	**2,960.73**	**-1,106.36**	**8,231.49**	**-98.40**	**-26.40**	**4,609.29**	**245.07**	**-**	**1,17,823**
	Grand total (A + B)			**40,813.90**	**35,947.60**	**1,831.92**	**53,787.89**	**-144.71**	**-2,186.81**	**88,938.52**	**4,417.84**	**-**	**1,92,780**
C. NON WORKING GOVERNMENT COMPANIES													
AGRICULTURE AND ALLIED SECTOR													
1	Karnataka Agro Industries Corporation Limited (KAIC)	2015-16	2016-17	7.54	68.98	-260.60	Not considered for non-working companies	-17.26	-3.19	-183.33	0.19	-	0
2	The Mysore Tobacco Company Limited(Subsidiary of Company at C-1) (MTC)	2015-16	2016-17	0.78	-	-15.11		-0.29	-	-13.01	0.37	-	2
3	Karnataka Pulpwood Limited (Subsidiary of Company at A-8) (KPL)	2015-16	2016-17	1.25	2.89	-20.88		0.00	-	-16.74	0.00	-	0
4	The Karnataka State Veneers Limited (Subsidiary of Company at A-9) (KSVL)	2004-05	2005-06	1.00	1.00	-8.85		-0.45	-	0.26	-0.45	-	0
5	The Mysore Match Company Limited (Subsidiary of Company at A-9) (MMCL)	2015-16	2016-17	0.05	-	0.10		0.11	-	0.17	0.11	64.71	0
	Sector-wise total			**10.62**	**72.87**	**-305.34**		**-17.89**	**-3.19**	**-212.65**	**0.22**	**-**	**2**

Sl. No.	Sector / Name of the Public Sector Undertaking	Period of accounts	Year in which accounts finalised	Paid-up capital^^	Loans outstan-ding at the end of year	Accumu-lated Profit(+)/ loss (-)	Turnover	Net profit (+)/loss (-) (x)	Net impact of Audit comments#	Capital employed @	Return on capital employed $	Percentage of return on capital employed	Manpower(No. of employees) (as on 31.3.2016)
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)
MANUFACTURING SECTOR													
6	The Mysore Lamp Works Limited (MLW)	2015-16	2016-17	11.81	116.88	-292.25	Not considered for non-working companies	-11.70	-	-150.32	-0.27	-	0
7	Vijayanagar Steel Limited (VSL)	2015-16	2016-17	12.91	0.58	-0.42		-0.20	-	15.85	-0.20	-	0
8	The Mysore Cosmetics Limited (Subsidiary of Company at A-56) (MCL)	2003-04	2004-05	0.16	-	-3.12		-0.79	-	-0.23	-0.79	-	0
9	The Mysore Chrome Tanning Company Limited (Subsidiary of Company atA-56) (MCT)	2015-16	2016-17	0.76	0.41	-8.58		0.00	-	-7.41	0.00	-	0
10	NGEF Limited (NGEF)	2002-03	2003-04	46.51	227.24	-408.85		-157.48	-	98.21	-157.48	-	0
11	Karnataka Telecom Limited (Subsidiary of Company at C-10) (KTL)	2003-04	2004-05	3.00	-	36.11		0.05	-	-29.23	0.05	-	0
12	The Mysore Acetate and Chemicals Company Limited (MACCL)	2002-03	2003-04	12.18	13.11	12.18		-0.46	-	0.09	-0.46	-	0
	Sector-wise total			**87.33**	**358.22**	**-664.93**	**-**	**-170.58**	**-**	**-73.04**	**-159.15**	**-**	**0**
	TOTAL C (All sector-wise non-working Government Companies)			**97.95**	**431.09**	**-970.27**	**-**	**-188.47**	**-3.19**	**-285.69**	**-158.93**	**-**	**2**
	Grand Total (A + B + C)			**40,911.85**	**36,378.69**	**861.65**	**53,787.89**	**-333.18**	**-2,190.00**	**88,652.83**	**4,258.91**	**4.80**	**1,92,782**

