

PREFACE

Government commercial enterprises, the accounts of which are subject to audit by the Comptroller and Auditor General of India, fall under the following categories:

- (i) Government companies,
- (ii) Statutory corporations and
- (iii) Departmentally managed commercial undertakings.

2. This Report deals with the results of audit of Government companies and Statutory corporations and has been prepared for submission to the Government of Karnataka under Section 19 A of the Comptroller and Auditor General's (CAG) (Duties, Powers and Conditions of Service) Act, 1971, as amended from time to time. The results of audit relating to departmentally managed commercial undertakings are included in the Report of the Comptroller and Auditor General of India (Civil) - Government of Karnataka.

3. Audit of accounts of Government companies is conducted by the Comptroller and Auditor General of India (CAG) under the provisions of Section 619 of the Companies Act, 1956.

4. In respect of Karnataka State Road Transport Corporation, Bangalore Metropolitan Transport Corporation, North Western Karnataka Road Transport Corporation and North Eastern Karnataka Road Transport Corporation, which are Statutory corporations, the Comptroller and Auditor General of India is the sole auditor. As per State Financial Corporations (Amendment) Act, 2000, the CAG has the right to conduct the audit of accounts of Karnataka State Financial Corporation in addition to the audit conducted by the Chartered Accountants, appointed by the Corporation out of the panels of auditors approved by the Reserve Bank of India. In respect of Karnataka State Warehousing Corporation, the CAG has the right to conduct the audit of their accounts in addition to the audit conducted by the Chartered Accountants, appointed by the State Government in consultation with the CAG. In respect of Karnataka Electricity Regulatory Commission, the CAG is the sole auditor. The Audit Reports on the annual accounts of all these corporations are forwarded separately to the State Government.

5. The cases mentioned in this Report are those, which came to notice in the course of audit during 2009-10 as well as those which came to notice in earlier years, but were not dealt with in the previous Reports. Matters relating to the period subsequent to 2009-10 have also been included, wherever necessary.

6. The audit in relation to the material included in this Report has been conducted in conformity with the Auditing Standards issued by the CAG.

Overview

1. Overview of Government companies and Statutory corporations

Audit of Government companies is governed by Section 619 of the Companies Act, 1956. The accounts of Government companies are audited by Statutory Auditors appointed by the CAG. These accounts are also subject to supplementary audit conducted by the CAG. Audit of Statutory corporations is governed by their respective legislations. As on 31 March 2010, the State of Karnataka had 75 working Public Sector Undertakings - PSUs (69 companies and 6 statutory corporations) and 15 non-working PSUs (all companies), which employed 1.77 lakh employees. The State PSUs registered a turnover of ₹36,369.87 crore for 2009-10 as per their latest finalised accounts. This turnover was equal to 12.19 per cent of State Gross Domestic Product indicating the important role played by the PSUs in the economy. The PSUs had accumulated loss of ₹ 197.93 crore as per their latest finalised accounts.

Investments in PSUs

As on 31 March 2010, the investment (Capital and long term loans) in 90 PSUs was ₹ 54,231.30 crore. Infrastructure Sector accounted for about 58.23 per cent of total investment and Power Sector about 27.97 per cent in 2009-10. The Government contributed ₹ 8,113.61 crore towards equity, loans and grants / subsidies in 2009-10.

Performance of PSUs

The working State PSUs earned a profit of ₹545.78 crore in the aggregate for 2009-10 as per their latest finalised accounts. The major contributors to profit were Karnataka Power Corporation Limited (₹711.05 crore), Mysore Minerals Limited (₹200.54 crore), and The Hutti Gold Mines Company Limited (₹124.71 crore). Heavy losses were incurred by Chamundeshwari Electricity Supply Corporation Limited (₹ 217.15 crore), Gulbarga Electricity Supply Company Limited (₹ 216.25 crore) and Hubli Electricity Supply Company Limited (₹173.64 crore).

Audit noticed various deficiencies in the functioning of PSUs. A review of three years Audit Reports of CAG shows that the PSUs' losses of ₹ 417.48 crore and infructuous investments of ₹ 302.40 crore were controllable with better management. Thus, there was tremendous scope to improve the functioning and enhance the profits. The PSUs can discharge their role efficiently only if they are financially self-reliant. There is a need for greater professionalism and accountability in the functioning of PSUs.

Quality of accounts

The quality of accounts of working companies needs improvement. During the year, out of 70 accounts finalised, the statutory auditors had given unqualified reports for ten accounts, qualified reports for 51 accounts, adverse reports (which means that accounts do not reflect a true and fair position) for seven accounts and disclaimers (meaning the auditors are unable to form an opinion on accounts) for two accounts. There were 106 instances of non-compliance with Accounting Standards in 35 accounts during the year. Reports of Statutory Auditors on internal control of the companies indicated several weak areas.

Arrears in accounts and winding up

Twenty working PSUs had arrears of accounts of twenty accounts as of September 2010. The arrears pertain only to the current year (2009-10). There were fifteen non-working PSUs including seven under liquidation. The Government may consider winding up these non-working companies.

2. Performance reviews relating to Government companies

The Report includes Performance reviews relating to *Working of Karnataka Power Corporation Limited* and *Implementation of Rural Load Management System scheme by Electricity Supply Companies*. Executive summary of audit findings is given below:

➤ Working of Karnataka Power Corporation Limited.

Power is an essential requirement for all facets of life and has been recognised as a basic human need. In compliance with the Electricity Act, 2003, Government of India prepared (February 2005) National Electricity Policy (NEP) in consultation with State Governments and Central Electricity Authority (CEA) with a view to achieve 'Power for All' by 2012.

Karnataka Power Corporation Limited was incorporated on 20 July 1970 under the Companies' Act, 1956, as a wholly-owned Company under the administrative control of Energy Department of the Government of Karnataka (GoK). As on 31 March 2010, the Company had two thermal power stations (1,970 MW), eighteen hydro generation stations (3,637.35 MW), two renewable energy stations (10.56 MW) and one Diesel Generating (DG) plant (127.92 MW) with a total installed capacity of 5,745.83 MW. The turnover of the Company was ₹ 4,397.25 crore in 2009-10, which was equal to 12.09 per cent and 1.47 per cent of the turnover of State PSUs and State Gross Domestic Product respectively. As on 31 March 2010, the Company had employee strength of 6,281.

Capacity addition

Though the installed capacity in the State increased from 7,084.80 MW at the beginning of 2005-06 to 10,387.81 MW at the end of 2009-10, yet the State was not in a position to meet the peak demand. The peak demand, which was 5,949 MW in 2005-06 increased to 8,094 MW in 2009-10 and the deficit which was 6.57 per cent in 2005-06 increased to 12.91 per cent in 2009-10. Even the purchase of power from private producers could not suffice the required demand forcing the State to impose load shedding. The shortfall as compared to required demand increased from 1,326 MU in 2005-06 to 5,059 MU in 2009-10.

Against the required capacity addition of 8,050 MW during 2005-10, the actual capacity addition was 3,183.11 MW, leaving a shortfall of 4,866.89 MW. Though 1,644 MW of capacity was planned to be added by the Company (KPCL) during 2005-10, the actual

addition was only 861 MW, leaving a deficit of 783 MW.

Achievement of Power for All by 2012

Karnataka Electricity Regulatory Commission (KERC) had forecast (December 2008) peak requirement of 10,120 MW by the end of 2012. In order to meet this demand, the installed capacity required worked out to 14,913 MW. Considering the installed capacity of 10,387.81 MW at the end of 2009-10, the capacity addition required to be commissioned between 2010-11 and 2011-12 worked out to 4,525 MW. The projects on hand, however, would add capacity to the extent of 2,053 MW, still leaving a gap of 2,472 MW. Thus, the primary objective of power for all by 2012 may not be achieved.

Project management

Of the ten projects planned by the Company during 2005-10, only seven were taken up, of which only four were completed and three were under implementation. Of the balance three projects, one project was shelved and the two were yet to be taken up for want of environmental clearance and assured gas supplies. The implementation period of the completed projects was beyond the scheduled period and the time overrun ranged from 1.5 months to 36 months due to delay in supply of materials and commissioning of critical equipments.

Contract management

The Company failed to levy liquidated damages of ₹ 82.85 crore on contractors for delayed completion / supply and also failed to recover excess payment towards duties and taxes. Undue benefit was extended to the supplier of coal due to incorrect interpretation of the term 'pro-rata' while adjusting for coal with excess moisture content.

Operational performance

Life extension works of RTPS Units 1 and 2 were not taken up as per CEA norms though due for replacement or refurbishment. Failure to undertake R&M works of Diesel Generating plant resulted in higher maintenance costs.

Delay in execution of uprating works in Nagihari Power House resulted in loss of generation of 2,671 MU. The norm for operation and maintenance (O&M) expenditure was exceeded in thermal power stations whereas it was within the norm in hydro stations. Against the average O&M cost of ₹18.20 lakh per MW up to 2007-08 and ₹16.88 lakh per MW thereafter, the actual O&M cost per MW was ₹33.34 lakh, ₹33.78 lakh, ₹34.75 lakh, ₹39.90 lakh and ₹38.52 lakh during 2005-10.

Procurement of fuel

Shortages in lifting of allotted quantity of coal were observed leading to loss of generation valued ₹78.46 crore. Though the thermal power stations had sufficient capacity to unload the rakes within the time allowed by Railways, delay was noticed in clearing the rakes resulting in payment of demurrage of ₹31.30 crore.

Consumption of fuel

Coal valued ₹905.36 crore was consumed in excess of norms specified by the equipment supplier.

Deployment of manpower

The Company had not assessed the required manpower. Excess non-technical staff was observed in hydro stations while there was shortage of technical and non-technical staff in thermal power stations as compared to norms. The salaries and wages paid to excess non-technical staff in hydro stations was to the tune of ₹185.15 crore

Auxiliary consumption

Auxiliary consumption of hydro stations exceeded the norm fixed by CEA and such excess consumption was 528.49 MU valued at ₹29.21 crore. As regards thermal power stations, it was within the norms fixed by KERC / Central Electricity Regulatory Commission (CERC).

Plant Load Factor

The generation and Plant Load Factor (PLF) achieved were far below the designed generation and PLF in thermal power stations. The Company was not able to achieve the norm prescribed by CERC in 2008-09 and 2009-10 due to longer duration of forced shutdown. Though the PLF achieved by RTPS during 2006-10 was above the norm fixed by CERC and national average, it showed a declining trend i.e. from 89.18 per cent in 2006-07 to

80.78 per cent in 2009-10. This was due to ageing of Units, quality of coal, frequent breakdown of Units, running on partial load, back-down instructions from Load Despatch Centre (LDC) and non-achievement of rated parameters.

Bellary Thermal Power Station (BTPS) had not achieved the norm for PLF specified by CERC.

The targets for generation as approved by CEA were achieved by hydro stations.

Outages

The number of hours lost due to planned outages in thermal power stations increased from 2,283.82 hours in 2006-07 to 3,757.25 hours in 2009-10 i.e., from 3.72 per cent to 5.36 per cent of the available hours. The forced outage hours were within the norm of 10 per cent of the available hours fixed by CEA in all the years except 2008-09. In RTPS, 1.65 per cent to 7.45 per cent of the operated capacity remained unutilised resulting in loss of generation of 2,388 MU due to running of Units on partial load and reduced capacity due to their ageing. Loss of generation at BTPS due to operation below the rated capacity was 1,147 MU.

Financial management

The dues receivable from ESCOMs increased from ₹2,525.02 crore at the end of March 2006 to ₹4,032.16 crore at the end of March 2010 due to poor realisation resulting in increased dependence on short term loans for meeting operational requirements. The borrowings increased from ₹4,552.40 crore at the end of March 2006 to ₹7,381.97 crore at the end of March 2010 leading to additional interest burden of ₹284.79 crore. As at the end of March 2010, RTPS held spares valued ₹136.43 crore which was in excess of the prescribed guidelines by ₹77.63 crore resulting in locking up of funds and loss of interest of ₹4.77 crore for one year alone.

Although the Power Purchase Agreements empowered the Company to appropriate payments received from ESCOMs first towards outstanding interest and thereafter towards principal dues, the Company failed to do so resulting in accumulation of interest to the extent of ₹1,170.83 crore.

Environmental issues

The Company had exceeded the parameters prescribed by Central Pollution Control Board / Environmental Acts in respect of air, water and noise pollution. As RTPS failed to comply with

the directions of State Pollution Control Board, it could not avail of concessional rates on water cess leading to extra expenditure of ₹1.16 crore.

Conclusion and Recommendations

The State is not in a position to achieve 'Power for All by 2012' due to lack of concerted efforts for augmentation of capacity. The project management was ineffective as instances of time overrun were noticed. New hydro projects proposed to be taken up by the Company were either awaiting clearance from MoEF or held up due to local agitation. Renewable Energy Sources in the State also remained underutilised. The operational performance of thermal power stations was sub-optimal due to fixation of generation targets below the available hours, low plant load factor, inefficient fuel management, failure to undertake timely renovation and modernisation and life extension schemes. The consumption of coal was in excess as compared to designed parameters. The poor realisation of dues and consequent accumulation of outstandings from ESCOMs forced the Company to resort to borrowings entailing payment of interest. This had also affected its ability to take up new projects.

The review contains eight recommendations:

The Company needs to streamline procedures for procurement, acceptance and consumption of coal and strive to improve efficiency;

The thermal power stations should strive to improve performance to the level of norms of CERC / KERC and CEA and achieve the specifications prescribed by equipment suppliers;

The Company should also analyse / investigate reasons for excess consumption of fuel, higher outage hours, higher auxiliary consumption and other higher operating parameters;

The Company needs to take up renovation and modernisation and life extension programmes as per schedule. This would result in optimum utilisation of existing facilities;

The Government needs to evolve a long-term strategy for capacity augmentation through its own agencies and by private sector participation;

From a long-term perspective there is a need to diversify energy sources and provide clean energy. Development of hydro and renewable energy sources needs to be accorded top priority for energy security;

The Government also needs to encourage, adopt and implement Demand Side Management and Energy Efficiency measures in addition to capacity addition; and

The Government should consider setting up a task force on priority so that the objective of providing power for all by the end of 2012 is achieved.

(Chapter 2.1)

➤ **Implementation of Rural Load Management System scheme by Electricity Supply Companies.**

In Karnataka there is a wide gap between demand and supply of power, which affects both irrigation and domestic consumers. To overcome the gap through better demand side management, a scheme called Rural Load Management Scheme (RLMS) was conceived. The main objective of the RLMS was to provide assured hours of power supply to Irrigation Pump (IP) set consumers and 24 hours power supply a day to non-IP consumers. Other benefits such as reduction in peak load, transmission and distribution losses and improvement in tail end voltage were also envisaged under the scheme.

RLMS scheme

Under the RLMS, a Rural Load Management Unit (RLMU) box is installed on the Low Tension side (output side) of the transformer. The RLMU box comprises of Programmable Logic Controllers (PLC), circuit breaker, modem, electronic meter etc. The main idea behind RLMS is to segregate IP loads on the transformer into two groups. The feeder (11KV) is kept charged for 24 hours in a day. While power supply is given for entire 24 hours to non-IP set consumers, power supply to IP set consumers is regulated by the PLC for specified hours in a staggered manner as per a pre-determined programme. The PLC switches between the two groups alternatively, thereby ensuring assured power supply to IP set consumers.

Audit objectives

A performance audit review was undertaken in three Electricity Supply Companies (BESCOM, HESCOM and MESCOM) to ascertain whether the RLMS scheme was carefully designed with adequate planning; whether the scheme was implemented economically, efficiently and effectively; whether the intended benefits in reduction of distribution losses and improvement in tail end voltage were achieved; and whether the main objective of providing assured hours of power supply to IP set consumers and 24 hours power supply to non-IP set consumers was achieved.

Audit findings

The RLMS scheme was taken up in the ESCOMs without proper planning. The scheme was not scrutinized by Technical Audit. The total cost incurred from December 2004 to

March 2010 was ₹589.34 crore. In BESCOM and HESCOM system improvement works were taken up by utilizing higher capacity materials than those specified in the policy of the companies resulting in extra expenditure of ₹4.33 crore in test checked divisions. In HESCOM, qualification requirements of tenderers for supply of RLMU boxes were altered after invitation of tenders.

Tampering was noticed when power supply was not provided to farmers during May 2007 in test checked feeder. The Vigilance Wing of BESCOM noticed tampering of RLMU boxes during April-May 2008 also as power was not provided to farmers for long hours and non-supply hours were not compensated with power supply in other hours. The power supply position (post April 2008) deteriorated. Power cut in RLMS feeders' resulted in non supply of power during the stipulated time to a group of IP set consumers and such periods of non-supply were not compensated with power supply during some other time of the day.

The vicious cycle of power cut in RLMS feeders, non-rotation of timings of power supply and supply during evening hours, led to large scale tampering. The maintenance contractor could not maintain the RLMU boxes being tampered on a large scale. The situation was aggravated by the rising demand-supply gap scenario of power supply. Hence, the scheme, which was modelled to work in a demand-supply gap situation failed in BESCOM and HESCOM. The expenditure made on RLMU boxes in six and five test checked divisions of BESCOM and HESCOM were ₹19.73 crore and ₹8.62 crore respectively, served only limited purpose and was largely wasteful.

The incidental benefits of reduction in peak load, reduction in transmission and distribution losses and improvement in tail end voltage were achieved in 20 test checked feeders of three ESCOMs, but the main objective of providing assured hours of power supply to IP set consumers and 24 hours power supply to non-IP set consumers, however, failed in BESCOM and HESCOM. BESCOM stopped implementing RLMS in August 2008, while HESCOM decided in January 2009 not to go ahead with the execution of RLMS in the remaining feeders where work had not commenced.

In MESCOM, however, load shedding was not resorted in RLMS feeders. Under extreme conditions, the feeders were treated at par with Urban feeders (minimum power cut). Instances of tampering noticed were attended to by the maintenance contractor. This led to the success of the scheme only in MESCOM, indicating that the scheme was a workable model if the companies provided power supply to IP set consumers as per Government policy.

To meet the same objective, BESCO has now embarked upon another scheme called Niranthara Jyothi in which separate lines would be drawn to supply power to IP sets.

Recommendations

All schemes undertaken by the ESCOMs should be scrutinised by Technical Audit so as to assess their viability and sustainability under the then existing conditions.

The objective of the companies should be to provide assured hours of power supply to IP set consumers rather than focusing on preventing tampering. This would entail a win-win situation to the consumers and the companies. Proper maintenance of the assets is also a key to the success of any scheme.

In view of the success of RLMS scheme in MESCOM and as the Expert Committee appointed by the company had also estimated the cost under Niranthara Jyothi to be double the cost under RLMS, BESCO and HESCO need to take a re-look at the alternatives to meet the desired objective of providing assured power supply to IP set consumers.

(Chapter 2.2)

3. Transaction audit observations

Transaction audit observations included in this Report highlight deficiencies in the management of PSUs, which resulted in serious financial implications. The irregularities pointed out are broadly of the following nature:

Loss of ₹ 44.15 crore in six cases due to non compliance with rules, directives, procedures, terms and conditions of contracts.

(Paragraphs 3.1, 3.3, 3.4, 3.6, 3.9 and 3.13)

Loss of ₹ 27.87 crore in six cases due to non-safeguarding the financial interests of organization.

(Paragraphs 3.2, 3.5, 3.8, 3.10, 3.11 and 3.12)

Loss of ₹ 2.05 crore in one case due to lack of competitiveness in operations

(Paragraph 3.7)

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

- **Karnataka Power Corporation Limited, Karnataka Power Transmission Corporation Limited and Electricity Supply Companies** made irregular payments of ₹ 40.38 crore as ex-gratia to their employees in contravention of the guidelines issued by the Department of Public Enterprises.

(Paragraph 3.1)

- The **Karnataka Neeravari Nigam Limited** paid re-handling charges in addition to excavation and transportation charges resulting in inadmissible benefit to the contractor amounting to ₹ 9.93 crore.

(Paragraph 3.5)

- Deficiencies in preparation of quotations without including the relevant costs coupled with slow progress of works resulted in loss of ₹ 2.05 crore in **Karnataka Rural Infrastructure Development Limited**.

(Paragraph 3.7)

- The decision of the **Mysore Electrical Industries Limited** to venture into an area of work in which it had no expertise resulted in a loss of ₹ 0.95 crore.

(Paragraph 3.9)

CHAPTER I

1. Overview of State Public Sector Undertakings

Introduction

1.1 The State Public Sector Undertakings (PSUs) consist of State Government Companies and Statutory Corporations. The PSUs are established to carry out activities of commercial nature, keeping in view the welfare of people. In Karnataka, the PSUs occupy an important place in the state economy. The PSUs registered a turnover of ₹ 36369.87 crore for 2009-10 as per their latest finalised accounts as of September 2010. This turnover was equal to 12.19 *per cent* of State Gross Domestic Product (GDP) for 2009-10. Major activities of the PSUs in Karnataka are concentrated in infrastructure sector. The working PSUs earned a profit of ₹ 545.78 crore in aggregate for 2009-10 as per their latest finalised accounts. They had employed 1.77 lakh employees as of 31 March 2010. The PSUs do not include eight Departmental Undertakings (DUs), which carry out commercial operations but are a part of Government departments. Audit findings of these DUs are incorporated in the Civil Audit Report for the State.

1.2 As on 31 March 2010, there were 90 PSUs as per the details given below. Of these, three Companies¹ were listed on the stock exchange(s).

Type of PSUs	Working PSUs	Non-working PSUs ²	Total
Government Companies ³	69	15	84
Statutory Corporations	6	-	6
Total	75	15	90

1.3 During the year 2009-10, three⁴ new PSUs were established and one non working company (Karnataka Film Industries Development Corporation Limited) was struck-off by the Registrar of Companies, Bangalore.

Audit Mandate

1.4 Audit of Government companies is governed by Section 619 of the Companies Act, 1956. According to Section 617, a Government company is one in which not less than 51 *per cent* of the paid up capital is held by Government(s). A Government company includes a subsidiary of a Government company. Further, a company in which 51 *per cent* of the paid up capital is held in any combination by Government(s), Government companies and Corporations controlled by Government(s) is treated as if it were a

¹ The Mysore Paper Mills Limited, Mysore Paints and Varnish Limited and Mysore Lamp Works Limited.

² Non-working PSUs are those which have ceased to carry on their operations.

³ includes 619-B companies.

⁴ Raichur Power Corporation Limited, Karnataka Thanda Development Corporation Limited and Karnataka Public Lands Corporation Limited.

Government company (deemed Government company) as per Section 619-B of the Companies Act 1956.

1.5 The accounts of the State Government companies (as defined in Section 617 of the Companies Act, 1956) are audited by Statutory Auditors, who are appointed by the CAG as per the provisions of Section 619(2) of the Companies Act, 1956. These accounts are also subject to supplementary audit conducted by the CAG as per the provisions of Section 619 of the Companies Act, 1956.

1.6 Audit of statutory corporations is governed by their respective legislations. Out of six statutory corporations, the CAG is the sole auditor for Karnataka State Road Transport Corporation, Bangalore Metropolitan Transport Corporation, North Western Karnataka Road Transport Corporation and North Eastern Karnataka Road Transport Corporation. In respect of Karnataka State Warehousing Corporation and Karnataka State Financial Corporation, the audit is conducted by Chartered Accountants and supplementary audit by the CAG.

Investment in PSUs

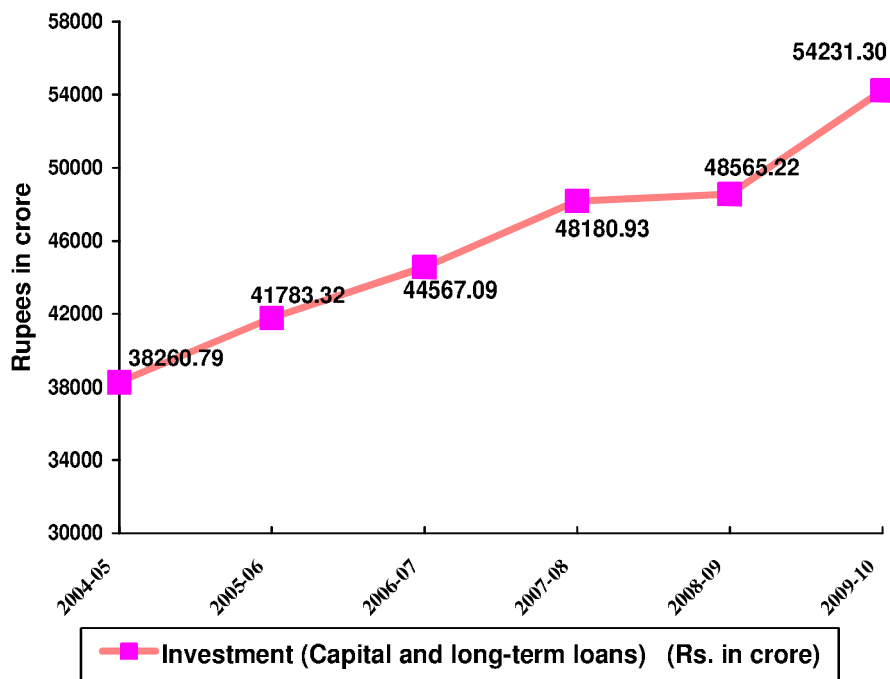
1.7 As on 31 March 2010, the investment (capital and long-term loans) in 90 PSUs (including 619-B companies) was ₹ 54,231.30 crore as per details given below.

(Rupees in crore)

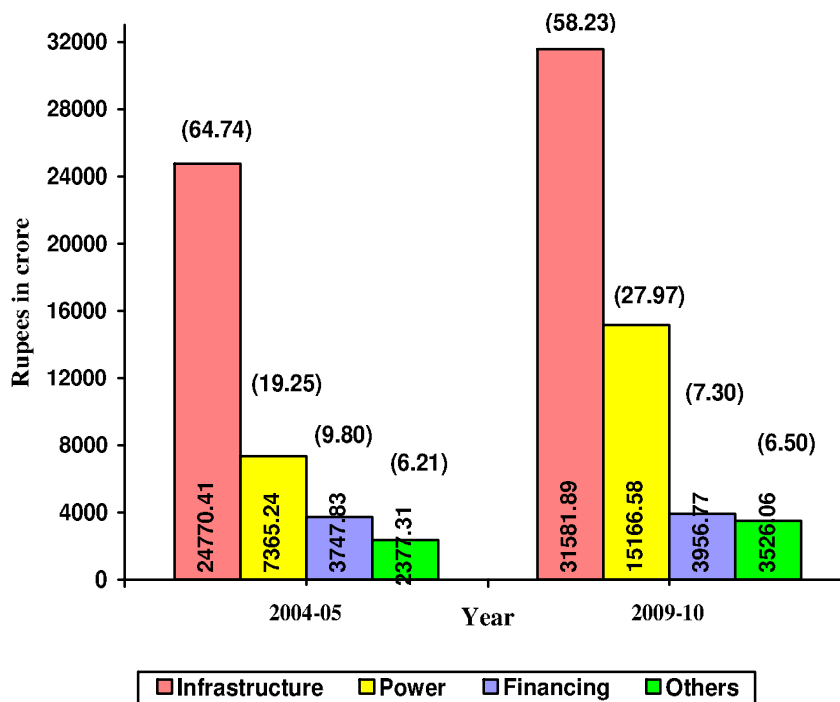
Type of PSUs	Government Companies			Statutory Corporations			Grand Total
	Capital	Long Term Loans	Total	Capital	Long Term Loans	Total	
Working PSUs	27,835.03	21,501.73	49,336.76	1,529.16	2,790.89	4,320.05	53,656.81
Non-working PSUs	163.06	411.43	574.49	-	-	-	574.49
Total	27,998.09	21,913.16	49,911.25	1,529.16	2,790.89	4,320.05	54,231.30

A summarised position of government investment in PSUs is detailed in **Annexure 1**.

1.8 As on 31 March 2010, of the total investment in PSUs, 98.94 per cent was in working PSUs and the remaining 1.06 per cent in non-working PSUs. The total investment consisted of 54.45 per cent towards capital and 45.55 per cent in long-term loans. The investment has grown by 41.74 per cent from ₹ 38,260.79 crore in 2004-05 to ₹ 54,231.30 crore in 2009-10 as shown in the graph below.



1.9 The investment in important sectors and percentage thereof at the end of 31 March 2005 and 31 March 2010 are indicated below in the bar chart. Out of total investments, the investment in power sector has seen its percentage share rising to 27.97 per cent in 2009-10 from 19.25 per cent in 2004-05.



(Figures in brackets show the percentage of total investment)

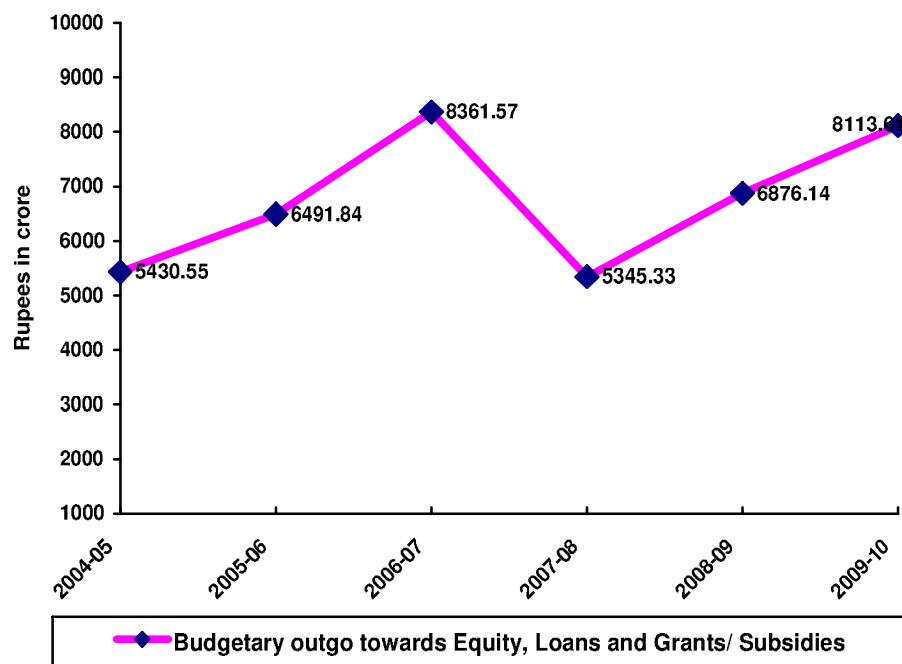
Budgetary outgo, grants / subsidies, guarantees and loans

1.10 The details regarding budgetary outgo towards equity, loans, grants / subsidies, guarantees issued, loans written off, loans converted into equity and interest waived in respect of PSUs are given in **Annexure 3**. The summarised details are given below for three years ended 2009-10.

(Amount : Rupees in crore)

Sl. No.	Particulars	2007-08		2008-09		2009-10	
		No. of PSUs	Amount	No. of PSUs	Amount	No. of PSUs	Amount
1	Equity Capital outgo from budget	16	2,610.65	20	3,400.36	24	4,026.78
2	Loans given from budget	11	481.89	6	500.55	6	348.69
3	Grants/Subsidy received	23	2,252.79	23	2,975.23	27	3,738.14
4	Total Outgo (1+2+3) ⁵	35	5,345.33	35	6,876.14	42	8,113.61
5	Loans converted into equity	-	-	1	1.00	5	499.91
6	Loans written off	-	-	-	-	-	-
7	Interest/Penal interest written off	2	22.49	1	0.15	-	-
8	Total Waiver (6+7)	2	22.49	1	0.15	-	-
9	Guarantees issued	6	158.02	10	393.11	4	262.00
10	Guarantee Commitment	19	4,800.02	19	4,202.18	18	3,615.88

1.11 The details regarding budgetary outgo towards equity, loans and grants/ subsidies for past six years are given in a graph below.



⁵ indicates actual number of PSUs.

The budgetary support in respect of equity, loans and grants / subsidies decreased in 2007-08 in comparison to 2006-07. The budgetary support increased during 2008-09 and 2009-10 as compared to 2007-08.

1.12 As per Section 5(1) of the Karnataka Ceiling on Government Guarantees Act, 1999, (as amended by Act 15 of 2002), with effect from April 2001, the Government would charge a minimum of one *per cent* as guarantee commission which shall not be waived under any circumstances. Out of the guarantee commission of ₹ 441.87 crore payable as at the end of March 2010, the PSUs had paid ₹ 128.50 crore leaving balance of ₹ 313.37 crore to be received by the Government. The PSUs which had major arrears were Krishna Bhagya Jala Nigam Limited (₹ 192.02 crore), Cauvery Neeravari Nigam Limited (₹ 38.40 crore) and Rajiv Gandhi Rural Housing Corporation Limited (₹ 25.27 crore).

Reconciliation with Finance Accounts

1.13 The figures in respect of equity, loans and guarantees outstanding as per the records of PSUs should agree with that of the figures appearing in the Finance Accounts of the State. In case the figures do not agree, the PSUs concerned and the Finance Department should carry out reconciliation of differences. The position in this regard as at 31 March 2010 is stated below.

(Rupees in crore)

Outstanding in respect of	Amount as per Finance Accounts	Amount as per records of PSUs	Difference
Equity	29,996.51	28,042.07	1954.44
Loans	3,141.31	8,317.77	5176.46
Guarantees	4,168.56	3,615.88	552.68

1.14 Audit observed that the differences occurred in respect of 77 PSUs. The Government and the PSUs should take concrete steps to reconcile the differences in a time-bound manner.

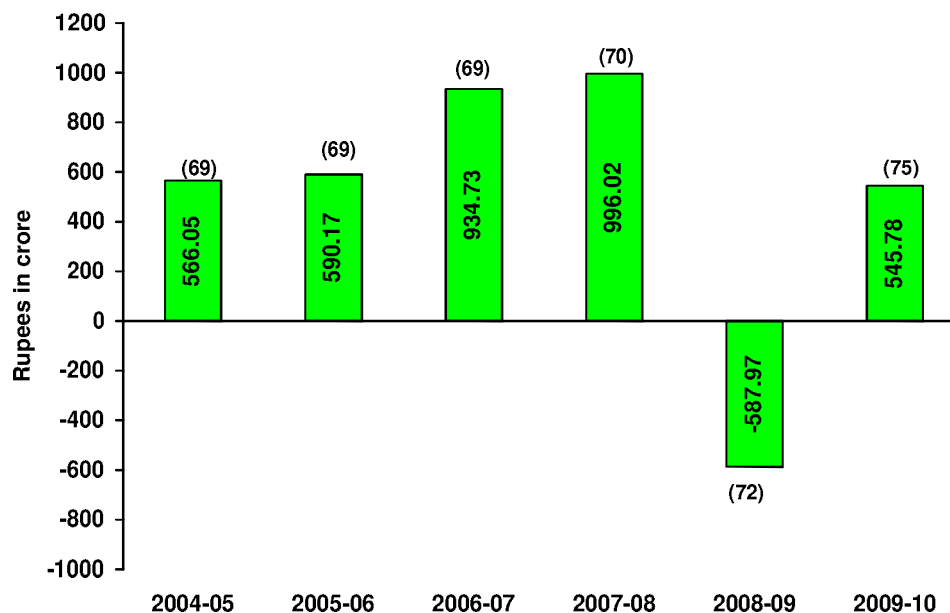
Performance of PSUs

1.15 The financial results of PSUs, financial position and working results of working Statutory corporations are detailed in **Annexures 2, 5 and 6** respectively. A ratio of PSU turnover to State GDP shows the significant extent of PSU activities in the State economy. Table below provides the details of working PSUs turnover *vis-a-vis* State GDP for the period 2004-05 to 2009-10.

(Rupees in crore)

Particulars	2004-05	2005-06	2006-07	2007-08	2008-09	2009-10
Turnover ⁶	24,935.75	20,883.70	25,284.68	28,218.05	32,627.68	36,369.48
State GDP	1,56,226	1,83,796	2,05,784	2,40,062	2,70,697	2,98,465
Percentage of Turnover to State GDP	15.96	11.36	12.29	11.75	12.05	12.19

1.16 Profit earned or loss incurred by State working PSUs during 2004-05 to 2009-10 is given below in the bar chart.



■ Overall Profit earned (Loss incurred) during the year by Working PSUs

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

As per their latest finalised accounts, out of 75 working PSUs, 43 PSUs earned profit of ₹ 1,410.90 crore and 26 PSUs incurred loss of ₹ 865.12 crore. One working PSU (Karnataka Thanda Development Corporation Limited) incorporated in February 2009 had not finalised its first accounts. Three companies⁷ 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 capitalized the excess of expenditure over income. Another company (Karnataka Vocational Training and Skill Development Corporation Limited) did not prepare Profit and Loss Account and expenses were set off against the grant received. The major contributors to profit were Karnataka Power Corporation Limited (₹ 711.05 crore), Mysore Minerals Limited (₹ 200.54 crore) and The Hutti Gold Mines

⁶ turnover as per the latest finalised accounts.

⁷ Karnataka Neeravari Nigam Limited, Cauvery Neeravari Nigam Limited and Raichur Power Corporation Limited.

Company Limited (₹ 124.71 crore). The heavy losses were incurred by Chamundeshwari Electricity Supply Corporation Limited (₹ 217.15 crore), Gulbarga Electricity Supply Company Limited (₹ 216.25 crore) and Hubli Electricity Supply Company Limited (₹ 173.64 crore),

1.17 The losses of PSUs are mainly attributable to deficiencies in financial management, planning, implementation of project, running their operations and monitoring. A review of latest three years Audit Reports of the CAG shows that the PSUs incurred losses to the tune of ₹ 417.48 crore and had made infructuous investment of ₹ 302.40 crore which were controllable with better management. Year wise details from Audit Reports are stated below.

(Rupees in crore)

Particulars	2007-08	2008-09	2009-10	Total
Net Profit / (Loss)	821.36	(759.50)	366.58	428.44
Controllable losses as per the CAG's Audit Report	257.58	75.53	84.37	417.48
Infructuous Investment	41.75	87.28	173.37	302.40

1.18 The above losses pointed out by Audit Reports of the CAG are based on test check of records of PSUs. The actual controllable losses would be much more. The above table shows that with better management, the losses can be minimised (or eliminated or the profits can be enhanced substantially). The PSUs can discharge their role efficiently only if they are financially self-reliant. The above situation points towards a need for greater professionalism and accountability in the functioning of PSUs.

1.19 Some other key parameters pertaining to the PSUs are given below.

(Rupees in crore)

Particulars	2004-05	2005-06	2006-07	2007-08	2008-09	2009-10
Return on Capital Employed (<i>per cent</i>)	3.13	3.26	4.60	4.58	1.88	3.47
Debt	22,499.07	22,736.05	23,234.20	24,078.32	24,087.55	24,704.05
Turnover ⁸	24,935.75	20,883.70	25,284.68	28,218.05	32,627.68	36,369.48
Debt / Turnover Ratio	0.90:1	1.09:1	0.92:1	0.85:1	0.74:1	0.68:1
Interest Payments	1,400.97	1,625.19	1,593.24	1,607.58	1,556.95	1,901.19
Accumulated Profits (losses)	808.52	1,209.00	935.94	1,248.48	(39.93)	(197.93)

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

1.20 There was an increase in turnover while there was a relatively lesser increase in debts. The increase in return on capital employed was due to the increase in profits of Karnataka Power Corporation Limited and Mysore Minerals Limited.

⁸ turnover of working PSUs as per the latest finalised accounts as of 30 September.

1.21 The State Government had issued (May 2003) guidelines according to which Government nominees on the boards of Public Enterprises or Joint Ventures where the State Government has equity holding should insist on the declaration of minimum dividend of 20 *per cent* on share holding. As per their latest finalised accounts, 45 PSUs⁹ earned an aggregate profit of ₹ 1,411.01 crore but only 14 PSUs declared dividend which amounted to ₹ 41.52 crore.

Arrears in finalisation of accounts

1.22 The accounts of the companies for every financial year are required to be finalised within six months from the end of the relevant financial year under Sections 166, 210, 230, 619 and 619-B of the Companies Act, 1956. 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 September 2010.

Sl. No.	Particulars	2005-06	2006-07	2007-08	2008-09	2009-10
1	Number of working PSUs	69	69	70	72	75
2	Number of accounts finalised during the year	63	79	69	74	73
3	Number of accounts in arrears	29	19	20	18	20
4	Average arrears <i>per</i> PSU (3/1)	0.42	0.28	0.29	0.25	0.27
5	Number of working PSUs with arrears in accounts	25	15	17	16	20
6	Extent of arrears	1 to 3 years	1 to 3 years	1 to 2 years	1 to 2 years	1 year

1.23 The performance of finalisation of accounts within the year by the working PSUs has improved over the last five years. The arrears pertain only to the current year (2009-10), pending finalization as at September 2010.

1.24 In respect of arrears in finalisation of accounts by non-working PSUs, out of 15 non-working PSUs, liquidation process is underway in seven PSUs. The arrears of accounts of these seven PSUs¹⁰, under liquidation, ranged from three to seven years. The remaining eight PSUs had finalised their accounts for 2009-10 by September 2010.

⁹ including non-working Government companies.

¹⁰ The Mysore Acetate and Chemicals Company Limited, NGEF Limited, Karnataka Telecom Limited, The Mysore Cosmetics Limited, The Karnatak State Veneers Limited, Chamundi Machine Tools Limited and Karnataka State Textiles Limited.

1.25 The State Government had invested ₹ 794.92 crore (equity: ₹ 286.34 crore, grants: ₹ 21.21 crore and subsidy: ₹ 487.37 crore) in eight PSUs during the years for which accounts had not been finalised as on 30 September 2010 as detailed in **Annexure 4**.

Winding up of non-working PSUs

1.26 There were 15 non-working PSUs (all companies) as on 31 March 2010. Of these, seven PSUs have commenced liquidation process. The numbers of non-working companies at the end of each year of the past five years are given below.

Particulars	2005-06	2006-07	2007-08	2008-09	2009-10
No. of non-working companies	17	17	16	16	15

During 2009-10, three non-working PSUs¹¹ incurred an expenditure of ₹ 0.54 crore towards establishment costs. This expenditure was met through rent, interest and other sources by these PSUs.

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

Sl. No.	Particulars	Companies	Statutory Corporations	Total
1	Total No. of non-working PSUs	15	-	15
2	Of (1) above, the No. under			
(a)	Liquidation by Court (liquidator appointed)	7	-	7
(b)	Voluntary winding up (liquidator appointed)	-	-	-
(c)	Closure, i.e., closing orders / instructions issued but liquidation process not yet started.	8	-	8

1.28 During the year 2009-10, one company (Karnataka Film Industries Development Corporation Limited) was wound up. The companies which have taken the route of winding up by Court order are under liquidation process for the last three to seven years. The process of voluntary winding up under the Companies Act is much faster and needs to be adopted / pursued vigorously. The Government may take a decision regarding winding up of the eight non-working PSUs where no decision about their continuation or otherwise has been taken after they became non-working. The Government may consider setting up a cell to expedite closing down its non-working companies.

¹¹ Karnataka Agro Industries Corporation Limited (₹ 0.26 crore), The Mysore Lamps Works Limited (₹ 0.24 crore) and Vijayanagar Steel Limited (₹ 0.04 crore).

Accounts Comments and Internal Audit

1.29 Sixty two working companies forwarded their 70 audited accounts to the Principal Accountant General (PAG) during the year 2009-10 as at September 2010. Of these, 62 accounts of 56 companies were selected for supplementary audit. The audit reports of statutory auditors appointed by the CAG and the supplementary audit of the CAG indicate that the quality of maintenance of accounts needs to be improved substantially. The details of aggregate money value of comments of statutory auditors and the CAG are given below.

(Amount : Rupees in crore)

Sl. No.	Particulars	2007-08		2008-09		2009-10	
		No. of accounts	Amount	No. of accounts	Amount	No. of accounts	Amount
1	Decrease in profit	10	70.71	11	152.24	14	138.10
2	Increase in profit	5	38.05	7	40.43	4	11.83
3	Decrease in loss	3	2.60	2	3.72	2	5.93
4	Increase in loss	5	5.47	9	46.88	10	121.81

1.30 During the year 2009-10, the statutory auditors had given unqualified reports for ten accounts, qualified reports for 51 accounts, adverse reports (which means that accounts do not reflect a true and fair position) for seven accounts and disclaimers (meaning the auditors are unable to form an opinion on accounts) for two accounts. The compliance of companies with the Accounting Standards remained poor as there were 106 instances of non-compliance in 35 accounts during the year.

1.31 Some of the important comments in respect of accounts of companies are stated below.

Gulbarga Electricity Supply Company Limited (2008-09)

- The Company had not executed any documents with the financial institutions nor did it possess any documents in respect of loans transferred from Karnataka Power Transmission Corporation Limited to the Company, consequent to unbundling of transmission and distribution activities. Hence the statutory auditors stated that they were unable to comment on default made in repayment of these dues to a financial institution or bank.

Karnataka Public Lands Corporation Limited (2009-10)

- No shares had been issued and no calls had been made for allotment of any shares since inception of the company to the subscribers to the Memorandum of the Company up to 31 March 2010.

Karnataka Leather Industries Development Corporation Limited (2008-09)

- Title deeds of immovable properties were not yet transferred in the name of the Company.

Karnataka Forest Development Corporation Limited (2009-10)

- The Company did not provide for the differential amount of ₹ 24.05 crore payable to the Government of Karnataka towards annual lease rentals up to the financial year 2008-09 for the areas taken on lease with reference to the actual rent paid as against the rate at which the Government had fixed the rate.

Bangalore Electricity Supply Company Limited (2009-10)

- As approved by Government of Karnataka, the Company was vested with Fixed Assets such as land and buildings and vehicles by virtue of the transfer scheme on 1 June 2002. Titles in respect of such assets had not been transferred (September 2010) in favour of the Company.

1.32 Similarly, three working statutory corporations forwarded their three accounts to the PAG during the year 2009-10. Of these three accounts, two accounts pertained to statutory corporations where the CAG was the sole auditor on which audit was completed. The remaining one account was selected for supplementary audit. The audit reports of statutory auditors and the sole audit of the CAG indicate that the quality of maintenance of accounts needs to be improved substantially. The details of aggregate money value of comments of statutory auditors and the CAG are given below.

(Amount : Rupees in crore)

Sl. No.	Particulars	2007-08		2008-09		2009-10	
		No. of accounts	Amount	No. of accounts	Amount	No. of accounts	Amount
1	Decrease in profit	4	264.24	2	153.11	3	206.63
2	Increase in profit	1	0.10	1	0.82	-	-
3	Decrease in loss	-	-	-	-	-	-
4	Increase in loss	2	69.40	3	102.54	-	-

1.33 During the year, all the three accounts received qualified reports.

1.34 Some of the important comments in respect of statutory corporations are stated below.

Bangalore Metropolitan Transport Corporation (2009-10)

- The Corporation had a liability of ₹ 2 crore towards the differential gratuity on 90 per cent additional dearness allowance payable to employees who retired or died during the period 18 November 1995 to 31 March 1998 which had been shown as contingent liability. This was a confirmed liability as the court awarded the payment of gratuity to those who approached the court. Non-provision for this claim had resulted in understatement of revenue liability and overstatement of profit by ₹ 2 crore.

Karnataka State Road Transport Corporation (2009-10)

- As per Accounting Standard 15, the liability for retirement benefit should be determined based on actuarial valuation made at intervals not exceeding three years. However, the Corporation did actuarial valuation as on 30 September 2005 only and based on this, accrued liability towards gratuity as on 31 March 2010 was estimated at ₹ 67.18 crore after taking into account its share held with Gratuity Trust to the extent of ₹ 22.02 crore. Against this, provision of ₹ 1 crore was made during the year 2009-10 resulting in short provision of ₹ 66.18 crore. This resulted in understatement of current liabilities and provisions and overstatement of profit by ₹ 66.18 crore.

1.35 The Statutory Auditors (Chartered Accountants) are required to furnish a detailed report upon various aspects including internal control / internal audit systems in the companies audited in accordance with the directions issued by the CAG to them under Section 619(3)(a) of the Companies Act, 1956 and to identify areas which needed improvement. An illustrative resume of major comments made by the Statutory Auditors on possible improvement in the internal audit / internal control system in respect of 19 companies for the year 2008-09 and 13 companies in respect for the year 2009-10, is given in **Annexure 7**.

Recoveries at the instance of audit

1.36 During the course of propriety audit in 2009-10, recoveries of ₹ 41.16 crore were pointed out to the Management of PSUs, of which ₹ 12.48 crore was recovered by the PSUs. Recoveries of ₹ 9.35 crore pointed out in the earlier years were effected during the year 2009-10.

Status of placement of Separate Audit Reports

1.37 The Separate Audit Reports (SARs) in respect of all statutory corporations issued by the CAG up to 2008-09 were placed in the Legislature by the Government.

Disinvestment, Privatisation and Restructuring of PSUs

1.38 The State Government has approved and adopted (February 2001) a comprehensive policy on Public Sector Reforms and privatisation of Public Sector Undertakings (PSUs) in the State. Accordingly, the Government identified 31 PSUs for closure, privatisation and restructuring. Four companies¹² were dissolved / amalgamated (up to September 2010). The position of action taken by the Government in respect of the remaining 27 companies identified for closure / privatisation / restructuring is as follows:

¹² Karnataka Tungsten Moly Limited, Karnataka Agro Proteins Limited, Vishveswaraya Vidyuth Nigam Limited and Karnataka Film Industries Development Corporation Limited.

Particulars	No. of companies	Government order issued	Government order not yet issued
Non-working Government companies decided for closure	15	15 ³	-
Working Government companies decided for closure	3	1 ^e	2 [@]
Working Government companies decided for privatisation	8	6 [▼]	2 [♦]
Restructuring of Working Government companies	1	1 ^Ω	-

Reforms in Power Sector

1.39 The State has Electricity Regulatory Commission (KERC) formed in (August 1999) under the Karnataka Electricity Reform Act, 1999 with the objective of rationalisation of electricity tariff, advising in matters relating to electricity generation, transmission and distribution in the State and issue of licences. During 2009-10, KERC approved 44,575 million units as energy requirement for financial year 2010 in its multi year tariff order. In addition, it issued four¹³ regulations / guidelines / orders and approved 55 Power Purchase Agreements (PPA) in respect of different non-conventional energy projects.

1.40 Memorandum of Understanding (MoU) was signed in February 2000 between the Union Ministry of Power and the State Government as a joint commitment for implementation of reforms programme in power sector with identified milestones. The progress achieved so far in respect of important milestones is stated below.

Milestone	Achievement as at March 2010
100 <i>per cent</i> electrification of all villages by 2012	100 <i>per cent</i> electrification was achieved by 2009.
Commitment in the MoU to reduce the overall Transmission and Distribution (T&D) losses by 10 to 15 <i>per cent</i> with target reduction of five <i>per cent</i> every year from 2000-01.	T&D losses reduced from 35.50 <i>per cent</i> during 2000-01 to 21.73 <i>per cent</i> during 2009-10. Thus, the reduction in T&D Losses achieved over the last nine years is only 13.77 <i>per cent</i> .

³ All the non-working companies as per Annexure 1.

^e Karnatak 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 Karnataka State Forest Industries Corporation Limited to be merged with Karnataka Forest Development Corporation Limited.

¹³ Order on Fixing a Price Cap for Short term Power Procurement by the Distribution Licensees, Determination of Tariff for Renewable sources of Energy for the period January 2010 – January 2015, Fifth Amendment to KERC (Recovery of Expenditure for Supply of Electricity) Regulations, 2004 and Integrated Resource Planning for meeting the demand in Karnataka during XI Plan.

Milestone	Achievement as at March 2010
100 <i>per cent</i> metering of all distribution feeders by September 2001.	Completed by December 2002.
100 <i>per cent</i> metering of all consumers by 2004-05	72.09 <i>per cent</i> of Irrigation Pump sets were not metered. 11.89 <i>per cent</i> of Bhagya Jyothi and Kutir Jyothi installations were not metered. 0.52 <i>per cent</i> of street light installations were not metered.
Energy audit at 11 KV sub-station level by September 2001	Energy audit of 11 KV feeders, on monthly basis, has commenced from June 2003.
Securitisation of outstanding dues of Central PSUs to be reduced to ₹ 900 crore by 2004-05.	The dues were securitised by issue of bonds in August 2003.

CHAPTER II

Performance reviews relating to Government companies

2.1 Working of Karnataka Power Corporation Limited

Executive Summary

Power is an essential requirement for all facets of life and has been recognised as a basic human need. In compliance with the Electricity Act, 2003, Government of India prepared (February 2005) National Electricity Policy (NEP) in consultation with State Governments and Central Electricity Authority (CEA) with a view to achieve 'Power for All' by 2012.

Karnataka Power Corporation Limited was incorporated on 20 July 1970 under the Companies' Act, 1956, as a wholly-owned Company under the administrative control of Energy Department of the Government of Karnataka (GoK). As on 31 March 2010, the Company had two thermal power stations (1,970 MW), eighteen hydro generation stations (3,637.35 MW), two renewable energy stations (10.56 MW) and one Diesel Generating (DG) plant (127.92 MW) with a total installed capacity of 5,745.83 MW. The turnover of the Company was ₹4,397.25 crore in 2009-10, which was equal to 12.09 per cent and 1.47 per cent of the turnover of State PSUs and State Gross Domestic Product respectively. As on 31 March 2010, the Company had employee strength of 6,281.

Capacity addition

Though the installed capacity in the State increased from 7,084.80 MW at the beginning of 2005-06 to 10,387.81 MW at the end of 2009-10, yet the State was not in a position to meet the peak demand. The peak demand, which was 5,949 MW in 2005-06 increased to 8,094 MW in 2009-10 and the deficit which was 6.57 per cent in 2005-06 increased to 12.91 per cent in 2009-10. Even the purchase of power from private producers could not suffice the required demand forcing the State to impose load shedding. The shortfall as compared to required demand increased from 1,326 MU in 2005-06 to 5,059 MU in 2009-10.

Against the required capacity addition of 8,050 MW during 2005-10, the actual capacity addition was 3,183.11 MW, leaving a shortfall of 4,866.89 MW. Though 1,644 MW of capacity was planned to be added by the Company (KPCL) during 2005-10, the actual addition was only 861 MW, leaving a deficit of 783 MW.

Achievement of Power for All by 2012

Karnataka Electricity Regulatory Commission (KERC) had forecast (December 2008) peak requirement of 10,120 MW by the end of 2012. In order to meet this demand, the installed capacity required worked out to 14,913 MW. Considering the installed capacity of 10,387.81 MW at the end of 2009-10, the capacity addition required to be commissioned between 2010-11 and 2011-12 worked out to 4,525 MW. The projects on hand, however, would add capacity to the extent of 2,053 MW, still leaving a gap of 2,472 MW. Thus, the primary objective of power for all by 2012 may not be achieved.

Project management

Of the ten projects planned by the Company during 2005-10, only seven were taken up, of which only four were completed and three were under implementation. Of the balance three projects, one project was shelved and the two were yet to be taken up for want of environmental clearance and assured gas supplies. The implementation period of the completed projects was beyond the scheduled period and the time overrun ranged from 1.5 months to 36 months due to delay in supply of materials and commissioning of critical equipments.

Contract management

The Company failed to levy liquidated damages of ₹ 82.85 crore on contractors for delayed completion / supply and also failed to recover excess payment towards duties and taxes. Undue benefit was extended to the supplier of coal due to incorrect interpretation of the term 'pro-rata' while adjusting for coal with excess moisture content.

Operational performance

Life extension works of RTPS Units 1 and 2 were not taken up as per CEA norms though due for replacement or refurbishment. Failure to undertake R&M works of Diesel Generating plant resulted in higher maintenance costs. Delay in execution of uprating works in Nagihari Power House resulted in loss of generation of 2,671 MU.

The norm for operation and maintenance (O&M) expenditure was exceeded in thermal power stations whereas it was within the norm in hydro stations. Against the average O&M cost of ₹18.20 lakh per MW up to 2007-08 and ₹16.88 lakh per MW thereafter, the actual O&M cost per MW was ₹33.34 lakh, ₹33.78 lakh, ₹34.75 lakh, ₹39.90 lakh and ₹38.52 lakh during 2005-10.

Procurement of fuel

Shortages in lifting of allotted quantity of coal were observed leading to loss of generation valued ₹78.46 crore. Though the thermal power stations had sufficient capacity to unload the rakes within the time allowed by Railways, delay was noticed in clearing the rakes resulting in payment of demurrage of ₹ 31.30 crore.

Consumption of fuel

Coal valued ₹ 905.36 crore was consumed in excess of norms specified by the equipment supplier.

Deployment of manpower

The Company had not assessed the required manpower. Excess non-technical staff was observed in hydro stations while there was shortage of technical and non-technical staff in thermal power stations as compared to norms. The salaries and wages paid to excess non-technical staff in hydro stations was to the tune of ₹185.15 crore

Auxiliary consumption

Auxiliary consumption of hydro stations exceeded the norm fixed by CEA and such excess consumption was 528.49 MU valued at ₹ 29.21 crore. As regards thermal power stations, it was within the norms fixed by KERC / Central Electricity Regulatory Commission (CERC).

Plant Load Factor

The generation and Plant Load Factor (PLF) achieved were far below the designed generation and PLF in thermal power stations. The Company was not able to achieve the norm prescribed by CERC in 2008-09 and 2009-10 due to longer duration of forced shutdown. Though the PLF achieved by RTPS during 2006-10 was above the norm fixed by CERC and national average, it showed a declining trend i.e. from 89.18 per cent in 2006-07 to 80.78 per cent in 2009-10. This was due to ageing of Units, quality of coal, frequent breakdown of Units, running on partial load, back-down instructions from Load Despatch Centre (LDC) and non-achievement of rated parameters.

Bellary Thermal Power Station (BTPS) had not achieved the norm for PLF specified by CERC.

The targets for generation as approved by CEA were achieved by hydro stations.

Outages

The number of hours lost due to planned outages in thermal power stations increased from 2,283.82 hours in 2006-07 to 3,757.25 hours in 2009-10 i.e., from 3.72 per cent to 5.36 per cent of the available hours. The forced outage hours were within the norm of 10 per cent of the available hours fixed by CEA in all the years except 2008-09. In RTPS, 1.65 per cent to 7.45 per cent of the operated capacity remained unutilised resulting in loss of generation of 2,388 MU due to running of Units on partial load and reduced capacity due to their ageing. Loss of generation at BTPS due to operation below the rated capacity was 1,147 MU.

Financial management

The dues receivable from ESCOMs increased from ₹2,525.02 crore at the end of March 2006 to ₹4,032.16 crore at the end of March 2010 due to poor realisation resulting in increased dependence on short term loans for meeting operational requirements. The borrowings increased from ₹ 4,552.40 crore at the end of March 2006 to ₹ 7,381.97 crore at the end of March 2010 leading to additional interest burden of ₹284.79 crore. As at the end of March 2010, RTPS held spares valued ₹136.43 crore which was in excess of the prescribed guidelines by ₹77.63 crore resulting in locking up of funds and loss of interest of ₹4.77 crore for one year alone.

Although the Power Purchase Agreements empowered the Company to appropriate payments received from ESCOMs first towards outstanding interest and thereafter towards principal dues, the Company failed to do so resulting in accumulation of interest to the extent of ₹1,170.83 crore.

Environmental issues

The Company had exceeded the parameters prescribed by Central Pollution Control Board / Environmental Acts in respect of air, water and noise pollution. As RTPS failed to comply with the directions of State Pollution Control Board, it could not avail of concessional rates on water cess leading to extra expenditure of ₹1.16 crore.

Conclusion and Recommendations

The State is not in a position to achieve 'Power for All by 2012' due to lack of concerted efforts for augmentation of capacity. The project management was ineffective as instances of time

overrun were noticed. New hydro projects proposed to be taken up by the Company were either awaiting clearance from MoEF or held up due to local agitation. Renewable Energy Sources in the State also remained underutilised. The operational performance of thermal power stations was sub-optimal due to fixation of generation targets below the available hours, low plant load factor, inefficient fuel management, failure to undertake timely renovation and modernisation and life extension schemes. The consumption of coal was in excess as compared to designed parameters. The poor realisation of dues and consequent accumulation of outstandings from ESCOMs forced the Company to resort to borrowings entailing payment of interest. This had also affected its ability to take up new projects.

The review contains eight recommendations:

The Company needs to streamline procedures for procurement, acceptance and consumption of coal and strive to improve efficiency;

The thermal power stations should strive to improve performance to the level of norms of CERC / KERC and CEA and achieve the specifications prescribed by equipment suppliers;

The Company should also analyse / investigate reasons for excess consumption of fuel, higher outage hours, higher auxiliary consumption and other higher operating parameters;

The Company needs to take up renovation and modernisation and life extension programmes as per schedule. This would result in optimum utilisation of existing facilities;

The Government needs to evolve a long-term strategy for capacity augmentation through its own agencies and by private sector participation;

From a long-term perspective there is a need to diversify energy sources and provide clean energy. Development of hydro and renewable energy sources needs to be accorded top priority for energy security;

The Government also needs to encourage, adopt and implement Demand Side Management and Energy Efficiency measures in addition to capacity addition; and

The Government should consider setting up a task force on priority so that the objective of providing power for all by the end of 2012 is achieved.

Introduction

Power is an essential requirement for all facets of life and has been recognised as a basic human need. The availability of reliable and quality power at competitive rates is very crucial to sustain growth of all sectors of the economy. The Electricity Act, 2003 provides a framework conducive to the development of Power Sector, promote transparency and competition and protect the interest of the consumers. In compliance with Section 3 of the Act, the Government of India (GoI) prepared the National Electricity Policy (NEP) in February 2005 in consultation with the State Governments and Central Electricity Authority (CEA) for development of the power sector based on optimal utilisation of resources like coal, gas, nuclear material, hydro and renewable sources of energy. The Policy aims at, *inter alia*, laying guidelines for accelerated development of the Power Sector. It also requires CEA to frame the National Electricity Plan once in five years. The Plan would be a short term framework of five years and give a 15 year perspective.

2.1.2 The electricity requirement¹⁴ in the State of Karnataka during the year 2004-05 was 35,237 Million Units (MU) (ex-bus) of which only 33,644 MU (ex-bus) were available leaving a shortfall of 1,593 MU, which works out to 4.52 *per cent* of the requirement. The total installed generation capacity in Karnataka at the end of 2004-05 was 5,934.80 Mega Watt (MW) (excluding firm allocation of 1,150 MW from Central Generating Stations - CGS) and the effective available capacity was 5,612 MW (ex-bus) against the peak demand of 5,971 MW (ex-bus) leaving a deficit of 359 MW. As on 31 March 2010, the comparative figures of requirement and available capacity were 45,550 MU (ex-bus) and 9,117.91 MW (excluding firm allocation of 1,269.90 MW from CGS). Thus, there was growth in demand of 10,313 MU during the review period, whereas the capacity addition was 3,183.11 MW (excluding the share available from CGS).

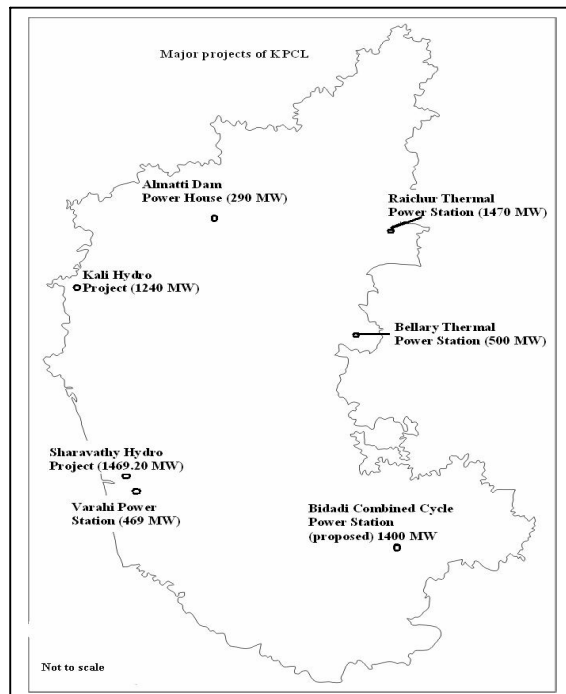
2.1.3 In Karnataka¹⁵, the public sector utility engaged in generation of power is Karnataka Power Corporation Limited (Company), which was incorporated on 20 July 1970 under the Companies' Act, 1956, as a wholly-owned Company under the administrative control of Energy Department of the Government of Karnataka (GoK). The Management of the Company is vested with Board of Directors (BoD) comprising not less than three and not more than seventeen

¹⁴ information compiled from the annual reports of Southern Regional Power Committee, Central Electricity Authority.

¹⁵ the main utilities in Karnataka's power sector are the Karnataka Power Corporation Limited - the Public Sector generation utility, the Karnataka Power Transmission Corporation Limited (KPTCL) - the Public Sector transmission utility and five Public Sector regional distribution utilities or electricity supply companies (ESCOMs) viz., Bangalore Electricity Supply Company Limited, Mangalore Electricity Supply Company Limited, Gulbarga Electricity Supply Company Limited, Hubli Electricity Supply Company Limited and Chamundeshwari Electricity Supply Corporation Limited. A special purpose vehicle viz., Power Company of Karnataka Limited was formed (August 2007) by Government of Karnataka to supplement the efforts of the Company in capacity addition and to carry out tariff-based bidding process on behalf of ESCOMs to bridge the gap between availability and demand.

directors, appointed by the State Government. As at the end of March 2010, there were fourteen directors on the Board including the Chief Minister who was the Chairman. The day-to-day operations of the Company are carried out by the Managing Director (MD) who is the Chief Executive of the Company. The MD is assisted by the Executive Directors and the Chief Engineers who are responsible for the operation and maintenance of thermal and hydro stations respectively.

The Company had two thermal power stations (1,970 MW¹⁶), eighteen hydro generation stations (3,637.35 MW), two renewable energy stations (10.56 MW¹⁷) and one Diesel Generating (DG) plant¹⁸ (127.92 MW) with a total installed capacity of 5,745.83 MW as at 31 March 2010.



Of hydro stations, 11 per cent (399.95 MW) were irrigation-based projects, 12 per cent (438.40 MW¹⁹) were run-of-the-river²⁰ schemes, 30 per cent (1,090 MW²¹) were storage-based schemes (dependent on the level of water in the reservoirs) and 47 per cent (1,709 MW) were peaking stations²².

The turnover of the Company was ₹ 4,397.25 crore in 2009-10, which was equal to 12.09 per cent and 1.47 per cent of the turnover of State PSUs and

State Gross Domestic Product (advance estimates at current prices) for the year 2009-10 respectively. As on 31 March 2010, the Company had employee strength of 6,052 excluding 229 of erstwhile Visvesvaraya Vidyuth Nigama

¹⁶ Raichur Thermal Power Station (seven Units of 210 MW each) and Bellary Thermal Power Station (single unit of 500 MW).

¹⁷ Kappadagudda Wind Farm (4.56 MW) and Solar Photo-voltaic Plant (6 MW).

¹⁸ during the year 2009-10, the installed capacity of DG plant was considered as 108 MW by the Company.

¹⁹ Almatti (290 MW), Bhadra (39.2 MW), Ghataprabha (32 MW), Munirabad (28 MW) and four mini hydro projects aggregating 10.75 MW viz., Kalmala, Sirwar, Ganekal and Mallapur.

²⁰ run-of-the-river hydro station has no reservoir to store water inflow from the catchment area. The natural flow and elevation drop of a river are used to generate electricity. Shivanasamudram (42 MW), Shimshapura (17.2 MW), Mahatma Gandhi Hydro Electric (139.2 MW) and Gerusoppa (240 MW) projects are such stations operated by the Company.

²¹ Sharavathy (1,035 MW) and Linganamakki (55 MW).

²² power stations providing power to electrical grids for meeting peak demand (highest point of consumer consumption of electricity) are called peaking stations. In the State, Kali Stage 1 (970 MW), Kali Stage 2 (270 MW), Varahi (460 MW) and Mani (9 MW) are considered as peaking stations.

Limited (VVNL), which was merged with the Company with effect from 1 April 2006.

2.1.4 The reviews relating to the Company included in the earlier²³ Audit Reports and their present status is given below:

Review	Reference	Present status
Raichur Thermal Power Station – Units 1 and 2	Audit Report (Commercial), 1987	Deemed to be discussed by Committee on Public Undertakings (COPU)
Varahi Hydroelectric Project	Audit Report (Commercial), 1990	Discussed by COPU during 1992-93. Recommendations made in April 1993.
Implementation of Hydel projects	Audit Report (Commercial), 1994	Discussed by COPU in September 1996. Recommendations were made in March 1997, July 1999 and March 2001.
Raichur Thermal Power Station – Units 3 to 6	Audit Report (Commercial), 2000	Deemed to be discussed by COPU.
Sharavathy Tailrace Project, Gerusoppa	Audit Report (Commercial), 2003	Discussed by COPU in November 2005 / January 2006. No recommendations were made.
Fuel management in power sector companies	Audit Report (Commercial), 2004	Discussed by COPU in August 2009. No recommendations were made.
Renovation and modernisation works of hydro generating stations in Visvesvaraya Vidyuth Nigama Limited	Audit Report (Commercial), 2006	Review is yet to be discussed by COPU.
Raichur Thermal Power Station – Unit 7	Audit Report (Commercial), 2007	Review is yet to be discussed by COPU.

Scope and Methodology of Audit

2.1.5 The present review, conducted during March to June 2010, covers the performance of the Company during the period from 2005-06 to 2009-10. The review mainly deals with Planning, Project Management, Financial Management, Operational Performance (with particular reference to thermal stations and a general review of the ongoing projects relating to hydro stations), Environmental Issues and Monitoring by top Management. Audit examination involved scrutiny of records at Head Office and three (out of eleven) generating projects planned for commissioning during X and XI plan periods (2002-12).

The source-wise details of projects envisaged for commissioning during X and XI plans and projects actually commissioned up to March 2010 were as follows:

Particulars	Hydro		Thermal		Gas		Renewable Energy		Total	
	No.	Capacity (MW)	No.	Capacity (MW)	No.	Capacity (MW)	No.	Capacity (MW)	No.	Capacity (MW)
Planned for commissioning during X and XI plans	5	1,030	4	1,460	1	350 ²⁴	2	11.50*	12	2,851.50
Actually commissioned up to March 2010	3	535*	2	710	-	-	2	8.50	7	1,253.50

*includes 9 MW Solar Photo-voltaic plant which is complete to the extent of 6 MW.

*includes uprating of Nagjhari Power House by 45 MW, which is partly completed (15 MW).

²³ from 1987 onwards.

²⁴ capacity has been revised to 1,400 MW.

Of the twelve projects (2,851.50 MW) planned for commissioning during X and XI plans (2002-12), only seven (1,253.50 MW) were commissioned up to March 2010. Of this, we took up for analysis three projects completed during 2005-10 - one thermal and two hydro projects (including uprating of partly completed hydro station) with a combined capacity of 745 MW. The details of projects taken up by the Company during 2002-10 and selected for review (59 *per cent* of new capacity additions made during 2002-10) are indicated in **Annexure 8**.

2.1.6 The methodology adopted for attaining the audit objectives with reference to audit criteria consisted of explaining audit objectives to top management, scrutiny of records at Head Office and selected units, interaction with the auditee personnel, analysis of data with reference to audit criteria, issue of audit queries, discussion of audit findings with the Management and issue of draft review to the Management and Government for comments.

Audit Objectives

2.1.7 The objectives of the performance audit were:

2.1.8 Planning and Project Management

- To assess whether capacity addition programme taken up / to be taken up to meet shortage of power in the State is in line with the National Policy of Power for All by 2012;
- To assess whether a plan of action is in place for optimisation of generation from the existing capacity;
- To ascertain whether the contracts were awarded with due regard to economy and in transparent manner;
- To ascertain whether the execution of projects were managed economically, effectively and efficiently;
- To ascertain whether hydro projects were planned and formulated after taking into consideration the optimum design to get the maximum power, dam design and safety aspects; and
- To ascertain whether the Company had taken up the projects under non-conventional sources such as wind, solar, biomass *etc.*, and tap generation from captive power sources.

2.1.9 Financial Management

- To ascertain whether the projections for funding the new projects and upgradation of existing generating units were realistic including the identification and optimal utilisation for intended purpose;
- To assess whether all claims including energy bills and liquidated damages were properly raised and recovered in an efficient manner; and
- To assess the soundness of financial health of the generating undertaking.

2.1.10 Operational Performance

- To assess whether the power plants were operated efficiently and preventive maintenance, as prescribed, was carried out minimising the forced outages;
- To assess whether requirements of each category of fuel were worked out realistically, procured economically and utilised efficiently;
- To assess whether the manpower requirement was realistic and its utilisation optimal;
- To assess whether the Life Extension (LE) / Renovation and Modernisation (R&M) programmes were ascertained and carried out in an economic, effective and efficient manner; and
- To assess the impact of LE / R&M activity on the operational performance of the Unit.

2.1.11 Environmental Issues

- To assess whether various types of pollutants (air, water, noise, hazardous waste) in the power stations were within the prescribed norms and the stations complied with the required statutory requirements; and
- To assess the adequacy of waste management system and its implementation.

2.1.12 Monitoring and Evaluation

- To ascertain whether adequate Management Information System (MIS) existed in the entity to monitor and assess the impact and utilise the feedback for preparation of future schemes.

Audit Criteria

2.1.13. The audit criteria adopted for assessing the achievement of audit objectives were:

- National Electricity Plan, norms / guidelines of CEA and Ministry of Power (MoP) regarding planning and implementation of projects;
- norms and statistical reports of Central Electricity Regulatory Commission (CERC), Karnataka Electricity Regulatory Commission (KEREC), Southern Regional Power Committee (SRPC) and State Planning Commission;
- standard procedures for award of contract with reference to principles of economy, efficiency and effectiveness;
- targets fixed for generation of power;
- parameters fixed for plant availability, Plant Load Factor (PLF), *etc.*;
- comparison with best performers in the regions / all India averages;
- prescribed norms for planned outages; and
- Acts relating to environmental laws.

Financial Position and Working Results

2.1.14. The financial position of the Company for the five years ending 2009-10 is given below:

(Rupees in crore)

Table 1

Particulars	2005-06	2006-07	2007-08	2008-09	2009-10
Liabilities					
Paid-up Capital	662.98	743.26	743.26	1,243.26	1,743.26
Reserve and Surplus (including Capital Grants but excluding Depreciation Reserve)	1,836.27	2,182.09	2,370.70	2,630.60	3,037.76
Borrowings (Loan Funds)					
Secured	2,584.34	2,894.85	2,632.30	2,665.83	3,552.01
Unsecured	1,968.06	1,971.81	2,350.91	3,966.86	3,829.96
Current Liabilities & Provisions (including Deferred Tax Liability)	629.02	1,098.07	1,023.56	1,301.03	1,272.87
Total	7,680.67	8,890.08	9,120.73	11,807.58	13,435.86
Assets					
Gross Block	6,053.61	6,507.56	8,529.57	8,893.19	9,142.44
Less: Depreciation	2,668.92	3,169.07	3,531.68	3,904.29	4,313.90
Net Fixed Assets	3,384.69	3,338.49	4,997.89	4,988.90	4,828.54
Capital works-in-progress	1,098.88	2,151.51	563.60	1,346.96	2,071.45
Investments	1.35	1.35	1.35	1.35	6.35
Current Assets, Loans and Advances	3,164.28	3,381.91	3,550.78	5,467.21	6,526.50
Miscellaneous Expenditure to the extent not written off	31.47	16.82	7.11	3.16	3.02
Total	7,680.67	8,890.08	9,120.73	11,807.58	13,435.86

Against the ideal debt-equity²⁵ ratio of 4:1, it was 4.41:1 in 2005-06, decreased to 2.24:1 in 2009-10. This was due to higher infusion in equity capital (₹ 1,080.28 crore) as compared to increase in long term borrowings (₹ 975.16 crore) during 2005-10.

Current Assets, Loans and Advances as at the end of March 2010 included principal dues (₹ 4,032.16 crore) and interest on these dues (₹ 1,170.83 crore) receivable from Electricity Supply Companies (ESCOMs) towards sale of energy. The extent of dues receivable from ESCOMs varied between 74.76 per cent (2008-09) and 82.14 per cent (2007-08) of the current assets, loans and advances of the Company.

The Company sells energy to ESCOMs at the rates specified by KERC from time to time. KERC fixes the tariff after considering various economic and other factors. Generally sale price does not cover the total input costs. The differential amount is absorbed by the Company. We observed that dues from ESCOMs were not regularly realised. Correspondingly, defaults in payment of bills of coal companies for supply of coal were also observed.

²⁵ for the purposes of debt-equity ratio, long-term loans are only considered.

The table below gives the details of energy bills raised on ESCOMs and recoveries there against and coal bills received *vis-à-vis* payments made for the review period.

(Rupees in crore)

Table 2

Sl. No.	Details	2005-06	2006-07	2007-08	2008-09	2009-10
1	Opening balance of energy charges receivable from ESCOMs	2,082.82	2,568.37 ²⁶	2,307.33	2,361.96	3,280.49
2	Sales during the year	2,438.01	3,433.80	3,344.89	4,147.90	4,397.25
3	Total amount due (1+2)	4,520.83	6,002.17	5,652.22	6,509.86	7,677.74
4	Energy charges realised from ESCOMs (including book adjustments and write offs)	1,995.81	3,694.84	3,290.26	3,229.37	3,645.58
5	Closing balance of energy charges receivable from ESCOMs (3-4)	2,525.02	2,307.33	2,361.96	3,280.49	4,032.16
6	Percentage of realisation to dues outstanding (4/3 x 100)	44.15	61.56	58.21	49.61	47.48
7	Coal bills received	1,415.07	1,633.52	1,598.75	2,323.13	2,097.74
8	Payments made	1,309.22	1,490.51	1,373.67	1,890.78	1,769.36
9	Difference (7-8)	105.85	143.01	225.08	432.35	323.38

The Company was forced to borrow short term loans to meet operational requirements due to poor realisation of dues from ESCOMs.

Note: The above table does not include power sold to other states / agencies under open access and interest on belated payments receivable from ESCOMs.

The poor realisation of receivables and consequent accumulation of huge outstandings from ESCOMs forced the Company to raise short term loans for meeting its operational requirements. The short term borrowings which was ₹ 1,629.46 crore at the end of 2005-06 increased to ₹ 3,483.87 crore at the end of 2009-10, representing an increase of 113.81 *per cent*.

In accordance with the terms and conditions concluded in the Power Purchase Agreements (PPAs) with ESCOMs, the Company levied interest on the progressive outstanding receivables but we observed that ESCOMs had not paid the interest of ₹ 1,170.83 crore. Although the PPAs empowered the Company to appropriate the payments received from ESCOMs first towards outstanding interest and thereafter towards the principal dues, the Company had not appropriated the receipts from ESCOMs towards outstanding interest. Instead, the amounts received were appropriated towards principal dues thus allowing the interest to accumulate over the years.

We also observed that the Company had paid interest of ₹ 17.85 crore during 2005-10 to washeries / collieries / contractors for its failure to ensure timely settlement of their bills.

²⁶ revised due to merger of VVNL with effect from 1 April 2006.

2.1.15 The details of working results like cost of generation of electricity, revenue realisation, net surplus / loss and earnings and cost *per unit* of operation are given below:

(Rupees in crore)

Table 3

Sl. No.	Description	2005-06	2006-07	2007-08	2008-09	2009-10
	Income					
1	Generation revenue	2,520.67	3,433.82	3,344.85	4,147.90	4,397.25
	Other income including interest / subsidy	148.89	316.56	306.50	283.38	409.29
	Total Income	2,669.56	3,750.38	3,651.35	4,431.28	4,806.54
	Generation					
2	Total generation (in MU)	19,888.94	26,635.44	25,613.16	25,080.30	26,020.19
	Less: Auxiliary consumption (in MU)	919.61	1,163.84	1,149.75	1,235.20	1,282.96
	Total generation available for transmission and distribution (in MU)	18,969.33	25,471.60	24,463.41	23,845.10	24,737.23
3	Expenditure					
(a)	Fixed cost					
(i)	Employees cost	213.85	363.62	419.13	349.52	313.88
(ii)	Administrative and general expenses	27.78	69.13	71.08	89.06	88.42
(iii)	Write off of receivables	19.17	420.77	256.17	0.00	1.13
(iv)	Depreciation	265.55	244.66	363.83	378.55	390.54
(v)	Consumables	75.25	52.34	42.85	42.15	50.05
(vi)	Interest and finance charges	349.65	383.28	412.72	572.61	504.79
	Total fixed cost	951.25	1,533.8	1,565.78	1,431.89	1,348.81
(b)	Variable cost					
	Fuel consumption					
(i)	(a) Coal	1,320.35	1,702.97	1,626.57	2,141.48	2,227.95
	(b) Oil	10.81	83.56	151.24	415.29	437.58
	(c) Chemicals	2.81	2.86	2.83	2.31	2.34
(ii)	Cost of water (hydro)	39.78	56.13	54.01	48.72	57.54
	Total variable cost	1,373.75	1,845.52	1,834.65	2,607.80	2,725.41
(c)	Total cost 3(a) + (b)	2,325.00	3,379.32	3,400.43	4,039.69	4,074.22
4	Realisation (<i>per unit</i>) (₹)	1.33	1.35	1.37	1.74	1.78
5	Fixed cost (<i>per unit</i>) (₹)	0.50	0.60	0.64	0.60	0.55
6	Variable cost (<i>per unit</i>) (₹)	0.73	0.73	0.75	1.09	1.10
7	Total cost (5+6) (<i>per unit</i>) (₹)	1.23	1.33	1.39	1.69	1.65
8	Contribution (4-6) (<i>per unit</i>) (₹)	0.60	0.62	0.62	0.65	0.68
9	Profit (+) / Loss (-) (4-7) (<i>per unit</i>) (₹)	0.10	0.02	-0.02	0.05	0.13

2.1.16 The graphical representation and details of realisation, fixed cost, variable cost, total cost, contribution and profit / loss *per unit* of different sources of energy are indicated in **Annexure 9**.

2.1.17 The operation of the Company resulted in profit in all the years except in the year 2007-08. The generation revenue substantially increased during 2006-07 mainly due to increase in generation capacity by 354.32 MW as erstwhile VVNL was amalgamated with the Company. The generation revenue increased substantially (by ₹ 803.05 crore) during 2008-09 due to increased thermal generation as compared to 2007-08. The higher margin in thermal power in comparison to hydro power contributed to substantial increase in profit during 2008-09.

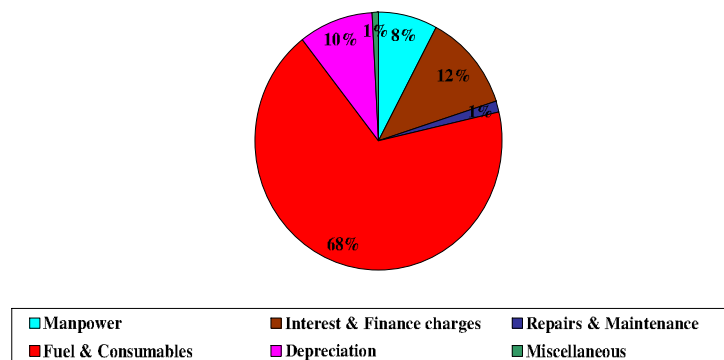
2.1.18 The total fixed cost increased during 2006-07, due to absorption of employee costs relating to employees of erstwhile VVNL and pay revision effected during that year. Besides, during 2006-07 and 2007-08, the Company wrote off receivables due from KPTCL and ESCOMs amounting to ₹ 420 crore and ₹ 250 crore respectively, resulting in increased fixed cost *per* unit during these years.

2.1.19 The variable cost *per* unit of energy generated by thermal power stations increased from ₹ 1.59 in 2005-06 to ₹ 1.87 in 2009-10. Similarly, the variable cost *per* unit generated by DG plant increased from ₹ 5.43 in 2006-07 to ₹ 8.19 in 2009-10, the reason for such increase being the steep rise in cost of fuel.

Elements of Cost

2.1.20 Fuel and Consumables and Interest and Finance charges constituted the major elements of costs. The percentage break-up of costs for 2009-10 is given below in the pie-chart:

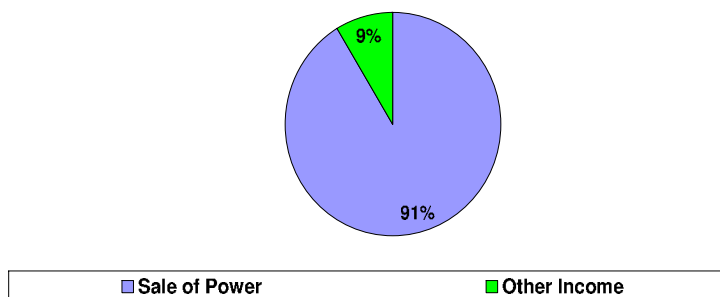
Components of various elements of cost



Elements of revenue

2.1.21 Sale of power constituted the major element of revenue. The percentage break-up of revenue for 2009-10 is given below in the pie-chart:

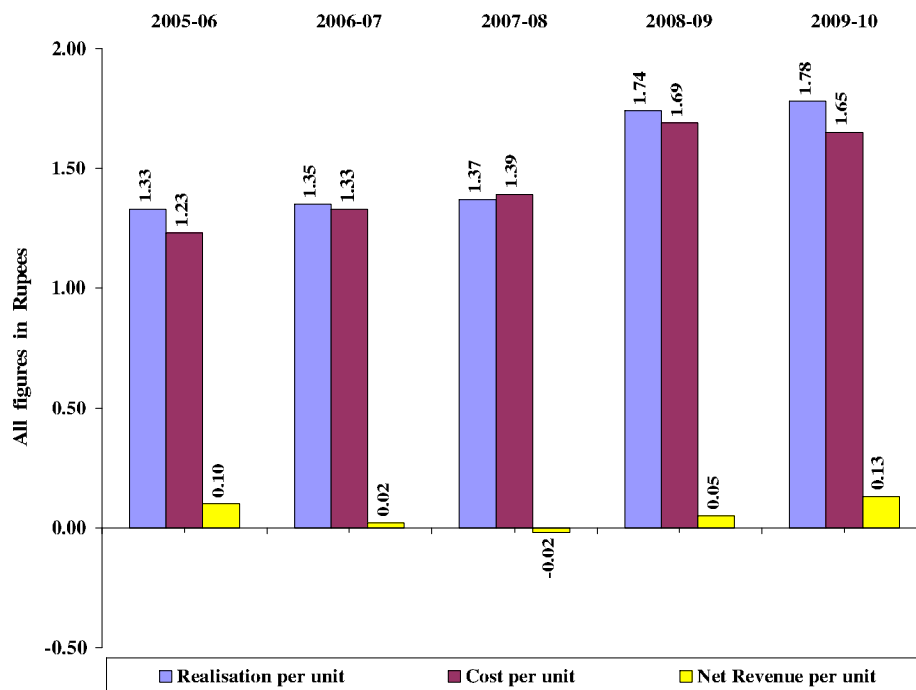
Components of various elements of revenue



Other income mainly included interest on delayed realisation of sale proceeds, other interest and miscellaneous receipts.