^^ Paid-up Capital does not include Share Deposits / Share Application Money pending allotment.
x Net profit/loss includes adjustment for prior income/expenses but excludes appropriations and tax provisions.
Impact of accounts include the net impact of comments of Statutory Auditors and the CAG and is denoted by (+) increase in profit/decrease in losses and (-) decrease in profit/increase in losses.
@ Capital employed represents Shareholders fund and long term borrowings.
$ Return on capital employed has been worked out by adding profit with the interest charged to profit and loss account.
* Prepared Statement of Income and Expenditure account (Sl.Nos.69, 73).
£ Excess of expenditure over income has been capitalised. No profit and loss account was prepared (Sl.Nos.30).
** Recorded 'zero' profit by claiming management fee equal to net administrative expenditure incurred (Sl.Nos.21).
$$ No profit and loss account prepared, only pre-operative expenditure (Sl.Nos.34, 36, 68)
Turnovers in respect of Companies at Sl.Nos.30, 31, 34 are not included. In respect of RGRHCL (Sl.No.30), the Company is involved in development work and excess of income over is capitalised. KRDCL (Sl.No.31) is involved in construction of roads and hence turnover not considered. Although, the operations of KBJNL (Sl.No.32), KNNL (Sl.No.33) and CNNL (Sl.No.34) are functioning under the administrative control of the Water Resources Department and involved in construction of irrigation projects, the turnover of CNNL is not considered as the Company does not prepare profit and loss account.

Appendix-3

Statement showing the department-wise outstanding Inspection Reports (I.Rs).

(Referred to in Paragraph 1.27)

Sl. No.	Name of the Department	No. of PSUs	No. of outstanding I.Rs.[∇]	No. of outstanding Paragraphs	Year from which outstanding
1	Agriculture and Horticulture	9	14	68	2005-06
2	Animal Husbandry, Fisheries/ Forest, ecology and environment	5	11	77	2007-08
3	Commerce and Industries	23	43	343	2010-11
4	Transport	4	75	445	2010-11
5	Co-operation	1	2	24	2011-12
6	Information, Tourism and Youth Service	3	3	41	2014-15
7	Water Resources	3	112	377	2010-11
8	Public Works	2	2	10	2012-13
9	Energy	10	194	1,454	2010-11
10	Social Welfare and Labour / Women and Child Welfare	4	18	110	2006-07
11	Food, Civil Supplies and Consumer Affairs	1	2	16	2012-13
12	Finance	3	18	87	2010-11
13	Housing	1	4	25	2008-09
14	Information and Technology	1	1	20	2015-16
15	Urban Development	1	2	24	2011-12
16	Employment and Training	1	1	9	2013-14
17	Infrastructure Development	1	1	4	2012-13
18	Home	1	3	13	2010-11
19	Rural Development and Panchyath Raj	1	2	2	2006-07
	Total	**75**	**508**	**3,149**	

[∇] Excludes Inspection Reports in respect of Departmental Undertakings and KERC.

Appendix-4

Delay in materialising Lift Irrigation Schemes

(*Referred to in Paragraphs 2.1.11, 2.1.14*)