Recovery of cost of operations

2.1.22 The Company was able to recover its cost of operations in all the years in respect of all sources as indicated in **Annexure 9**. The graphical representation of overall *per unit* realisation, cost and margin is indicated below:



Though the net revenue *per unit* was positive from different sources of energy in the year 2007-08, yet the overall net revenue *per unit* was negative due to write off of receivables (₹ 250 crore) and increased administrative expenditure / finance charges of corporate office.

The main reasons for increase in cost of generation from ₹ 1.23 *per unit* in 2005-06 to ₹ 1.65 *per unit* in 2009-10 were increased administration and general expenses, interest cost and expenses on fuel.

Audit Findings

2.1.23 We explained the objectives of the performance review to the Company during an ‘Entry Conference’ held in April 2010. Audit findings were reported to the Company and the State Government in July 2010 and discussed in the ‘Exit Conference’ held in August 2010, which was attended by the Principal Secretary, Energy Department, GoK and the Managing Director of the Company.

The Company replied to audit findings in August 2010, while the reply of the Government is awaited (September 2010). The views expressed by the Company have been considered while finalising the review. The audit findings are discussed below.

Operational Performance

2.1.24 The operational performance of the Company for the five years ending 2009-10 is given in **Annexure 10**. The operational performance of the Company was evaluated on various operational parameters such as plant load factor, plant availability, capacity utilisation, outages and auxiliary consumption. It was also seen whether the Company was able to maintain pace in terms of capacity addition with the growing demand for power in the State. Audit findings in this regard are also discussed in the subsequent paragraphs. These audit findings show that there was scope for improvement in performance.

Planning

2.1.25 National Electricity Policy aims to provide availability of over 1,000 units of *per capita* electricity by 2012, for which it was estimated that need based capacity addition of more than 1,00,000 MW would be required during 2002-2012 in the country. The Central Government has laid emphasis on the full development of hydro potential, being the cheaper source of energy as compared to thermal. The Central Government was to support the State Government for expeditious development of hydro power projects by offering the services of Central Public Sector Undertakings like National Hydro Power Corporation, National Thermal Power Corporation and North Eastern Electric Power Corporation. The requirement of generation as per NEP was 1,038 Billion Units requiring generation growth of 9.5 and 7.5 *per cent per annum* during X plan (2002-2007) and XI plan (2007-2012) respectively. In order to fully meet both energy and peak demand by 2012, there is need to create adequate reserve capacity margin. In addition to enhancing the overall availability of installed capacity to 85 *per cent*, a spinning reserve²⁷ of at least five *per cent* needs to be created. Besides, environmental concerns have to be suitably addressed through appropriate advance actions.

2.1.26 During the period from 2005-06 to 2009-10, the actual generation in the State was substantially less than the peak as well as the average demand as shown below:

Table 4

At the end of the year	Installed capacity of the State (MW)	Average gross demand (MW)	Gross peak demand (MW)	Total gross demand (MU)	Actual gross generation (MU)	Percentage of actual generation to average demand ²⁸	Percentage of actual generation to peak demand ²⁹
1	2	3	4	5	6	7	8
2005-06	6,513.99	5,078	5,949	34,515	34,266	77.03	65.75
2006-07	6,529.24	5,717	6,401	41,161	40,314	80.50	71.90
2007-08	7,613.35	5,848	6,732	41,102	40,012	78.10	67.85
2008-09	8,083.16	6,277	7,051	44,226	41,640	75.73	67.41
2009-10	9,117.91	6,843	8,094	47,027	43,517	72.60	61.38

²⁷ part loaded generating capacity with some reserve margin that is synchronised to the system and is ready to provide increased generation at short notice pursuant to despatch instruction or instantaneously in response to a frequency drop (Indian Electricity Grid Code, March 2002).

²⁸ Sl. No.7 = (Sl. No.6 / ((Sl. No.3*24*365)/1,000)) x 100.

²⁹ Sl. No.8 = (Sl. No.6 / ((Sl. No.4*24*365)/1,000)) x 100.

As may be seen from the above, the percentage of actual generation to peak demand which was 71.90 *per cent* in 2006-07 reduced to 61.38 *per cent* in 2009-10. The reason for such ever-increasing gap was the absence of concerted efforts to augment capacity. This had resulted in the total supply for the State being insufficient to meet the peak demand, as shown below:

Table 5

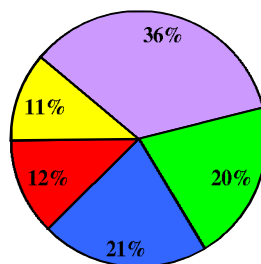
Year	Gross peak demand (MW)	Peak demand met (MW)	Peak deficit	
			MW	Percentage of peak demand
2005-06	5,949	5,558	391	6.57
2006-07	6,401	5,959	442	6.91
2007-08	6,732	5,715	1,017	15.11
2008-09	7,051	6,707	344	4.88
2009-10	8,094	7,049	1,045	12.91

The shortfall in meeting peak demand during 2009-10 was 12.91 *per cent*.

Thus, there remained a shortfall of 344 to 1,045 MW (4.88 *per cent* to 15.11 *per cent* of the peak demand) which was bridged by rotational load shedding.

Capacity Additions

2.1.27 The State had a total installed capacity of 7,084.80 MW (including firm allocation of 1,150 MW from Central Generating Stations) at the beginning of 2005-06 which increased to 10,387.81 MW (including firm allocation of 1,269.90 MW from CGS) at the end of 2009-10. The break up of generating capacities, as on 31 March 2010 under Thermal³⁰, Hydro³¹, Renewable Energy Sources (RES), Central³² and Independent Power Producers³³ (IPP) is shown in the pie chart below:



2.1.28 As per the Long term Demand Forecast³⁴ for the years from 2006 to 2017 prepared (December 2006) by KPTCL and approved by KERC, the maximum energy requirement of the State for the year 2009-10 was estimated

³⁰ contribution from State sector alone *i.e.*, the share of the Company, which includes 127.92 MW from DG Plant.

³¹ contribution from State sector alone *i.e.*, share of the Company.

³² consists of 1,074.54 MW of thermal and 195.36 MW of nuclear power (firm allocation from CGS).

³³ consists of 860 MW of thermal, 220 MW of gas and 106.5 MW of diesel power.

³⁴ as part of planned development of generation, transmission and distribution facilities and in line with the Government policy, KPTCL has been entrusted with the task of determining the long term, year-wise energy and demand forecast for the State.

at 50,794 MU. Similarly the maximum peak demand (at 65 *per cent* load factor) for the State was projected at 8,921 MW.

Thus, to meet the peak demand of 8,921 MW and energy requirement of 50,794 MU as estimated by KPTCL³⁵ for the year 2009-10, a capacity addition of about 8,050 MW³⁶ was required during the period from 2005-06 to 2009-10. Against this, the earmarked capacity addition according to NEP, categorised as Projects Under Construction (PUC³⁷) at State level, was only to the extent of 1,808 MW, as detailed below.

(in MW)

Table 6

Category	Thermal	Hydro	Gas	Nuclear	Non-conventional Energy	Total
PUC	1,350 ³⁸	340 ³⁹	0	118	0	1,808

2.1.29 Of the 1,808 MW of projects categorised under PUC, 558.96 MW⁴⁰, which were originally proposed to be completed during X plan, spilled over to XI plan due to delay in supplies / placement of order for Balance of Plants⁴¹ / erection by suppliers / contractors.

³⁵ estimate of KPTCL is considered, as the report is of 2006, the year closest to the year of Audit review.

³⁶ worked out considering a forecast error of 5 *per cent* (as per KERC norm), spinning reserve of 5 *per cent* (as per Para 5.2.3 of National Electricity Plan), load factor of 65 *per cent* on KPTCL forecast of 8,921 MW and availability of 7,084.80 MW at the end of 2004-05.

³⁷ projects under construction are projects whose capacity addition is proposed during XI plan (2007-12). This includes projects under implementation slipping from earlier plans.

³⁸ contribution of the Company was 750 MW. The balance 600 MW relates to Torangallu Extension Project, implemented by JSW Energy (Vijayanagar) Ltd., Bellary.

³⁹ entire hydro capacity addition was by the Company.

⁴⁰ Bellary Thermal Power Station Unit 1 of 500 MW and Kaiga Unit 3 share of 58.96 MW.

⁴¹ the plant systems and equipments of a thermal station consist of a Main Plant and a Balance of Plant. The main plant comprises of boiler, turbine and generator. The balance of plant includes all plants and equipment other than those included in main plant system *viz.*, coal handling plant, ash handling plant, water treatment system *etc.*, (Source: CEA's draft standard design criteria).

2.1.30 The particulars of capacity additions envisaged, actual additions by the Company and peak demand *vis-à-vis* energy supplied by the State during the review period are given below.

Table 7

Sl. No.	Description	2005-06	2006-07	2007-08	2008-09	2009-10
1	Capacity of the Company at the beginning of the year (MW)	4,530.51	4,640.51	4,994.83	5,509.83	5,739.83
2	Additions planned by the Company (MW) (including spill over of previous year, shown in brackets)	125	515 (15)	515 (515)	510	774 (265) ⁴²
3	Actual additions by the Company (MW)	110	0	515	230	6
4	Capacity of the Company at the end of the year (MW) (1+3)	4,640.51	4,994.83 ⁴³	5,509.83	5,739.83	5,745.83
5	Shortfall in capacity addition by the Company (MW) (2-3)	15	515	0	280	768
6	Gross Peak demand (MW)	5,949	6,401	6,732	7,051	8,094
7	Energy Requirement of State (MU)	34,515	41,161	41,102	44,226	47,027
8	Energy supplied:					
	a) by the Company (MU)	18,969	25,472	24,463	23,845	24,737
	b) Energy purchased (MU)	14,220	13,802	13,996	16,488	17,231
9	Shortfall (MU) (7-(8(a)+8(b)))	1,326	1,887	2,643	3,893	5,059

2.1.31 We observed that the actual capacity addition in the State during the review period (2005-10) was 3,183.11 MW, leaving a shortfall of 4,866.89 MW with reference to the required capacity addition. In this context, it is to be noted that during 2008-09, BESCOM purchased high cost energy from private sources at rates ranging from ₹ 6.81 to ₹ 7.93 *per* unit in order to meet the deficit. Against this, the average cost of energy purchased by ESCOMs from the Company was only ₹ 1.65 *per* unit. Evidently, purchase of power at high rates to tide over the deficit burdens the exchequer.

The achievements of the Company with reference to targeted capacity additions during the review period (2005-10) are given below:

- Against 1,644 MW of firm⁴⁴ capacity addition planned during 2005-10, the actual addition was only 861 MW (52 *per cent*).
- The works relating to two projects *viz.*, Raichur Thermal Power Station (RTPS) Unit 8 (250 MW) and Bellary Thermal Power Station (BTPS) Unit 2 (500 MW) are still under progress although these were envisaged to be completed by 2008-09 and 2009-10 respectively. While the delay in commissioning of RTPS Unit 8 was attributed (April 2010) to delay in supply of materials and in completion of Boiler-Turbine-Generator package works by M/s Bharat Heavy Electricals Limited (BHEL), the delay in commissioning of BTPS Unit 2 was due to delay in receipt of

⁴² 15 MW (Nagihari Power House Unit 6) was excluded from annual plan of 2009-10.

⁴³ the increase in installed capacity by 354.32 MW was due to merger of VVNL.

⁴⁴ firm capacity refers to projects which were approved by CEA and taken up by the Company for implementation.

environmental clearance from Ministry of Environment and Forests (MoEF), GoI.

- The residual works of the partly completed Nagjhari Power House were not completed even by the end of March 2010 although these were planned to be commissioned during 2008-09. The uprating of Unit 5 was in progress whereas Unit 6 was yet (September 2010) to be taken up for renovation.
- Apart from the above firm capacity addition, the Company had also planned implementation of projects of 415 MW capacity viz., Bidadi Combined Cycle Plant Project (350 MW) and second phase uprating of Sharavathy Generating Station (65 MW). The former did not take off due to absence of Government of India policy regarding allocation of natural gas. The uprating of Sharavathy Generating Station was not taken up.

Power for all by 2012

The primary objective of power for all by 2012 is not achievable as capacity addition planned was not commensurate with the projected demand.

2.1.32 KERC had forecast⁴⁵ (December 2008) peak requirement of 10,120 MW by the end of XI plan period (2011-12) with energy requirement of 58,388 MU. The peak demand for the State in 2009-10 was 8,094 MW against the installed capacity of 10,387.81 MW. The peak demand was met only to the extent of 7,049 MW (i.e., 67.86 per cent of installed capacity) due to capacity constraints.

To meet the peak demand of 10,120 MW forecast by KERC for 2011-12, the required installed capacity worked out to 14,913 MW (at the peak rate of 67.86 per cent met during 2009-10). Hence, the shortfall of 4,525 MW is required to be commissioned between 2010-11 and 2011-12 so as to achieve the objective of providing power for all by 2012. We, however, observed that only six⁴⁶ projects with capacity addition of 2,053 MW were projected for completion by the end of 2012, still leaving a gap of 2,472 MW. Government informed (September 2010) that besides the above planned additions, capacity of 1,000 MW from renewable energy sources and 500 MW from Bellary Thermal Power Station (Unit 3) would be added by 2012.

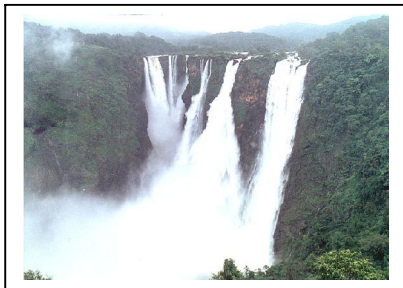
We observed that the Company was yet (September 2010) to finalise the contractor for execution of Bellary Thermal Power Station (Unit 3) and as per the Detailed Project Report, the completion period was projected as three years from date of placement of order (beyond the year 2012). The details of projects proposed to be taken up under renewable energy sources (1,000MW) were not available. We also observed that even after considering the Government's contention, there existed a shortage of 972 MW. In view of the above, the objective of providing power for all by 2012 may not be achieved.

⁴⁵ the latest available forecast prepared by KERC is considered.

⁴⁶ BTPS Unit 2 (500 MW), RTPS Unit 8 (250 MW), Udupi Power Corporation Limited (1,200 MW), Jurala Hydro Electric Project (70 MW), uprating of Nagjhari Power House Unit 5 and 6 by 30 MW (2 x 15 MW) and Solar Photo Voltaic project (3 MW).

Hydro Energy sources

2.1.33 CEA had assessed (2001) potential of 4,347 MW of hydro power in the State at 60 *per cent* load factor. The Government of India launched a programme in May 2003 for preparation of Preliminary Feasibility Reports (PFRs) of hydro electric schemes (more than 25 MW) under '50,000 MW initiative'. CEA reported (July 2010) the potential as 6,459 MW in Karnataka for 'above 25 MW' category. Of this 3,585.4 MW had already been developed by the Company.



The Company had submitted (September 2004) PFRs in respect of five hydro electric projects aggregating 1,900 MW *viz.*, Kalinadi Stage III (300 MW), Tamankal (300 MW), Gundia (300 MW), Gangavali (400 MW) and Agnashini (600 MW), proposed to be implemented by the Company. Gundia project, which was cleared by CEA only in April 2008 (at an estimated cost of ₹ 1,119.56 crore) was yet to be implemented (September 2010) due to non-receipt of environmental clearance from MoEF.

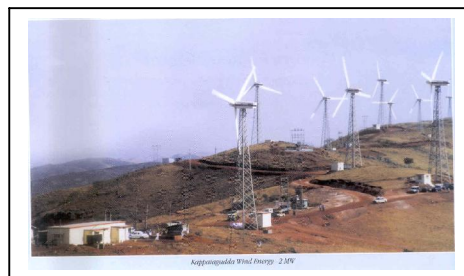
The survey and investigation works in respect of Kalinadi Stage III, Gangavali and Agnashini were not taken up due to agitation by local population. In respect of Tamankal project, clearance for usage of water was pending from Krishna Water Dispute Tribunal. The Company was yet to prepare DPRs in respect of these four projects (September 2010).

Besides the above projects, five more projects *viz.*, Shivanasamudram (345 MW), Mekedatu Stage II (360 MW), Gundia II (200 MW), Sharavathy pumped storage scheme (900 MW) and Kali pumped storage scheme (600 MW), aggregating 2,405 MW, had also been identified⁴⁷ for survey and investigation. The DPRs relating to these schemes had not been prepared till date (September 2010).

Renewable Energy sources

Renewable energy sources were only partially harnessed.

2.1.34 In the State, Karnataka Renewable Energy Development Limited (KREDL) acts as the nodal agency for facilitating implementation of renewable energy sources. Against assessed potential of 17,685 MW of renewable energy, only 2,755 MW (15.58 *per cent*) was harnessed as at the end of March 2010.

**Optimum utilisation of existing facilities**

2.1.35 In order to cope with the rising demand for power, not only additional capacity needs to be created as discussed above, a plan needs to be in place for optimum utilisation of existing facilities and also undertaking life extension programme / replacement of the existing facilities which are near completion of

⁴⁷ as per CEA report.

their age besides timely repair / maintenance. Renovation and Modernisation (R&M) and Life Extension (LE) of existing / old power stations have been recognised as an effective option to achieve additional generation from existing units at low cost and short gestation period. Besides generation improvement and life extension, other benefits from R&M include improvement in environmental emissions and improvement in availability, safety and reliability.

2.1.36 We observed that though all the six Units (21.32 MW each) of DG plant at Bangalore were due for R&M / Life Extension (LE) programmes between April 2008 and January 2009 as per CEA norms (completion of 15 years or 1,50,000 hours of operation), yet none of the Units were taken up. Government stated (September 2010) that the regular maintenance, medium maintenance and major overhauling were carried out and with these the plant could be run for 2-3 years after its life period. Government further stated that it is proposed to convert DG plant to gas-based plant based on the availability of domestic gas / Liquefied Natural Gas.

Deferment of R&M / LE works indefinitely on the ground of conversion to green fuel was not justified in the absence of GoI policy on allocation of natural gas and uncertainty regarding laying of pipeline for gas supplies. Failure to undertake R&M as per CEA norms had resulted in higher maintenance costs of plant and machinery. The expenditure on repairs of plant and machinery increased from ₹ 2.94 crore (₹ 2.3 lakh *per* MW) in 2005-06 to ₹ 6.47 crore in 2008-09 (₹ 5.06 lakh *per* MW).

We also observed that against the installed capacity of 127.92 MW (21.32 MW x 6 Units), the Company was utilising 108 MW (18 MW x 6 Units) only⁴⁸ as the original equipment manufacturer (OEM), had recommended utilisation to the extent of 80 *per cent* capacity for better performance of machines and fuel economy. We, however, observed that the Company followed the OEMs suggestion only to overcome severe vibration experienced during the operation of the Units at their full capacity as its efforts to get the defects rectified by the OEM were not successful. Operation of plant at 80 *per cent* capacity had resulted in consumption of excess heat of 292 Kcal/Kwh (as against turbine heat rate of 1,920 Kcal/Kwh guaranteed by the OEM, the heat rate was 2,212 Kcal/Kwh) resulting in excess consumption of fuel (Low Sulphur Heavy Stock) valued at ₹ 83.28 crore during 2005-10. The Company could have taken up the R&M works in time to improve the capacity of plant to its installed capacity.

2.1.37 Residual Life Assessment (RLA) study involving non-destructive and destructive tests is conducted after 20 years of life or 1.6 lakh hours of operation to reveal the remaining life of various critical components of plants so as to take timely steps to extend the life of the plant by appropriate repairs and replacements. RLA study can be carried out earlier, after 15 years or 1 lakh hours of operation, if the plant condition so necessitates.

We observed that no plan of action was envisaged for RTPS Units 1 and 2, which are aged more than 20 years and had operated for more than 1.6 lakh hours. The Units are due for replacement or refurbishment during 2010 and

No plan of action was envisaged for R & M works.

⁴⁸ as reported by the Company to KERC in 2008-09 and Audit in June 2009. Date of OEMs recommendation not available.

2011 as per CEA guidelines. The Company has planned to take up life extension works of these two Units in XII plan (2012-17).

Government replied (September 2010) that BHEL had conducted RLA studies of Boiler, Turbine and Generator in respect of Unit 2 in 2003 and in respect of Unit 1 in 2005. As a follow-up requirement, BHEL had been entrusted with task of conducting comprehensive RLA studies of Unit 2 from July 2010 and Unit 1 from September 2010.

Project Management

2.1.38 Preparation of an accurate and realistic DPR after considering feasibility study, considering factors like creation of infrastructure facility and addressing bottlenecks likely to be encountered in various stages of project planning are critical activities in the planning stage of the project.

2.1.39 Project management includes timely acquisition of land, effective actions to resolve bottlenecks, obtain necessary clearance from Ministry of Environment and Forests and other authorities, rehabilitation of displaced families, proper scheduling of various activities, adequate budget provisions, etc. The monitoring mechanism of the projects at pre-implementation stage is generally not as vigorous as it is in respect of 'ongoing projects'. The Ministry of Power (MoP) has devised control mechanism which would enable monitoring and follow up from feasibility to ordering stage. Notwithstanding this, time and cost over runs were noticed due to absence of coordinating mechanism throughout the implementation of the projects during the review period as discussed in succeeding paragraphs.

2.1.40 The following table indicates the scheduled and actual dates of completion of the power stations, date of start of transmission, date of commissioning of power stations and the time overrun.

Time overrun

Table 8

Sl. No.	Name of the Unit	Details	As per DPR	As per Contract	Actual	Time overrun (in months)
1	2	3	4	5	6	7 (6-5)
1	Almatti Dam Power House a) Unit 5 (55 MW)	Date of completion of unit	15.04.2005	02.05.2005	06.07.2005	02
		Date of start of transmission	15.04.2005	02.05.2005	06.07.2005	02
		Date of commercial operation / commissioning of unit ⁴⁹	15.04.2005	02.05.2005	06.07.2005	02
	b) Unit 6 (55 MW)	Date of completion of unit	15.07.2005	20.06.2005	10.08.2005	02
		Date of start of transmission	15.07.2005	20.06.2005	10.08.2005	02
		Date of commercial operation / commissioning of unit	15.07.2005	20.06.2005	10.08.2005	02
2	Nagjhari Power House Unit 4 (15MW)	Date of completion of unit	06.06.2004	30.04.2005	28.02.2008	34
		Date of start of transmission	06.06.2004	30.04.2005	28.02.2008	34
		Date of commercial operation / commissioning of unit	06.06.2004	30.04.2005	18.04.2008	36
3	BTPS Unit 1 (500 MW)	Date of completion of unit	28.12.2006	29.12.2006	25.03.2008	15
		Date of start of transmission	28.12.2006	28.12.2006	25.03.2008	15

⁴⁹ As per CEA, a hydro unit is considered as commissioned when the trial run operation is started.

Sl. No.	Name of the Unit	Details	As per DPR	As per Contract	Actual	Time overrun (in months)
		Date of commercial operation / commissioning of unit ⁵⁰	28.03.2007	28.03.2007	28.07.2008	16
4	Varahi Underground Power House Stage 2	Date of completion of unit	26.07.2008	22.10.2008	03.01.2009	02
		Date of start of transmission	26.07.2008	22.10.2008	03.01.2009	02
		Date of commercial operation / commissioning of unit	26.07.2008	22.10.2008	03.01.2009	02
	a) Unit 3 (115 MW)	Date of completion of unit	26.07.2008	24.11.2008	14.01.2009	1.5
		Date of start of transmission	26.07.2008	24.11.2008	14.01.2009	1.5
		Date of commercial operation / commissioning of unit	26.07.2008	24.11.2008	14.01.2009	1.5

Out of four projects completed during 2005-10 none were completed on schedule.

2.1.41 It could be seen from above that out of four projects implemented during the review period, none was completed in time. The time overrun varied between 1.5 months and 36 months.

2.1.42 An analysis of reasons for major delay revealed that the slippages in time schedule were avoidable at various stages of implementation of BTPS Unit 1 as they were occasioned by delay in supply of materials by BHEL and delay in commissioning of ash handling plant, coal handling plant and switchyard. In respect of Nagjhari Power House Unit 4, the delay in deciding the modification to the existing rotor spider resulted in delay in completion as discussed in paragraph 2.1.83.

2.1.43 The estimated cost of projects completed during the review period, actual expenditure, cost escalation and percentage increase in the cost are tabulated below:

Cost overrun

Table 9

(Rupees in crore)

Sl. No.	Name of the Unit	Estimated cost as per DPR ⁵¹	Awarded Cost ⁵²	Actual expenditure as on 31 March 2010 ⁵¹	Expenditure over and above estimate (6) = (5-3)	Percentage increase as compared to cost as per DPR (6/3)
1	2	3	4	5	6	7
1	Almatti Dam Power House ⁵³	714.93	455.73	520.54	Nil	Nil
2	Nagjhari Power House Unit 4 (15 MW)	15.66	13.83	15.98	0.32	2.04
3	BTPS Unit 1 (500 MW)	2,230.75	1,772.08	2,100.18	Nil	Nil
4	Varahi Underground Power House Stage 2 ⁵⁴ a) Unit 3 (115 MW) b) Unit 4 (115 MW)	286.05	243.99	264.74	Nil	Nil

⁵⁰ as per CEA, a thermal unit is considered as commissioned when the unit achieves full rated load. As BTPS Unit 1 did not achieve full rated load even during 2008-09, CEA had not considered the commissioning date of 25 March 2008 declared by the Company.

⁵¹ including interest during construction, overheads and other contingencies.

⁵² excluding interest during construction, overheads and other contingencies.

⁵³ Units 1 to 6, of which Units 5 and 6 (55 MW x 2) were completed during 2005-06.

⁵⁴ the DPR cost and actual cost includes ₹ 9.30 crore, being the expenditure incurred during execution of earlier stage (Stage 1).

It could be seen from the above that out of four projects implemented during review period, there was marginal increase in cost in respect of only one project (Nagjhari Power House Unit 4) as compared to the cost estimated in the DPR.

Contract Management

2.1.44 Contract management is the process of efficiently managing contract (including inviting bids and award of work) and execution of work in an effective and economic manner. The works are generally awarded on turnkey (composite) basis to a single party involving civil construction, supplies of machines and ancillary works.

2.1.45 During the review period contracts valued at ₹ 4,861.69 crore (completed ₹ 2,901.44 crore and ongoing ₹ 1,960.25 crore) were executed. The agreements related to civil works, supply of equipment and other miscellaneous works.

2.1.46 We observed:

- The Engineering, Procurement and Construction (EPC) contract concluded (December 2003) with M/s BHEL for BTPS Unit 1 provided for recovery of liquidated damages (LD) up to 15 per cent of the contract price. The contract price of ₹ 1,618.56 crore increased to ₹ 1,673.57 crore due to increase in the rates of duties, variation in foreign exchange rates and other additional works. As per the terms and conditions of the contract, the price *inter alia* included all taxes and duties existing on the date of contract as well as future variations during the contract period. We observed that the Company considered only the initial contract price while enforcing recovery of LD for belated completion of works instead of the final contract price, which resulted in short recovery of ₹ 8.25 crore⁵⁵. Against the loss of revenue of ₹ 1,112.46 crore suffered by the Company due to delay in completion of the Unit 1, it was able to recover LD to the extent of ₹ 242.78 crore. Government stated (September 2010) that the corrected LD would be recovered from the dues payable to M/s BHEL. Further developments are awaited (September 2010).
- The Company entered into an agreement in December 2004 with M/s Modern Construction Company Private Limited (MCCPL) for the work of laying pipeline from Maralihalla stream to Bellary Thermal Power Station (BTPS) at a cost of ₹ 17.70 crore. Clause 3(c) of the agreement provided for taking over and completion of balance works at the risk and cost of the contractor in the event of the contractor failing to adhere to the



⁵⁵ (₹ 1,673.57 crore - ₹ 1,618.56 crore) x 15 per cent.

milestones. The contractor failed to execute the work and the Company rescinded the contract in January 2006 on the ground that the progress achieved by the contractor was slow and performance below par. The balance works were then got executed through M/s Gammon India Limited and the actual cost worked out to ₹ 22.30 crore. The additional cost as compared to earlier cost was ₹ 13.06 crore. The Company adjusted ₹ 4.92 crore from the bank guarantee of MCCPL and the balance cost of ₹ 10.74 crore which was recoverable from MCCPL, in terms of clause 3(c) of the agreement, was not recovered till date (September 2010). MCCPL had submitted a claim and filed a case in the Hon'ble High Court of Karnataka, which is pending adjudication (September 2010).

- The Company had entered into an agreement with M/s VA Tech Hydro Consortium in July 2006 for setting up two new Units (3 and 4) at Varahi Underground Power House. The agreement also included renovation and modernisation of existing Units 1 and 2. As per the agreement, in the event of non-completion of work as per terms, liquidated damages at the rate of 15 *per cent* of contract price subject to a maximum of ₹ 30.86 crore was leviable. Against the scheduled date of November 2008 for handing over the Units 3 and 4, the Units were handed over only in December 2009 by the contractor. Similarly, renovation works of Units 1 and 2, which were to be completed by January 2009, are yet to be taken up (September 2010).

As the completion of works of all the Units (1 to 4) were delayed, maximum liquidated damages of ₹ 30.86 crore had to be levied. We observed that Company had not levied the same till date (September 2010), although it held bank guarantee from the contractor amounting to ₹ 20.40.crore⁵⁶.

Government stated (September 2010) that LD would be levied and recovered from the dues payable to the agency after take over of the Units.

- The agreement with VA Tech Hydro Consortium also stipulated that any statutory variation in percentage of applicable taxes, duties, levies, *etc.*, was to be reimbursed by the Company to the contractor or by the contractor to the Company, as the case may be. The rates of excise duty (ED) and central sales tax (CST) prevailing at the time of entering into agreement was 16.32 *per cent* and 4 *per cent* respectively which progressively decreased to 10.30 *per cent* and 2 *per cent* respectively during the execution of the contract. The Company, however, released payments based on old ED and CST rates, which resulted in excess payment of ₹ 4.16 crore. On being pointed out, the Company recovered (March 2010) the excess payments made towards ED and CST. We observed that though the countervailing duty (equal to ED) on the imported items had also decreased consequent to reduction in ED, the excess payment made towards Countervailing Duty remained

⁵⁶ ₹ 17.53 crore plus Euro 4.95 lakh at ₹ 58 per Euro.

unaddressed as VA Tech Hydro Consortium was paid merely on the basis of draw down schedule⁵⁷ instead of at reduced rates.

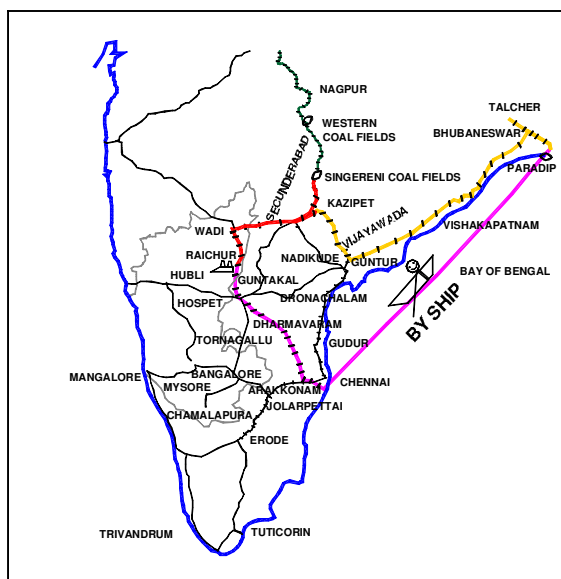
Operational Performance

2.1.47 Operation of generation companies are dependent on input efficiency consisting of material and manpower and output efficiency in terms of plant load factor, plant availability, capacity utilisation, outages and auxiliary consumption. These aspects have been discussed below.

Input Efficiency

Procedure for procurement of coal

2.1.48 The Central Electricity Authority (CEA) fixes power generation targets for thermal power stations considering capacity of plant, average plant load factor and past performance. The Company works out coal requirement on the basis of targets so fixed and past coal consumption trends. The coal requirement so assessed is conveyed to the Standing Linkage Committee (SLC) of the Ministry of Coal, GoI, which decides the source and quantity of coal supply to TPSs on quarterly basis. On the basis of linkage source approved by SLC, the Company enters into Coal Supply Agreements (CSA) with collieries.



2.1.49 Supply of coal for RTPS is from (i) M/s Singareni Collieries Company Limited (SCCL), Andhra Pradesh, (ii) M/s Western Coalfields Limited (WCL), Maharashtra, (iii) M/s Mahanadi Coalfields Limited (MCL), Talcher, Orissa and (iv) imported coal. The Company entered into fuel supply agreements with WCL and SCCL in March 2000 and September 2001 respectively which were renewed from time to time. The fuel supply agreement with MCL was concluded only in June 2008. At present, new coal supply agreements concluded in 2009, in line with the New Coal Distribution Policy of Ministry of Coal, GoI, are in force.

With a view to improve Gross Calorific Value of Coal and also to meet the statutory requirement of MoEF to use coal with ash content of less than 34 per cent, the Company entered into agreements with washery agencies for supply of washed coal. As per the agreement, the washery agencies were required to lift raw coal directly from collieries based on the instructions of the Company and supply washed coal equivalent to 80 per cent of raw coal lifted. As the

⁵⁷ a schedule of estimated expenditure to be incurred on a project. In the instant case, draw down schedule was prepared considering ED and CST at the rate of 16.32 per cent and 4 per cent respectively.

envisaged benefits (improvement in station heat rate and boiler efficiency and reduction in coal consumption) were not achieved, the Company discontinued washing operations from May 2009.

2.1.50 The position of coal linkages fixed, coal lifted, generation targets prescribed and actual generation achieved during the period from 2005-06 to 2009-10 by RTPS was as under:

Table 10

Sl. No.	Particulars	2005-06	2006-07	2007-08	2008-09	2009-10	Total
1	Coal Linkage fixed (lakh MT)	84.90	89.55	96.60	92.37	71.20	434.62
2	Quantity of coal lifted (lakh MT)	73.09	81.62	80.45	76.69	56.59	368.44
3	Generation targets (MU)	10,330	10,330	10,329	10,302	10,302	51,593
4	Actual generation achieved (MU)	9,165	11,483	10,875	10,519	10,402	52,444
5	Shortfall in generation targets (MU) (3-4)	1,165	-	-	-	-	-

It would be seen from the above that the total linkage of coal during the five years fixed by SLC for the Company was 434.62 lakh MT. Against this, only 368.44 lakh MT was lifted by the Company from collieries, resulting in short receipt of 66.18 lakh MT (15.23 *per cent*). This resulted in shortfall in achievement of the prescribed generation targets in 2005-06 by 1,165 MU in RTPS valued at ₹ 78.46 crore⁵⁸.

Government attributed (September 2010) the short receipt of coal to non-availability / non-allotment of sufficient rakes, operational constraints by Railways and to production constraints at collieries.

Fuel Supply Arrangement

2.1.51 Coal is classified into different grades. The price of the coal depends on the grade of coal. Supply of indigenous coal for RTPS is regulated through Coal Supply Agreement (CSA) with the collieries.

In respect of BTPS, Government of India has allotted (November 2003) dedicated coal mines in Wardha Valley of Maharashtra. A Joint Venture named Karnataka Emta Coal Mines Limited (KECML) was floated by the Company with Eastern Minerals and Trading Agency, Kolkata, for development of this mine and supply of washed coal.

A review of CSA revealed the following:

Non-levy of penalty of ₹33 crore from KECML for non-supply of coal

2.1.52 A Fuel Supply Agreement (FSA) was entered into in May 2007 between the Company and the KECML for supply of coal. In accordance with the agreement, the delivery of coal was to commence one month prior to the scheduled date of synchronisation of BTPS. In the event of failure to supply coal from captive mines, KECML was to arrange supplies from any other source at no extra cost to the Company and failure to execute the supplies were to attract levy of penalty at the rate of half *per cent* of initial contract value (₹ 330 crore) for every week's delay subject to a maximum of 10 *per cent* of contract value.

⁵⁸ though the shortfall in achievement of prescribed targets worked out to ₹ 272.61 crore, it is limited to ₹ 78.46 crore as it was only to this extent there was loss of generation for want of coal during 2005-06.

The synchronisation of BTPS Unit 1 was decided to be conducted on 25 March 2008 and accordingly KECML was to supply coal to facilitate synchronisation. As KECML failed to supply even by March 2008, the Company transported 905.72 MT of coal from RTPS, situated nearby BTPS, and synchronised the Unit. We observed that though the maximum penalty (₹ 33.00 crore) could be levied considering the actual date of supply of coal, the Company did not levy penalty on KECML as per contractual terms for delay in supply of coal.

Government stated (September 2010) that the Company had informed KECML about the recovery of penalty towards non-supply of coal and the same was under review. Further developments are awaited (September 2010).

Undue benefit to KECML

2.1.53 KECML was required to supply washed coal having total moisture content not exceeding 15 per cent. In case it exceeded 15 per cent, pro-rata adjustment was to be made in the weight of coal. Further, the Company had the right to reject and consume (without any payment) the washed coal containing total moisture in excess of 17 per cent as per unloading point analysis.

We observed that whenever the total moisture content ranged between 15 per cent and 17 per cent, the Company did not adopt pro-rata adjustment method for the quantities received. Instead, the deductible quantity was arrived at by applying the percentage of moisture content in excess of 15 per cent on the quantities received, resulting in excess payment to KECML.

Government stated (September 2010) that the Company had informed KECML of the method of pro-rata calculation and that further action would be initiated based on their comments.

Payment of demurrage charges to Railways

2.1.54 Coal and secondary fuel (HFO and LDO) supplies to thermal power stations are received through railway wagons. Railways allowed free time of seven hours per rake at RTPS and five hours per rake at BTPS for unloading and retaining and if the rakes were detained beyond this time, demurrage was payable to railways. We observed that though the Coal Handling Plants at RTPS and BTPS had sufficient capacity to unload and release the rakes within the time allowed by Railways, there was delay in clearing the rakes after unloading. This resulted in payment of demurrage amounting to ₹ 31.30 crore during 2005-10.

The Company preferred a claim for ₹ 13.61 crore on M/s BHEL towards demurrages paid on account of delay in unloading of coal from wagons which was occasioned by belated completion of wagon tippers at BTPS. We observed that the claim was not contractually enforceable as the Company had recovered the maximum liquidated damages (₹ 242.78 crore) from BHEL for belated completion of Unit 1 as commented upon in paragraph 2.1.46



Quality of coal

2.1.55 Each thermal station is designed for usage of a particular grade of coal. Usage of envisaged grade of coal ensures optimising generation of power and economising cost of generation.



The grade of coal to be received from collieries was classified into six categories based on their corresponding Useful Heat Value (UHV). The price coal decreased on a graduated scale as the grade of coal slipped from B to G. As per agreements with coal companies, the sampling of coal was to be carried out jointly by the seller and the Company or its representative at the

loading end. In case, no sample was collected at the loading end, the sampling and analysis done at the unloading end was to be the basis for determining the grade for that particular rake and payment regulated accordingly.

We, however, observed that 2,786 rakes, (89 *per cent*) of the 3,121 rakes of raw coal received at RTPS end from various coal companies during the period 2005-10 did not conform to the grade declared at loading point. This had not only resulted in the Company paying higher rates for lower grade coal but also resulted in inferior coal being fed to the Units. The Company had also not assessed the extra expenditure on coal due to these grade slippages.

While confirming grade slippages at RTPS (unloading end), Government stated (September 2010) that the Company was regularly requesting the coal companies to execute the supplies as per the billed grade. Government further stated that the analysis reports at RTPS end were never considered by the coal companies.

Loss of generation due to inadequate fuel stock in bunkers

2.1.56 The minimum fuel stock was not maintained in the bunkers at thermal power stations and the Company faced problems of shortage of fuel from time to time. Test check of records relating to outages of plants showed that the different Units of RTPS were under forced shutdown during 2005-10 due to shortage of coal in bunkers resulting in loss of generation aggregating 645 MU valued at ₹ 165.73 crore (based on realisation *per unit* of RTPS).

Consumption of fuel**Excess consumption of coal**

2.1.57 Consumption of coal depends upon its calorific value. The norms fixed in the project report of RTPS and BTPS for generation of one unit of power *vis-à-vis* maximum and minimum consumption of coal *per* unit of power during the review period is indicated in the table below:

(Kg/Kwh)

Table 11

Name of the Unit	Norms fixed in the project report	Average min consumption during the reviewed years	Average max consumption during the reviewed years
RTPS Units 1 and 2	0.4854	0.6477 ⁵⁹ (2008-09)	0.6887 ⁵⁹ (2009-10)
RTPS Unit 3	0.6328		
RTPS Unit 4	0.6486		
RTPS Units 5 and 6	0.6562		
RTPS Unit 7	0.6519		
BTPS Unit 1	0.4850	0.5590 (July 2008)	0.8701 (September 2008)

From the above it may be seen that consumption remained higher than the norms in all the years under review in RTPS Units 1, 2 and 3 and in 2008-09 and 2009-10 in BTPS Unit 1. Audit analysis showed that consumption above the norms resulted in excess consumption of coal to the tune of 37.98 lakh MT during 2005-10 as detailed in **Annexure 11**.

Government stated (September 2010) that the norms fixed in the project report were only tentative and attributed the higher consumption of coal to absence of homogeneity of coal received from different sources, grade slippages, presence of huge lumps, stones, boulders and extraneous materials in the supplies.