LIS (District catered to)	i) Initial administrative approval ii) Potential iii) Cost	i) Date of approval of latest DPR ii) Potential iii) Cost iv) Actual expenditure (March 2016)	Audit observations
Bhima (Kalaburgi)	i) April 1992 ii) 24,292 ha iii) ₹ 94.17 crore	i) October 2009 ii) 24,292 ha iii) ₹ 588.37 crore iv) ₹ 598 crore	• Works commenced in February 2003, after lapse of more than ten years of the administrative approvals. • Cost of the scheme had crossed the sanctioned cost against the physical progress of 69 *per cent* of the envisaged potential (December 2016).
Guddada-mallapura (Haveri)	i) August 2003 ii) 5,261 ha iii) ₹ 60 crore	i) October 2009 ii) 5,261 ha iii) ₹ 115.40 crore iv) ₹ 111 crore	• Works commenced in September 2005. • The works of canal network were under progress (December 2016). • Potential yet to be created
Hipparagi (4 LISs) (Vijayapura, Bagalkot and Belagavi)	i) October 1991 ii) 59,692 ha iii) ₹ 186.70 crore	i) February 2008 ii) 74,742 ha iii) ₹ 1,521.78 crore iv) ₹ 1,788 crore	• The original proposals were revised three times (June 2001, April 2007 and February 2008) by adding four new lifts. • Cost was revised four times, latest cost was set at ₹ 3,330.23 crore (approval of GoK was pending as of December 2016), a manifold increase compared to the original cost for increasing additional potential by 15,050 ha. • Rehabilitation and resettlement works and field irrigation channels were in progress (December 2016).
Savanur (Haveri)	i) November 2014 ii) 15,500 ha iii) ₹ 144 crore	i) March 2016 ii) 15,500 ha iii) ₹ 690 crore iv) ₹ 0.09 crore	• Works commenced in May 2015, were under progress (December 2016). No potential created yet.
Shiggoan (Haveri)	i) January 2009 ii) 9,900 ha iii) ₹ 238 crore	i) October 2013 ii) 13,500 ha iii) ₹ 532 crore iv) ₹ 293 crore	• Scope was changed by adding additional potential of 3,600 ha under Micro irrigation as per the approval of Central Water Commission (May 2012) to comply with the environmental norms. Physical progress of 73 *per cent* had so far been achieved. • The works of Micro irrigation were yet to commence (December 2016).

LIS (District catered to)	i) Initial administrative approval ii) Potential iii) Cost	i) Date of approval of latest DPR ii) Potential iii) Cost iv) Actual expenditure (March 2016)	Audit observations
Singatalur (Koppal, Gadag and Bellary)	i) September 1992 ii) 16,188 ha iii) ₹ 63.62 crore	i) January 2015 ii) 1,07,380 ha iii) ₹ 5,768.04 crore iv) ₹ 1,489 crore	• Scope of the scheme was revised four times (September 1992, December 1998, December 2010 and January 2014). • Actual potential created was only 19,588 ha (18 *per cent*) against 1.07 lakh ha. The works of micro irrigation were yet to commence (December 2016)
Souparnika (Udupi)	i) April 2010 ii) 1,730 ha iii) ₹ 53.22 crore	i) March 2016 ii) 1,730 ha iii) ₹ 53.22 crore iv) 98.92 crore	• Works commenced in February 2011 were completed in December 2012 against due date of May 2012. • ₹ 99 crore was incurred against the sanctioned cost due to change in schedule of rates and higher quotes in tender. Revised cost was not approved by the Government.
Sri Rameshwara (Belagavi)	i) August 2003 ii) 13,800 ha iii) ₹ 218.42 crore	i) July 2011 ii) 13,800 ha iii) ₹ 363 crore iv) ₹ 421 crore	• Works commenced in September 2005 were completed in March 2013 against the due date of March 2007.
Tiluvalli (Haveri)	i) October 1992 ii) 1,012 ha iii) ₹ 2.09 crore	i) January 2010 ii 1,012 ha iii) ₹ 34 crore iv) ₹ 19.17 crore	• Estimates were revised to ₹ 41.76 crore during 2010-11, which was not approved. • The scheme was under progress pending completion of rejuvenation of canal network (December 2016). No potential created yet.
Tubachi-Babaleshwara (Vijayapura, Bagalkot and Belagavi)	i) February 2014 ii) 42,500 ha iii) ₹ 2,488.97 crore	i) Under approval ii) 52,700 ha iii) ₹ 2,489 crore iv) ₹ 65 crore	• Works, commenced in December 2014 were in progress (October 2016). • Due date for completion was December 2016. • Cost of the project revised to ₹ 3,572 crore, which is yet to be approved by the Government December 2016.

Appendix-5

Projects selected for audit under Part-A and Part-B

(*Referred to in Paragraph 2.2.6*)

Sl. No.	Name of the utility	Name of the town	Approved cost: Part A (₹ crore)	Approved cost: Part B (₹ crore)
1	BESCOM	Bengaluru	219.38	-
2		Chikkaballapur	1.40	7.65
3		Davangere	4.11	51.83
4		Doddaballapur	1.33	14.51
5		Hosakote	0.88	6.11
6		Ramanagara	1.35	11.80
7		Tiptur	1.41	8.17
8		Tumakuru	3.50	42.76
9	CESC	Hassan	2.44	11.65
10		Kollegala	1.28	4.10
11		Mysuru	14.94	128.35
12		Nanjangud	1.01	5.68
13	GESCOM	Basavakalyan	1.05	5.83
14		Bhalki	0.92	6.37
15		Gangavathi	1.24	6.50
16		Kalaburgi	6.57	33.57
17		Kampli	1.41	5.42
18		Raichur	2.48	21.39
19		Sindhanur	1.23	4.75
20	HESCOM	Athani	1.15	2.46
21		Vijayapura	4.89	29.06
22		Chikodi	1.34	1.70
23		Gokak	1.22	3.49
24		Indi	0.83	1.18
25		Mahalingpur	0.60	2.01
26		Rabkavi-Banahatti	1.56	5.83
27		Sirsi	1.34	4.66
28	MESCOM	Kadur	0.96	-
29		Mangaluru	10.36	-
30		Shivamogga	4.01	-

Note: Bengaluru Town was not part of Audit sample under Part-B and MESCOM did not implement Part-B.

Appendix-6
Details of SRS compliances by ITIA
(*Referred to in Paragraph 2.2.13*)

Module	Total No of SRS Requirements	Available	Not Available	Percentage completion
Web Self Service	28	28	0	100
System Security Requirement	30	25	5	83
Management Information System	10	9	1	90
New Connection	26	25	1	96
Collections	67	66	1	99
Development of Commercial DB of Consumers	12	7	5	58
Disconnection & Dismantling	41	37	4	90
GIS based customer Indexing and asset mapping	479	477	2	100
Identity and Access Management system	113	93	20	83
Billing	117	113	4	97
GIS based integrated network analysis module	171	150	21	88
Asset Management	41	39	2	95
Maintenance management	217	214	3	99
Meter Data Acquisition	143	129	14	90
Energy Audit	10	6	4	60
Metering	60	50	10	83
Centralised Customer Care	166	149	17	90
Total	**1,731**	**1,618**	**113**	**93**

Appendix-7

Status of User Acceptance Test of modules as of October 2016
(*Referred to in Paragraph 2.2.13*)

Module	No. of total test cases proposed	No. of test cases passed	No. of test cases failed to execute	No of test cases not executed	Total pending cases	Overall status
Web Self Service	24	23	1	0	1	96
System Security Requirement	6	5	1	0	1	83
Management Information System	19	6	13	0	13	32
New Connection	49	46	0	3	3	94
Collections	26	26	0	0	0	100
Development of Commercial Data Base of Consumers	8	8	0	0	0	100
Disconnection & Dismantling	10	10	0	0	0	100
GIS based customer Indexing and asset mapping	25	20	5	0	5	80
Identity and Access Management system	19	12	7	0	7	63
Billing	39	35	4	0	4	90
GIS based integrated network analysis module	5	5	0	0	0	100
Asset Management & Maintenance Management	40	30	0	10	10	75
Meter Data Acquisition	72	63	9	0	9	88
Energy Audit	12	6	6	0	6	50
Metering	89	75	14	0	14	84
Total	**443**	**370**	**60**	**13**	**73**	**84**

Appendix-8
Delay in award of works under Part-B of RAPDRP
(*Referred to in Paragraph 2.2.24, 2.2.26*)