2.1.58 The value of excess consumption of coal in two thermal power stations of the Company amounted to ₹ 905.36 crore as detailed below:

Table 12

Sl. No.	Particulars	2005-06	2006-07	2007-08	2008-09	2009-10	
1	Unit generated (MU)	RTPS	9,164.73	11,483.43	10,874.86	10,518.59	10,402.10
		BTPS	-	-	-	1,198.86	2,860.83
2	Coal required as <i>per</i> norms (lakh MT)	RTPS	55.36	69.20	65.71	64.05	63.19
		BTPS	-	-	-	5.81	13.88
3	Coal consumed (lakh MT)	RTPS	60.90	76.25	72.30	68.13	71.64
		BTPS	-	-	-	8.10	17.86
4	Excess consumption (lakh MT) (3 – 2)	RTPS	5.53	7.06	6.59	4.08	8.45
		BTPS	-	-	-	2.29	3.98
5	Rate <i>per</i> MT (₹)	RTPS	2,168	2,233	2,250	2,869	2,488
		BTPS	-	-	-	2,305	2,499
6	Coal consumed <i>per</i> unit (Kg.) [Sl. No.3 x 100] / Sl. No.1]	RTPS	0.6645	0.6640	0.6648	0.6477	0.6884
		BTPS	-	-	-	0.6756	0.6243
7	Value of excess coal (₹ in crore) (Sl. No.4 x Sl. No.5)/100	120.11	157.43	148.28	169.84	309.70	

⁵⁹ the Company does not compute coal consumption for each Unit. The coal consumption for Station is computed, which is then apportioned to each Unit on the basis of gross generation.

Manpower Management

2.1.59 The manpower requirement *per* MW for operation and maintenance of a generating station as per National Electricity Plan (April 2007) for X and XI plan periods is given below:

(No. of persons *per* MW)

Table 13

Nature of function	X Plan (2002-07)			XI Plan (2007-12)		
	Thermal plant of capacity		Hydro	Thermal plant of capacity		Hydro
	500 MW	<500 MW		500 MW	<500 MW	
Technical	0.82	1.15	1.53	0.74	1.03	1.38
Non-Technical	0.30	0.61	0.26	0.27	0.55	0.23

2.1.60 The following table summarises the normative manpower requirement as per CEA *vis-à-vis* the actual manpower deployed by the Company during the review period.

Table 14

Sl. No.	Particulars	2005-06	2006-07	2007-08	2008-09	2009-10	
Normative Manpower requirement as per CEA							
1	Technical	Thermal	1,691	1,838	1,646	2,016	2,016
		Hydro	4,851	5,197	4,688	4,708	5,034
		Total	6,542	7,035	6,334	6,724	7,050
	Non-Technical	Thermal	897	975	879	1,014	1,014
		Hydro	824	883	781	785	839
		Total	1,721	1,858	1,660	1,799	1,853
Actual manpower⁶⁰							
2	Technical	Thermal	1,613	1,593	1,589	1,916	1,960
		Hydro	1,572	1,765	1,624	1,587	1,568
		Total	3,185	3,358	3,213	3,503	3,528⁶¹
	Non-Technical	Thermal	667	718	688	734	666
		Hydro	1,488	1,617	1,571	1,512	1,511
		Total	2,155	2,335	2,259	2,246	2,177⁶¹
Excess(+) / deficit (-)							
3	Technical	Thermal	-78	-245	-57	-100	-56
		Hydro	-3,279	-3,432	-3,064	-3,121	-3,466
	Non-technical	Thermal	-230	-257	-191	-280	-348
		Hydro	664	734	790	727	672
4	Expenditure on salaries ⁶² (₹ in crore)	213.85	363.62	419.13	349.52	313.88	
5	Extra expenditure with reference to excess non-technical staff in hydro ⁶³ (₹ in crore)	22.03	40.52	49.91	39.37	33.32	

⁶⁰ Manpower requirement is considered only in the year subsequent to year of completion of project (*i.e.*, if a project is completed in March 2008, the man power requirement is taken for 2008-09).

⁶¹ The employee strength of the Company as on 31 March 2010 was 6,281, of which 5,705 employees were working in power stations. The balance 576 employees were working in corporate / administrative offices.

⁶² total expenditure on salaries for the Company.

⁶³ average per employee expenditure for the Company is worked out and then extra expenditure due to excess manpower is computed.

No action was taken to rationalise manpower as per norms.

2.1.61 We observed that the Company has not assessed either the required manpower or idle manpower. Consequently, the strength of technical staff in hydro stations was much less whereas the strength of non-technical staff in these stations was more than the normative requirement. The salaries and wages paid to such excess non-technical staff amounted to ₹ 185.15 crore during the period from 2005-06 to 2009-10.

In respect of thermal stations, the strength of technical and non-technical staff was lesser than the normative requirements.

Government stated (September 2010) that the Company had appointed a consultant to review and assess the staff strength. Further developments are awaited (September 2010).

Output Efficiency

Shortfall in generation

2.1.62 The targets for generation of thermal power by the Company for each year are fixed by the BoD considering maintenance schedules, past performance and grid requirements. The targets are reviewed and approved by CEA. We observed that the Company was able to achieve targeted generation in thermal power stations only during 2006-07 and 2007-08. The shortfall in generation during other years (2005-06, 2008-09 and 2009-10) aggregated to 3,613 MU (9.57 per cent) as shown in the following table:

(in MU)

Table 15

Year	Target	Actual	Shortfall
	(in million Units)		
2005-06	10,330	9,165	-1,165
2006-07	10,330	11,483	-
2007-08	10,329	10,875	-
2008-09	13,212	11,717	-1,495
2009-10	14,216	13,263	-953

RTPS was able to meet targeted generation in all the years except 2005-06 and 2009-10. While the shortfall in 2005-06 was due to good monsoon and back-down instructions from Load Despatch Centre (LDC), it was due to non-commissioning of RTPS Unit 8 (scheduled for completion in September 2009) during 2009-10.

The shortfall in BTPS Unit 1, during 2008-09 was mainly due to mechanical and technical problems which continued even during 2009-10.

The year-wise details of energy to be generated and plant load factor (PLF) achievable as per design *vis-à-vis* actual generation and plant load factor achieved respectively by thermal generating stations during 2005-10 are indicated in **Annexure 12**.

2.1.63 It is seen from the annexure that:

- The actual generation and actual PLF achieved were far below the energy to be generated and PLF as per design during the five years up to 2009-10.
- Against the possible generation of 73,181 MU of energy at designed capacity during the five years ended 2009-10, the actual generation was 56,503 MU leading to shortfall of 16,678 MU.
- As the PLF had been designed considering the availability of inputs, the loss of generation (16,678 MU) during 2005-10 indicated that resources and capacity were not being utilised to the optimum level due to design deficiencies, quality of fuel, frequent breakdown of Units, running Units on partial load and back down instructions from LDC.

2.1.64 Generation targets for hydro projects are fixed considering the average inflow and generation of ten years, maintenance schedule and grid requirements. The target as approved by CEA *vis-à-vis* actual generation during 2005-10 are detailed in **Annexure 13**. The Company had achieved the targeted generation in all hydro stations except mini hydro stations as their operation was dependent on the release of water for irrigation.

We analysed the achievement of generation based on the designed capacities and inflow of water in respect of three major hydro stations *viz.*, Sharavathy Generating Station, Varahi Underground Power House and Nagjhari Power House. We observed that there was shortfall in generation by 713 MU in respect of Nagjhari Power House as compared to the designed capacity (based on the achieved live water storage) resulting in loss of possible revenue of ₹ 25.39 crore⁶⁴ during 2005-10. Similarly, there was shortfall in generation of 3,982 MU in respect of Sharavathy Generating Station as compared to the generation possible based on inflow of water, resulting in loss of possible revenue of ₹ 50.17⁶⁵ crore during 2005-10.

Low Plant Load Factor (PLF)

2.1.65 Plant load factor (PLF) refers to the ratio between actual generation and

PLF of 77.22 per cent at National level was achieved during 2008-09. The highest ever PLF of 95.99 per cent was achieved in GHTPS at Lehra Mohabbat, among all State sector thermal power stations. (Source: Performance review of thermal power stations 2008-09 by CEA).

maximum possible generation at installed capacity. The PLF norms fixed by CERC for thermal power generating stations was 80 per cent, while the national average between

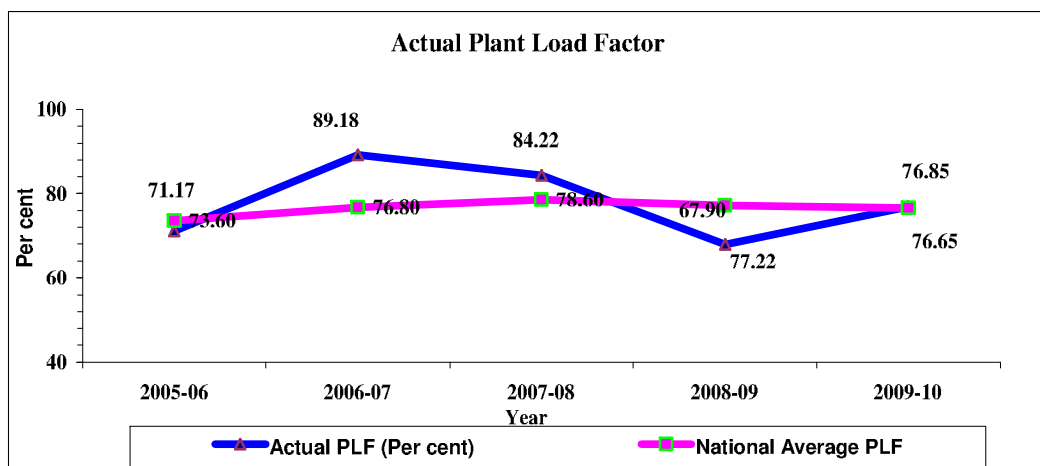
2005-06 and 2009-10 was 76.57 per cent⁶⁶.

⁶⁴ considering selling price of 35.6 paise per unit as per State Government order of June 1993.

⁶⁵ considering selling price of 12.6 paise per unit as per State Government order of June 1993.

⁶⁶ Source : MoP, Annual report 2009-10 (Chapter 3), PLF up to January 2010.

The graph depicting the actual plant load factor *vis-à-vis* national average PLF for the last five years ended 2010 is given below:



Note: The trend line up to 2007-08 depicts PLF of RTPS alone and that of 2008-09 and 2009-10 depicts both RTPS and BTPS.

The Company was not able to achieve the norm prescribed by CERC in 2005-06, 2008-09 and 2009-10. The decline in overall PLF achieved by thermal power stations in 2008-09 and 2009-10 was due to longer duration of forced shutdown of BTPS Unit 1.

Though the PLF achieved by RTPS during 2006-10 was above the norm fixed by CERC and national average, the PLF registered by the station showed a declining trend *i.e.*, from 89.18 *per cent* in 2006-07 to 80.78 *per cent* in 2009-10. This was due to ageing of Units, quality of coal, frequent breakdown of Units, running on partial load, back-down instructions from LDC and non-achievement of rated parameters.

2.1.66 The details of average realisation *vis-à-vis* average cost *per unit*, PLF achieved, average national PLF, actual PLF and the loss of margin relating to RTPS and BTPS are tabulated below:

Table 16

Sl. No.	Description		2005-06	2006-07	2007-08	2008-09	2009-10
1	Average Realisation (₹ <i>per unit</i>)	RTPS	2.34	2.37	2.42	2.82	2.63
		BTPS				3.21	2.90
2	Average Cost (₹ <i>per unit</i>)	RTPS	2.21	2.13	2.20	2.57	2.39
		BTPS				5.15	3.03
3	Average Contribution (₹ <i>per unit</i>)	RTPS	0.75	0.74	0.77	0.78	0.72
		BTPS				1.02	1.17
4	Average Margin (Sl. No.1 - Sl. No.2)	RTPS	0.13	0.24	0.22	0.25	0.24
		BTPS				-1.94	-0.13
5	Actual PLF (<i>per cent</i>)	RTPS	71.17	89.18	84.22	81.68	80.78
		BTPS				27.37	65.32
6	National Average PLF ⁶⁷		73.60	76.80	78.60	77.22	76.65
7	Units Generated (MU)	RTPS	9,164.73	11,483.43	10,874.86	10,518.59	10,402.10
		BTPS				1,198.86	2,860.83

⁶⁷ national average PLF of combined sectors (State, Centre and Private) was considered for comparison.

Sl. No.	Description		2005-06	2006-07	2007-08	2008-09	2009-10
8	Units to be generated by station as per National average PLF (MU) (Sl. No.7 / Sl. No.5 x Sl. No.6)	RTPS	9,477.65	9,889.30	10,149.18	9,944.24	9,870.28
		BTPS	-	-	-	3,382.39	3,357.05
9	Shortfall in Units as compared to National average PLF (MU) (Sl. No. 8 – Sl. No. 7)		312.92	-	-	2,183.53	496.22
10	Loss of contribution (₹ in crore) (Sl. No.9 x Sl. No.3) / 10		23.47	-	-	222.72	58.06

2.1.67 It is seen from the above table that while RTPS recorded positive margins during all the years, BTPS recorded negative margin during 2008-09 and 2009-10. The estimated shortfall in generation by RTPS and BTPS in comparison to national average PLF worked out to 2,992.67 MU resulting in loss of possible contribution amounting to ₹ 304.25 crore.

2.1.68 The details of maximum possible generation at installed capacity, actual generation and corresponding PLF achieved by RTPS and BTPS for the five years up to 2009-10 are given in **Annexure 12**. The main reason for low PLF in BTPS was longer duration of forced shutdown, low capacity utilisation due to technical problems and delay in regular operations by four months (April 2008 to July 2008) after synchronisation.

Low plant availability

2.1.69 Plant availability is the ratio of actual hours operated to maximum possible hours available during certain periods. The details of total hours available, total hours operated, planned outages, forced outages and overall plant availability in respect of the Company are shown below:

Overall Operating Availability of 85.05 per cent was achieved during 2008-09 among all sectors (Central, State and Private). (Source: Performance review of thermal power stations 2008-09 by CEA).

Table 17

Sl. No.	Particulars		2005-06	2006-07	2007-08	2008-09	2009-10
1	Total hours available		61,320	61,320	61,488	70,080	70,080
2	Operated hours		45,680.05	55,622.63	52,654.77	57,775.97	59,786.27
3	Planned outages (in hours)		4,891.03	2,283.82	4,204.63	3,567.93	3,757.25
4	Forced outages (in hours)		1,803.32	1,277.20	2,089.68	8,256.45	5,759.70
5	Idle hours ⁶⁸		8,945.60	2,136.35	2,538.92	479.65	776.78
6	Percentage of	Planned outages to total available hours	7.98	3.72	6.84	5.09	5.36
7		Forced outages to total available hours	2.94	2.08	3.40	11.78	8.22
8	Plant availability (per cent)	As worked out by the Company	89.08	94.19	89.76	83.13	86.42
		As worked out by Audit (Sl. No.2 / Sl. No.1) x 100	74.49	90.71	85.63	82.44	85.31

Note: The information up to 2007-08 pertains to RTPS alone and that of 2008-09 and 2009-10 relates to both RTPS and BTPS.

⁶⁸ period during which the Units were shut down due to grid requirements though the Units were ready with required inputs for operation.

While the percentage of planned outages to available hours decreased from 7.98 in 2005-06 to 5.36 in 2009-10, the percentage of forced outages to available hours increased from 2.94 to 8.22 during this period.

2.1.70 We observed that the Company worked out the plant availability factor after including idle hours caused by No Load Demand (NLD⁶⁹). Against the CERC norm of 80 per cent plant availability during 2004-09 and 85 per cent thereafter (without considering idle hours), the average plant availability of RTPS was 84.77 per cent during 2004-09 and 86.48 per cent during 2009-10.

The idle hours due to NLD was occasioned by availability of adequate water in storage reservoirs due to favorable monsoon, reduced demand and cheaper hydro power.

Although the Company approached the Government on several occasions to permit it to generate and sell power to other agencies during the period of NLD, Government did not permit it on the plea that the energy was required for consumption in the State in case of exigencies of increased demand.

2.1.71 BTPS Unit 1 did not conform to the norm fixed by CERC for plant availability during 2008-09 and 2009-10 as the Unit was shutdown for longer periods (7,105.41 hours of 17,520 available hours) due to delay in completion of critical works by BHEL for which LD of ₹ 242.78 crore was levied. However, the loss of revenue suffered by the Company due to forced shutdown of plant amounted to ₹ 886.70 crore (considering PLF of 80 per cent fixed by CERC).

2.1.72 The details of plant availability in respect of three⁷⁰ major hydro projects are given below

Table 18

Sl. No.	Particulars	2005-06	2006-07	2007-08	2008-09	2009-10	
I	Sharavathy Generating Station						
1	Total hours available	87,600	87,600	87,840	87,600	87,600	
2	Operated hours	75,991.27	82,142.60	83,735.88	80,822.32	78,330.58	
3	Planned outages (in hours)	1,677.32	1,425.78	1,827.52	926.32	720.07	
4	Forced outages (in hours)	1,095.05	508.80	786.92	1,867.76	1,921.28	
5	Idle Hours	8,836.36	3,522.82	1,489.68	3,983.60	6,628.07	
6	Plant availability (per cent)	As worked out by Audit	86.75	93.77	95.33	92.26	89.42
II	Naghari Power House						
1	Total hours available	43,800	43,800	43,920	43,800	43,800	
2	Operated hours	17,213.63	31,901.15	27,314.27	26,903.58	16,901.18	
3	Planned outages (in hours)	1,059.25	1,130.07	3,728.53	3,306.85	1,342.35	
4	Forced outages (in hours)	2,706.70	1,096.70	488.12	4,829.00	1,050.65	
5	Idle Hours	22,820.42	9,672.08	12389.08	8760.57	24,505.82	

⁶⁹ complete shut down of Units based on the instructions of Load Despatch Centre due to reduced demand.

⁷⁰ the remaining hydro stations are either run-of the river or irrigation based hydro systems.

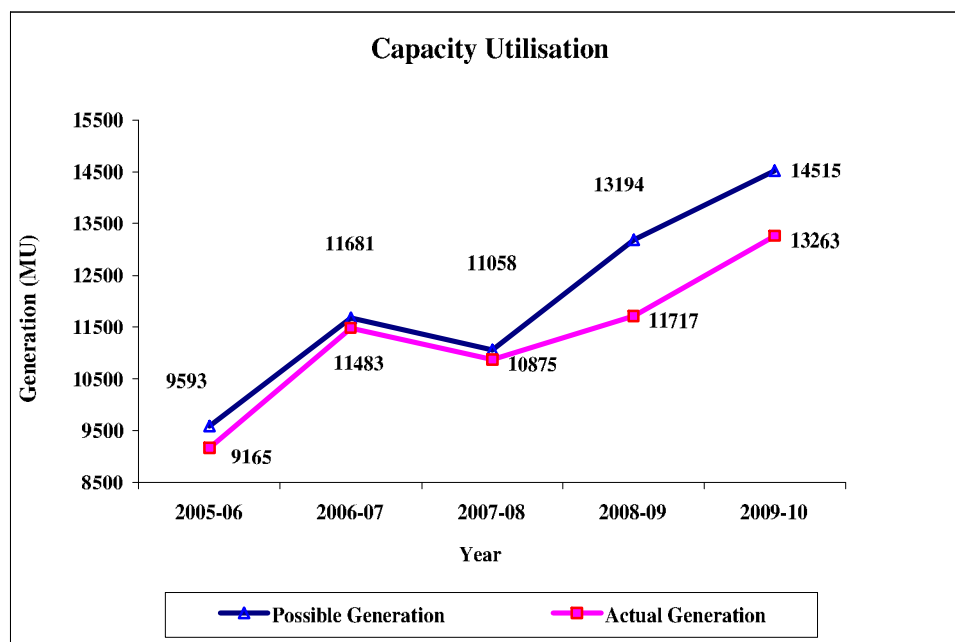
Sl. No.	Particulars		2005-06	2006-07	2007-08	2008-09	2009-10
6	Plant availability (per cent)	As worked out by Audit	39.30	72.83	62.19	61.42	38.59
III Varahi Underground Power House							
1	Total hours available		17,520	17,520	17,568	17,520	35,040
2	Operated hours		16,759.88	15,347.92	16,567.80	16,738.63	23,790.60
3	Planned outages (in hours)		56.17	2,101.25	869.63	525.65	2,005.82
4	Forced outages (in hours)		79.7	62.43	40.62	199.73	5,196.00
5	Idle Hours		624.25	8.4	89.95	55.99	4,047.58
6	Plant availability (per cent)	As worked out by Audit	95.66	87.60	94.31	95.54	67.90

It could be seen that the plant availability varied from 38.59 per cent (Nagjhari Power House in 2009-10) to 95.66 per cent (Varahi Underground Power House in the year 2005-06) during 2005-10.

The idle hours in Sharavathy Generating Station was mainly due to low load demand. The low plant availability in Nagjhari Power House was due to operation of station only during peaking hours, taking up of R&M works relating to Units 4 & 5 and restricted operation with a view to preserve water to meet demand in summer. The decline in plant availability of Varahi Underground Power House in 2009-10 was due to rectification works in newly commissioned Units (3 and 4).

Low capacity utilisation

2.1.73 Capacity utilisation is the ratio of actual generation to possible generation during actual hours of operation. The graph depicting the capacity utilisation for the last five years ended 2010 is given below:



Note:The trend line up to 2007-08 depicts capacity utilisation of RTPS alone. For 2008-09 and 2009-10 it includes both RTPS and BTPS.

Audit analysis revealed that during 2005-10, 1.65 per cent to 7.45 per cent of the operated capacity remained unutilised at RTPS, resulting in loss of generation of 2,388 MU. This was mainly due to running of Units on partial load and reduced capacity due to their ageing. Similarly the loss of generation at BTPS due to operation below the rated capacity was 1,147 MU.

Outages

2.1.74 Outages refer to the period for which the plant remained closed for attending planned / forced maintenance. We observed:

The forced outages in thermal stations are showing an increasing trend though they are within norms prescribed by CEA.

- The total number of hours lost due to planned outages in thermal power stations increased from 2,283.82 hours in 2006-07 to 3,757.25 hours in 2009-10 i.e., from 3.72 per cent to 5.36 per cent of the total available hours in the respective years.
- The forced outage hours recorded by the thermal power stations were within the norm of 10 per cent of the available hours fixed by CEA in all the years except 2008-09 (11.78 per cent).

- Though the forced outages in RTPS increased from 1,277.20 hours in 2006-07 to 3,757.02 hours in 2009-10 i.e., from 2.08 per cent to 6.13 per cent of the total available hours, the forced outages

Energy loss on account of forced outages was 9.29 per cent in 2008-09 among all sectors (Central, State and Private). (Source: Performance review of thermal power stations 2008-09 by the CEA).

remained within the norm of 10 per cent fixed by CEA.

- In BTPS, though the forced outages decreased from 5,102.73 hours (58.25 per cent) in 2008-09 to 2,002.68 hours (22.86 per cent) in 2009-10, yet the Unit exceeded the norm fixed by CEA. The overall increased forced outages during 2008-09 and 2009-10 was mainly due to shut down of BTPS Unit 1 for four months (April to July 2008) and for three months (July to September 2009) respectively. This was attributed to delay in completion of critical works by M/s BHEL and mechanical problems encountered while running the Unit.

Auxiliary consumption of power

2.1.75 Auxiliary consumption is the energy consumed by power stations themselves for running their equipment and common services. The CERC norm for auxiliary consumption was 9 per cent up to March 2009, which was reduced to 8.5 per cent thereafter. The combined auxiliary consumption recorded by thermal power stations during 2005-10 was within the norms.

Auxiliary power consumption at national level was 8.32 per cent during 2008-09. (Source: Performance review of thermal power stations 2008-09 by the CEA).

2.1.76 In respect of hydro power stations, CERC has fixed a norm of 0.2 to 0.7 per cent of gross generation for auxiliary energy consumption, depending upon the type of Power House and the excitation system. The normative auxiliary consumption, considering the maximum allowance of 0.7 per cent, worked out to 457.54 MU for the period 2005-10. Against this, the actual auxiliary

consumption was 986.03 MU, resulting in excess consumption of 528.49 MU valued at ₹ 29.21 crore (considering realisation rate of respective years).

Repairs and Maintenance

2.1.77 To ensure long term sustainable levels of performance, it is important to adhere to periodic maintenance schedules. The efficiency and availability of equipment is dependent on the strict adherence to annual maintenance and equipment overhauling schedules. Non-adherence to schedule carry a risk of the equipment consuming more coal, fuel oil and a higher risk of forced outages which necessitate undertaking R&M works. These factors lead to increase in the cost of power generation due to reduced availability of equipment which affect the total power generated.

2.1.78 We observed (May 2010) that records indicating the dates when the Units had fallen due for periodical maintenance and the dates of maintenance works actually done were not maintained in both hydro and thermal power stations.

Renovation and Modernisation

2.1.79 Renovation and Modernisation (R&M) and refurbishment activities involve identification of the problems of the Units, preparation of techno-economic viability reports and preparation of DPR to lay down benefits to be achieved from these works.

2.1.80 R&M activities are aimed at overcoming problems in operating Units caused by generic defects, design deficiency and ageing by re-equipping, modifying, augmenting them with latest technology / systems. R&M also helps in improving the performance of generating stations in terms of output, reliability and availability in terms of the original design values, reduction in maintenance requirements, ease of maintenance and enhanced efficiency. R&M activities are undertaken in thermal power stations operating at PLF of 40 *per cent* and below after assessing the performance and requirement of the Units.

2.1.81 Refurbishment activities are aimed at extending economic life of the Units by 15 to 20 years which have served for more than 20 years or have been operating at PLF below 40 *per cent*. Necessary permission and clearance for R&M and refurbishment activities from State Electricity Regulatory Commission / CEA / State Government are to be obtained. Residual Life Assessment (RLA) studies are also conducted for all refurbishment activities and in major R&M works. For refurbishment and R&M activities, Power Finance Corporation (PFC) sanctions loan equal to 70 *per cent* of the estimated cost of the activity against guarantee furnished by the State Government and the rest of the fund is met through internal sources or loan from State Government.

2.1.82 We observed:

- the Company had not taken up R&M activities of DG plant at Bangalore and RTPS Units 1 and 2 (as detailed in paragraphs 2.1.36 and 2.1.37).
- though the Company was to complete R&M⁷¹ of Nagjhari Power House, Sharavathy, Supa and Linganamakki by 2009-10, action was yet to be initiated (September 2010).
- the Company planned to undertake life extension works in Bhadra generating station only during XII plan although the same was programmed for completion during XI plan⁷¹.

Delay in executing uprating works

2.1.83 The Company awarded (May 2003) works relating to uprating of Units 4



to 6 of Nagjhari Power House (15 MW each) at a cost of ₹ 32.20 crore. While the supply of items was to be completed within 33 months (March 2006), the work relating to erection was to be completed within 8 months from the date of handing over the unit to the contractor. The Units were to be taken up sequentially for uprating works.

Based on the vibration studies conducted, the contractor, M/s VA Tech

Hydro India Private Limited, Bhopal proposed (January 2004) modification to the existing rotor spider to reduce the vibration levels. The Company referred (July 2004) the same to expert committee and then (January 2005) to M/s BHEL (original equipment manufacturer), which recommended that these modifications would not have significant effect in bringing down vibration levels. Accordingly, Unit 4 was handed over (February 2005) to the contractor with instructions to carry out the works as per the scope of the contract.

While Unit 4 was synchronised in February 2008 after uprating, the work relating to Unit 5 was in progress as at the end of March 2010. Thus, uprating of Units which was envisaged for completion during X plan not only spilled over to XI plan but also remained partially achieved till date (September 2010). We observed that there was delay (between January 2004 and February 2005) in deciding whether to modify the existing rotor spider or replace it. The delay in completion of Unit 4 led to sequential delay in taking up R&M works relating to remaining two Units. The estimated loss of generation due to belated completion of Unit 4 and consequential pendency in completion of works in Units 5 and 6 was 2,671 MU up to March 2010.

⁷¹ as per CEA report.

Operation and Maintenance

2.1.84 The operation and maintenance (O&M) cost includes expenditure on employees, repairs and maintenance including stores and consumables, consumption of capital spares not part of capital cost, security expenses, administrative expenses *etc.*, of generating stations besides corporate expenses apportioned to each generating station *etc.*, but excludes the expenditure on fuel.

2.1.85 CERC in its 2009 Regulations allowed O&M norm for 2009-10 as ₹ 18.20 lakh, ₹ 16 lakh, ₹ 13 lakh and ₹ 11 lakh *per MW* in respect of 200-250 MW, 300-350 MW, 500 MW and 600 MW and above capacity thermal power Units respectively. The overall average cost *per MW* on weighted average method worked out to ₹ 18.20 lakh up to 2007-08 and ₹ 16.88 lakh for 2008-09 and 2009-10. Against the above mentioned norms, the total O&M cost *per MW* incurred by the Company was ₹ 33.34 lakh, ₹ 33.78 lakh, ₹ 34.75 lakh, ₹ 39.90 lakh and ₹ 38.52 lakh during 2005-10. O&M expenses were much higher than the norms fixed by CERC in this regard.

2.1.86 In respect of hydro generating stations, the CERC norm for O&M expenses for 2009-10 was fixed at ₹ 38.45 lakh *per MW*. We observed that during 2005-10, the O&M expenses of hydro generating stations varied from ₹ 13.22 lakh *per MW* to ₹ 18.43 lakh *per MW*.

Financial Management

2.1.87 Efficient fund management is the need of the hour in any organisation. This also serves as a tool for decision making, for optimum utilisation of available resources and borrowings at favorable terms at appropriate time.

2.1.88 The power sector companies should, therefore, streamline their systems and procedures to ensure that:

- Funds are not invested in idle inventory,
- Outstanding advances are adjusted / recovered promptly,
- Funds are not borrowed in advance of actual need, and
- Swapping high cost debt with low cost debt is availed expeditiously.

The main sources of funds were realisations from sale of power, loans from State Government / Banks / Financial Institutions (FI), equity contribution from State Government, etc. These funds were mainly utilised to meet expenditure on fuel (coal and oil), debt servicing, employee and administrative costs, system improvement works of capital and revenue nature.

2.1.89 Details of sources and utilisation of resources on actual basis by the Company for the years 2005-06 to 2009-10 are given below:

(Rupees in crore)

Table 19

Sl. No.	Particulars	2005-06	2006-07	2007-08	2008-09	2009-10
Cash Inflow:						
1	Net Profit / (loss)	344.56	371.06	250.93	391.58	732.35
2	Add: Adjustments	602.57	632.49	768.61	949.10	859.96
3	Operating profit before working capital changes (1+2)	947.13	1,003.55	1,019.54	1,340.68	1,592.31
4	Operating activities	48.14	509.85	99.43	208.60	175.97
5	Investing activities	22.04	15.94	16.37	12.90	15.73
6	Financing activities	662.88	310.51	379.11	2,163.78	1,386.18
7	Total (3+4+5+6)	1,680.19	1,839.85	1,514.45	3,725.96	3,170.19
Cash outflow:						
8	Operating activities	618.67	169.36	577.58	1,483.73	1,393.78
9	Investing activities	712.03	1,079.00	427.21	1,155.00	971.09
10	Financing activities	364.76	438.50	692.68	604.31	659.08
11	Total (8+9+10)	1,695.46	1,686.86	1,697.47	3,243.04	3,023.95
12	Net increase / (decrease) in cash and cash equivalent (7-11)	(15.27)	152.99	(183.02)	482.92	146.24
13	Opening balance of cash and cash equivalent	105.40	95.70 ⁷²	248.69	65.67	548.59
14	Closing balance of cash and cash equivalent	90.13	248.69	65.67	548.59	694.83
15	Net increase / (decrease) in cash and cash equivalent (13-14)	(15.27)	152.99	(183.02)	482.92	146.24

It could be observed from the above table that the cash and cash equivalents increased in all the years except during 2005-06 and 2007-08. The cash inflow was mainly through borrowings in the form of cash credit / term loans from commercial banks / financial institutions. The dependence on borrowed funds increased from ₹ 4,552.40 crore at the end of March 2006 to ₹ 7,381.97 crore at the end of March 2010, which was used mainly for meeting capital expenditure and financing activities. This entailed additional interest burden of ₹ 284.79 crore during 2005-10 ultimately increasing the operating cost of the Company. Due to poor realisation, the dues from ESCOMs which was ₹ 2,525.02 crore at the end of March 2006 increased to ₹ 4,032.16 crore at the end of March 2010, which, in turn, forced the Company to rely on borrowed funds. It could also be observed that the Company could meet its working

⁷² opening balance of cash and cash equivalent of 2006-07 does not agree with that of closing balance of 2005-06 due to merger of VVNL with effect from April 2006.

capital requirements (cash outflow for operating activities) out of the cash generated from operations (sum of operating profit before working capital changes and cash inflow from operating activities) in all the years except during 2008-09.

Spares were held more than CERC norms.

2.1.90 As per the guidelines of CERC, thermal power stations have to maintain spares of ₹ 4 lakh for each MW of installed capacity. The value of spares to be maintained by RTPS on the basis of CERC guidelines worked out to ₹ 58.80 crore. As at the end of March 2010, RTPS held stock of spares valued at ₹ 136.43 crore which was in excess of the prescribed guidelines by ₹ 77.63 crore. This resulted in locking up of funds and consequential loss of interest of ₹ 4.77 crore for one year alone (at 6.15 *per cent* per annum, being the average cost of short term loans for the year 2009-10).

Government stated (September 2010) that the Company had resorted to procurement of spares on need basis and that the matter would be referred to the technical committee for movement of spares to other plants of the Company for utilisation.

Tariff Fixation

2.1.91 The Company is required to file application for approval of generation tariff for each year 120 days before the commencement of the respective year or such other date as may be directed by KERC. KERC accepts the application filed by the Company with such modifications / conditions as may be deemed just and appropriate and after considering all suggestions and objections from public and other stakeholders, issues an order containing targets for controllable items and the generation tariffs for the year within 120 days of the receipt of the application.

2.1.92 KERC sets performance targets for each year of the control period for the items or parameters that are deemed to be controllable and which include:

- a) Station Heat Rate;
- b) Availability;
- c) Auxiliary Energy Consumption;
- d) Secondary Fuel Oil Consumption;
- e) Operation and Maintenance Expenses;
- f) Plant Load Factor
- g) Financing Cost which includes cost of debt (interest), cost of equity (return); and
- h) Depreciation.

We observed:

2.1.93 In respect of sale of energy from RTPS Units 1 to 7, hydro stations and Almatti Dam Power House (ADPH), draft Power Purchase Agreements (PPA) were executed between the Company and KPTCL prior to 2005-06. The rates contained in these draft PPAs were approved by KERC subject to certain operating and commercial parameters. These parameters were contested (2002-03) by the Company and the Appellate Tribunal for Electricity, New Delhi remanded (March 2009) the PPAs back to KERC with a direction to pass a fresh order on PPA between the parties.

The Company continued to claim energy bills during this period, in accordance

with

- a) the provisional tariffs admitted by Power Company of Karnataka Limited (PCKL⁷³) in respect of Kadra, Kodasalli, Gerusoppa and Bhadra stations
- b) the rates specified in the PPA executed for RTPS Units 5 and 6
- c) the rates indicated in initialed PPA for RTPS Unit 7, BTPS Unit 1, Almatti Dam Power House and Diesel Generating Plant, Yelahanka;
- d) the rates specified by GoK in respect of RTPS Units 1 to 4, Kappadagudda stage 1 and all other hydro stations including mini hydro;
- e) tariff proposed by PCKL in respect of Kappadagudda stage 2.

KERC approved (August 2009) PPAs of RTPS (single common PPA for Units 1 to 7), ADPH, DG Plant and hydro power projects. Accordingly, the Company concluded (25 May 2010) agreements with ESCOMs giving retrospective effect to it from April 2009. The financial loss during 2005-09, if any, suffered due to non-achievement of technical parameters was not analysed by the Company.

We observed that during 2009-10, the Company did not suffer financial loss on account of underperformance on targets for financial and technical parameters (except on account of station heat rate) as specified by KERC in respect of RTPS.

In respect of BTPS, the PPA is yet to be approved by KERC (September 2010).

Environment Issues

Company has exceeded the prescribed norms of Air, Water and Noise pollution levels.

2.1.94 In order to minimise the adverse impact on environment, the GoI has enacted various Acts and statutes. At the State level, Karnataka State Pollution Control Board (KSPCB) is the regulating agency to ensure compliance with the provisions of these acts and statutes. Ministry of Environment and Forests (MoEF), Government of India and Central Pollution Control Board (CPCB) are also vested with powers under various statutes.

The Company had an environmental wing for obtaining environmental clearances and monitoring compliance with environmental laws. Compliance with the provisions of various environmental Acts are discussed below:

Operation of plant without consent

2.1.95 Application for consent under section 25 and 26 of Water (Prevention and Control of Pollution) Act, 1974 and section 21 of Air (Prevention and



Control of Pollution) Act, 1981 is required to be filed 120 days in advance before State Pollution Control Board (*i.e.*, KSPCB). We observed that though RTPS was required to initiate action for renewal of statutory consent of KSPCB for the year 2009-10 in

⁷³ verification and scrutiny of energy bills on behalf of ESCOMs is being carried out by PCKL.

January / February 2009, the application was filed (April 2009) after a delay of two months. We further observed that KSPCB had not communicated its consent for operation of plant for the year 2009-10 as the Company furnished the modified report of water balance only in April 2010. Thus the Station was operated for almost a year without statutory consent.

2.1.96 It was further observed that BTPS had filed application for renewal of consent belatedly. The application for 2009-10 was submitted belatedly by two months and for 2010-11, the Company had not filed for renewal as at the end of May 2010.

Air Pollution

2.1.97 Coal ash, being a fine particulate matter, is a pollutant under certain conditions when it is airborne and its concentration in a given volume of atmosphere is high. Control of Suspended Particulate Matters (SPM) in flue gas is an important responsibility of thermal power stations. Electrostatic Precipitator (ESP) is used to reduce SPM concentration in flue gases. Control of SPM level is dependent on effective and efficient functioning of ESPs.

Non-achievement of specified SPM levels

2.1.98 ESPs installed at RTPS Units were designed to achieve an SPM level of 50 $\mu\text{g}/\text{m}^3$. As per the National Ambient Air Quality standards issued



(November 2009) by Central Pollution Control Board (CPCB), the concentration of SPM in ambient air in industrial areas should not exceed 60 $\mu\text{g}/\text{m}^3$. Audit scrutiny revealed that the average annual SPM levels recorded at RTPS was beyond the norms in all the years under review except 2006-07. The Company had not analysed the reasons for not achieving the

desired level of SPM in other months for corrective action.

2.1.99 ESP installed at BTPS was designed to achieve an SPM level of 100 $\mu\text{g}/\text{m}^3$. Audit scrutiny however, showed that the recorded average SPM levels for the year 2008-09 and 2009-10 was 150 $\mu\text{g}/\text{m}^3$ and 124 $\mu\text{g}/\text{m}^3$ respectively. Further, in the light of the recent notification (November 2009) issued by CPCB prescribing a norm of 60 $\mu\text{g}/\text{m}^3$ the existing ESP at BTPS requires modification.

Besides, the level of Respirable Particulate Matter (RPM) also exceeded the permissible level of 40 $\mu\text{g}/\text{m}^3$ during the years 2008-09 (76 $\mu\text{g}/\text{m}^3$) and 2009-10 (64 $\mu\text{g}/\text{m}^3$). The Company had not analysed the reasons for not achieving the desired level of SPM and taken corrective action till date (September 2010).

Non-installation of on-line monitoring equipment

2.1.100 As per the provisions of the Environment (Protection) Act, 1986, thermal power stations should provide on-line monitoring systems to record SPM levels. We noticed that on-line monitoring system was not installed at RTPS and data was collected manually. Non-installation of on-line monitoring equipment was in contravention of the statutory provisions.

Ash disposal

2.1.101 Annual generation of fly ash⁷⁴ at RTPS increased from 13.98 lakh MT in 2005-06 to 17.08 lakh MT in 2009-10. MoEF had issued a notification (September 1999) which stipulated that every thermal plant should supply fly ash to Units manufacturing building material free of cost for at least 10 years. Further, it was stipulated that every coal-based thermal power plant was to phase out the dumping and disposal of fly ash on land and achieve 100 *per cent* utilisation of fly ash by the end of ninth year *i.e.*, by September 2008.



Scrutiny of generation and disposal of fly ash for the years under review (2005-10) revealed that against the total fly ash of 81.35 lakh MT generated, only 59.79 lakh MT was issued to small scale / cement industries. The balance quantity of 21.56 lakh MT was dumped on land (ash pond), in contravention of the notification. We also observed that long-term action plan was not drawn up for achievement of 100 *per cent* utilisation of fly ash generated and for phasing out dumping of fly ash on land. Government stated (September 2010) that fly ash utilization increased from 30 *per cent* during 2002-03 to 86 *per cent* in 2010-11.

Clean Development Mechanism

2.1.102 To save earth from green house gases (GHG⁷⁵) a number of countries including India signed the Kyoto Protocol (Protocol), which was adopted (December 1997) in the Third Conference of Parties to the United Nations Framework Convention on Climate Change (UNFCCC). Article 3 of the Protocol targetted reduction of emission of GHG by five *per cent* in the developed countries. UNFCCC had set the standard level of carbon emission allowed for a particular industry or activity. The extent to which an entity is emitting less carbon (as per standard fixed by UNFCCC), it gets credits for the same. Only those power plants that meet the UNFCCC norms and take up new technologies are entitled to sell these credits. The booking of such saving of GHG is called purchase of Certified Emission Reduction (CER), commonly called Carbon Credits. If the developed countries were unable to reduce their own carbon emissions, they could book the savings of GHG in developing

⁷⁴ after allowing for bottom ash at 20 *per cent* and loss at 10 *per cent* in economiser, Ash Handling Plant and Electro Static Precipitator hoppers.

⁷⁵ Carbon di-oxide, Methane, Nitrous Oxide, Hydro Fluorocarbons, Per-Fluorocarbons, Sulphur Hexafluoride.

countries in their account by paying money to the concerned country. This whole system is named Clean Development Mechanism (CDM). CDM came into force in February 2005.

For sale of CER, registration of power plant is required as a CDM project with UNFCCC. The power plants that commenced operations on or after 1 January 2000 were eligible for registration by submitting the request with Designated National Authority (DNA). In India, MoEF is nominated as DNA.