Name of the town	Date of sanction	Date of inviting of tender	Date of award	Delay in award from the date of sanction* (months)
BESCOM				
Chikkaballapur	March 2010	June 2010	March 2011	6
Davanagere	March 2010	June 2010	February 2011	5
Doddaballapur	March 2010	June 2010	March 2011	6
Hosakote	March 2010	June 2010	March 2011	6
Ramanagara	March 2010	June 2010	April 2011	7
Tiptur	March 2010	June 2010	March 2011	6
Tumukuru	March 2010	June 2010	March 2011	6
CESC				
Hassan	June 2010	July 2010	August 2012(S), April 2012(SM), March 2012(TM)	20
Kollegal	June 2010	July 2010	January 2012	13
Mysuru	June 2010	July 2010	January 2012	13
Nanjangud	June 2010	July 2010	January 2012	13
GESCOM				
Basavakalyan	March 2010	April 2011	February 2012	17
Bhalki	March 2010	April 2011	May 2012	20
Gangavathi	March 2010	April 2011	April 2012	19
Kalaburgi	March 2010	April 2011	May 2012	20
Kampli	March 2010	April 2011	March 2012	18
Raichur	March 2010	April 2011	February 2012	17
Sindhanur	March 2010	April 2011	February 2012	17
HESCOM				
Athani	March 2010	December 2011	June 2012	21
Vijayapura	June 2010	December 2011	June 2012	19
Chikkodi	March 2010	December 2011	June 2012	21
Gokak	March 2010	December 2011	June 2012	21
Indi	March 2010	December 2011	June 2012	21
Mahalingpur	March 2010	December 2011	June 2012	21
Rabkavi-Banhatti	March 2010	December 2011	June 2012	19
Sirsi	June 2010	December 2011	June 2012	25

* Delay has been calculated after leaving six months period from the date of sanctioning of DPRs.

Appendix-9
Delay in completion of works under Part-B of RAPDRP as of October 2016
(*Referred to in Paragraph 2.2.29*)

Name of the town	Date of award	Stipulated date of completion	Actual date of completion	Delay in completion (in months)
Chikkaballapur	March 2011	March 2013	April 2015	25
Davanagere	February 2011	February 2013	March 2014	13
Doddaballapur	March 2011	March 2013	August 2015	29
Hosakote	March 2011	March 2013	August 2015	29
Ramanagara	April 2011	April 2013	April 2015	24
Tiptur	March 2011	March 2013	April 2014	13
Tumukuru	March 2011	March 2013	April 2014	13
Hassan	August 2012(S), April 12(SM), March.12(TM)	August 2013, October 2012, July 2012	March 2016, May 2014, July 2013	31 17 12
Kollegala	January 12(S), April 12(SM), March 12(TM)	January 2013, October 2012, July 2012	March 2016, May 2014, July 2013	38 17 12
Mysuru	January 12(S), April 12(SM), March 12(TM)	July 2013, October 2012, July 2012	Work in progress, May 2014, July 2013	- 17 12
Nanjangud	January 12(S), April 12 (SM), March 12(TM)	January 2013, October 2013, July 2012	August 2014, May 2014, July 2013	19 7 12
Basavakalyan	February 2012	January 2013	March 2015	26
Bhalki	May 2012	April 2013	March 15	23
Gangavathi	April 2012	March 2013	January 2015	22
Kalaburgi	May 2012	April 2013	March 2015	23
Kampli	March 2012	February 2013	January 2015	23
Raichur	February 2012	January 2013	Work in progress	NA
Sindhanur	February 2012	January 2013	Work in progress	NA
Athani	June 2012	June 2013	December 2013	6
Vijayapura	June 2012	June 2013	November 2014	17
Chikkodi	June 2012	June 2013	June 2014	12
Gokak	June 2012	June 2013	August 2014	14
Indi	June 2012	June 2013	November 2014	17
Mahalingpur	June 2012	June 2013	November 2014	16
Rabkavi-Banhatti	June 2012	June 2013	May 2014	11
Sirsi	June 2012	June 2013	July 2014	12

S-Strengthening works, SM-Single phase metering, TM-Three phase metering

Glossary
(*Referred to in Paragraph 2.1*)

Canal Bed Level (CBL)	It is the bottom level of the Canal corresponding to the ground level.
Delivery Chamber	It is a civil structure constructed at the end of the rising main/gravity main for distribution of water into the outlets.
Full Reservoir Level (FRL)	The Maximum level of water that can be stored in a reservoir/barrage.
Gravity Main	The Gravity main is the open canal/pipeline, which conveys the water (without pumping) from high level to low level through gravity.
Head Regulator	It is a structure with/without gates constructed across the canal to regulate the flow of water.
Hydraulic Pressure	It is the force of water applied perpendicular to the surface of an object per unit area over which that force is distributed.
Intake Channel	It is a canal constructed to draw water directly from the source of water to the Jackwell of the LIS for onward pumping.
Jackwell	The water drawn through the intake channel is let into the Jackwell or sump for onward pumping.
Micro or Drip irrigation	Micro or Drip irrigation is a form of irrigation that saves water and fertilizer by allowing water to drip slowly to the roots of plants, either onto the soil surface or directly onto the root zone, through a network of valves, pipes, tubing, and emitters.
Pump house	The pump house is a civil structure which accommodates the pumping machinery located either above or by the side of Jackwell.
Rising Main	The rising main is the pipeline, which conveys the pumped water to the delivery chamber located at the ridge point.
Reservoir Level (RL)	It is the level corresponding to the storage of water in the related reservoir.
Motor Floor Level	It is the level at which pumps are placed at the floor of Pump house.

Glossary

(*Referred to in Paragraph 2.2*)

AT&C losses	Aggregate Technical and Commercial losses provide a realistic picture of energy and revenue loss. It comprises Technical and Commercial losses. AT&C losses are calculated using following formula: {1-Billing Efficiency X Collection Efficiency} X 100 Where Billing efficiency = Total Units Sold/Total Input and Collection Efficiency = Revenue Collected/Amount Billed
DTC	Distribution Transformer Centre refers to a transformer that provides the final voltage transformation in the electric power distribution system, stepping down the voltage used in the distribution lines to the level used by the customer.
Feeder	A feeder could be either an overhead line or an underground cable which transmits the power.
GIS	GIS refers to Geographic Information System which is an information system developed and used in a global context. A GIS is any information system which attempts to deliver the totality of measurable data worldwide within a defined context.
Go-Live	'Go-live' refers to the declaration of the project successful, when the software is run bug free with actual live data at site for three months.
Modems	A modem (modulator-demodulator) is a network hardware device that modulates one or more carrier wave signals to encode digital information for transmission and demodulates signals to decode the transmitted information. The goal is to produce a signal that can be transmitted easily and decoded to reproduce the original digital data.
MPLS	Multi Protocol Label Switching (MPLS) is a type of data-carrying technique for high-performance telecommunications networks that direct data from one network node to the next, based on short path labels rather than long network addresses, avoiding complex lookups in a routing table.
Network Bandwidth	Bandwidth in bits may also refer to consumed bandwidth, corresponding to the average rate of successful data transfer through a communication path.
UAT	UAT refers to User Acceptance Test which is a software testing process where the system is tested for acceptability and validates the end to end business flow.
VPN	A Virtual Private Network (VPN) extends a private network across a public network, such as Internet. It enables users to send and receive data across shared or public networks as if their computing devices were directly connected to the private network.
WAN	A Wide Area Network (WAN) is a telecommunications network or computer network that extends over a large geographical distance.
SRS	System Requirement Specifications provide guidance for procedural automation of the existing business processes and invocation of appropriate IT resources associated with it to be implemented under Part-A of the Programme.

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