We observed:

- In respect of projects conceived after January 2000 (BTPS Units 1 and 2 and RTPS Unit 8), the Company had not explored the possibility of availing carbon credits at the time of preparation of DPR itself. Government informed (September 2010) that as per the Company, the thermal plants were not eligible for CDM benefits. We, however, observed that Yermaras Thermal Power Station and Edlapur Thermal Power Station (Joint Venture promoted by the Company and M/s BHEL which are under implementation) had sought CDM status. Besides, the Company appointed (2009-10) M/s Enzen Global Solutions as CDM consultants for availment of carbon credits for existing thermal power plants.
- In respect of Solar Photo Voltaic Plants (SPV) at Yalesandra, Itnal and Yapaladinni, the Company applied (2009 and 2010) to MoEF for carbon credits and appointed (2009) consultants for obtaining necessary approvals and CDM benefits. Emission norms as per UNFCCC are awaited (May 2010).

Noise Pollution

2.1.103 Noise Pollution (Regulation and Control) Rules, 2000 aim to regulate and control noise producing and generating sources. To achieve the above, noise emission from equipment should be controlled at source, adequate silencing equipment needs to be provided at various noise sources and a green belt should be developed around the plant area to diffuse noise dispersion. The thermal power stations are required to record sound levels in all the areas stipulated in the rules referred to above.

Audit scrutiny showed that the noise levels recorded at RTPS during day time in industrial areas for a period of five years up to 2009-10 ranged from 85 decibels (dB) to 90 dB against the prescribed level of 75 dB and from 46 dB to 62 dB in residential areas against the prescribed level of 55 dB. The Company had not analysed the reasons for increased noise levels.

The average noise level recorded at BTPS during day time in industrial area was within the prescribed level of 75 dB for the years 2008-09 and 2009-10.

Water pollution

2.1.104 The waste water of a power plant is a source of water pollution. As per the provisions of the Water (Prevention and Control of Pollution) Act, 1974, the thermal power stations are required to obtain the consent of State Pollution Control Board which *inter alia* contains the conditions and stipulations for water pollution to be complied with by the Station. The Karnataka State Pollution Control Board, at the time of every renewal of consent (renewed annually for a period of twelve months from July to June) had allowed RTPS to discharge sewage effluents from its premises and township on land for irrigation within the premises of RTPS. The station was also directed to recycle and reuse trade effluents (from coal handling plant, oil decanting pump house, De-mineralisation plant) and ash pond overflow for development of greenery and the excess effluents to an extent of 4 cusecs (13,032 kilo litres *per* day) were permitted to be discharged into river Krishna. Audit scrutiny revealed that the discharge into river was within the norms.

2.1.105 The norms prescribed by KSPCB at the time of consent (and subsequent renewals) under Section 25 / 26 of Water (Prevention and Control of Pollution) Act, 1974 and Section 21 of Air (Prevention and Control of Pollution) Act, 1981, stipulated that the Total Suspended Solids (TSS) in effluents from the Station should not exceed 100 milligrams *per* litre (mg/l). We observed that though the average yearly TSS in effluent discharge (trade effluents) at RTPS was within the norm of 100 mg/l in all the years except during 2007-08, the average monthly TSS level exceeded the norm on several occasions, as detailed below:

Table 20

Year	Maximum	Minimum	Average	Number of months in which the norm was exceeded
	(in mg/l)			
2005-06	215	28	97	4
2006-07	137	39	71	2
2007-08	268	20	104	6
2008-09	128	10	47	1
2009-10	84	23	44	0

The main reason for higher level of TSS *vis-à-vis* standards was ineffective functioning of sedimentation tanks and effluent treatment plants. Effective and time bound steps could have avoided the non-repairable damage caused to the water bodies.

2.1.106 As regards BTPS, we observed that the Company had not measured the quantum of TSS in trade effluents on the ground that such effluents were recycled with zero discharge concept. We are of the view that the Company is required to test and evaluate the quantum of TSS in trade effluents irrespective of the fact whether effluents are discharged or entirely recycled as presence of TSS in excess of permissible levels may adversely impact the quality of ground water, even in the case of zero discharge.

Payment of Water Cess at higher rates

2.1.107 As per the provisions of the Water (Prevention and Control of Pollution) Cess Act, 1977, water cess at rates specified is collected for water utilised for the purposes specified in the Act *ibid*. Compliance with the standards laid down by Government of India under Environment (Protection)

Act, 1986 makes the consumer eligible for concessional rate of water cess and also rebate in payment of cess. Audit scrutiny revealed that as RTPS had failed to install meters for measuring each stream of water consumption and to furnish water analysis report and monthly production reports to KSPCB, it could not avail of concessional rates. Compliance with the requirements of KSPCB would have entailed savings of ₹ 1.16 crore during 2005-10.

Non-payment of cess

2.1.108 As per the provisions of Water (Prevention and Control of Pollution) Cess Act, 1977, cess on water utilised for the purposes specified in the Act is required to be remitted to the Pollution Control Board. Audit scrutiny showed that though BTPS had utilised water for the purposes⁷⁶ specified in the Act *ibid*, no cess was remitted to KSPCB. The water cess so payable amounted to ₹ 32.92 lakh for the period from April 2008 to March 2010.

Monitoring by top management

MIS data and monitoring of service parameters

2.1.109 The Company plays an important role in the State economy. For such a giant organisation to succeed in operating economically, efficiently and effectively, there should be documented management systems of operations, service standards and targets. Further, there has to be a Management Information System (MIS) to report on achievement of targets and norms. The achievements need to be reviewed to address deficiencies and also to set targets for subsequent years. The targets should generally be such that the achievement of which would make an organisation self-reliant.

Review of the system revealed that:

- the operational and the financial achievements *vis-à-vis* the targets were discussed by the Management and corrective action were being taken.
- the Statutory Auditors had repeatedly advised strengthening of internal control procedures for purchase of fixed assets, inventory, sale of energy including execution of works contracts and accounting of coal to make them commensurate with the size and nature of business.

Government stated (August 2010) that the Company had appointed internal auditors to further strengthen the internal control procedures.

Acknowledgement

Audit acknowledges the co-operation and assistance extended by the staff and the Management of the Company at various stages of the performance review.

⁷⁶ industrial cooling / spraying in boiler feed and in processes whereby water gets polluted and the pollutants are not easily bio-degradable.

The Statutory Auditors are repeatedly commenting on the need to strengthen internal control procedures.

Conclusion

The peak demand for the State in 2009-10 was 8,094 MW against the installed capacity of 10,387.81 MW. Yet, the peak demand was met only to the extent of 7,049 MW (*i.e.*, 67.86 per cent of installed capacity).

The Karnataka Electricity Regulatory Commission (KERC) had forecast (December 2008) peak requirement of 10,120 MW by the end of 2012. To meet the peak demand of 10,120 MW forecast by KERC, the required installed capacity worked out to 14,913 MW. Hence, the shortfall of 4,525 MW is required to be commissioned between 2010-11 and 2011-12 so as to achieve the objective of providing power for all by 2012.

Against this, only six projects with capacity addition of 2,053 MW were projected for completion by the end of 2012, still leaving a gap of 2,472 MW. Hence, the objective of providing power for all by 2012 may not be achieved.

New hydro projects proposed to be taken up by the Company were either awaiting clearance from MoEF or held up due to local agitation. Renewable Energy Sources in the State also remained underutilised.

With regard to operational performance of existing projects of the Company, it was observed that the performance of thermal power stations was sub-optimal due to fixation of generation targets below the available hours, low plant load factor, inefficient fuel management, failure to undertake timely renovation and modernisation and life extension schemes. The consumption of coal was in excess as compared to designed parameters.

The poor realisation of dues and consequent accumulation of outstandings from ESCOMs forced the Company to resort to borrowings entailing payment of interest. This had also affected its ability to take up new projects.

Recommendations

The Company needs to streamline procedures for procurement, acceptance and consumption of coal and strive to improve efficiency. The thermal power stations should strive to improve performance to the level of norms of CERC / KERC and CEA and achieve the specifications prescribed by equipment suppliers. The Company should also analyse / investigate reasons for excess consumption of fuel, higher outage hours, higher auxiliary consumption and other higher operating parameters. The Company needs to take up renovation and modernisation and life extension programmes as per schedule. This would result in optimum utilisation of existing facilities.

The Government needs to evolve a long-term strategy for capacity augmentation through its own agencies and by private sector participation. From a long-term perspective there is a need to diversify energy sources and provide clean energy. Development of hydro and renewable energy sources needs to be accorded top priority for energy

security. The Government also needs to encourage, adopt and implement Demand Side Management and Energy Efficiency measures in addition to capacity addition. The Government should consider setting up a task force on priority so that the objective of providing power for all by the end of 2012 is achieved.

2.2 Electricity Supply Companies

Implementation of Rural Load Management System scheme by Electricity Supply Companies

Executive Summary

In Karnataka there is a wide gap between demand and supply of power, which affects both irrigation and domestic consumers. To overcome the gap through better demand side management, a scheme called Rural Load Management Scheme (RLMS) was conceived. The main objective of the RLMS was to provide assured hours of power supply to Irrigation Pump (IP) set consumers and 24 hours power supply a day to non-IP consumers. Other benefits such as reduction in peak load, transmission and distribution losses and improvement in tail end voltage were also envisaged under the scheme.

RLMS scheme

Under the RLMS, a Rural Load Management Unit (RLMU) box is installed on the Low Tension side (output side) of the transformer. The RLMU box comprises of Programmable Logic Controllers (PLC), circuit breaker, modem, electronic meter etc. The main idea behind RLMS is to segregate IP loads on the transformer into two groups. The feeder (11KV) is kept charged for 24 hours in a day. While power supply is given for entire 24 hours to non-IP set consumers, power supply to IP set consumers is regulated by the PLC for specified hours in a staggered manner as per a pre-determined programme. The PLC switches between the two groups alternatively, thereby ensuring assured power supply to IP set consumers.

Audit objectives

A performance audit review was undertaken in three Electricity Supply Companies (BESCOM, HESCOM and MESCOM) to ascertain whether the RLMS scheme was carefully designed with adequate planning; whether the scheme was implemented economically, efficiently and effectively; whether the intended benefits in reduction of distribution losses and improvement in tail end voltage were achieved; and whether the main objective of providing assured hours of power supply to IP set consumers and 24 hours power supply to non-IP set consumers was achieved.

Audit findings

The RLMS scheme was taken up in the ESCOMs without proper planning. The scheme was not scrutinized by Technical Audit. The total cost incurred from December 2004 to March 2010 was ₹589.34 crore. In BESCOM and HESCOM system improvement works were taken up by utilizing higher capacity materials than those specified in the policy of the companies resulting in extra expenditure of ₹4.33 crore in test checked divisions. In HESCOM, qualification requirements of tenderers for supply of RLMU boxes were altered after invitation of tenders.

Tampering was noticed when power supply was not provided to farmers during May 2007 in test checked feeder. The Vigilance Wing of BESCOM noticed tampering of RLMU boxes during April-May 2008 also as power was not provided to farmers for long hours and non-supply hours were not compensated with power supply in other hours. The power supply position (post April 2008) deteriorated. Power cut in RLMS feeders' resulted in non supply of power during the stipulated time to a group of IP set consumers and such periods of non-supply were not compensated with power supply during some other time of the day.

The vicious cycle of power cut in RLMS feeders, non-rotation of timings of power supply and supply during evening hours, led to large scale tampering. The maintenance contractor could not maintain the RLMU boxes being tampered on a large scale. The situation was aggravated by the rising demand-supply gap scenario of power supply. Hence, the scheme, which was modelled to work in a demand-supply gap situation failed in BESCOM and HESCOM. The expenditure made on RLMU boxes in six and five test checked divisions of BESCOM and HESCOM were ₹19.73 crore and ₹8.62 crore respectively, served only limited purpose and was largely wasteful.

The incidental benefits of reduction in peak load, reduction in transmission and distribution losses and improvement in tail end voltage were achieved in 20 test checked feeders of three ESCOMs, but the main objective of providing assured hours of power supply to IP set consumers and 24 hours power supply to non-IP set consumers, however, failed in BESCO and HESCO. BESCO stopped implementing RLMS in August 2008, while HESCO decided in January 2009 not to go ahead with the execution of RLMS in the remaining feeders where work had not commenced.

In MESCOM, however, load shedding was not resorted in RLMS feeders. Under extreme conditions, the feeders were treated at par with Urban feeders (minimum power cut). Instances of tampering noticed were attended to by the maintenance contractor. This led to the success of the scheme only in MESCOM, indicating that the scheme was a workable model if the companies provided power supply to IP set consumers as per Government policy.

To meet the same objective, BESCO has now embarked upon another scheme called Niranthara Jyothi in which separate lines would be drawn to supply power to IP sets.

Recommendations

All schemes undertaken by the ESCOMs should be scrutinised by Technical Audit so as to assess their viability and sustainability under the then existing conditions.

The objective of the companies should be to provide assured hours of power supply to IP set consumers rather than focusing on preventing tampering. This would entail a win-win situation to the consumers and the companies. Proper maintenance of the assets is also a key to the success of any scheme.

In view of the success of RLMS scheme in MESCOM and as the Expert Committee appointed by the company had also estimated the cost under Niranthara Jyothi to be double the cost under RLMS, BESCO and HESCO need to take a re-look at the alternatives to meet the desired objective of providing assured power supply to IP set consumers.

Introduction

With the objective of increasing food production, farmers in Karnataka were encouraged to install Irrigation Pump (IP) Sets to bore-wells and open wells to increase area under cultivation. The consumption of electricity by the IP Set consumers was nearly 40 *per cent* of the total energy sold in Karnataka in 2005-06. The increase in generation did not match the demand and the gap widened resulting in load shedding for consumers.

The Karnataka Power Transmission Corporation Limited, which transmits electricity, proposed (2003), undertaking a scheme called Grama Jyothi Scheme in five Electricity Supply companies⁷⁷ (ESCOMs) viz., BESCO, HESCO, MESCOM, GESCOM and CESC distribution areas for supply of single phase power supply during the entire day to rural areas and regulate power supply to IP Sets. In the meanwhile (March 2004), Bangalore Electricity Supply Company Limited (BESCO) experimented with another pilot scheme called *Rural Load Management System (RLMS)* in two feeders at Tavarekere.

Rural Load Management System (RLMS)

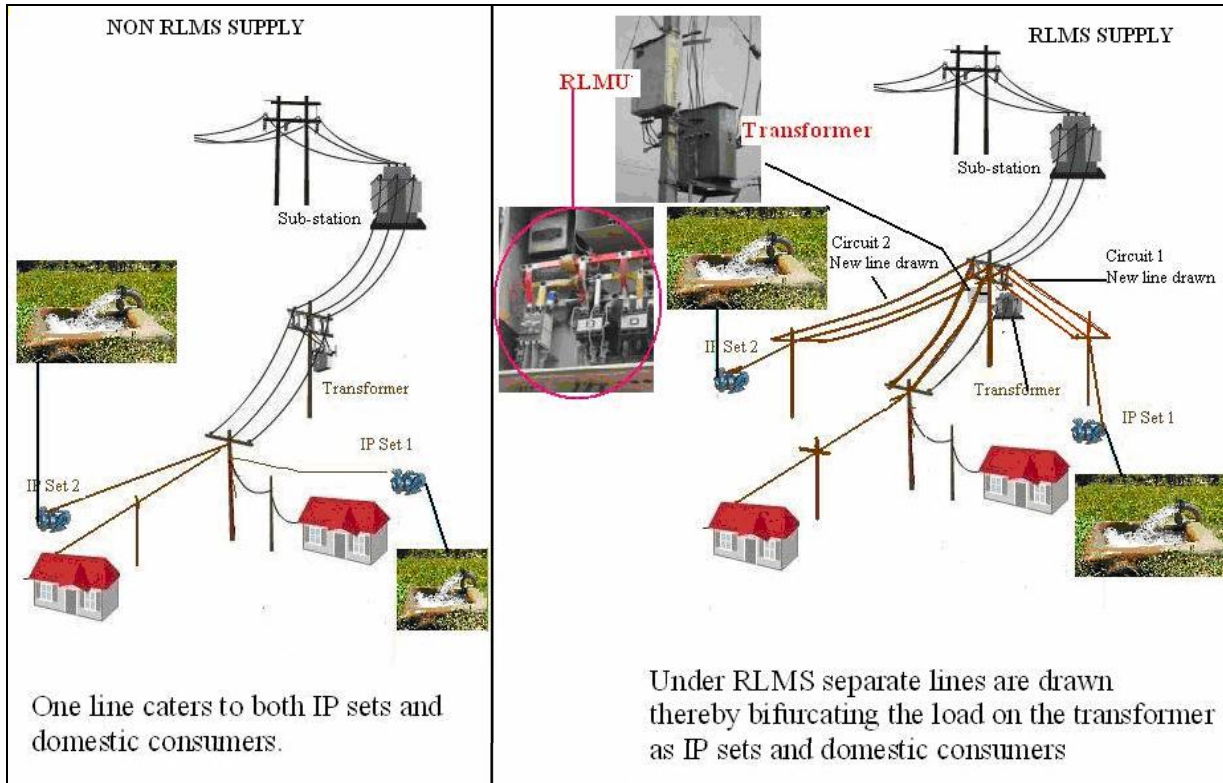
2.2.2 In the normal method of power supply, the supply line emanating from the transformer is common to all consumers (IP sets, domestic, commercial *etc.*).

Under the RLMS, a Rural Load Management Unit (RLMU) box is installed on the Low Tension (output) side of the transformer comprising of Programmable Logic Controller (PLC)⁷⁸, Circuit breaker, Modem, Electronic meter *etc.* The concept behind RLMS was to segregate the load on each transformer in to IP set consumers and non IP set consumers. The IP set consumers are again bifurcated into two groups. The 11KV feeder (input side) is kept charged for 24 hours. On the output side, power supply is given to non-IP consumers for entire 24 hours, while power supply to IP set consumers is regulated by the PLC for specified hours as per a pre-determined programme. The PLC switches between the two groups of IP sets consumers alternatively. In case of failure of power supply during the programmed hours to IP set consumers, the PLC would automatically provide power supply at another time of the day / night hours.

⁷⁷ Bangalore Electricity Supply Company Limited (BESCO), Hubli Electricity Supply Company Limited (HESCO), Mangalore Electricity Supply Company Limited (MESCOM), Gulbarga Electricity Supply Company Limited (GESCOM), and Chamundeswari Electricity Supply Corporation Limited (CESC).

⁷⁸ Programmable Logical Controller (PLC) is an instrument in RLMU box which instructs the system to supply/not to supply power to the circuits as per the programme loaded.

The schematic diagram below shows the then existing method of supply of power and the method of supply of power under RLMS.



The company identified the following merits and demerits for the RLMS scheme.

Merits	Demerits
<ul style="list-style-type: none"> ➤ Assured hours of power supply to IP set consumers. ➤ 24 hours power supply to consumers other than IP set consumers. ➤ Reduction in peak load, reduction in transmission distribution losses and improvement in tail end voltage, thus ensuring quality power. ➤ Additional revenue from other category consumers. 	<ul style="list-style-type: none"> ➤ Possibility of bypassing RLMU boxes by IP set consumers.

The Board of BESCOM discussed the results of pilot projects in two feeders at Tavarakere and decided (December 2004) to implement the scheme in 282 feeders (about 1/3rd of total feeders in BESCOM) at a total cost of ₹ 195.43 crore. Subsequently, in August 2006 the planned implementation of RLMS was increased to 315 feeders. The company (BESCOM) had emphasized (February 2005) before Karnataka Electricity Regulatory Commission (KERC)⁷⁹ that implementation of the RLMS scheme would give an ever lasting

⁷⁹ KERC is responsible for fixing tariff in the State. The company approached KERC as the cost would be considered for tariff purpose.

solution in bridging the gap between demand and supply. Other ESCOMs (except CESC) also decided (HESCOM : October 2005, MESCOM : December 2006, GESCOM : June/July 2006) to implement the scheme in a phased manner.

The details of RLMS works executed by ESCOMs up to end of March 2010 are as follows.

Company	Total No. of feeders selected for RLMS (Target)	No. of feeders completed	Expenditure incurred (₹ in crore)
BESCOM	315	297	264.86
MESCOM	149	133	67.72
HESCOM	211	126	148.96
GESCOM	81	75	107.80
Total	756	631	589.34

Out of the total 756 feeders selected for RLMS in four ESCOMs, 631 feeders were completed. We observed that 39 feeders in 13 test checked divisions were completed but not commissioned (refer paragraph 2.2.11). BESCOM and MESCOM financed the scheme from its own funds, while HESCOM implemented the scheme with own funds and funds from Rural Electrification Corporation (REC). As at March 2010, out of the sanctioned amount of ₹ 179.39 crore by REC, HESCOM had utilised ₹ 94.52 crore. HESCOM had paid interest of ₹ 19.39 crore and principal amount drawn was still not due for payment (March 2010).

The Board of Directors of BESCOM were informed (January 2008) that the results of RLMS -Phase-I were encouraging and as such specifications were ordered to be drawn to cover the balance 835 rural feeders⁸⁰ in Phase II of the scheme. Tenders were invited for Phase II of RLMS and the contractors were given Letters of Award in February 2008. Meanwhile, the officers of BESCOM visited Gujarat State in July 2008 and reported (August 2008) about working of a scheme in which separate⁸¹ power supply lines (11KV) are drawn from substations to feed IP set connections.

The Board of Directors of BESCOM in the meeting held in August 2008 decided to drop the RLMS Scheme Phase-II, treating the results of the RLMS Phase-I as not encouraging. HESCOM had also stopped implementation of the RLMS scheme since January 2009. At present (May 2010) BESCOM is implementing Niranthara Jyothi scheme, whereas MESCOM is continuing to implement the RLMS scheme.

⁸⁰ the feeders have increased over the last five years due to addition of new feeders and bifurcation of existing feeders.

⁸¹ similar to Niranthara Jyothi Scheme, which was subsequently implemented in Karnataka.

Scope of audit

2.2.3 Performance Audit was conducted between January 2010 and May 2010 covering planning, evaluation, implementation and achievements of the desired objectives of the RLMS scheme in BESCOM, HESCOM and MESCOM. The execution of the scheme between 2005-06 to 2009-10 in these three ESCOMs, was covered in audit. The audit examination involved scrutiny of records at the Corporate Office of the ESCOMs and 13* out of 31 divisions where the scheme was implemented.

Acknowledgement

We acknowledge the co-operation and assistance extended by the staff and the Management of the companies at various stages of the performance review.

Audit objectives

2.2.4 The Performance Audit was conducted with a view to ascertain whether

- the scheme was goal oriented;
- the scheme was implemented economically, efficiently and effectively;
- to ascertain whether the scheme was effectively monitored at all levels and whether there was adequate maintenance;
- there was reduction in peak load, transmission and distribution losses and improvement in tail end voltage; and
- the main objective of providing assured hours of power supply to IP set consumers and 24 hours power supply to non- IP set consumers was achieved, thus improving consumer satisfaction levels.

Audit criteria

2.2.5 The Audit criteria considered were the following.

- Power supply was to be provided as per Government directions from time to time;
- 24 hour power supply was to be provided to RLMS feeder and instructions for change in timings of PLC were periodically communicated to contractors.
- Schedule of rates of the ESCOMs and Detailed Project Report; and
- Terms of contract with contractors.

* Probability Proportion to size with replacement (PPSWR) with multiple of number of feeders with estimate cost was adopted as size measure and 13 divisions out of 31 divisions were selected for test check. The 13 divisions are Harihar, Davangere, Nelamangala, Ramnagar, Tumkur and Madhugiri in BESCOM; Hubli, Bagalokot, Dharwad, Haveri and Ranebennur in HESCOM; Sagar and Kadur in MESCOM.

Audit methodology

2.2.6 The methodology adopted for attaining the audit objectives with reference to the audit criteria were as follows.

- Review of Minutes of the meetings of Board of Directors;
- Review of Detailed Project Reports;
- Scrutiny of records and decision of management relating to award of contracts;
- Review of records relating to implementation of the Scheme; and
- Scrutiny of Management Information System reports.

Audit findings

2.2.7 The objectives of the performance review were explained to Government and the company during an entry conference held in April 2010. The findings emerging out of the test check were reported to the Management in June 2010. The exit conference attended by the Pr.Secretary to the Government and represented by the Managing Directors of the ESCOMs was held in August 2010. The views expressed in the exit conference and replies furnished by the Management have been considered while finalizing the report. The findings are discussed in the succeeding paragraphs.

Planning

2.2.8 Before commencement of a scheme, it is essential that there exists a proper system of planning the activity. Once a decision to implement a scheme involving technical matter is taken up, the scheme should be subjected to Technical audit, so as to ensure that the desired technical parameters are in conformity with the policy of the companies.

The company (BESCOM) experimented (February / March 2004) with a scheme called 'RLMS scheme' in two feeders at Tavarakere. The Board of Directors of BESCOM approved the RLMS Scheme in March 2004 and directed (August 2004) that feeder-wise DPR be prepared. The Board of BESCOM discussed (August 2004) the results of pilot projects (March to July 2004) in two feeders at Tavarakere and decided (December 2004) to implement the scheme in 282 feeders.

Non-conducting of Technical Audit

2.2.9 We observed that in BESCOM, the DPRs were not subjected to technical audit even though the company had a Technical Audit and Quality Control (TAQC) wing. In HESCOM and MESCOM also, the RLMS scheme was not subjected to technical audit.

The company (BESCOM) opined (August 2010) that DPRs were prepared and scrutinised by Planning and Technical departments comprising qualified and experienced engineers and, hence, the need for vetting by TAQC was not felt.

The Planning wing of BESCO which studied the performance of RLMS in 46 feeders (subsequent to its implementation) had concluded that system improvement works were included on a large scale in the RLMS scheme and hence the scheme had to be audited technically.

System improvement works

2.2.10 ‘System improvement works’ involve works such as extension of Low Tension (LT) lines with conductors, shifting of distribution transformers to load centers, extensive releasing and restringing of existing LT lines and erection of intermediary pole supports to LT lines.

RLMS itself is a Demand Side Management measure and only alteration works required to bifurcate and segregate IP set loads from the existing network needs to be executed. Minimum two circuits need to be formed for sharing the IP set loads and the formation of two circuits is itself sufficient for effective working of RLMS. RLMS scheme is executed in rural areas where the existing transformer capacity was less than 100 KVA and even for 100 KVA with two bifurcated loads the ‘weasel’ conductors are quite sufficient to take the IP set loads. The policy of the ESCOMs as described in their Schedule of Rates also stipulates that ‘weasel’ conductors are to be used for rural areas.

We observed that BESCO and HESCO planned to execute the RLMS by including system improvements works rather than alteration of works to bifurcate the IP set loads. The materials (conductors and poles) utilised for system improvement works were contrary to its own policy and hence the DPR/planning was deficient to that extent. The scheme was not subjected to Technical audit. The resultant extra expenditure incurred on the higher capacity ‘rabbit’ conductors and RCC poles (to support the ‘rabbit’ conductors) in ten test checked divisions of BESCO and HESCO was ₹ 4.33 crore. It may be pointed out here that MESCO, however, executed the RLMS scheme by taking up only alteration works required for bifurcation of IP loads with ‘weasel’ conductors (supported by PCC poles).

The contention (August 2010) of BESCO that provision for the required materials depending upon field requirements and future load growth were made in the DPRs runs contrary to the observations made by an Expert Committee constituted by BESCO, which had opined (May 2008) that such system improvement works could have been reduced. The Managing Director, while offering his remarks to the State Government on the views of the Expert Committee had stated (May 2008) that Expert Committee had put the reduction in cost of estimate at around 40 *per cent* if system improvement works were excluded from RLMS scheme.

Implementation

2.2.11 For the success of any scheme, the scheme has to be implemented economically, efficiently and effectively. Further, for the benefits to be derived the projects need to be implemented and commissioned in time. We observed following deficiencies in the implementation of the scheme in the test checked divisions of ESCOMs.

In HESCOM, qualification requirements of the tenderers were modified after invitation of tenders.

- BESCOM had awarded (May 2005) to M/s ABB Ltd., the works of RLMS scheme on partial turnkey basis by supplying major materials like distribution transformers, rabbit conductor, poles, disc insulators etc. As per the agreements with M/s ABB Limited, the work was to be completed within nine months including monsoon period. In six test checked divisions, however, there was abnormal time overrun in completion of work ranging from 1 to 33 months which was attributed to non-supply of materials by the company.
- HESCOM opted to execute the works under RLMS scheme on total turnkey basis and after calling for tenders (January 2006) for execution of works, raised (March 2006) the qualification requirements (QR) of the tenderers. Because of the increased QR, many of the tenderers stood disqualified and were denied opportunity to participate in the tender. This forced the company to accept the single tender of M/s ABB Limited in five divisions⁸², while one division viz., Bagalkot was subsequently awarded (July 2007) to M/s PEC Electricals, Hyderabad as per directions of Hon'ble High Court. Hence, the amendment of the QR subsequent to issue of tender notification was not in the best interest of the organization. As per the agreements with the firms (ABB Limited, PEC Electricals and Subhash Projects Marketing Limited), the total turnkey work was to be completed within 12 months from date of Letter of Intent. In six test checked divisions, however, there were delays ranging from 1 month to 13 months and the company, overlooking its interest, did not levy any penalty.
- MESCOM awarded (June 2007) the work of fixing of RLMU boxes to contractors. The other related works of bifurcation of IP load were either executed departmentally or through labour contracts.
- A test check of divisions revealed that the feeders fitted with RLMU boxes were not commissioned even though the work was completed in the following feeders:

Company	Number of divisions test checked	No. of feeders where work was completed	No. of feeders completed but not commissioned	Divisions where feeders were not commissioned with RLMU boxes (no. of feeders not commissioned in brackets)
BESCOM	6	173	9	Nelamangala (9)
HESCOM	5	45	28	Hubli (2), Dharward(11), Bagalkot (5), Rannebennur (10)
MESCOM	2	103	2	Kadur (2)

BESCOM stated (August 2010) that in Nelamangala division, all the RLMS feeders were commissioned soon after the completion of work. The reply is not in line with the details furnished by the Division (April

⁸² of the 13 divisions put to tender in four divisions ABB limited was the lowest; in one division PEC Electricals was the lowest (apart from Bagalkot division) and in two divisions SPM Limited was the lowest tenderer to whom the contract were awarded.

2010), in which it was stated that though works in nine feeders⁸³ were completed between October 2008 and June 2009, the same were yet to be commissioned.

- Test check of stores and payments to contractors revealed the following
- In two divisions (Harihar and Davangere) of BESCOM, materials like conductors, poles, meters *etc.*, to be supplied by the company were drawn from the stores after certification of the completion of work.
 - In Bagalkot division of HESCOM, we observed release of payments even though the Engineer-in-charge had recorded in the bills - *“in view of urgency and it (bill) was only first and partial bill to regularize the advance amount paid. Hence, the bill was signed without taking inventory. The last and final bill will be submitted only after complete inventory”*. This bill was passed for payment in November 2008, but it was observed that neither had the inventory been recorded nor final bill settled till March 2010 (date of our scrutiny).
 - In Dharwad division of HESCOM, the Executive Engineer had noted in July 2009 that the PLC units of three feeders (Ibrahimpur, Shanawad and Annigeri) were due for issue to the company though the same had been recorded in measurement book as received. We observed that the payments in respect of these feeders had, however, already been released in November 2008.
 - The agreements entered into in October 2005 and April 2007 with the contractors by BESCOM and HESCOM stipulated that payment of 80 *per cent* of the cost of the materials supplied by the contractor would be given as advance and the balance 20 *per cent* would be paid after completion of the work. Test check in four divisions revealed that the advances given on materials amounting to ₹ 5.88 crore and ₹ 1.95 crore were pending adjustment (for two years in HESCOM and six months in BESCOM) respectively as at March 2010.

Advances given against major materials were pending adjustment for six months to two years.

The deficiencies noticed in the implementation of the scheme points to deficiencies in internal control procedures regarding sourcing of requisite material for works, delay in commissioning and release of payment to contractors. The benefits expected to be extended to the intended beneficiaries from the expenditure incurred were not realised in areas where RLMU boxes were installed but were not commissioned and in other areas the benefits were delayed to the extent there was delay in implementation.

⁸³ feeders at Kagimadu, Chakrabavi, Halasabele, Savandurga, Shivagange, Marur, Thaggikuppe, Gudemaranahalli and Managal.

2.2.12 In ESCOMs, large number of IP sets were not metered. In the absence of meters for IP sets, energy audit could be attempted at the next level *viz.*, transformer centre level. For the purposes of energy audit and analyzing the results of RLMS scheme collection of recordings of energy meters was essential. This energy audit could only be done if modems installed in the RLMU boxes (fixed at transformer centres) could record and transmit the information to the control centre. In the absence of connectivity, a person had to climb each pole to record the meter reading.

We observed that as transformers were situated in remote areas where there was no network connectivity, meter readings could not be remotely recorded. Further, as each feeder had about 50 transformers it was practically not possible to climb each transformer pole for recording reading. Thus, inclusion of modems in RLMUs was not based on ground realities. Considering an average of 50 transformers per feeder, the total unfruitful expenditure on installing modems in RLMU boxes of 631 feeders completed till date, worked out to ₹ 20.01 crore⁸⁴. In this connection, it is to be noted that an Expert Committee set up by the company to study the 'Capital Expenditure' proposals had noted that these meters and modems did not serve any purpose as the IP sets were not metered and, as such, the amount spent on metres and modems could have been avoided.

The opinion (August 2010) of BESCO that sooner or later all the areas would get network connectivity was not justified, as even if a few transformers were not read, the purpose of energy audit would be defeated and this was known to the company. We noted that the only alternative till then was to obtain the readings on weekly basis from the maintenance contractor in terms of the agreement, which too was not obtained and analysed.

Monitoring and Maintenance

Monitoring of the Scheme

2.2.13 Effective monitoring and follow up is an essential part of the success of any scheme. It was observed that the progress of the RLMS scheme was periodically discussed at circle and zonal levels of all the ESCOMs up to March 2008. From April 2008, the details of data of the RLMS provided by the contractor were not available in the test checked divisions. We note that details of discussions at circle and zonal levels after April 2008 were not on record.

Monitoring of schedule of supply

2.2.14 The main idea behind RLMS scheme is to segregate IP load on each transformer into two groups. While power supply is given to non-IP consumers for entire 24 hours, power supply to IP set consumers is regulated by the Programmable Logic Controllers (PLC) for specified hours in a staggered

⁸⁴ ₹ 6,660 per meter x 631 (total feeders in all ESCOMs) x 50 transformers per feeder (approx) = ₹ 20.01 crore. The extra expenditure on meters is not considered as the meters can be used for other connections.

manner. It was not easy to change the timings of PLC unless done remotely and even if one transformer centre was not remotely connected, the change in timings could not be affected. The agreement with the contractor (supplier of RLMU boxes) specified that the PLC was to be capable of storing a pre-determined programme and the schedule was likely to change depending on the season⁸⁵.

In BESCOM and HESCOM, the schedule detailing the timings for power supply to be given to contractors, were not available on record.

Though the condition of providing time schedules and changes were stipulated in the agreement, it was noticed in test checked divisions of BESCOM and HESCOM that there was no record of any intimation given to contractors detailing the timings that the PLC had to provide power to different IP set consumers. MESCOM has reasonably maintained the intimations given to the contractor regarding the schedule of power supply.

The contention (August 2010) of the company (BESCOM) that it had intimated the contractors to maintain timings of power supply had an implication on the company elsewhere stating that providing power to farmers in the evening hours was not well-received and had resulted in tampering. The fact that all the transformers needed to be connected to the control centre to affect the change in timings and that a number of transformers were situated in remote places necessitated the company to ensure that the maintenance contractor was periodically provided with time schedules and changes. In the absence of intimations in the test checked divisions, we could not ascertain that the contractors modified the programme in the PLC units so as to provide power with the stipulated timings (on rotational basis) to different groups of IP set consumers (farmers).

Maintenance by contractors

2.2.15 Proper maintenance of the RLMU boxes is essential for the success of the RLMS scheme.

- BESCOM entered into an agreement in October 2005 with the contractor (ABB Ltd) who supplied RLMU boxes, for the maintenance of the boxes for five years. The details of claims raised by contractor, those admitted and balance pending settlement by the company were not available. During the test check of Ramanagaram division of BESCOM, we observed that in respect of 16 feeders the contractors had claimed payments of ₹ 18.29 lakh⁸⁶ towards maintenance charges of feeders, 5 months to 11 months prior to their dates of commissioning.
- HESCOM did not enter into maintenance contract, though tenders were called for and evaluated in January 2006.
- MESCOM entered into a maintenance agreement with the supplier of RLMU boxes in June 2007.

Maintenance of RLMU boxes was discontinued in BESCOM. HESCOM did not enter into maintenance agreement.

⁸⁵ Clause 1.02.05 and 1.02.06 of agreement. Clause 1.02.06 referred to a sample schedule as part of the agreement. The sample schedule, that is part of the agreement (referred as Annexure-B), is also not available in the agreements made available to audit.

⁸⁶ completion dates of feeders as recorded by Accounts Section and Measurement books varied. The payments are yet to be made (August 2010).

- In BESCOM and MESCOM, the agreements with the maintenance contractors stipulated that the data regarding peak load, energy sent out *etc.*, were to be furnished on weekly basis. This was required to facilitate energy audit⁸⁷. In the test checked divisions of BESCOM, the contractors had furnished these data for intermittent months for certain feeders only up to March 2008. It was during this period (April-May 2008) that Vigilance Wing of BESCOM also reported large scale tampering. The details of data of the RLMS feeders provided by the contractors from April 2008 to till date (August 2010) were not available in the test checked divisions. The company had not decided to restore the maintenance or to terminate the maintenance contracts till date (August 2010). In HESCOM, as no maintenance contract was entered into, no data was available. In MESCOM, such reports were furnished by the contractor in respect of certain feeders intermittently. Energy audit on RLMS feeders were however, not conducted in BESCOM and HESCOM.

The company (BESCOM) stated (August 2010) that it was wrong to say that maintenance was discontinued from March 2008. The maintenance had to be done by the maintenance contractor and could not be done by its own staff as there were 1.18 lakh transformers in its jurisdiction. Tampering and problems of changing the time in PLCs led to strain on the contractors' resources. Vigilance Wing of the company (BESCOM) reported high incidents of tampering in April / May 2008 and the contractor sought police protection.

The reply is factual. The large number of transformers in its jurisdiction and the requirement of maintaining them (by contractors) were known to the company. The factors that led to failure of the scheme were supplying power during evening hours, not instructing the contractor to change the timings of PLC periodically, deteriorating power supply situation resulting in large scale tampering and failure by the contractor to maintain the RLMU boxes.

Realisation of incidental objectives

2.2.16 The data in respect of all the commissioned feeders were not available⁸⁸. We examined the statistics regarding peak load, transmission and distribution losses and tail-end voltages in 20 feeders (randomly selected) from the selected test checked divisions of three ESCOMs. The results are as tabulated below:

Company	Division	Name of the feeder	Reduction in peak load	Reduction in T&D loss	Improvement in tail-end voltage
BESCOM	Nelamangala	Gollahalli	✓	✓	✓
	Nelamangala	Manne	✓	✓	✓
	Tumkur	Virupasandra	✓	✓	✓
	Tumkur	Herur	✓	✓	✓
	Madhugiri	F1 Medigeshi	✓	✗	✓

⁸⁷ Clause 1.02.13, 1.02.12, 1.18.08 and 1.18.09 of the agreement (part III-Section I).

⁸⁸ refer to paragraph 2.2.15, where non-availability of data in full is stated. The analysis of realisation of incidental objectives is based on data available for the period up to May 2008.

Company	Division	Name of the feeder	Reduction in peak load	Reduction in T&D loss	Improvement in tail-end voltage
	Madhugiri	F6-DV Halli	✓	✓	✓
	Ramnagar	Bilagumba	✓	✗	✓
	Ramnagar	F7-Kottahalli	✗	✓	✓
	Davangere	Anagod	✓	✓	✓
	Davangere	Asagod	✓	✗	✓
	Harihar	Bennehalli	✓	✓	✓
	Harihar	Yelehole	✓	✓	✓
HESCOM	Hubli	Kamadolli	✗	✓	✓
	Hubli	Saunsi	✗	✓	✓
	Dharwad	Yerikoppa	✗	✓	✓
	Dharwad	Narendra	✓	✓	✓
MESCOM	Sagar	Nandihalli	✗	✓	✓
	Sagar	Apinakatte	✓	✓	✓
	Kadur	Jigenahalli	✓	✓	✓
	Kadur	Kallapura	✓	✓	✓

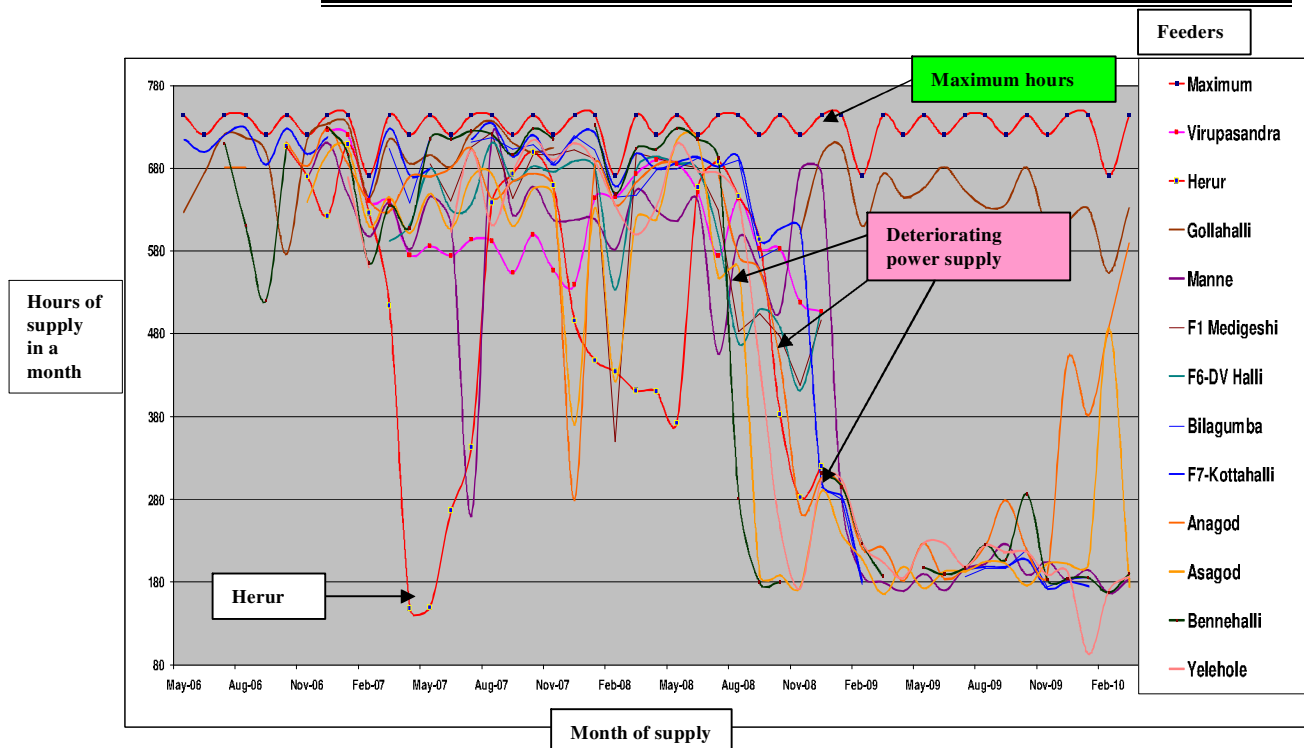
There was reduction in peak load, T&D losses and improvement in tail end voltage after implementation of RLMS.

It is heartening to note that there was reduction in peak load and transmission and distribution losses and improvement in tail-end voltage in most of the feeders.

Realisation of main objective

2.2.17 Possibility of tampering of RLMU boxes was one of the demerits of the scheme expected at the time of conception of the scheme in December 2004. The company (BESCOM) had stated in February 2005 before Karnataka Electricity Regulatory Commission (KERC) that implementation of the RLMS scheme would give an ever-lasting solution in bridging the gap between demand and supply. As per Government order of August 2004, atleast six hours of good quality power supply was to be provided to IP set consumers. Power supply for specified hours was to be provided to each group of IP set consumers in a staggered manner. Thus, load shedding was not to be resorted to and the PLC would control the power supply. The power supplied in respect of 12 feeders (random check) in the selected test checked divisions of BESCOM⁸⁹ after commissioning of RLMS is illustrated below:

⁸⁹ test check was limited to BESCOM. In HESCOM, the RLMU units were stated to be by-passed immediately on its commissioning.



From the above graph, the following was observed:

- The concept behind RLMS scheme was to provide 24 hours power supply to RLMS feeders. This implied that in the RLMS feeders, there should not be any power cut. We, however, observed that none of the feeders received maximum hours of power supply in any of the months indicating power cuts in RLMS feeders.
- Attention is drawn to the power supplies made during April 2007 and May 2007, in Herur feeder of Tumkur Division. As RLMS feeders were to be provided with 24 hours power supply per day, the number of hours of supply in April and May 2007 should have been 720 hours and 744 hours respectively. The feeder at Herur, however, supplied power for only 148 hours and 149 hours in April and May 2007. In the meeting held in May 2007 between the officials of BESCOM and representatives of M/s ABB (contractor), large scale tampering in Tumkur and Kolar circles were discussed and the contractor (M/s ABB Ltd) had reported that there was tampering in some villages at Herur. The quantum of power supplied indicated that farmers had resorted to tampering as the required power was not provided to them.
- The graph above also indicates that power supply in the test checked feeders showed a decreasing trend from June 2008 and reached dismal levels by November / December 2008. The company accepted that tampering was noticed during intensive inspections between April and June 2008. The Vigilance Wing of BESCOM, after checking 55 feeders (714 RLMUs) during April / May 2008 had reported that there was tampering/by-passing in 34 per cent of the RLMUs. In most of the cases, the villagers resorted to large scale tampering of RLMU equipment after load shedding / power failure for long duration and as the non-supply hours

were not compensated with power supply in other hours. In Many cases, M/s ABB Ltd themselves had by-passed the equipment due to non-availability of spares.

The Company (BESCOM) stated (August 2010) that it was wrong to construe that failure of the scheme was for the reason that the company could not maintain continuous power supply to the RLMS feeders. The company cited that providing power in the evening hours was not being well received by the farmers, who resorted to tampering, alongwith delay in maintenance works by the contractors as the biggest mistakes for the failure of the RLMS scheme. Unauthorized load of IP set connections and inability to compensate for time in PLC programming constrained the company to shed load on RLMS feeders when power scarcity struck during 2008. The Company stated that had the Scheme succeeded during June 2008 to December 2008, there would have been no need for the Company to search for a solution.

The RLMS scheme was a success in MESCOM whereas it failed in HESCOM and BESCOM.

It is to be noted that RLMS scheme was projected to KERC as an everlasting solution to meet the demand-supply gap and as such the RLMS scheme was supposed to work in a power deficit scenario. As could be seen from the graph and analysis, tampering was noticed when power supply was not provided to farmers (*eg.*, noticed in Herur feeder during May 2007). The Vigilance Wing of BESCOM noticed tampering of RLMU boxes during April-May 2008 as power was not provided to farmers for long hours and non-supply hours were not compensated with power supply in other hours. The deteriorating power supply during this period (post April 2008)⁹⁰ could also be co-related to power supply position in the test checked feeders (graph). Moreover, by the company's own admission, the supply of power during evening hours was not well received by farmers. Power cut in RLMS feeders results in non supply of power during the stipulated time to a group of IP set consumers and such periods of non-supply had to be compensated with power supply during some other time of the day. Compensating the power supply during the evening hours would not be well received by farmers. The vicious cycle of power cut in RLMS feeders, non-rotation of timings of power supply and supply during evening hours, led to large scale tampering⁹¹. The maintenance contractor could not maintain the RLMU boxes being tampered on a large scale. The situation was aggravated by the rising demand-supply gap scenario of power supply. Hence, the scheme, which was modelled to work in a demand-supply gap situation, failed in BESCOM and HESCOM. Thus, RLMU boxes served their purpose only for a limited period as the boxes were tampered with subsequently. The expenditure made on RLMU boxes in six test checked divisions of BESCOM and five test checked divisions of HESCOM was

⁹⁰ as per Annual Reports of Southern Regional Power Committee, as a result of load shedding, rural feeders in Karnataka were given power supply (three phase supply required for IP sets) for only 8-9 hours from January 2005 to November 2008 and six hours power supply from November 2008 onwards till end of March 2010.

⁹¹ the extent of tampering was not available in BESCOM and HESCOM.

₹ 19.73 crore and ₹ 8.62 crore⁹² respectively, which served only limited purpose and was largely wasteful.

The incidental benefits of reduction in peak load, reduction in transmission and distribution losses and improvement in tail end voltage were achieved in all the ESCOMs. The main objective of providing assured hours of power supply to IP set consumers and 24 hours power supply to non-IP set consumers, however, largely failed in BESCOM and HESCOM. BESCOM stopped implementing RLMS in August 2008, while HESCOM decided in January 2009 not to go ahead with the execution of RLMS in the remaining feeders where work had not commenced.

In MESCOM, however, load shedding was not resorted to in RLMS feeders. Under extreme conditions, the feeders were treated at par with Urban feeders (minimum power cut). Instances of tampering noticed were attended to by the maintenance contractor⁹³. This led to the success of the scheme only in MESCOM.

RLMS vis-à-vis Niranthara Jyothi scheme

2.2.18 While the RLMS Phase-I was in progress, the Hono'ble Minister for Public Works Department & Energy and the Managing Director of KPTCL, who was the Chairman of all ESCOMs, directed (August / November 2007) that RLMS work in the balance feeders be taken up in one go. BESCOM floated (November 2007) tenders for Phase-II on partial turnkey basis. No DPR was prepared. The cost of implementing RLMS phase –II for 835 feeders was estimated at ₹ 2,343 crore but the scheme was shelved and works in balance 835 feeders were taken up under another scheme called *Niranthara Jyothi* (where a separate 11 KV line was drawn for supply of power to IP sets) at a cost of ₹ 735 crore.

Comparison of costs

2.2.19 We observed that the cost per feeder under RLMS phase I in BESCOM worked out to ₹ 54 lakh⁹⁴, while the cost per feeder in MESCOM worked out to ₹ 51 lakh⁹⁵. BESCOM still had 835 feeders to be taken up under RLMS – Phase II, but, the scheme was abandoned in favour of Niranthara Jyothi scheme conceived after visit of the officials of the Company to the State of Gujarat. To complete works in the balance 835 feeders in RLMS-phase-II, considering the

⁹² for 14,050 RLMU in six test checked divisions of BESCOM at ₹ 41,298 per RLMU; for 2,338 RLMU in five test check division of HESCOM at ₹ 36,868 per RLMU. The cost per RLMU per unit excludes the cost of meter and modem (refer paragraph 2.2.12). The extra expenditure in these test checked divisions works out to ₹ 28.35 crore.

Note: All RLMUs are considered as bypassed in HESCOM. In the absence of details in BESCOM, 34 per cent of RLMU boxes in test checked divisions are considered as 'not functioning', while arriving at the loss, based on the percentage of tampering as arrived in the Vigilance Wing report.

⁹³ as periodical bills were seen preferred by the contractor up to this period.

⁹⁴ total cost incurred for 297 feeders was ₹ 264.86 crore and excluding system improvement works at 40 per cent (which were not required as per Expert Committee), the total cost worked out to ₹ 158.92 crore and cost per feeder was ₹ 54 lakh.

⁹⁵ total cost incurred for 133 feeders was ₹ 67.72 crore. As there was no system improvement works in MESCOM, the cost per feeder worked out to ₹ 51 lakh.

average cost per feeder of Phase-I, we estimate in BESCOM, the total cost would have been of the order of ₹ 450 crore. Instead, BESCOM took up works under Niranthara Jyothi at a cost of ₹ 735 crore.

The company had constituted (March 2008) two studies. The first, by an Expert Committee under the chairmanship of a former Chairman of erstwhile Karnataka Electricity Board, was to study the benefits that accrued from the RLMS scheme. The Committee was also required to examine the alternative system of dedicated feeders for supply of power to agricultural loads in rural areas, as followed in Gujarat, and compare the cost effectiveness of the two schemes. The second was an in-house study by the Corporate Planning wing of the Company of 46 feeders where RLMS scheme was implemented.

The Expert Committee in their report at Annexure VI (Table-5) detailed the cost⁹⁶ of RLMS scheme and the cost of drawing an exclusive 11 KV line for power supply to IP sets (Niranthara Jyothi) and reported that as compared to RLMS, the cost of providing the same facility by constructing exclusive 11 KV feeders to IP sets was much higher and almost double the cost of RLMS.

The company stated (August 2010) that the Expert Committee never looked into the cost of the alternate scheme (Niranthara Jyothi). The company also stated that the Government of Gujarat had sent a team to Karnataka to study and compare the RLMS pilot study before they took up segregation of feeders (Swarna Jyothi scheme), whereas, the ESCOMs in Karnataka continued on the ‘hunch’ that segregation of feeders (Niranthara Jyothi) would be twice as costly (as RLMS). The Company viewed the Expert Committee’s opinion that RLMS was cheaper as a ‘myth’.

Comparison of benefits

2.2.20 A comparative statement of the different parameters of RLMS scheme as per the pilot study at Tavarekere, the study of 46 feeders by Planning wing of BESCOM, the results of test check by audit in 12 feeders and results of pilot study under Niranthara Jyothi is given below:

	As per RLMS pilot study at Tavarekere and DPR	As per study of 46 feeders by Planning wing (Average of 46 feeders)	As per test check of 12 feeders by Audit.	As per pilot study of Niranthara Jyothi at Malur and DPR
Peak demand (<i>per cent</i>)	50	Reduced in 43 feeders to the extent of 40 <i>per cent</i> in peak load current	NA	NA
Peak load (<i>per cent</i>)	20	32 (Average)	45 (Average) Decrease in 11 feeders and increase in one feeder	10
Improvement in tail end voltage	NA	318 V to 380 V (Average) (19.5 <i>per cent</i>) Improvement in all feeders	326 V to 368 V (Average) Improvement in all	190 V to 220V (single phase)

⁹⁶ excluding system improvement works, which according to the committee, was not required.

	As per RLMS pilot study at Tavarekere and DPR	As per study of 46 feeders by Planning wing (Average of 46 feeders)	As per test check of 12 feeders by Audit.	As per pilot study of Niranthara Jyothi at Malur and DPR
			feeders	
Reduction in transformer failures	16.66 to 5 <i>per cent</i>	Decrease in 40 feeders and increase in 6 feeders	NA	3.8 to 2 <i>per cent</i>
Increase in consumption / billing (<i>per cent</i>)	46	61 (metered consumption increased in 29 feeders and decreased in 17 feeders)	45 (increase in all feeders)	24.73
Increase in demand	50 <i>per cent</i>	NA	NA	
Payback period (years)	2.76 (as per DPR)	-	-	4.65
Reduction in Transmission and Distribution losses (<i>per cent</i>)	NA	Average of 28.25 to 27.35 <i>per cent</i> (Decrease in 28 feeders and increase in 18 feeders)	Average of 25.66 to 23.66 <i>per cent</i> (Decrease in 9 feeders and increase in 3 feeders)	NA

NA= not available.

We observed that the pay back period in the DPR of RLMS phase I was projected at 2 years 10 months. In the Niranthara Jyothi scheme, the payback period was projected at 4 years and 8 months.

We observed that both the Expert Committee and the Report of the Planning Wing had concluded⁹⁷ that the RLMS scheme was technically sound and the benefits envisaged under the scheme had been achieved⁹⁸, but the high rate of tampering of RLMU boxes had defeated the main objective. The observations of audit about the factors that contributed to the success of RLMS scheme in MESCOM and the reasons for failure of the scheme in BESCO and HESCO are brought out in paragraph 2.2.17 *infra*.

Conclusion

The RLMS scheme was taken up in the ESCOMs without proper planning as the scheme was not scrutinised by Technical Audit Wing. Materials of higher capacity than those specified in the policy of the companies were utilised.

The vicious cycle of power cut in RLMS feeders, non-rotation of timings of power supply and supply during evening hours, led to large scale tampering. The maintenance contractors could not maintain the RLMU boxes being tampered on a large scale. This forced the company to go in for further power cuts in RLMS feeders. The situation was aggravated by the rising demand-supply gap scenario of power supply. Hence, the

⁹⁷ undated.

⁹⁸ benefits included rural households getting 24 hours power supply, benefits to rural small scale industries, benefits to farmers and better demand side management.

scheme, which was modelled to work in a demand-supply gap situation failed in BESCOM and HESCOM. The main objective of providing assured hours of power supply to IP set consumers and 24 hours power supply to non-IP set consumers, however, largely failed in BESCOM and HESCOM.

In MESCOM, however, load shedding was not resorted in RLMS feeders. Under extreme conditions, the feeders were treated at par with Urban feeders (minimum power cut). Instances of tampering noticed were attended to by the maintenance contractors. This led to the success of the scheme in MESCOM.

The incidental benefits of the RLMS scheme viz., reduction in peak load, reduction in transmission and distribution losses and improvement in tail end voltage were, however, achieved in all the ESCOMs.

The success of the RLMS scheme in MESCOM indicated that the scheme is a workable model.

BESCOM and HESCOM stopped implementing RLMS in August 2008 and January 2009. BESCOM has now embarked upon another scheme called Niranthara Jyothi, in which separate lines would be drawn from substations to IP set consumers. The Expert Committee appointed by BESCOM had noted that the cost under Niranthara Jyothi would be double the cost under RLMS.

Recommendations

All schemes undertaken by the Electricity supply companies should be scrutinised by Technical Audit so as to assess its viability and sustainability under the then existing conditions. The companies are aware of the gap in the demand-supply position in the power situation of the State. The company (BESCOM) had projected to the Karnataka Electricity Regulatory Commission that RLMS scheme was an everlasting solution to bridge the gap.

The objective of the companies should be to provide assured hours of power supply to IP set consumers rather than focusing on preventing tampering. This would entail a win-win situation to the consumers and the companies. Proper maintenance of the assets is also a key to the success of any scheme. The Company (BESCOM) has now embarked upon another scheme called Niranthara Jyothi in which separate lines are to be drawn to feed IP set consumers.

In view of the success of RLMS scheme in MESCOM and as the Expert Committee appointed by the company had also estimated the cost under Niranthara Jyothi to be double the cost under RLMS, BESCOM and HESCOM need to take a re-look at the alternatives to meet the desired objective of providing assured power supply to IP set consumers.

CHAPTER III

3. Transaction Audit Observations

Important audit findings emerging from test check of transactions made by the State Government companies are included in this Chapter.

Government companies

Karnataka Power Corporation Limited, Karnataka Power Transmission Corporation Limited and Electricity Supply Companies

3.1 Irregular payment of ex-gratia

Companies made irregular payments of ₹ 40.38 crore as ex-gratia to their employees in contravention of the guidelines issued by the Department of Public Enterprises.

The Department of Disinvestment and State Public Sector Enterprises Reforms (DDPER) modified and issued (February 2005) detailed guidelines for payment of bonus and ex-gratia to the employees of the Public Sector Enterprises (PSEs). These guidelines *inter alia* stipulated that

- if any PSE wanted to pay ex-gratia to its employees, then the allocable surplus must be arrived at duly providing for uncovered accumulated losses, pending Statutory payments, arrears of depreciation of previous years and any other statutory provisions.
- the PSEs should have paid dividend as per the Government order of May 2003.
- the PSEs should not have raised loans from Banks and other financial institutions on the strength of Government Guarantee.

The PSEs are to submit their proposals for payment of ex-gratia to the Administrative Department along with a duly filled format "A" prescribed in the Payment of Bonus Act 1965. Approval of DDPER and Finance Department has to be obtained invariably before making payment. In no case, *ex-post facto* sanction should be sought from DDPER/Finance Department/Administrative Department. If any PSE made ex-gratia payment without prior concurrence or approval and sends the file for ratification, that shall not be agreed to and, in that eventuality, the Chief Executive Officer and Financial Advisor of the PSE shall be held personally responsible and necessary disciplinary proceeding shall be initiated against the erring official. It is the Administrative Departments' responsibility to initiate the disciplinary proceedings *suo motu* wherever payment of ex-gratia is made without following the above procedures/guidelines/norms.

During test check of three PSE's⁹⁹ viz., KPCL, KPTCL and ESCOMs, we observed (December 2009) that even though the PSEs had not met the criteria stipulated in the DDPER guidelines, the PSEs released ex-gratia to its employees. These releases were made during the last three years without obtaining prior approval of DDPER and Finance Department as detailed below.

- Though KPCL had allocable surplus of ₹ 58.58 crore during 2006-07, the PSE had raised loans on the guarantee of the Government and hence did not satisfy the criteria stipulated in the DDPER guidelines. The Board of Directors of KPCL, however, approved and paid ex-gratia to its employees for the year 2006-07 and sought (July 2008) ratification from the Government. The Government refused¹⁰⁰ to grant *ex-post facto* sanction. KPCL paid (August 2008 /July 2009) ex-gratia for the years 2007-08 and 2008-09 without adhering to the conditions stipulated in the DDPER guidelines. KPCL requested for *ex-post facto* approval to the Government during August 2008 (for 2007-08) and August 2009 (for 2008-09). The Government, however, communicated non-approval of the same during August 2008 and August 2009. The ex-gratia payments were made by the company inspite of non-approval by the Government year-after-year. The aggregate amount of ex-gratia paid for the period 2006-07 to 2008-09 was ₹ 6.16 crore.

In reply, Government forwarded (March 2010) the KPCL's contention that non-release of ex-gratia would have had an adverse effect on the industrial relations and the company had requested the Government again in January 2010 to ratify the ex-gratia payments. Government, however, is yet to communicate the approval for ex-gratia paid (September 2010).

- It respect of KPTCL and ESCOMs, the companies were dependent on Government for subsidy¹⁰¹. KPTCL had made profits in all the years from 2006-07 to 2008-09. All the ESCOMs too made profit in 2006-07 and 2007-08, but incurred losses during 2008-09. The profits made by KPTCL and ESCOMs were after considering the subsidy received from Government. KPTCL and ESCOMs had not declared dividend in any of the years during 2006-09.

Though KPTCL and ESCOMs had not met the criteria laid down under DDPER guidelines, these companies also made payments year-after-year. The Government did not approve¹⁰² the payments of ex-gratia for any of the years. The Government stated (April 2008) that disbursal of

⁹⁹ Karnataka Power Corporation Limited (KPCL), Karnataka Power Transmission Corporation Limited (KPTCL) and Electricity Supply Companies –ESCOMs, viz., Bangalore Electricity Supply Company Limited, Gulbarga Electricity Supply Company Limited, Hubli Electricity Supply Company Limited, Mangalore Electricity Supply Company Limited and Chamundeshwari Electricity Supply Corporation Limited.

¹⁰⁰ Government had been refusing to give *post facto* approvals for ex-gratia payments from the year 2003-04.

¹⁰¹ between 2006-09 subsidy was given to all the ESCOMs in all the years and the total subsidy given was ₹ 4,934 crore.

¹⁰² the Government had not approved ex-gratia payments from the year 2000-01.

ex-gratia was in total disregard of the guidelines and repetition of such acts in future would attract reduction in release of funds. KPTCL and ESCOMS, however, continued making payment towards ex-gratia for the years 2007-08 (August 2008) and 2008-09 (August 2009). The aggregate amount of ex-gratia paid for the period 2006-07 to 2008-09 by KPTCL and ESCOMs was ₹ 34.22 crore.

In reply the KPTCL stated (June 2010) that payment of ex-gratia was made as a custom for the last several years and to maintain industrial peace.

Payment of ex-gratia by these PSEs disregarding the criteria laid down under DDPER guidelines and without prior approval of the Government resulted in irregular expenditure of ₹ 40.38 crore during 2006-09.

The matter was reported to the Government (May 2010); its reply in respect of KPTCL is awaited (September 2010).

Karnataka Power Transmission Corporation Limited

3.2 Idle investment

Failure to complete transmission lines as planned resulted in extra expenditure of ₹ 15.12 crore and unfruitful expenditure of ₹ 17.12 crore.

The Karnataka Power Transmission Corporation Limited (the erstwhile Karnataka Electricity Board) had approved (December 1994) a project for establishing a 220/66 KV Sub-station at Malur, which included construction of Double Circuit (DC) line from Somanahalli to the Malur Sub-station at a cost of ₹ 12.66 crore and construction of 220 KV DC line from Malur to Kolar at a cost of ₹ 6.60 crore. The work was to be completed by March 1999.

An Expert Committee of the erstwhile Karnataka Electricity Board (March 1997) noted that connecting the proposed Malur Station to the line between Hoody and Kolar, which was already overloaded, might further worsen the already low voltage situation. Since delay was foreseen in establishment of the Station at Chintamani / Kolar (400 KV), construction of a Single Circuit (SC) line between Somanahalli and Malur was recommended. The Committee stated that once the Station at Chintamani / Kolar was commissioned, this SC line itself would be a standby.

Disregarding this recommendation, the company took up (1998) construction of the DC line from Somanahalli to Malur. The construction was stopped in October 2001 because of way leave problems, after incurring expenditure of ₹ 11.55 crore. Similarly, the construction of the DC line from Malur to Kolar, taken up in May 1999, was stopped in August 2002 after investing ₹ 5.57 crore.

Many thefts were reported as the completed portions of the lines were not charged and remained without protection. The company accorded approval (February 2004), for completion of the balance work of Somanahalli – Malur line, on turnkey basis, 29 months after the work was stopped, to avoid further

theft and loss of property. Against the tendered (April 2004) amount of ₹ 7.52 crore, the offer of M/s Deepak Cables (India) Limited at ₹ 8 crore, 6.41 *per cent* in excess over the amount put to tender, was the lowest. The offer was valid up to December 2004. The quotation had factored in the materials available in stores at the time of tender notification, which were to be supplied to the turnkey contractor. As the materials valued at ₹ 1.84 crore were diverted (November 2004) the quoted price of M/s Deepak Cables for completion of the Somanahalli – Malur line was revised to ₹ 10.97 crore.

Recurring thefts on Malur – Kolar line forced the company to include the re-erection of the damaged towers and re-stringing of the stolen portion of this line as well in the turnkey contract. Incorporating this work the tender price of M/s Deepak Cables was raised to ₹ 12.27 crore (November 2005).

In between, the Central Purchase Committee (CPC) constituted (February 2005) a Fact Finding Committee to ascertain the actual quantities available in the stores. The CPC also decided to award the work to M/s Deepak Cables, subject to the condition that additional quantities would be ascertained based on the report of the Committee, which was ratified by the Board. The CPC authorised (November 2005) the Chief Engineer, Bangalore Zone to reassess the quoted price based on the report of the Fact Finding Committee and the price was revised (January 2006) again to ₹ 16.04 crore and issued the Letter of Award (LOA) to M/s Deepak Cables. This work was rejected by the contractor stating that the validity of the offer had expired.

The company then floated short term tender (March 2006), against which only an offer of M/s Deepak Cables was received, which was approved by the Board of Directors (August 2006). The quoted price of ₹ 27.39 crore of M/s Deepak Cables was 42.36 *per cent* above the revised estimate of ₹ 19.24 crore and 70.76 *per cent* above the price of ₹ 16.04 crore in the LOA of January 2006. The LOA was issued in August 2006 and the Detailed Work Award in October 2006. The work, which was to be completed in seven months *i.e.*, by May 2007, is yet to be completed (September 2010).

We observed that :

- the expenditure of ₹ 17.12 crore incurred on the above works till the works were stopped in October 2001 / August 2002, remained unutilised till date (August 2010).
- against the tender floated in April 2004, the LOA for ₹ 12.27 crore was issued only in January 2006, 21 months after receipt of the offer, which was rejected by M/s Deepak Cables. After calling for fresh tenders, the work was again awarded to M/s Deepak Cables, who was the lone bidder, for ₹ 27.39 crore. Owing to non-firming up of the quantities and delay in awarding work, the company had to bear extra expenditure of ₹ 15.12 crore¹⁰³.

¹⁰³ (₹ 27.39 crore - ₹ 12.27 crore).

- Disregarding the recommendation of the Expert Committee, Malur Station was commissioned (1999) by construction of another line to the Hoody-Kolar line. Malur Station is now connected permanently to the newly constructed 400 KV Station at Kolar.
- the company stated (April 2005) that two more 220 KV Stations at Bangarapet and Hoskote had been planned and therefore, construction of the Somanahalli – Malur DC line would become essential. The Station at Bangarapet has since been commissioned and is connected to the Kolar Station. The Hoskote Station does not require power from the line.

The Malur-Somanahalli line work which was supposed to be completed by 1999 is yet to be completed (September 2010) even after ten years of its original planned completion date. Delay at every stage, non-firming up of quantities and failure to issue LOA within validity period resulted in extra expenditure of ₹ 15.12 crore and unfruitful expenditure of ₹ 17.12 crore.

The matter was reported to the Government (May 2010); its reply is awaited (September 2010).

3.3 Avoidable loss

Acceptance of bank guarantee without verification resulted in loss of ₹ 48.50 lakh.

The Karnataka Power Transmission Corporation Limited (company) is involved in the transmission of power in the State. The company undertakes works of construction of stations and transmission lines. Clause 39 under contract performance guarantee in section ITB, Volume I (commercial requirements) of Standard Bidding Documents stipulate that the successful bidder to whom the work is awarded shall be required to furnish a performance guarantee from a Public Sector Indian Bank / Scheduled Commercial Bank in favour of the owner. The guarantee amount was to be 10 *per cent* of the contract price and it shall guarantee the faithful performance of the contract, in accordance with the terms and conditions specified in the bid documents.

In accordance with the above requirements, M/s Samala Marappa & Sons (contractor) furnished bank guarantees valued at ₹ 48.50 lakh¹⁰⁴ in respect of three works¹⁰⁵ awarded between May 2003 and January 2005 and were scheduled to be completed between November 2003 and June 2006. The bank guarantees were furnished from Tungabhadra Krushi Sahakara Bank (N), Bellary, a Co-operative Bank.

¹⁰⁴ one bank guarantee valued ₹ 8.76 lakh was furnished by M/s MVR Electricals.

¹⁰⁵ construction of single circuit line from RAACL to Bellary (₹ 1.36 crore), establishing sub-station at Kudithini (₹ 2.53 crore) and construction of line from the Munirabad-Bellary single circuit line to sub-station at Kudithini (₹ 0.97 crore).

As the contractor could not complete the work despite repeated extensions of time, the contracts were terminated and the contractor was blacklisted (August 2007). The company approached the co-operative bank for encashment of bank guarantee. The bank refused (August 2007) to honour the same stating that the bank guarantees were not issued by it. The company filed (September 2007) a First Information Report at Rural Police Station, Bellary.

We observed (March 2009) that the company accepted bank guarantees issued by Co-operative Bank in violation of the stipulations in the bidding documents. The company had not independently verified the guarantees from the issuing bank. Though the company lodged a complaint with the police, no departmental action was taken against the officials who had accepted the bank guarantees without verification, thereby failing to safeguard the financial interest of the company. This resulted in a loss of ₹ 48.50 lakh. It may be mentioned here that the State Government had issued (August 1981) instructions to ensure that guarantee documents were to be received directly from the Bankers and not through parties and confirmation of the fact of issue of such guarantee was to be obtained from issuing banks so that risks of forgeries are eliminated.

The company stated (November 2009) that it had framed guidelines in October 2005 according to which only bank guarantees issued by Public Sector Indian Bank/Scheduled Commercial Bank were to be accepted. The company also stated that to avoid such instances of fake bank guarantees, strict measures would be taken to get such documents verified by the issuing bank.

It is recommended that the company put in place strict procedures and guidelines for acceptance, verification and monitoring of bank guarantees.

The matter was reported to the Government (May 2010); its reply is awaited (September 2010).

Karnataka Road Development Corporation Limited and Bangalore Electricity Supply Company Limited

3.4 Failure to recover labour welfare cess

The companies failed to recover labour welfare cess of ₹ 67.04 lakh from the payments made to contractors.

Under Section 3(1) of the Building and Other Construction Workers' Welfare Cess Act, 1996 (Act), the Ministry of Labour, Government of India specified (September 1996) that the State Government should levy welfare cess at the rate of one *per cent* of the cost of construction incurred by an employer. Government of Karnataka (GOK) also formulated (November 2006) Building and Other Construction Workers' (Regulation of Employment and Conditions of Service) Rules, 2006 to enforce the provisions of the Act. The Government Order issued in January 2007 stipulated *inter-alia* that Public Sector

Undertakings carrying out building or other construction works¹⁰⁶ should deduct one *per cent* of the amount of cost approved as per the tender notification from the bill at the time of making payment to the contractor and remit the same to the Karnataka State Building and Other Construction Workers' Welfare Board (Welfare Board) within 30 days of making such payment. This was applicable to all the tenders submitted or finalised and works entrusted to contractors on or after 1 November 2006.

Test check in six companies¹⁰⁷ showed that Karnataka Road Development Corporation Limited (KRDCCL) and Bangalore Electricity Supply Company Limited did not levy the prescribed labour welfare cess of ₹ 67.04 lakh from the contractors during the period from March 2007 to May 2010. As the amount is not recovered from the contractors, the company was liable for payment of ₹ 67.04 lakh to the Welfare Board.

KRDCL stated (August 2010) that in respect of tenders notified before the issue (January 2007) of Government Order, letters were addressed to the contractors intimating the facts and in respect of other cases, recovery process had been initiated. BESCOM stated (September 2010) that the amount would be recovered from the pending bills of the contractors.

The matter was reported to the Government (July 2010); its reply is awaited (September 2010).

Karnataka Neeravari Nigam Limited

3.5 Extra expenditure

The company paid re-handling charges in addition to excavation and transportation charges resulting in inadmissible benefit to the contractor amounting to ₹ 9.93 crore.

As per the Schedule of Rates (SOR) of Water Resources Department (WRD) 2007-08, the basic rates for '*excavation in all kinds of soil*', '*excavation in soft rock without blasting*' and '*excavation in soft rock requiring blasting*' included cost of all materials, machinery, labour, placing the excavated soil neatly in dump area with lead up to 1 km and lift up to 18 metre¹⁰⁸.

The Karnataka Neeravari Nigam Limited (company) prepares estimates before awarding a work, based on the SOR and the works alongwith such estimated amounts are put to tender. In a 'percentage tender', the tenderer has to submit

¹⁰⁶ building or other construction works includes construction, alteration, repairs, maintenance and demolition in relation to works relating to generation, transmission and distribution of power.

¹⁰⁷ Karnataka Rural Infrastructure Development Limited, Bangalore Metro Rail Corporation Limited, Karnataka State Police Housing Corporation Limited, Mysore Sales International Limited, Bangalore Electricity Supply Company Limited and Karnataka Road Development Corporation Limited.

¹⁰⁸ for lead beyond 1 km, rate as defined in SOR was payable and for lift beyond 18 metre the basic rate was to be increased by 5 *per cent*.

his bid (Schedule-B to contract) duly stating at what percentage to the amount put to tender he is willing to execute the work.

The company floated (March 2008) percentage tender for construction of a canal from Kalasa Reservoir to Malaprabha River. The contractor, who quoted the lowest at ₹ 37.29 crore (31.45 *per cent* below amount put to tender based on SOR of WRD 2007-08) against the recast¹⁰⁹ tender amount (₹ 54.39 crore) was awarded the work. The rates for excavation as per agreement ranged from ₹ 49.60 per cum to ₹ 98.62 per cum for different items of excavation work and were inclusive of excavation, transportation and placing the excavated soil in dumping yard situated about 5 kilometres away. Further, rule 3 and 22 of Schedule B to contract stipulated that the rates quoted should be inclusive of the dewatering, desilting charges, pumping out water at all stages and no extra payment on any account should be made. Also, as per rule 27 of Schedule B to contract the quoted rates included all the leads and lifts and if any extra work was to be done by the contractor for his convenience no separate payment would be made and no claims would be entertained.

The Technical Subcommittee (TSC) of the company, which inspected the site of work in April 2009, reported that due to slushy and treacherous nature of soil in deep cut reaches it was not possible to transport the excavated muck by the tippers from the bottom. So, an additional excavator was stationed by the contractor at mid-level to collect the excavated soil from the bottom level excavator and dispose of through tippers. The TSC also reported that the contractor who was present at the site had requested for a suitable rate for the additional work.

The company worked out a data rate¹¹⁰ of ₹ 100 *per cum* based on hire charges of excavator and cost of labour as there was no similar item in the SR for the additional work of re-handling the excavated muck and a supplementary agreement was entered into in July 2009.

As per the latest running account bill paid till the end of March 2010, the contractor was paid ₹ 6.31 crore for excavation of 9.93 lakh cum (soil and soft rock). In addition, for having re-handled this 9.93 lakh cum, an amount of ₹ 9.93 crore was also paid. The work was under progress as at the end of September 2010.

We observed that as per the contract the entire process of excavation, transportation and placing the excavated soil neatly in dump area, including all leads and lifts was covered in the initial scope of work. Making additional payments under the nomenclature of 're-handling' for items of work, which were already included in scope of work, resulted in extension of inadmissible benefit to the contractor amounting to ₹ 9.93 crore. We also noticed that the

¹⁰⁹ the original amount put to tender for ₹ 49.64 crore was recast (July 2008) to ₹ 54.39 crore due to change in design. The contractor had quoted ₹ 37.29 crore for the initial tender also.

¹¹⁰ Data Rates : Rates worked out when similar items are not available in Schedule of Rates.

additional excavator was placed at mid-level but re-handling charges were paid for the entire quantity of 9.93 lakh cum excavated from top to bottom.

The Management stated (July 2010) that the data rate was worked out due to obstacles encountered on account of physical, geological and engineering properties of the excavated strata and these parameters were entirely different from standard excavation. The strata were sub-charged with ground water and the soil slid down immediately on execution. The movement of tippers was difficult as it was not possible to form ramps causing difficulty and excavation was to be done by multi-level excavators. The reply is not in consonance with the scope of work mentioned in the contract / Schedule of rates. Further, in a percentage tender, the tenderer is liable to bear all risks, including difficulties encountered in executing the work.

The matter was reported to the Government (May 2010); its reply is awaited (September 2010).

Mysore Minerals Limited

3.6 Avoidable expenditure

The company failed to deduct tax at source from payments made to contractors, as required under the provisions of the Income Tax Act 1961 resulting in avoidable tax burden of ₹ 1.40 crore.

Section 194C of the Income Tax Act 1961 (Act) stipulates that any person responsible for paying any sum to a resident contractor in pursuance of a contract shall, at the time of credit of such sum to the account of the contractor or at the time of payment thereof, deduct tax at source and under Section 200, the tax so deducted shall be credited to Central Government within the prescribed time. In case tax is deductible but has not been deducted, such payments are not allowed as deduction from profits in computing the income chargeable to tax as per Section 40(a)(ia).

We observed that the company did not have an effective system of deducting tax at source (TDS) before making payments to contractors. Failure to deduct tax rendered deduction of these expenses as inadmissible in arriving at taxable income. The amounts were therefore added back to the profits for computing taxable income resulting in avoidable payment of excess income tax. The company, in the subsequent years effected TDS from the contractors and claimed the benefits foregone. We, however, observed that as at the end of August 2010, payments valued at ₹ 1.40 crore were still pending for deduction of TDS in respect of 77 cases as detailed below:

(Rupees in lakh)

Financial Year	Assessment Year	Payments on which tax was not deducted at source	Deductions claimed during the subsequent year on the basis of payment of tax	Balance	Income Taxborne by the company
2004-05	2005-06	1,834.97	1,695.66	139.31	50.98
2005-06	2006-07	151.83	14.29	137.54	46.30
2006-07	2007-08	228.32	114.40	113.92	38.35
2007-08	2008-09	215.43	215.43	0	0.00
2008-09	2009-10	17.53	4.60	12.93	4.39
Total		2,448.08	2,044.38	403.70	140.02

The Government, while accepting the non-adherence to the provisions of the Income Tax Act, stated (August 2010) that action would be initiated to recover the applicable amount of TDS from the contractors / professionals or raise debit notes which would be allowed during assessments year 2011-12.

Karnataka Rural Infrastructure Development Limited

3.7 Avoidable loss

Deficiencies in preparation of quotations without including the relevant costs coupled with slow progress of works resulted in loss of ₹ 2.05 crore.

Karnataka Rural Infrastructure Development Limited (company) participated in the tenders floated (November 2005) by Karnataka Urban Infrastructure Development and Finance Corporation (KUIDFC), another Government Company, for Urban Transport (improvements) of Karwar and Bhatkal. The company quoted ₹ 8.07 crore (2.08 per cent below the tender amount) and ₹ 3.34 crore (3.11 per cent below the tender amount) for Karwar and Bhatkal, respectively. KUIDFC issued (July 2006) work orders to the company for both the works with schedule of completion at 12 months for works at Karwar and 9 months for works at Bhatkal. The company furnished (July 2006) performance bank guarantee of ₹ 1.46 crore. KUIDFC released (August 2006) mobilization advance of ₹ 1.14 crore against which the company furnished a bank guarantee of matching amount.

During September 2006, October 2006 and November 2006, KUIDFC intimated the company of the slow progress and poor quality of work. As the company failed in fulfilling the contractual obligation, KUIDFC terminated (December 2006) the contracts, encashed the bank guarantees and adjusted mobilization advance. KUIDFC admitted bills of only ₹ 30.89 lakh out of the ₹ 89.79 lakh submitted by the company. The company approached (December 2006) the Hon'ble High Court of Karnataka and obtained a stay order on further proceedings by KUIDFC. The High Power Committee (HPC) for settlement of disputes between Public Sector Undertakings discussed the matter in March 2007 and directed the company to withdraw the writ petition unconditionally and facilitate re-tendering by KUIDFC. It also directed

KUIDFC and the company to work out the amount to be refunded to the company to the extent of work executed including performance guarantee. It further decided (May 2007) that the Company would withdraw the writ petition and issues relating to payment for work done and return of bank guarantee would be resolved. In July 2009, HPC resolved that KUIDFC would not return the bank guarantee and the company would accept this and not raise the matter again. Both the parties mutually agreed not to resort to any further legal proceedings.

We observed (February 2008) that the main reason for failure to execute the works were the failure of the company in preparation of workable bid amounts before participating in tenders and the slow progress in the execution of work. The company did not consider taxes, hire charges of machinery and anticipated escalation charges while quoting the rates for the works. As per company's own estimation in November 2006, considering the then prevailing rates, the loss was estimated at ₹ 2.20 crore. In respect of works at Karwar and Bhatkal, against the required financial progress of ₹ 1.35 crore and ₹ 1.67 crore as at October / November 2006, the company could achieve inordinately low financial progress of only ₹ 0.24 crore and ₹ 0.18 crore, respectively.

The deficiencies in preparation of bids without including the relevant costs coupled with slow progress of works resulted in loss of ₹ 2.05 crore¹¹¹.

The company accepted (June 2010) that it had no experience in participating in tender works and items such as taxes and hire charges were also not considered for quotation. The company further stated that the hike in rates of cement, steel and asphalt could not be judged. The company should have exercised due care in preparing quotations especially when it had no experience in such works.

The matter was reported to the Government (July 2010); its reply is awaited (September 2010).

Chamundeswari Electricity Supply Corporation Limited

3.8 Extra expenditure

Non-signing of supplementary Power Purchase Agreement resulted in extra expenditure of ₹ 1.18 crore.

Karnataka Power Transmission Corporation Limited (KPTCL) entered (March 2001) into a Power Purchase Agreement (PPA) with Vijayalakshmi Hydro Power Pvt. Ltd (VHPPL). The PPA was approved by the Karnataka Electricity Regulatory Commission (KERC). As per the PPA, for the energy delivered, KPTCL was to pay VHPPL ₹ 2.25 per unit with base year as 1994-95 with 5 per cent escalation per annum over the tariff applicable for the first 10 years from the date of signing of the agreement. KPTCL froze the tariff at ₹ 3.32 per unit with effect from April 2003 because of the high cost of power and due to various initiatives contemplated in the Electricity Act 2003.

¹¹¹ Bank guarantee : ₹ 1.46 crore plus bills not admitted: ₹ 0.59 crore (Bank guarantee of ₹ 1.14 crore is not considered as it was in lieu of the mobilization advance already drawn by the company).

In accordance with conditions in Electricity Act 2003, KPTCL was barred from trading in electricity with effect from June 2003 and to tide over the situation, State Power Procurement Co-ordination Centre (SPPCC) was established to co-ordinate the procurement of power from different sources.

In May 2005 the Government of Karnataka transferred (with effect from June 2005), the rights relating to trading of electricity from KPTCL to five Electricity Supply Companies¹¹² of which one was MESCOM. In March 2006, certain jurisdictional areas from MESCOM were transferred to Chamundeswari Electricity Supply Corporation Limited (CESC). In March 2006, Government assigned the PPA to CESC with effect from financial year 2006-07.

SPPCC invited (March / September 2006) VHPPL for re-negotiation of the tariff which was frozen at ₹ 3.32 per unit from 1 April 2003. The tripartite agreement (supplementary PPA) was to be signed by KPTCL, VHPPL and CESC. The draft supplementary PPA (February 2007) envisaged purchase of power at ₹ 3.32 per unit with escalation of 2 *per cent* per annum on the base tariff¹¹³ retrospectively from April 2003. VHPPL concurred (February 2007) with the revised tariff and requested SPPCC to take further steps for the joint signature of respective parties along with release of its outstanding dues.¹¹⁴

We observed that though VHPPL concurred with the supplementary PPA in February 2007 and SPPCC had requested CESC to intimate a convenient date in June 2007, CESC did not sign the supplementary PPA. Since signing of supplementary PPA was kept long pending and substantial amount due to VHPPL remained unpaid, VHPPL revoked (July 2008) the consent given in January 2007 for reduced tariff and affirmed that only the PPA of March 2001 subsisted.

Based on an appeal (2008) by VHPPL, KERC ordered (April 2009) that the parties were bound by the PPA of March 2001 as no supplementary agreement was signed.

Thus, inordinate delay (February 2007 to July 2008) in finalising the proposal and failure of CESC to initial the supplementary PPA resulted in extra expenditure on purchase of power amounting to ₹ 1.18 crore¹¹⁵.

The Government while accepting the delay stated (September 2010) that the Company was newly formed and the concept of PPA was new to the Company. Government further stated that agreement could not be signed by the Company due to administrative reasons like change of management and officials.

¹¹² Bangalore Electricity Supply Company Limited (BESCOM), Hubli Electricity Supply Company Limited (HESCOM), Mangalore Electricity Supply Company Limited (MESCOM), Gulbarga Electricity Supply Company Limited (GESCOM), and Chamundeswari Electricity Supply Corporation Limited (CESC).

¹¹³ Base tariff means ₹ 3.32 per unit applicable for the year 2002-03.

¹¹⁴ the outstanding dues was ₹ 35 lakh as at August 2006.

¹¹⁵ the extra expenditure is for purchase of power between June 2005 (date of formation of MESCOM) to July 2010.

The Mysore Electrical Industries Limited**3.9 Avoidable loss**

The decision of the company to venture into an area of work in which it had no expertise resulted in a loss of ₹ 0.95 crore.

The Mysore Electrical Industries Limited (company) is engaged in the manufacture of switchgears and motor control equipment. Karnataka Power Transmission Corporation Limited (KPTCL), another Government company in Karnataka, floated (December 2002) tenders for construction of transmission line from Chikkodi to substation at Kudachi (35.06 km) on total turnkey basis. The project envisaged construction of 120 towers and stringing of the lines with 'Drake' conductor. As the company did not satisfy the pre-qualification requirements, it identified M/s Theji Constructions Private Limited (TCPL) as a collaborator to participate in the tender. While the supply portion was to be executed by the company, civil and erection portions were to be executed by the collaborator. TCPL submitted (December 2002) their quotation for civil and erection portion to the company. The company participated (December 2002) in the tender and emerged as the lowest bidder with a bid of ₹ 7.48 crore which was 15.56 *per cent* above the amount put to tender and was awarded (July 2003) the project, which was to be completed by August 2004. The company furnished (June 2003) bank guarantee of 10 *per cent* (₹ 74.79 lakh) of the contract award cost. The award cost was revised to ₹ 7.99 crore¹¹⁶ in April 2004.

A Memorandum of Understanding (MOU) was entered into (June 2003) between the company and TCPL according to which the rates quoted by TCPL for the civil and erection work were to be at firm quoted price and payment was to be on 'back-to-back basis'. Any loss to the company due to delay in erection and civil works was to be borne by TCPL. The company issued (January 2004) Letters of Award to TCPL for civil works and erection. The work was to be completed within six months (July 2004).

The company supplied (October 2003 to July 2005) materials valued at ₹ 4.63 crore to the site. TCPL completed (August 2004) the civil works but failed to complete the erection work. TCPL demanded advance payments as well as upward price revision¹¹⁷ for erection and stringing of conductor. The company rejected the demand for increase in prices but released (January 2004 to January 2006) advances of ₹ 11.50 lakh to TCPL, even though the MOU did not provide for such advance payments. As only 90 out of 120 towers were erected even as of January 2007, the company terminated the contract in January 2007. The company encashed (January 2007) bank guarantee of ₹ 5.65 lakh furnished by TCPL. Retention money of ₹ 9.10 lakh of TCPL was retained by KPTCL. Then the company identified (February 2007) M/s RDS Constructions, Bellary as alternate contractor to complete the balance works. After erecting 15 out of the balance 30 towers, M/s RDS Constructions also expressed their inability to proceed further, citing various reasons. Thereafter,

¹¹⁶ supply of materials: ₹ 6.65 crore; erection: ₹ 0.23 crore and civil works: ₹ 1.11 crore.

¹¹⁷ erection of towers: ₹ 2,500 *per* MT as against the quoted rates of ₹ 1,350 *per* MT and stringing of conductor: ₹ 65,000 *per* km as against the quoted rates of ₹ 40,000 *per* km.

the company stopped (December 2007) the work and intimated KPTCL accordingly. A joint inventory of materials at the store yard of the company was conducted (May / June 2009) by KPTCL and the company. KPTCL decided (January 2010) to short-close the work and float fresh tenders for the balance work at the risk and cost of the company. The decision on encashment of bank guarantee furnished by the company, which was valid up to 30 September 2010, has not been taken by the Board of Directors of KPTCL (September 2010).

We observed (December 2009) that

- though the company was to execute only the supply portion of the contract erection and civil works were also an integral part of the turnkey contract and successful completion depended on the performance of the collaborator. Venturing into a turnkey project of constructing a power line depending largely on the collaborator exposed the company to the risk of breach of contract. No action was taken against the collaborator to recover the amounts lost.
- the rates of galvanised towers and Drake conductor, which constituted 77 *per cent* of the contract value of supplies, were more than the rates quoted in the turnkey contract. This was due to incorrect assessment of prevailing market prices and also as the rates quoted by the company were not reviewed by the pricing committee of the company. Out of the total requirement of 214 km of Drake Conductor, 115 km were not purchased as the difference between the rates quoted in the turnkey contract and the prevailing rates as on September 2007 had reached ₹ 1 crore.
- due to the short closure of the contract, the company lost ₹ 0.95 crore¹¹⁸ and in addition may lose an additional ₹ 2.63 crore¹¹⁹. Further, the company would also be liable to pay additional expenditure for getting the project completed at its risk and cost through a different source by KPTCL as a penalty.

The company stated (June 2010) that the project could not be completed due to circumstances beyond its control and KPTCL had been requested to short close the project without insisting encashment of bank guarantee. The decision of the company to venture into an area of work in which it had no expertise, that too without satisfying the credibility of collaborator and also without properly evaluating the rates to be quoted, resulted in loss of ₹ 0.95 crore up to September 2010.

The matter was reported to the Government (June 2010); its reply is awaited (September 2010).

¹¹⁸ bills not accepted: ₹ 51.56 lakh; liquidated damages: ₹ 25.94 lakh and difference between purchase cost and rates quoted in turnkey contract: ₹ 20.57 lakh less net amount due to TCPL : ₹ 3.25 lakh (₹ 14.75 lakh minus ₹ 11.50 lakh).

¹¹⁹ encashment of bank guarantee of ₹ 74.79 lakh and forfeiture of retention money of ₹ 187.73 lakh for which decision of Board of Directors of KPTCL is yet to be taken.

Food Karnataka Limited**3.10 Avoidable payment**

The decision to treat the interest earned on Government grants parked in fixed deposits as its income rather than adding it to the grants, resulted in avoidable payment of income tax of ₹ 65.10 lakh.

The company was incorporated in April 2003 as a Special Purpose Vehicle (SPV) to promote and implement the objective of the Government of India (GoI) in the Xth Plan Scheme, which included promotion of Food Parks. Each of the Agro Food Parks was eligible for a Central Grant of ₹ 4 crore and a matching development aid of ₹ 4 crore from the State. The Government of Karnataka (GoK) had vested the company with the responsibility of facilitating and developing six Agro Food Parks, one each at Malur, Hiriyur, Bagalkot, Jewargi, Maddur and Belgaum in Joint Venture through Public-Private Partnership. The Governments released grants from 2001-02 onwards.

The Ministry of Food Processing Industry (MFPI), GoI, released (July 2001) ₹4 crore and the GoK released ₹17 crore (between March 2002 and March 2010) to the company. The company, in turn released ₹17.86 crore between August 2006 and March 2010 to the different JV companies as per periodical demands. The balances remaining were parked in Fixed Deposits regularly. The details of receipt and utilization of funds provided by the Governments are tabulated below:

Year	Grants remaining unutilized at the beginning of the year	Grants received from Central/ State Governments	Grants released to JV Partners	Grants remaining unutilized at the end of the year
	(Rupees in lakh)			
2003-04	(KIADB ¹²⁰ received the Grants)	750.00	-	750.00
2004-05	750.00	350.00	-	1,100.00
2005-06	1,100.00	200.00	-	1,300.00
2006-07	1,300.00	-	200.00	1,100.00
2007-08	1,100.00	-	400.00	700.00
2008-09	700.00	200.00	500.00	400.00
2009-10	400.00	600.00	686.45	313.55
		2,100.00	1,786.45	313.55

We observed that the Joint Venture partner selected to set up the Food Park at Maddur had not identified the land for the project and means of finance by obtaining term loan from bank. The Joint Venture Agreement for Agro Food Park at Belgaum was also cancelled as the JV partner had neither paid the land cost nor tied up means of finance. The company cancelled both the JVs in April 2007. The Xth Five Year Plan under which the food park scheme was proposed for implementation lapsed in March 2007 and the State lost the possibility of Central financial aid of ₹ 8 crore for establishment of two parks. None of the

¹²⁰ Karnataka Industrial Area Development Board.

other four parks (under implementation) have commenced commercial operation till date (September 2010).

We further observed that the company had earned interest of ₹ 2.96 crore on grants kept in fixed deposits and treated the interest as its income. Income tax amounted to ₹ 65.10 lakh was paid on such income¹²¹. Since the interest earned from fixed deposits were from investment of unspent grants, it should have been added back to the principal amount of grants instead of accounting it as its income. The company could have avoided the tax of ₹ 65.10 lakh on interest income, besides the financial irregularity.

The company replied (October 2004 / October 2007) that the Government had not specified any conditions for utilisation of funds. The company also invited reference to the opinion of the Institute of Chartered Accountants of India, which stated that where the terms of agreement were silent as to utilisation of interest earned on funds placed in fixed deposits during the interim period, the funds should be added to ear-marked fund by routing it through income and expenditure account as the entire fund was to be utilised for a specific purpose. It stated that the interest was treated as revenue in the Profit and Loss Account accordingly. The company also stated (February 2010) that action would be initiated with the IT department for refund of tax collected.

The company's reply was not correct as the interest routed through Profit and Loss Account was not added back to grant fund as per the opinion of Institute of Chartered Accountants. The MFPI, GoI had also directed (August 2008) the Corporation Bank (where the fixed deposits were parked) to return the unspent balances along with interest as any unspent balance relating to a plan scheme was required to be deposited back to Exchequer. The Ministry further viewed (October 2008) the matter regarding payment of income tax on grant released as a financial irregularity. MFPI, GOI, in reply to the request of company (November 2008) not to treat it as a financial irregularity, stated (February 2009) that utilization of interest earned on grants to meet administrative expenditure was not admissible.

The Government in its reply (June 2010) stated that as the company had no other source of revenue, the interest on deposits was utilized for administrative expenditure. The contention of the company and the Government was not in line with observations of MFPI, GoI, which had already expressed that utilization of grants and interest earned on it, for administrative expenditure was not admissible and the payment of income tax was a financial irregularity.

¹²¹ interest earned during the period 2003-04 to 2008-09.

Karnataka Agro Industries Corporation Limited

3.11 Inadequate arrangements for safeguarding movable and immovable assets

The company suffered a loss of ₹ 0.57 crore in the value of its assets during the last six years and assets remained exposed to encroachment due to inadequate safety arrangements.

The company (Karnataka Agro Industries Corporation Limited) was incorporated in September 1967 with the main objective of manufacturing agricultural equipment, chemicals, manures, fertilizers and pesticides. The company became non-functional since September 2003 on account of non-competitiveness of the products of the company due to globalization, privatization and deregulation of the fertilizer market. The accounts of the company have been finalized and audited up to the year 2008-09, which were adopted in the Annual General Meeting held in December 2009. The latest certified accounts for the year ended 31 March 2009 depicted that the company had total assets of ₹ 18.47 crore (including immovable assets: ₹ 14.69 crore and movable assets: ₹ 3.78 crore).

In order to have better control over assets, the company should maintain complete and up-to-date records of each asset, besides making essential arrangements, such as, periodic physical verification, arrangements for watch and ward of the assets, and adequate insurance cover against the risk of floods, earthquake, *etc.* Further, in respect of the land, the company needs to construct a boundary wall and engage watch and ward on land lying vacant so as to prevent encroachments. In case of illegal encroachments on land, prompt legal measures should be taken by the company for making the land encroachment free. The deficiencies noticed in maintenance of proper records and taking adequate measures in safeguarding the movable and immovable properties by the company are summarized below:

Inadequate maintenance of asset records

In order to have a scientific and effective internal control system in force, the company needs to maintain 'asset records' for each asset with all important particulars of the assets such as location, original cost, accumulated depreciation, technical and engineering specifications of machineries, identification number, *etc.* We observed that the company did not maintain adequate and up-to-date records depicting all vital information. The 'asset records' maintained by the company were last updated up to 31 March 2004 and no updation was made thereafter.

Physical verification of assets

The system of physical verification of assets at regular time intervals is an essential tool of internal control as it helps in ensuring the availability of assets in the possession of the company at stated location. An effective system of periodic physical verification of assets minimizes the risks of loss / theft of

movable assets and encroachments in case of immovable properties and at the same time, enables the Management to take timely remedial action against the detected cases of theft / encroachments of assets. The company had no laid down policy for physical verification of assets.

The company has not carried out physical verification of assets since 2006-07. Though physical verification was conducted up to 2005-06, the company did not furnish a copy of the physical verification report and hence the discrepancy between physical count and book records could not be ascertained. Thus, the assets of the company remained exposed to the risks of theft / encroachment. The company replied (March 2010) that as all their employees had been relieved under 'Voluntary Retirement Scheme-2003' physical verification could not be conducted.

Encroachments due to inadequate security arrangements

Proper arrangement for security and watch and ward of the immovable properties (*viz.*, land and buildings) is very essential as it ensures encroachment free availability of the land and buildings for company's own use as well as sale, as and when needed. As the physical verification of assets was not conducted, the position of encroachment, if any, on the land/buildings was not known. The company did not have khata¹²² in respect of 48.41 acres of land out of the total area of 70.84 acres of land owned by the company in different parts of the State. The company replied (March 2010) that necessary action was being taken to get the khata transferred.

Non-use of assets

The company needs to make adequate arrangements for proper maintenance and upkeep of the plant and machinery not in use. As the company has been non-functional since September 2003, periodical review of the position of these assets taking into account the reports of the physical verification is essential so as to avoid deterioration of assets due to efflux of time. The assets not in use for long also need to be considered for sale.

It was, however, observed that there were no proper arrangements for maintenance and upkeep of the assets not in use. Further, there was no system in the company for conducting a need-based review of the assets so as to decide on possible utility of these assets in future or their timely disposal. As a result, inventories valued at ₹ 0.57 crore considered obsolete, held by the company, are no longer useful and the remaining assets (valued at ₹ 3.78 crore) which are no longer required may be disposed of to the best advantage of the company. The company replied (March 2010) that major portion of assets have been disposed of and action was being taken to dispose of the remaining assets.

Insurance cover

The insurance for the properties is a cover that guards the assets of the company against the probable losses due to natural calamities and other reasons

¹²² **Khata is a property document that includes details of the land or property *viz.*, name of the owner, size, location and built-up area of property *etc.***

such as fire, floods, riots, theft, *etc.*. Regular and adequate coverage of insurance at a nominal cost (premium) minimizes the risks against these losses. The company had not renewed the insurance since May 2007.

The company is exposed to risk of encroachments on its land/building in the absence of adequate watch and ward. There is also a risk of assets becoming obsolete due to non-use/lack of maintenance. In view of this, it is recommended that the company may:

- Maintain complete and up-to-date records giving all vital information of all movable and immovable assets;
- Periodically reconcile the discrepancies in the figures of the assets;
- Conduct physical verification of assets at regular time intervals;
- Make adequate security arrangements for watch and ward of immovable properties, either internally or outsourced, so as to prevent possibilities of encroachments;
- Make adequate arrangement for upkeep/maintenance of non-used assets and periodically review the position for their future utility; and
- Obtain regular and adequate insurance cover for all the assets against risks.

The matter was reported to the Government (June 2010); its reply is awaited (September 2010).

Karnataka Power Corporation Limited

3.12 Avoidable extra expenditure

The decision of the company to avail of two permanent High Tension connections instead of one temporary power supply and one permanent connection resulted in avoidable extra payment of ₹ 42.01 lakh on power charges.

Karnataka Power Corporation Limited (company) proposed (January 2002) to construct Bellary Thermal Power Station (BTPS) in Bellary District. As per the agreement entered (December 2003) with M/s Bharat Heavy Electricals Limited (BHEL), construction power supply of 4 MVA was to be provided free of cost. In the meeting held (January 2004) between the company and BHEL, the company agreed to make available initially construction power supply of 500 KVA by February 2004 and 4 MVA by April 2004.

The company had approached Gulbarga Electricity Supply Company Limited (GESCOM), for sanction of 4 MVA in May 2003 itself. The company decided (September 2003) to avail of the construction power supply by tapping the 66 KV line passing adjacent to BTPS compound and floated (September 2003) tenders for establishing a sub-station. During the initial assessment of offers, as the lowest offer of ₹ 3.32 crore was very high compared to the estimated cost of ₹ 1.70 crore, the company re-floated (November 2003)¹²³ fresh tenders. The works were awarded in January / February 2004 to various agencies and

¹²³ GESCOM sanctioned (November 2003) a HT installation (EHT 4) of 4 MVA to the company.

was to be completed by April 2004. The sub-station was completed at a cost of ₹ 2.04 crore and serviced in July 2004.

The company, in addition to the above connection, had requested (December 2003) GESCO to provide High Tension (HT) connection of 500 KVA, which was accorded sanction in January 2004. The power supply was required to meet the initial start up operations between February 2004 and April 2004. The work of HT connection was completed in March 2004.

The company, thus, had two permanent HT connections of which 500KVA was to meet requirement from February 2004 onwards and 4MVA to meet the requirement from April 2004 onwards.

We observed (November 2009) that the decision to obtain a permanent connection of 500KVA for initial requirement (February 2004 to April / July 2004) was not justified. By obtaining permanent power supply, the company was liable to pay monthly minimum fixed charges for 500 KVA installation for a minimum period of five years as per Section 32.04 of Electricity & Distribution Code of GESCO. We further noticed that power was drawn from the 500 KVA line only in September 2004, by which time, power from 4 MVA line was already available (July 2004). In all, between the date of installation (February 2004) to date of disconnection (October 2009), power was drawn only for nine months¹²⁴ from 500 KVA line which could be met from 4 MVA line available.

Thus, the decision of the company to obtain permanent HT connection of 500 KVA instead of temporary power supply for temporary requirement resulted in payment of avoidable monthly minimum charges for five years totalling ₹ 42.01 lakh¹²⁵.

The Government stated (August 2010) that the decision was taken to obtain permanent HT power supply from GESCO instead of temporary power supply considering the same as a standby source for BTPS construction activities. The fact that the company approached GESCO for disconnection of 500 KVA line in November 2006 which could not be disconnected as the initial agreement period for installation of HT power supply with GESCO was five years from the date of service indicated that there was no actual requirement of the supply. Moreover, the company had made standby arrangements by providing DG sets in July 2009, which could have been done in 2004 itself after availing of temporary connection.

¹²⁴ September 2004 (65 KVA), November 2004 (171 KVA), December 2004 (210 KVA), February 2005 (1 KVA), November 2005 (375 KVA), November 2007 (12 KVA), December 2007 (17 KVA), January 2009 (50 KVA) and April 2009 (152 KVA).

¹²⁵ net of charges which would have been payable if temporary connection had been availed ₹ 48.91 lakh less ₹ 6.90 lakh (₹ 1.15 lakh x 6 months).

Karnataka Renewable Energy Development Limited

3.13 Avoidable loss

Non-adherence to the provisions of Income Tax Act resulted in avoidable loss of ₹ 26.56 lakh.

The provisions of Income Tax (IT) Act 1961 (Section 208) stipulate that Corporate Assesseees have to pay advance tax on estimated income in four instalments on the due dates prescribed¹²⁶. As per Section 139 (1) of IT Act, the assesseees are required to file the returns before 31st October of relevant assessment year and any failure in payment of advance tax or filing of returns attracted penal interest (Section 234).

We observed (November 2009) that Karnataka Renewable Energy Development Limited (company) did not pay advance tax in any of the assessment years from 2002-03 to 2008-09 within due dates¹²⁷. The company appointed (February 2008) a Tax Auditor for taking up tax audit for the years 2002 to 2006¹²⁸. The company filed its returns and paid the tax along with interest. Tax returns were filed for the assessment years 2007-08 and 2008-09 only in December 2008 and January 2009 as against October 2007 and October 2008 respectively. The total interest paid due to non-payment of advance tax and delay in filing returns for the financial years from 2001-2008 was ₹ 74.03 lakh.

The company replied (January 2010) that it had backlog in Statutory Audit since 1996-97 and thus the IT returns could not be filed in time. The company further stated that Income Tax amounts were kept in fixed deposits which earned interest of ₹ 56.93 lakh.

The reply of the company does not justify non-adherence to the provisions of Income Tax Act, as payment of advance tax and filing of tax return were not connected to statutory audit. The non-compliance with provision of IT Act was not financially prudent and resulted in loss of ₹ 26.56 lakh¹²⁹.

The matter was reported to the Government (May 2010); its reply is awaited (September 2010).

¹²⁶ up to 15 per cent before 15 June, up to 45 per cent before 15 September, up to 75 per cent before 15 December and up to 100 per cent before 15 March of the tax payable every year.

¹²⁷ for assessment years 2004-05, there was no tax liability and for assessment year 2005-06, tax deducted at source exceeded the tax payable for the year.

¹²⁸ Tax Auditor for 2006-07 and 2007-08 was appointed in February 2009.

¹²⁹ interest earned on Fixed Deposit was also liable to income tax of ₹ 9.46 lakh. Therefore the overall loss was ₹ 74.03 lakh less (₹ 56.93 lakh – ₹ 9.46 lakh).

Karnataka State Police Housing Corporation Limited

3.14 IT Audit of Web based Project Management System software

Delay in complete implementation of Web based Project Management System software resulted in non fruition of investment made and non achievement of objectives.

The Karnataka State Police Housing Corporation Limited (Company) was incorporated in 1985 under Companies Act 1956 and undertakes construction of residential and office buildings for Police, Prisons, Home Guards and Fire services departments.

The Company implemented a Web based Project Management System (WPMS) in 2001 for remote monitoring of the execution of projects by customising the Microsoft Project Server software and creating a web based network for connectivity between the divisions and head office. The Company has invested till date ₹ 2.80 crore in IT assets. The investment was meant to result in creation of IT infrastructure and capability required for effective and timely monitoring of projects remotely, the software has not been fully implemented so far (September 2010). We attempted a general review of the information technology policy and strategy of the Company and a detailed review of the development and performance of the WPMS to evaluate the overall achievement of objectives, which are discussed below:

IT policy, planning and strategy

3.14.1 The Company had adopted IT based project monitoring tools from 2003 and made substantial investments in IT, it has not formulated any IT policy or strategy for implementation of computerisation in a planned manner. The Company had outsourced the maintenance of the WPMS software, hardware / servers, networking, database administration and change management functions. But, it had not formulated any policy for controlling the activities of the contractors to ensure the protection of IT assets and confidentiality of data. It had also not defined the recruitment policies to ensure that competent personnel were always available to support IT functions.

Non-integration of the WPMS with TALLY accounting software

The Company could not dispense with the practice of processing manual bills as it was not able to fully integrate the software with the TALLY accounting software used in Accounts Department. The efforts made for integration which would enable passing of Bills in a seamless manner and obviate data entry at different levels to ensure accuracy were not successful due to technical problems and deficiencies in implementation like non-incorporation of essential features, incomplete data capture *etc.*, which affected the accuracy / reliability of the database.

e-Measurement book (e-MB)

An e-MB was planned to be designed into WPMS to automate the monitoring process further. The plan was for WPMS to pick up the work details directly

from e-MB, avoid duplication of data entry and facilitate correct and timely generation of e-bills. We observed that the e-MB as envisaged to be implemented had design deficiencies – If the rates of items in the works contracts were to be amended, the full file had to be downloaded every time for amendments and uploaded again; there was no check against uploading any other text file giving room for manipulation; there was no log or record of the changes effected by the Company in respect of the rates or quantities of the works contracts, etc. We are of the opinion that unless the e-MB is automatically linked to the bills and controls and exceptions are built into the system it will be no better than the existing manual measurement book in terms of speed, efficiency and accountability. The Company stated (July 2010) that the necessary changes would be proposed after stabilization of the system.

Ineffective monitoring of projects

3.14.2 Deficiencies arising out of lack of input and processing controls made the system incapable of generation of meaningful data for monitoring. Non-standardisation of time allotted for various tasks, improper / incorrect usage of the system, delay / failure in updating data and non-utilisation of monitoring tools and failure to input vital parameters which could serve as benchmarks for control, seriously affected the utility of the system leading to ineffective monitoring.

We observed that the Company has not formulated any guidelines or a framework based on which the time designated to the various tasks in the projects could be estimated and accordingly fed into the database for monitoring against timelines. Instances where the time fixed for ‘Supplying and Fixing LT cast iron pot heads’ ranged from 9 days to 252 days, the time allotted to complete the task of water supply and sewerage ranged between 0 and 2,576 days were noticed in analysis of the records. We are of the opinion that in the absence of a laid down framework by the Company based on time tested standardized task completion norms it would be difficult to enforce and monitor projects overshooting time frame allotted and secure Company’s financial interests.

Grant of extension of time and calculation of time overrun

A review of the projects of the Company implemented by Bangalore Urban and Bangalore Rural Divisions revealed that extension of time (EOT) was sought by contractors after completion of projects and granted by the Company. In some cases, though the contractor had sought extension while the project was in progress, extension was given by the Company only after the completion of the project. It was seen that EOT of more than 100 days had been granted in many cases after completion of work and in one case it was 1,262 days. EOT was not handled through the system. As a result, the WBPMS could not be utilised for controlling delays. In the absence of reports to list projects where EOT had been granted, levy of penalties were watched offline. It was stated (August 2010) that Site Engineers have now been instructed to use WBPMS for monitoring EOT.

A report on time overrun is available in the system. Time overrun is to be calculated as the difference between the estimated end date and the actual end

date for completed projects where the actual end date is beyond the estimated end date. For ongoing projects, time overrun should be displayed only where the current date is beyond the estimated end date. Time overrun should be calculated as the period between current date and the estimated end date in such cases.

It was however seen that time overrun was calculated in all cases as the difference between the estimated end date and current date. Such mistakes made monitoring unrealistic and also affected the correctness of the project database.

These details when submitted for managerial information would affect the monitoring of works on a continuous basis which was essential to control time and cost overruns.

Ineffective monitoring of payments

3.14.3 Absence of input and validation controls resulted in incomplete / incorrect data capture. Again, failure to streamline procedure for processing of bills and incorrect incorporation of parameters resulted in lack of validation controls. As a result, the WBPMS could not be utilised efficiently for monitoring of payments.

Payments / issue of cheques

We observed that the details of payments made by cheques were not captured properly in the system to ensure integrity and accuracy of the database. It was found that input and validation controls were totally absent making the payment database incomplete and unreliable. In instances even the basic detail of cheque numbers for payment to contractors bills were not captured. Also, the system did not capture the RA bill numbers for which payments had been released against the cheques issued thereby making it difficult for monitoring.

Incorrect generation of e-bills and consequent inability to use the facility for making payments in a transparent manner defeated one of the major objectives of the WBPMS.

Defective database

3.14.4 There were inconsistencies in the data captured in various databases relating to projects, payments and contractors due to lack of validation controls. The databases were incomplete, contained incorrect data and the corrections made in the manual bills and records were not incorporated. The incorrect and unreliable databases seriously affected the utility of the WBPMS and resulted in perpetuation of the manual systems and records. It also indicated that the users at different levels did not have the capacity to use the WBPMS properly.

Incomplete Project database

The status of the projects (proposed, ongoing or completed) formed a very important data component in the WBPMS. Instead of obtaining the status automatically through the system, based on the completion dates, the Engineers in divisions manually entered the status. If the Engineers failed to change the

status to “completed”, the project continued to be shown as an ‘ongoing’ project. Even where projects have been completed, the actual date of completion and time taken for execution was not available in several cases as some of the engineers did not update the status promptly.

The failure in prompt updating of progress data would curtail the ability of the WBPMS to generate alerts which were required for controlling the projects.

e-commerce

3.14.5 The Company created a e-commerce facility for the contractors to procure construction material through internet directly from the producers to be delivered to the work sites, ‘mystore.kspnc.org’ in July 2007. The portal linked the Company, the vendors and the contractors with the intention of simplifying procurement and reducing cost. It was seen that the portal had not found favour with the vendors as well as the contractors as only 35 registered vendors and about 50-60 contractors out of about 140 who executed works for the Company had used the portal since inception.

Under-utilisation of the WBPMS

3.14.6 One of the major reasons for the inability of the Management to replace the manual systems even after seven years of implementation of the WBPMS was the lack of knowledge and unwillingness on the part of the users to use the system. It was seen that even the existing features of the WBPMS were not utilised to have better control over processes. We noticed the existing facility of Payment and recovery of mobilization advance, receipt and refund of security deposits were not used.

These matters were reported to the Government / Management (September 2010); their replies were awaited.

Follow-up action on Audit Reports

3.15 Explanatory notes outstanding

3.15.1 The Comptroller and Auditor General of India’s Audit Reports represent culmination of the process of scrutiny starting with initial inspection of accounts and records maintained in various offices and departments of the Government. It is, therefore, necessary that they elicit appropriate and timely response from the executive. Finance Department, Government of Karnataka issued instructions (January 1974) to all Administrative Departments to submit explanatory notes indicating a corrective / remedial action taken or proposed to be taken on paragraphs and reviews included in the Audit Reports within three months of their presentation to the Legislature, without waiting for any notice or call from the Committee on Public Undertakings (COPU).

Audit Reports for the years 2004-05 to 2008-09 were presented to the State Legislature between March 2006 and March 2010. Fifteen departments, which were commented upon, did not submit explanatory notes on 66 out of 145 paragraphs / reviews as on September 2010, as indicated below:

Year of the Audit Report (Commercial)	Total paragraphs and reviews in Audit Report	No. of paragraphs and reviews for which explanatory notes were not received
2004-05	25	5
2005-06	31	10
2006-07	36	15
2007-08	27	15
2008-09	26	21
Total	145	66

Department wise analysis is given below:

Name of the department	2004-05	2005-06	2006-07	2007-08	2008-09
Commerce and Industries	4	1	6	3	5
Energy		5	6	7	6
Water Resources			1		1
Forest					
Home					
Social Welfare	1			1	
Finance				2	
Co-operation		2			1
Information technology		2			
Public works			2	2	
Animal Husbandry					
Transport					2
Woman and Child Development					2
Rural Development and Panchayat Raj					1
Urban Development					1
General					2
Total	5	10	15	15	21

Outstanding compliance with reports of Committee on Public Undertakings (COPU)

3.15.2 As per the instructions, the compliance (Action Taken Notes-ATN / Action Taken Report - ATR) with recommendations of COPU was required to be furnished within six months of placement of the Report in the Legislature. Replies to Eleven Reports of the COPU containing recommendations to 88 paragraphs, presented to the State Legislature between February 2004 and March 2010, had not been received as on September 2010, as indicated below:

Year of the COPU Report	Total number of Reports involved	No. of paragraphs where replies not received
2003-04	1	2
2005-06	4	27
2006-07	2	4
2007-08	1	20
2009-10	3	35
Total	11	88

3.16 Response to Inspection reports, Draft paragraphs and Reviews

Audit observations noticed during audit and not settled on the spot are communicated to the head of PSUs and concerned departments 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 2010 is given in **Annexure 14**.

Similarly, draft paragraphs and reviews on the working of Public Sector Undertakings are forwarded to the Principal Secretary / Secretary of the Administrative Department concerned demi-officially, seeking confirmation of facts and figures and their comments thereon within a period of six weeks. All the reviews have been discussed in the exit conference with the Government. It was, however, observed that one review and 11 paragraphs forwarded to the various departments during May 2010 to September 2010 as detailed in **Annexure 15**, had not been replied so far (September 2010). The views of Government / Department have been taken into consideration while finalising the reviews / paragraphs wherever replies have been received.

It is recommended that (a) the Government should ensure that procedure exists for action against the officials who failed to send replies to Inspection reports / draft paragraphs and ATNs to the recommendations of COPU as per the prescribed time schedule, (b) action to recover loss / outstanding advances / overpayment is taken within prescribed time, and (c) the system of responding to audit observations is revamped.

BANGALORE
The

(D J BHADRA)
Principal Accountant General
(Civil and Commercial Audit), Karnataka

COUNTERSIGNED

NEW DELHI
The

(VINOD RAI)
Comptroller and Auditor General of India

ANNEXURES

Annexure – 1

Statement showing particulars of up to date paid-up capital, loans outstanding and Manpower as on 31 March 2010 in respect of Government companies and Statutory corporations.

(Referred to in paragraph 1.7)

(Figures in column 5 (a) to 6 (d) are Rupees in crore)

Sl. No.	Sector & Name of the Company	Name of the Department	Month and year of incorporation	Paid-up Capital ^{\$}			Loans outstanding at the close of 2009-10 ^{**}			Debt equity ratio for 2009-10 (Previous year)	Manpower (No. of employees) (as on 31.3.2010)		
				State Government	Central Government	Others	State Government	Central Government	Others			Total	Total
(1)	(2)	(3)	(4)	5 (a)	5 (b)	5 (c)	5 (d)	6 (a)	6 (b)	6 (c)	6 (d)	(7)	(8)
A. WORKING GOVERNMENT COMPANIES													
AGRICULTURE AND ALLIED SECTOR													
1	Karnataka State Agro Corn Products Limited (KSACPL)	Agriculture & Horticulture	Apr. 73	2.23	-	0.50	2.73	6.72	-	-	6.72	2.46:1	162
2	Karnataka State Agricultural Produce Processing and Export Corporation Limited (KAPPEC)	Agriculture & Horticulture	Apr. 96	0.50	-	-	0.50	-	-	-	-	-	16
3	Karnataka Togan Abhivridhi Mandali Limited (KTAML)	Agriculture & Horticulture	May 02	5.00	-	-	5.00	-	-	-	-	-	5
4	The Karnataka Fisheries Development Corporation Limited (KFDC)	Animal Husbandry and Fisheries	Oct. 70	16.16	-	-	16.16	0.75	-	-	0.75	0.05:1 (0.05:1)	138
5	Karnataka Sheep and Wool Development Corporation Limited (KSAWDCL)	Animal Husbandry and Fisheries	Dec. 01	6.05	-	-	6.05	-	-	-	-	-	75
6	Karnataka Compost Development Corporation Limited (Subsidiary of Company at C-1) (KCDCL)	Agriculture & Horticulture	Aug. 75	-	-	0.50	0.50	-	-	2.28	2.28	4.56:1 (6.64:1)	30
7	Karnataka Cashew Development Corporation Limited (KCDC)	Forest Ecology & Environment	Feb. 78	4.15	0.44	-	4.59	3.00	-	1.75	4.75	1.03:1 (1.03:1)	119
8	Karnataka Forest Development Corporation Limited (KFDCL)	Forest Ecology & Environment	Jan. 71	9.31	-	-	9.31	-	-	-	-	-	683
9	The Karnataka State Forest Industries Corporation Limited (KSFIC)	Forest Ecology & Environment	Mar. 73	2.67	-	-	2.67	-	-	-	-	(0.03:1)	222
10	Karnataka State Seeds Corporation Limited (KSSCL)	Agriculture & Horticulture	Aug. 73	1.43	0.62	1.63 (0.12)	3.68 (0.12)	-	-	-	-	(0.05:1)	280
11	Food Karnataka Limited (FKL)	Agriculture & Horticulture	April 03	-	-	0.10	0.10	-	-	-	-	-	-
	Sectorwise Total			47.50	1.06	2.73 (0.12)	51.29 (0.12)	10.47	-	4.03	14.50		1730

Audit Report (Commercial) for the year ended 31 March 2010

Sl. No.	Sector & Name of the Company	Name of the Department	Month and year of incorporation	Paid-up Capital [§]			Loans ^{**} outstanding at the close of 2009-10			Debt equity ratio for 2009-10 (Previous year)	Manpower (No. of employees) (as on 31.3.2010)		
				State Government	Central Government	Others	State Government	Central Government	Others			Total	
(1)	(2)	(3)	(4)	5 (a)	5 (b)	5 (c)	5 (d)	6 (a)	6 (b)	6 (c)	6 (d)	(7)	(8)
FINANCING SECTOR													
12	The Karnataka Handloom Development Corporation Limited (KHDCL)	Commerce & Industries	Oct. 75	39.18	5.20	-	44.38	15.26	-	25.06	40.32	0.91:1 (1.00:1)	884
13	Karnataka State Handicrafts Development Corporation Limited (KSHDCL)	Commerce & Industries	Mar. 64	2.84 (0.04)	1.21	-	4.05 (0.04)	0.68	-	0.72	1.40	0.35:1 (0.36:1)	214
14	D. Devaraj Urs Backward Classes Development Corporation Limited (DUBCDCL)	Social welfare	Oct. 77	118.71 (44.33)	-	-	118.71 (44.33)	-	-	72.96	72.96	0.61:1 (0.66:1)	70
15	Karnataka State Women's Development Corporation (KSWDC)	Women & Child Development	Sep. 87	9.86	2.98	-	12.84	-	-	-	-	-	71
16	Dr.B.R. Ambedkar Development Corporation Limited (BRADCL)	Social welfare	Mar. 75	101.37 (6.90)	80.00 (6.00)	-	181.37 (12.90)	-	-	132.17	132.17	0.73:1 (0.66:1)	269
17	Karnataka Schedule Tribes Development Corporation Limited (KSTADC)	Social welfare	July 06	3.82 (3.81)	-	-	3.82 (3.81)	-	-	18.31	18.31	4.79:1 (4.52:1)	-
18	The Karnataka Minorities Development Corporation Limited (KMDC)	Social welfare	Feb. 86	124.49 (59.71)	-	-	124.49 (59.71)	-	-	34.11	34.11	0.27:1 (0.35:1)	16
19	Karnataka State Industrial Investment and Development Corporation Limited (KSIIDC)	Commerce & Industries	July 64	368.44 (68.44)	-	197.63	566.07 (68.44)	0.15	0.92	271.50	272.57	0.48:1 (0.52:1)	110
20	Karnataka Urban Infrastructure Development and Finance Corporation Limited (KUIDFC)	Urban Development	Nov. 93	6.06	-	2.00	8.06	-	-	-	-	-	462
21	Sree Kanteerava Studios Limited (KSL)	Information, Tourism & Youth Services	Mar. 66	0.82	-	0.06	0.88	0.96	-	-	0.96	1.09:1 (1.09:1)	9
22	Karnataka Asset Management Company Private Limited (KAMCPL)	Finance	April 98	-	-	0.50	0.50	-	-	-	-	-	5
23	Karnataka Trustee Company Private Limited (KTCPCL)	Finance	April 98	-	-	0.01	0.01	-	-	-	-	-	1

Sl. No.	Sector & Name of the Company	Name of the Department	Month and year of incorporation	Paid-up Capital [§]			Loans ^{**} outstanding at the close of 2009-10			Debt equity ratio for 2009-10 (Previous year)	Manpower (No. of employees) (as on 31.3.2010)		
				State Government	Central Government	Others	Total	State Government	Central Government			Others	Total
(1)	(2)	(3)	(4)	5 (a)	5 (b)	5 (c)	5 (d)	6 (a)	6 (b)	6 (c)	6 (d)	(7)	(8)
24	Karnataka Thanda Development Corporation Limited (KTIDCL)	Social Welfare	Feb. 09	0.01	-	-	0.01	-	-	0.50	0.50	50:1	Not available
	Sectorwise Total			775.60 (183.23)	89.39 (6.00)	200.20	1065.19 (189.23)	17.05	0.92	555.33	573.30		2036
INFRASTRUCTURE SECTOR													
25	Karnataka State Construction Corporation Limited (KSCCL)	Public works	Sep. 68	2.05	-	-	2.05	5.53	-	-	5.53	2.70:1 (2.70:1)	172
26	Karnataka Rural Infrastructure Development Limited (KRIDL) ¹	Rural Development & Panchayat Raj	Aug. 74	12.25	-	-	12.25	72.16	-	-	72.16	5.89:1 (6.91:1)	1003
27	Karnataka State Police Housing Corporation Limited (KSPHCL)	Home	June 85	0.12	-	-	0.12	-	-	193.92	193.92	1616.00:1 (1843.92:1)	248
28	Rajiv Gandhi Rural Housing Corporation Limited (RGRHCL)	Housing	April 2000	3.00	-	-	3.00	597.40	-	460.01	1057.41	352.47:1 (347.54:1)	39
29	Karnataka Road Development Corporation Limited (KRDCL)	Public works	July 99	817.41 (617.41)	-	-	817.41 (617.41)	-	-	390.79	390.79	0.48:1 (0.71:1)	82
30	Krishna Bhagya Jala Nigam Limited (KBJNL)	Water Resources	Aug. 94	6877.88	-	109.13	6987.01	-	-	373.29	373.29	0.05:1 (0.07:1)	2432
31	Karnataka Neeravari Nigam Limited (KNNL)	Water Resources	Nov. 98	7641.13 (286.97)	-	207.03	7848.16 (286.97)	4.90	-	498.00	502.90	0.06:1 (0.10:1)	3429
32	Cauvery Neeravari Nigam Limited (CNNL)	Water Resources	June 03	4064.93 (2964.88)	-	143.83 (143.83)	4208.76 (3108.71)	6108.88	-	552.82	6661.70	1.58:1 (2.01:1)	2389
33	Bangalore Metro Rail Corporation Limited (BMRCL)	Urban Development	Sep. 94	1360.04 (840.05)	519.99	-	1880.03 (840.05)	540.63	19.02	-	559.65	0.30:1 (0.35:1)	87
34	Bangalore Airport Rail Link Limited (Subsidiary of Company at A-19) (BARL)	Infrastructure Development	Mar. 08	5.70 (0.76)	-	0.05	5.75 (0.76)	-	-	-	-	-	8
	Sectorwise Total			20784.51 (4710.07)	519.99	460.04 (143.83)	21764.54 (4853.90)	7329.50	19.02	2468.83	9817.35		9889
MANUFACTURING SECTOR													
35	Karnataka Leather Industries Development Corporation Limited (LIDKAR)	Commerce & Industries	Oct. 76	6.85	-	-	6.85	11.36	-	0.74	12.10	1.77:1 (3.62:1)	106

¹ Formerly Karnataka Land Army Corporation Limited.

Audit Report (Commercial) for the year ended 31 March 2010

Sl. No.	Sector & Name of the Company	Name of the Department	Month and year of incorporation	Paid-up Capital [§]			Loans ^{***} outstanding at the close of 2009-10			Debt equity ratio for 2009-10 (Previous year)	Manpower (No. of employees) (as on 31.3.2010)		
				State Government	Central Government	Others	State Government	Central Government	Others			Total	
(1)	(2)	(3)	(4)	5 (a)	5 (b)	5 (c)	5 (d)	6 (a)	6 (b)	6 (c)	6 (d)	(7)	(8)
36	Karnataka Soaps and Detergents Limited (KSDDL)	Commerce & Industries	July 80	31.82	-	-	31.82	8.35	-	-	8.35	0.26:1 (0.26:1)	858
37	Karnataka State Coir Development Corporation Limited (KSCDCL)	Commerce & Industries	Feb. 85	3.01	-	-	3.01	0.41	-	0.05	0.46	0.15:1 (0.15:1)	40
38	Karnataka State Small Industries Development Corporation Limited (KSSIDC)	Commerce & Industries	June 64	24.56	-	0.10	24.66	12.99	-	-	12.99	0.53:1 (0.54:1)	369
39	The Mysore Paper Mills Limited (MPM)	Commerce & Industries	May 36	76.97	-	41.92	118.89	101.03	-	95.73	196.76	1.65:1 (1.18:1)	3946
40	Karnataka Vidyuth Karkhane Limited (KAVIKA)	Commerce & Industries	Oct. 76	5.62	-	-	5.62	7.84	-	-	7.84	1.40:1 (1.40:1)	213
41	The Mysore Electrical Industries Limited (MEI)	Commerce & Industries	Feb. 45	7.67	-	1.76	9.43	28.54	-	0.41	28.95	3.07:1 (3.08:1)	218
42	NGEF (Hubli) Limited (Subsidiary of Company at C-11) (NGEFH)	Commerce & Industries	Dec. 88	-	-	3.20	3.20	-	-	-	-	-	150
43	Karnataka State Electronics Development Corporation Limited (KEONICS)	Information Technology	Sep. 76	15.87	-	-	15.87	-	-	-	-	-	185
44	Karnataka Silk Industries Corporation Limited (KSIC)	Commerce & Industries	Apr. 80	58.00	-	-	58.00	-	-	-	-	-	771
45	Karnataka Silk Marketing Board Limited (KSMB)	Commerce & Industries	Nov. 79	31.45	-	-	31.45	-	-	-	-	-	101
46	Karnataka State Power loom Development Corporation Limited (KSPDCL)	Commerce & Industries	Feb. 94	2.22	-	-	2.22	-	-	-	-	-	10
47	Mysore Minerals Limited (MML)	Commerce & Industries	May 66	2.97	-	0.03	3.00	-	-	-	-	-	1248
48	The Hunti Gold Mines Company Limited (HGML)	Commerce & Industries	July 47	2.20	-	0.76	2.96	-	-	-	-	-	3895
49	The Mysore Sugar Company Limited (MYSUGAR)	Commerce & Industries	Jan. 33	7.81	-	0.93	8.74	147.87	-	60.98	208.85	23.90:1 (17.84:1)	873
50	The Mysore Paints and Varnish Limited (MPVL)	Commerce & Industries	Nov. 47	0.95	-	0.09	1.04	-	-	-	-	-	63
51	Karnataka State Beverages Corporation Limited (KSBCL)	Finance	June 03	12.00 (10.00)	-	-	12.00 (10.00)	2.53	-	-	2.53	0.21:1 (40.75:1)	289

Sl. No.	Sector & Name of the Company	Name of the Department	Month and year of incorporation	Paid-up Capital [§]			Loans ^{**} outstanding at the close of 2009-10			Debt equity ratio for 2009-10 (Previous year)	Manpower (No. of employees) (as on 31.3.2010)		
				State Government	Central Government	Others	Total	State Government	Central Government			Others	Total
(1)	(2)	(3)	(4)	5 (a)	5 (b)	5 (c)	5 (d)	6 (a)	6 (b)	6 (c)	6 (d)	(7)	(8)
52	Mysore Sales International Limited (Subsidiary of Company at A-19) (MSIL)	Commerce & Industries	Mar. 66	7.46 (7.46)	-	24.01 (20.35)	31.47 (27.81)	5.00	-	0.86	5.86	0.19:1 (0.22:1)	325
53	Marketing Consultants and Agencies Limited (Subsidiary of Company at A-52) (MCA)	Commerce & Industries	Sep. 72	3.46 (3.46)	-	3.57	7.03 (3.46)	-	-	-	-	-	32
	Sectorwise Total			300.89 (20.92)	-	76.37 (20.35)	377.26 (41.27)	325.92	-	158.77	484.69		13692
POWER SECTOR													
54	Karnataka Power Corporation Limited (KPC)	Energy	July 70	1743.26 (500.00)	-	-	1743.26 (500.00)	-	-	3898.10	3898.10	2.24:1 (2.34:1)	6274
55	Karnataka Renewable Energy Development Limited (KREDL)	Energy	Mar. 96	0.50	-	-	0.50	-	-	-	-	- (38.80:1)	51
56	Karnataka Power Transmission Corporation Limited (KPTCL)	Energy	July 99	1218.27 (527.95)	-	-	1218.27 (527.95)	7.73	-	4091.03	4098.76	3.36:1 (3.84:1)	8711
57	Bangalore Electricity Supply Company Limited (BESCOM)	Energy	Apr. 02	415.97 (210.02)	-	-	415.97 (210.02)	60.25	78.17	272.87	411.29	1.16:1 (2.60:1)	10529
58	Hubli Electricity Supply Company Limited (HESCOM)	Energy	Apr. 02	563.25 (329.91)	-	-	563.25 (329.91)	80.12	-	1130.97	1211.09	2.15:1 (6.37:1)	7160
59	Mangalore Electricity Supply Company Limited (MESCOM)	Energy	Apr. 02	132.34 (22.00)	-	-	132.34 (22.00)	1.34	1.18	348.06	350.58	2.65:1 (3.10:1)	4137
60	Chamundeshwari Electricity Supply Corporation Limited (CHESC)	Energy	Dec. 04	157.30 (78.00)	-	-	157.30 (78.00)	29.52	-	115.29	144.81	0.92:1 (5.40:1)	5223
61	Gulbarga Electricity Supply Company Limited (GESCOM)	Energy	Apr. 02	305.14 (175.00)	-	-	305.14 (175.00)	2.84	16.68	460.70	480.22	1.57:1 (4.58:1)	5120
62	KPC Bidadi Power Corporation Private Limited (Subsidiary of Company at A-54) (KPCB)	Energy	Apr. 96	-	-	0.05	0.05	-	-	5.60	5.60	112.00:1 (86.80:1)	Nil
63	Power Company of Karnataka Limited (PCKL)	Energy	Aug. 07	-	-	20.05 (20.00)	20.05 (20.00)	-	-	-	-	-	27
64	Raichur Power Corporation Limited (RPCL)	Energy	Apr. 09	-	-	10.00	10.00	-	-	-	-	-	2

§ Business development expenditure accounted under Current Liabilities.

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Sl. No.	Sector & Name of the Company	Name of the Department	Month and year of incorporation	Paid-up Capital [§]			Loans ^{**} outstanding at the close of 2009-10			Debt equity ratio for 2009-10 (Previous year)	Manpower (No. of employees) (as on 31.3.2010)		
				State Government	Central Government	Others	Total	State Government	Central Government			Others	Total
(1)	(2)	(3)	(4)	5 (a)	5 (b)	5 (c)	5 (d)	6 (a)	6 (b)	6 (c)	6 (d)	(7)	(8)
	Sectorwise Total			4536.03 (1842.88)	-	30.10 (20.00)	4566.13 (1862.88)	181.80	96.03	10322.62	10600.45		47234
SERVICE SECTOR													
65	Karnataka Food and Civil Supplies Corporation Limited (KFCSCCL)	Food Civil Supplies & Consumer Affairs	Sep. 73	3.25	-	-	3.25	5.00	-	-	5.00	1.54:1 (1.85:1)	1279
66	The Karnataka State Tourism Development Corporation Limited (KSTDC)	Information, Tourism & Youth Services	Feb. 71	6.41 (1.41)	-	-	6.41 (1.41)	2.00	-	3.56	5.56	0.87:1 (1.03:1)	341
67	Jungle Lodges and Resorts Limited (JLR)	Information, Tourism & Youth Services	Mar. 80	0.50	-	0.42	0.92	-	-	0.86	0.86	0.93:1 (1.49:1)	452
	Sectorwise Total			10.16 (1.41)	-	0.42	10.58 (1.41)	7.00	-	4.42	11.42		2072
MISCELLANEOUS SECTOR													
68	Karnataka Vocational Training and Skill Development Corporation Limited (KVTSDCL)	Employment and Training	Sept. 08	0.04 (0.03)	-	-	0.04 (0.03)	-	-	-	-	-	6
69	Karnataka Public Lands Corporation Limited (KPLCL) ²	Revenue	Dec. 08	-	-	-	-	-	-	0.02	0.02		24
	Sectorwise Total			0.04 (0.03)	-	-	0.04 (0.03)	-	-	0.02	0.02		30
	TOTAL A (All sectorwise Government companies)			26454.73 (6758.54)	610.44 (6.00)	769.86 (184.30)	27835.03 (6948.84)	7871.74	1115.97	13514.02	21501.73	0.77:1	76683
B. WORKING STATUTORY CORPORATIONS													
AGRICULTURE AND ALLIED SECTOR													
1	Karnataka State Warehousing Corporation (KSWC)	Co-operation	Nov. 57	6.75 (2.85)	3.40	-	10.15 (2.85)	18.41	-	52.98	71.39	7.03:1 (5.25:1)	440
	Sectorwise Total			6.75 (2.85)	3.40	-	10.15 (2.85)	18.41	-	52.98	71.39		440

² No shares have been issued to the subscribers of the Memorandum of the Company up to 31 March 2010.

Sl. No.	Sector & Name of the Company	Name of the Department	Month and year of incorporation	Paid-up Capital [§]			Loans ^{**} outstanding at the close of 2009-10			Debt equity ratio for 2009-10 (Previous year)	Manpower (No. of employees) (as on 31.3.2010)		
				State Government	Central Government	Others	State Government	Central Government	Others			Total	
(1)	(2)	(3)	(4)	5 (a)	5 (b)	5 (c)	5 (d)	6 (a)	6 (b)	6 (c)	6 (d)	(7)	(8)
FINANCING SECTOR													
2	Karnataka State Financial Corporation (KSFC)	Finance	Mar.09	613.76 (143.34)	-	38.65	652.41 (143.34)	-	-	1665.87	1665.87	2.55:1 (3.03:1)	1163
	Sectorwise Total			613.76 (143.34)	-	38.65	652.41 (143.34)	-	-	1665.87	1665.87		1163
SERVICE SECTOR													
3	Karnataka State Road Transport Corporation (KSRTC)	Transport	Aug.61	242.79	48.10	1.00	291.89	21.00	-	253.75	274.75	0.94:1 (1.01:1)	31995
4	Bangalore Metropolitan Transport Corporation (BMTCL)	Transport	Aug.97	157.71 (53.12)	-	-	157.71 (53.12)	-	-	276.12	276.12	1.75:1 (0.31:1)	30996
5	North Western Karnataka Road Transport Corporation (NWKRTC)	Transport	Nov.97	212.77 [¶] (95.71)	-	-	212.77 (95.77)	1.05	-	316.74	317.79	1.49:1 (1.47:1)	21503
6	North Eastern Karnataka Road Transport Corporation (NEKRTC)	Transport	Aug-2000	204.23	-	-	204.23	-	-	184.97	184.97	0.91:1 (0.84:1)	13793
	Sectorwise Total			817.50 (148.83)	48.10	1.00	866.60 (148.83)	22.05	-	1031.58	1053.63		98287
	TOTAL B (all sectorwise Statutory corporations)			1438.01 (295.02)	51.50	39.65	1529.16 (295.02)	40.46	-	2750.43	2790.89		99890
	Grand total (A + B)			27892.74 (7053.56)	661.94 (6.00)	809.51 (184.30)	29364.19 (7243.86)	7912.20	115.97	16264.45	24292.62	0.83:1	176573
C. NON WORKING GOVERNMENT COMPANIES													
AGRICULTURE AND ALLIED SECTOR													
1	Karnataka Agro Industries Corporation Limited (KAIC)	Agriculture & Horticulture	Sep. 67	55.90 (48.36)	-	-	55.90 (48.36)	49.39	-	-	49.39	0.88:1 (0.88:1)	NIL
2	The Mysore Tobacco Company Limited (Subsidiary of Company at C-1) (MTC)	Agriculture & Horticulture	Apr. 37	0.61	-	0.17	0.78	-	-	-	-	-	NIL

[¶] ₹ 27.62 crore pertaining to one division which was transferred to NEKRTC during the year, excluded from the share capital.

Sl. No.	Sector & Name of the Company	Name of the Department	Month and year of incorporation	Paid-up Capital [§]			Loans ^{**} outstanding at the close of 2009-10			Debt equity ratio for 2009-10 (Previous year)	Manpower (No. of employees) (as on 31.3.2010)		
				State Government	Central Government	Others	5 (d)	6 (a)	6 (b)			Others	Total
(1)	(2)	(3)	(4)	5 (a)	5 (b)	5 (c)	5 (d)	6 (a)	6 (b)	6 (c)	6 (d)	(7)	(8)
3	Karnataka Pulpwood Limited (Subsidiary of Company at A-8) (KPL)	Forest ecology & Environment	Feb. 85	13.91 (13.91)	-	1.25	15.16 (13.91)	2.89	-	0.07	2.96	0.20:1 (0.19:1)	NIL
4	The Karnataka State Veeners Limited (Subsidiary of Company at A-9) (KSVL)	Forest ecology & Environment	Aug. 74	-	-	1.00	1.00	-	-	1.00	1.00	1.00:1 (1.00:1)	167
5	The Mysore Match Company Limited (Subsidiary of Company at A-9) (MMCL)	Forest ecology & Environment	May 40	0.01	-	0.04	0.05	-	-	-	-	-	NIL
	Sectorwise Total			70.43 (62.27)	-	2.46	72.89 (62.27)	52.28	-	1.07	53.35		167
MANUFACTURING SECTOR													
6	Karnataka Small Industries Marketing Corporation Limited (KSIMC)	Commerce & Industries	Sep. 84	1.36	-	0.35	1.71	-	-	-	-	-	11
7	The Mysore Lamp Works Limited (MLW)	Commerce & Industries	Aug. 36	10.76	-	1.05	11.81	94.80	-	3.50	98.30	8.32:1 (8.23:1)	NIL
8	Vijayanagar Steel Limited (VSL)	Commerce & Industries	Dec. 82	12.91	-	-	12.91	0.58	-	-	0.58	0.04:1 (0.05:1)	NIL
9	The Mysore Cosmetics Limited (Subsidiary of Company at A-52) (MCL)	Commerce & Industries	Mar. 66	0.01 (0.01)	-	0.15	0.16 (0.01)	-	-	-	-	-	NIL
10	The Mysore Chrome Tanning Company Limited (Subsidiary of Company at A-52) (MCT)	Commerce & Industries	Mar. 40	-	-	0.76	0.76	0.12	-	0.29	0.41	0.54:1 (0.54:1)	NIL
11	NGEF Limited (NGEF)	Commerce & Industries	Apr. 65	41.99	-	4.52	46.51	227.24	-	-	227.24	4.89:1 (4.89:1)	NIL
12	Karnataka Telecom Limited (Subsidiary of Company at C-11) (KTL)	Commerce & Industries	July 85	0.78	-	2.22	3.00	-	-	-	-	-	NIL
13	Chanundi Machine Tools Limited (CMTL)	Commerce & Industries	Oct. 75	0.63	-	-	0.63	2.50	-	1.00	3.50	5.56:1 (5.51:1)	NIL
14	Karnataka State Textiles Limited (KSTL)	Commerce & Industries	Dec. 84	0.50	-	-	0.50	14.94	-	-	14.94	29.88:1 (29.87:1)	NIL

Sl. No.	Sector & Name of the Company	Name of the Department	Month and year of incorporation	Paid-up Capital ^{\$}			Loans ^{***} outstanding at the close of 2009-10			Debt equity ratio for 2009-10 (Previous year)	Manpower (No. of employees) (as on 31.3.2010)		
				State Government	Central Government	Others	State Government	Central Government	Others			Total	
(1)	(2)	(3)	(4)	5 (a)	5 (b)	5 (c)	5 (d)	6 (a)	6 (b)	6 (c)	6 (d)	(7)	(8)
15	The Mysore Acetate and Chemicals Company Limited (MACCL)	Commerce & Industries	Dec. 63	9.96	-	2.22	12.18	13.11	-	-	13.11	1.08:1 (1.08:1)	78
	Sectorwise Total			78.90 (0.01)	-	11.27	90.17 (0.01)	353.29	-	4.79	358.08		89
	TOTAL C (All sectorwise Government companies)			149.33 (62.28)	-	13.73	163.06 (62.28)	405.57	-	5.86	411.43	2.52:1	256
	Grand Total (A + B + C)			28042.07 (7115.84)	661.94 (6.00)	823.24 (184.30)	29527.25 (7306.14)	8317.77	115.97	16270.31	24704.05	0.84:1	176829

Above includes Section 619-B companies at Sl. No. A 10, 11, 22, 23, 63 and 64.

^{\$} Paid-up capital includes share application money.

^{***} Loans outstanding at the close of 2009-10 represent long-term loans only.

Annexure – 2

Summarised financial results of Government companies and statutory corporations for the latest year for which accounts were finalised.
(Referred to in paragraph 1.15)

(Figures in column 5 (a) to (10) are Rupees in crore)

Sl. No.	Sector & Name of the Company	Period of Accounts	Year in which finalised	Net Profit (+)/ Loss (-)		Turnover	Impact of Accounts # Comments	Paid up Capital	Accumulated Profit (+)/ Loss (-)	Capital employed @	Return on capital employed \$	Percentage return on capital employed
				5 (a)	5 (b)							
(1)	(2)	(3)	(4)	5 (a)	5 (b)	5 (c)	(7)	(8)	(9)	(10)	(11)	(12)
A. WORKING GOVERNMENT COMPANIES												
AGRICULTURE AND ALLIED SECTOR												
1	KSACPL	2009-10	2010-11	-8.09	-	0.20	-0.32	2.73	-9.83	1.32	-8.29	-
2	KAPPEC	2009-10	2010-11	0.49	-	0.04	-	0.50	5.45	30.09	0.45	1.50
3	KTAML	2008-09	2009-10	0.39	-	0.02	-	5.00	0.85	8.85	0.37	4.18
4	KFDC	2008-09	2009-10	1.21	0.12	0.29	-	16.16	-8.65	13.76	0.92	6.69
5	KSAWDCL	2008-09	2010-11	-0.02	-	-	-	6.05	-3.48	17.63	-0.02	-
6	KCDCL	2009-10	2010-11	0.20	0.12	0.19	-	0.50	-0.53	4.62	0.01	0.22
7	KCDC	2009-10	2010-11	-1.31	0.53	0.43	-	4.59	-5.48	3.94	-1.74	-
8	KFDCL	2009-10	2010-11	10.48	0.86	0.82	-24.05	9.31	30.72	81.46	9.66	11.86
9	KSFIC	2009-10	2010-11	2.85	-	0.22	0.03	2.67	8.12	11.64	2.63	22.59
10	KSSCL	2008-09	2009-10	1.22	0.02	0.52	-0.68	3.68	6.49	39.70	0.70	1.76
11	FKL	2009-10	2010-11	0.03	-	0.01	-	0.10	0.01	1.36	0.02	1.47
	Sector wise Total			7.45	1.65	2.74	-25.02	51.29	23.67	214.37	4.71	
FINANCING SECTOR												
12	KHDCL	2009-10	2010-11	-3.00	7.86	0.37	-	44.38	-62.12	140.51	-3.37	-
13	KSHDCL	2008-09	2009-10	4.78	0.00	0.17	-0.08	4.05	11.50	16.28	4.61	28.32
14	DUBCDCL	2009-10	2010-11	0.19	1.42	0.09	-	118.71	-30.93	270.71	0.10	0.04
15	KSWDC	2009-10	2010-11	0.26	-	0.10	-0.29	12.84	4.74	26.25	0.16	0.61
16	BRADCL	2009-10	2010-11	-4.09	3.18	0.25	-0.09	181.37	-2.50	416.31	-4.34	-
17	KSTADC	2008-09	2009-10	4.83	0.18	0.03	-	3.82	6.32	72.11	4.80	6.66
18	KMDC	2009-10	2010-11	-1.56	1.43	0.11	-0.38	124.49	-24.27	160.50	-1.67	-
19	KSIIDC	2008-09	2009-10	53.94	18.79	4.19	0.15	555.17	-432.20	848.38	49.75	5.86
20	KUIDFC	2009-10	2010-11	0.01	-	0.41	-	8.06	27.05	614.71	-0.40	-
21	KSL	2009-10	2010-11	0.34	-	0.01	-	0.88	-0.24	1.52	0.33	21.71
22	KAMCPL	2009-10	2010-11	0.43	-	-	-	0.50	0.54	1.12	0.43	38.39

Sl. No.	Sector & Name of the Company	Period of Accounts	Year in which finalised	Net Profit (+)/ Loss (-)				Turnover	Impact of Accounts # Comments	Paid up Capital	Accumulated Profit (+)/ Loss (-)	Capital employed @	Return on capital employed \$	Percentage return on capital employed
				Net Profit/ Loss before Interest & Depreciation	Interest	Depreciation	Net Profit/ Loss (x)							
(1)	(2)	(3)	(4)	5 (a)	5 (b)	5 (c)	5 (d)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
23	KTCPL	2009-10	2010-11	0.04	-	-	0.04	-	-	0.01	0.05	0.07	0.04	57.14
24	KTDC	First Accounts not yet finalised	-	-	-	-	-	-	-	-	-	-	-	-
	Sector wise Total			56.17	32.86	5.73	17.58	243.31	-0.69	1054.28	-502.06	2568.47	50.44	
INFRASTRUCTURE SECTOR														
25	KSCCL	2009-10	2010-11	1.21	0.48	0.06	0.67	33.37		2.05	23.92	36.25	1.15	3.17
26	KRIDL	2008-09	2009-10	29.09	0.42	0.44	28.23	357.55	-3.84	12.25	7.97	139.47	28.65	20.54
27	KSPHCL	2009-10	2010-11	35.38	1.04	0.39	33.95	##	-	0.12	8.10	243.97	34.99	14.34
28	RGRHCL	2009-10	2010-11	-	-	-	£	##	-	3.00	-	610.69	-	-
29	KRDCL	2009-10	2010-11	-0.46	5.94	3.08	-9.48	6.51	3.02	817.41	-94.38	1663.97	-3.54	-
30	KBJNL	2009-10	2010-11	68.23	36.22	75.26	-43.25	11.98	-0.07	6987.01	-199.59	9972.54	-7.03	-
31	KNNL	2009-10	2010-11	-	-	-	\$\$	##	-	7848.16	-	8075.78	-	-
32	CNNL	2009-10	2010-11	-	-	-	\$\$	##	-	4208.76	-	9858.21	-	-
33	BMRCL	2009-10	2010-11	-	-	-	0.00	##	-12.27	1880.03	-	2815.77	-	-
34	BARL	2009-10	2010-11	-1.00	-	0.01	-1.01	##	-	5.75	-1.01	2.77	-1.01	-
	Sectorwise Total			132.45	44.10	79.24	9.11	409.41	-13.16	21764.54	-254.99	33419.42	53.21	
MANUFACTURING SECTOR														
35	LIDKAR	2008-09	2010-11	0.11	0.18	0.04	-0.11	2.50	-1.10	3.35	-21.23	-5.03	0.07	-
36	KSDL	2009-10	2010-11	14.11	0.26	0.50	13.35	178.91	-10.91	31.82	34.35	98.23	13.61	13.86
37	KSCDCL	2009-10	2010-11	0.19	0.08	0.03	0.08	2.91	-1.38	3.01	-4.62	6.28	0.16	2.55
38	KSSIDC	2009-10	2010-11	21.52	0.11	2.06	19.35	97.00	-	24.66	38.61	106.04	19.46	18.35
39	MPM	2008-09	2009-10	45.04	18.64	9.95	16.45	413.48	-	118.89	-32.02	307.93	35.09	11.40
40	KAVIKA	2009-10	2010-11	3.55	0.94	0.37	2.24	71.20	0.58	5.62	-7.61	85.43	3.18	3.72
41	MEI	2009-10	2010-11	2.37	2.08	0.14	0.15	21.22	-33.36	9.43	-21.88	59.70	2.23	3.74
42	NGEFH	2009-10	2010-11	-1.49	0.35	0.20	-2.04	12.88	-	3.20	1.47	7.97	-1.69	-
43	KEONICS	2009-10	2010-11	6.00	-	0.08	5.92	40.39	-	15.87	32.35	51.06	5.92	11.59
44	KSIC	2009-10	2010-11	8.42	-	0.41	8.01	52.38	-0.30	58.00	-31.51	38.44	8.01	20.84
45	KSMB	2009-10	2010-11	-2.55	-	0.04	-2.59	26.45	-	31.45	-24.40	7.04	-2.59	-

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Sl. No.	Sector & Name of the Company	Period of Accounts	Year in which finalised	Net Profit (+)/Loss (-)				Turnover	Impact of Accounts Comments	Paid up Capital	Accumulated Profit (+)/ Loss (-)	Capital employed @	Return on capital employed \$	Percentage return on capital employed
				Net Profit/ Loss before Interest & Depreciation	Interest	Depreciation	Net Profit/ Loss (x)							
(1)	(2)	(3)	(4)	5 (a)	5 (b)	5 (c)	5 (d)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
46	KSPDCL	2009-10	2010-11	1.60	-	0.08	1.52	25.35	-	2.22	7.22	9.45	1.52	16.08
47	MML	2009-10	2010-11	201.47	0.02	0.91	200.54	241.23	10.90	3.00	130.64	571.98	200.56	35.06
48	HGML	2009-10	2010-11	133.82	-	9.11	124.71	336.74	-	2.96	448.52	483.74	124.71	25.78
49	MYSUGAR	2008-09	2009-10	0.55	16.11	1.22	-16.78	57.77	-7.57	8.74	-268.87	-61.12	-0.67	-
50	MPVL	2009-10	2010-11	2.45	0.03	0.08	2.34	14.68	-0.43	1.04	14.76	16.32	2.37	14.52
51	KSBCCL	2009-10	2010-11	10.19	0.56	1.06	8.57	9653.21	-	12.00	47.46	52.34	9.13	17.44
52	MSIL	2009-10	2010-11	-2.83	0.27	1.10	-4.20	58.07	-2.41	31.47	125.91	150.38	-3.93	-
53	MCA	2009-10	2010-11	7.73	-	0.28	7.45	70.30	-	7.03	27.09	34.04	7.45	21.89
Sectorwise Total				452.25	39.63	27.66	384.96	11376.67	-45.98	373.76	496.24	2020.22	424.59	
POWER SECTOR														
54	KPC	2009-10	2010-11	1606.38	504.79	390.54	711.05	4397.25	-15.52	1743.26	2587.91	12604.87	1215.84	9.65
55	KREDL	2009-10	2010-11	10.30	0.44	1.49	8.37	11.35	-0.25	0.50	21.60	30.11	8.81	29.26
56	KPTCL	2009-10	2010-11	848.23	483.70	358.57	5.96	925.55		1218.27	178.68	7136.58	489.66	6.93
57	BESCOM	2009-10	2010-11	314.90	180.91	121.99	12.00	6791.59	-	415.97	-350.89	3911.64	192.91	4.93
58	HESCOM	2009-10	2010-11	178.81	270.18	82.27	-173.64	2277.59	-19.17	563.25	-659.08	2018.02	96.54	4.78
59	MESCOM	2009-10	2010-11	134.97	78.71	45.39	10.87	1175.25		132.34	50.73	1099.01	89.58	8.15
60	CHESC	2008-09	2009-10	-122.77	67.06	27.32	-217.15	1148.67	3.72	79.30	-221.00	591.49	-150.09	-
61	GESCOM	2008-09	2009-10	-90.15	92.99	33.11	-216.25	1361.27	-93.20	130.14	-185.49	1092.88	-123.26	-
62	KPCB	2009-10	2010-11	-5.46	-	0.03	-5.49	-	-	0.05	-5.49	0.15	-5.49	-
63	PCKL	2009-10	2010-11	-0.04	-	0.03	-0.07	-	-	20.05	-4.68	39.13	-0.07	-
64	RPCL	2009-10	2010-11				\$\$		-	10.00	-	7.30	-	-
Sectorwise Total				2875.17	1678.78	1060.74	135.65	18088.52	-124.42	4313.13	1412.29	28531.18	1814.43	-
SERVICE SECTOR														
65	KFCCL	2009-10	2010-11	12.77	2.89	0.52	9.36	1466.11	-1.91	3.25	103.20	282.56	12.25	4.34
66	KSTDC	2008-09	2009-10	0.44	1.73	1.12	-2.41	25.12	-4.47	6.41	-0.91	20.00	-0.68	
67	JLR	2009-10	2010-11	7.02	0.13	1.55	5.34	25.73	-	0.92	13.10	27.18	5.47	20.13
Sectorwise Total				20.23	4.75	3.19	12.29	1516.96	-6.38	10.58	115.39	329.74	17.04	

Sl. No.	Sector & Name of the Company	Period of Accounts	Year in which finalised	Net Profit (+)/Loss (-)			Turnover	Impact of Accounts # Comments	Paid up Capital	Accumulated Profit (+)/ Loss (-)	Capital employed @	Return on capital employed \$	Percentage return on capital employed	
				Net Profit/ Loss before Interest & Depreciation	Interest	Depreciation								Net Profit/ Loss (x)
(1)	(2)	(3)	(4)	5 (a)	5 (b)	5 (c)	5 (d)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
MISCELLANEOUS SECTOR														
68	KVTSDCL ³	2008-09 (Sept. 08 to Sept. 09)	2009-10	-	-	-	-	-	0.04	-	40.29	-	-	
69	KPLCL	2009-10	2010-11	0.30	-	0.09	0.21	-	-	0.15	0.08	0.21	262.50	
	Sectorwise Total			0.30	-	0.09	0.21	-	0.04	0.15	40.07	0.21		
	TOTAL A (All sectorwise Government companies)			3544.02	1801.77	1179.39	562.86	31814.51	-215.65	27567.62	67123.77	2364.63	3.52	
B. WORKING STATUTORY CORPORATIONS														
AGRICULTURE AND ALLIED SECTOR														
1	KSWC	2008-09	2009-10	10.85	3.12	2.40	5.33	26.99	-1.27	10.15	149.64	8.45	5.65	
	Sectorwise Total			10.85	3.12	2.40	5.33	26.99	-1.27	10.15	149.64	8.45	-	
FINANCING SECTOR														
2	KSFC	2008-09	2009-10	-37.69	-	1.48	-39.17	227.78	-4.19	534.06	2061.77	166.67	8.08	
	Sectorwise Total			-37.69	-	1.48	-39.17	227.78	-4.19	534.06	2061.77	166.67	-	
SERVICE SECTOR														
3	KSRTC	2009-10	2010-11	250.80	25.13	176.82	48.85	1746.36	-149.23	291.89	638.93	73.98	11.58	
4	BMTCL	2009-10	2010-11	169.93	1.39	103.41	65.13	1129.62	-56.13	157.71	1226.71	66.52	5.42	
5	NWRTC	2008-09	2009-10	48.59	35.29	81.87	-68.57	863.15	-76.86	214.38	233.81	-33.28	-	
6	NEKRTC	2008-09	2009-10	37.56	13.60	52.61	-28.65	561.07	-21.49	149.25	16.52	-15.05	-	
	Sectorwise Total			506.88	75.41	414.71	16.76	4800.20	-303.71	813.23	2115.97	92.17	-	
	Grand total (B)			480.04	78.53	418.59	-17.08	4554.97	-309.17	1357.44	4327.38	267.29	6.18	
	Grand total (A+B)			4024.06	1880.30	1597.98	545.78	36369.48	-524.82	28925.06	71451.15	2631.92	3.68	

³The company is engaged in providing services through Skill on the directions of Government of Karnataka as per the approved schemes from time to time and it is on a non-profit basis. Grants received through various departments are recognized as income and credited to the income and expenditure account to the extent of actual amount of grants spent during the year.

Audit Report (Commercial) for the year ended 31 March 2010

Sl. No.	Sector & Name of the Company	Period of Accounts	Year in which finalised	Net Profit (+)/Loss (-)				Turnover	Impact of Accounts Comments #	Paid up Capital	Accumulated Profit (+)/ Loss (-)	Capital employed @	Return on capital employed \$	Percentage return on capital employed (12)
				Net Profit/ Loss before Interest & Depreciation	Interest	Depreciation	Net Profit/ Loss (x)							
(1)	(2)	(3)	(4)	5 (a)	5 (b)	5 (c)	5 (d)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
C. NON WORKING GOVERNMENT COMPANIES														
AGRICULTURE AND ALLIED SECTOR														
1	KAIC	2009-10	2010-11	0.39	5.39	0.04	-5.04	-	-6.19	55.90	-165.12	-31.34	0.35	-
2	MTC	2009-10	2010-11	0.25	0.58	0.01	-0.34	-	-0.19	0.78	-13.19	-9.55	0.24	-
3	KPL	2009-10	2010-11	0.00	-	-	0.00	-	-	15.16	-20.87	-2.75	0.00	-
4	KSVL	2004-05	2005-06	-0.44	-	0.01	-0.45	-	-	1.00	-8.85	0.26	-0.45	-
5	MMCL	2009-10	2010-11	0.00	-	-	0.00	-	-	0.05	-0.28	-0.22	0.00	-
	Sectorwise Total			0.20	5.97	0.06	-5.83	-	-6.38	72.89	-208.31	-43.60	0.14	
MANUFACTURING SECTOR														
6	KSIMC	2009-10	2010-11	-0.16	--	0.04	-0.20	-	-	1.71	-0.15	2.16	-0.20	-
7	MLW	2009-10	2010-11	1.33	14.92	0.07	-13.66	0.39	-0.50	11.81	-226.08	-102.74	1.26	-
8	VSL	2009-10	2010-11	-	-	-	-	-	-	12.91	-0.01	13.43	-	-
9	MCL	2003-04	2004-05	-0.79	-	-	-0.79	-	-	0.16	-3.12	-0.23	-0.79	-
10	MCT	2009-10	2010-11	0.06	-	-	0.06	-	-	0.76	-9.60	-8.34	0.06	-
11	NGEF	2002-03	2003-04	-157.48	-	-	-157.48	-	-	46.51	-408.85	98.21	-157.48	-
12	KTL	2003-04	2004-05	0.05	-	-	0.05	-	-	3.00	-36.11	-29.23	0.05	-
13	CMTL	2006-07	2007-08	-0.01	-	-	-0.01	-	-	0.63	-7.97	-3.71	-0.01	-
14	KSTL	1998-99	1999-00	-0.88	-	-	-0.88	-	-	0.50	-8.91	4.32	-0.88	-
15	MACCL	2002-03	2003-04	-0.42	-	0.04	-0.46	-	-	12.18	-25.33	0.09	-0.46	-
	Sectorwise Total			-158.30	14.92	0.15	-173.37	0.39	-0.50	90.17	-726.13	-26.04	-158.45	
	TOTAL C (Non working Government companies)			-158.10	20.89	0.21	-179.20	0.39	-6.88	163.06	-934.44	-69.64	-158.31	
	Grand Total (A+B+C)			3865.96	1901.19	1598.19	366.58	36369.87	-531.70	29088.12	-197.93	71381.51	2473.61	3.47

Impact of accounts comments include the net impact of comments of Statutory Auditors and CAG and is denoted by (+) increase in profit/ decrease in losses and (-) decrease in profit/ increase in losses.

@ Capital employed represents net fixed assets (including capital works-in-progress) plus working capital except in case of finance companies/ corporations where the capital employed is worked out as a mean of aggregate of the opening and closing balances of paid up capital, free reserves, bonds, deposits and borrowings (including refinance).

\$ Return on capital employed has been worked out by adding profit and interest charged to profit and loss account.

\$\$ No profit and loss account prepared, only pre-operative expenditure.

£ Excess of expenditure over income capitalised. No profit and loss account prepared.

No turnovers as the companies are engaged in development or social work.

(x) Net profit/loss includes adjustment for prior period income / expenses but excludes appropriations and tax provisions.

Annexure – 3

Statement showing grants and subsidy received / receivable, guarantees received, waiver of dues, loans written off and loans converted into equity during the year and guarantee commitment at the end of March 2010.

(Referred to in paragraph 1.10)

(Figures in column 3 (a) to 6 (d) are Rupees in crore)

Sl. No.	Sector & Name of the Company	Equity/ loans received out of budget during the year		Grants and subsidy received during the year			Guarantees received during the year and commitment at the end of the year [@]		Waiver of dues during the year				
		Equity	Loans	Central Government	State Government	Others	Total	Received	Commitment	Loans repayment written off	Loans converted into equity	Interest/ penal interest waived	Total
(1)	(2)	3 (a)	3 (b)	4 (a)	4 (b)	4 (c)	4 (d)	5 (a)	5 (b)	6 (a)	6 (b)	6 (c)	6 (d)
A. WORKING GOVERNMENT COMPANIES													
AGRICULTURE & ALLIED SECTOR													
1	KSACPL	-	6.72	0.15 (G)			0.15 (G)		-	-	-	-	-
2	KAPPEC	-	-	3.56(G)			3.56(G)		-	-	-	-	-
3	KFDC			11.55 (G)			11.55 (G)						
4	KSAWDCL	-	-	0.01 (G)	3.52 (G)		3.53 (G)		-	-	-	-	-
5	KCDC	-	-	1.75 (G)			1.75 (G)						
6	KSSCL	-	-	4.00 (G)	10.00 (G)		14.00 (G)						
				14.00 (S)	14.00 (S)		14.00 (S)						
7	FKL				6.00 (G)		6.00 (G)		-	-	-	-	-
	Sectorwise Total	-	6.72	21.02 (G)	19.52 (G)		40.54 (G)		-	-	-	-	-
					14.00 (S)		14.00 (S)						
FINANCING SECTOR													
8	KHDCL	-	-	0.28 (PS)	0.28 (PS)		0.56 (PS)		25.06	-	-	-	-
				5.12 (S)	5.12 (S)		5.12 (S)						
9	KSHDCL			0.35 (G)	0.47 (G)		0.82 (G)		0.19				
10	DUBCDCL	12.49	-		58.52 (PS)		58.52 (PS)	20.00	72.96				
11	KSWDC		-		30.26(G)		30.26(G)						
12	BRADCL	6.90	-		86.98 (G)		86.98 (G)	15.00	132.17				
13	KMDC	22.50	-		18.95 (G)		18.95 (G)	-	38.16				
14	KSIIDC	10.90							204.40				
15	KTDCL	0.01	-		21.50 (PS)		21.50 (PS)						
	Sectorwise Total	52.80	-	0.28 (PS)	80.30 (PS)		80.58 (PS)	35.00	472.94				-
				0.35 (G)	136.66 (G)		137.01 (G)						
					5.12 (S)		5.12 (S)						

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Sl. No.	Sector & Name of the Company	Equity/loans received out of budget during the year		Grants and subsidy received during the year			Guarantees received during the year and commitment at the end of the year [@]		Waiver of dues during the year				
		Equity	Loans	Central Government	State Government	Others	Total	Received	Commitment	Loans repayment written off	Loans converted into equity	Interest/penal interest waived	Total
(1)	(2)	3 (a)	3 (b)	4 (a)	4 (b)	4 (c)	4 (d)	5 (a)	5 (b)	6 (a)	6 (b)	6 (c)	6 (d)
INFRASTRUCTURE SECTOR													
16	KRIDL							-	72.16				-
17	KSPHCL	-	-	-	53.96 (G) 40.00 (PS)		53.96 (G) 40.00 (PS)	-	193.92				-
18	RGRHCL		76.00	55.00 (PS)	618.51 (PS)	83.58 (PS)	757.09 (PS)		460.09				-
19	KRDCL	132.40			624.80 (G)		624.80 (G)		390.79				
20	KBINL				838.16 (G)		838.16 (G)		373.29				
21	KNNL	1376.30							498.00				-
22	CNNL	663.70							145.23				-
23	BMRCL	570.00	196.37										-
24	BARL	5.70											-
	Sectorwise Total	2748.10	272.37	55.00 (PS)	658.51 (PS) 1516.92 (G)	83.58 (PS)	797.09 (PS) 1516.92 (G)	-	2133.48				-
MANUFACTURING SECTOR													
25	LIDKAR	3.50	-										
26	KSSIDC				13.25 (G)		13.25 (G)						
27	KEONICS	3.00											
28	KSPDCL			0.37 (G)	1.89 (G)		2.26 (G)						
29	MYSUGAR		67.76						56.76				
30	KSBL	10.00											
	Sectorwise Total	16.50	67.76	0.37 (G)	15.14 (G)	-	15.51 (G)	-	56.76				-
POWER SECTOR													
31	KPC	500.00	-	3.68 (G)			3.68 (G)		322.89				-
32	KPTCL	185.00							46.35				
33	BESCOM	92.00		11.81 (G)	420.24 (S)		11.81 (G) 420.24 (S)		6.25		118.00		-
34	HESCOM	110.01		8.30 (G)	6.08 (G)		14.38 (G)	150.00			219.91		-

Sl. No.	Sector & Name of the Company	Equity/loans received out of budget during the year		Grants and subsidy received during the year			Guarantees received during the year and commitment at the end of the year [@]		Waiver of dues during the year				
		Equity	Loans	Central Government	State Government	Others	Total	Received	Commitment	Loans repayment written off	Loans converted into equity	Interest/penal interest waived	Total
(1)	(2)	3 (a)	3 (b)	4 (a)	4 (b)	4 (c)	4 (d)	5 (a)	5 (b)	6 (a)	6 (b)	6 (c)	6 (d)
35	MESCOM	10.00	0.77	20.30 (PS)	167.86 (S)	-	20.30 (PS) 167.86 (S)			-	22.00	-	22.00
36	CHESC	8.00	-								70.00		70.00
37	GESCOM	105.00	-		0.20 (G) 433.46 (S)		0.20 (G) 433.46 (S)				70.00		70.00
	Sectorwise Total	1010.01	0.77	20.30 (PS) 23.79 (G)	1021.56 (S) 6.28 (G)	-	20.30 (PS) 1021.56 (S) 30.07 (G)	150.00	375.49		499.91	-	499.91
SERVICE SECTOR													
38	KSTDC	-	-	1.78 (G)	7.49 (G)		9.27 (G)	-	-	-	-	-	-
	Sectorwise Total			1.78 (G)	7.49 (G)		9.27 (G)						
MISCELLANEOUS SECTOR													
39	KVTSDDL	0.03			29.12 (G)		29.12 (G)						
40	KPLCL				5.00 (G) 0.78 (PGS)		5.00 (G) 0.78 (PGS)						
	Sectorwise Total	0.03			34.12 (G) 0.78 (PGS)		34.12 (G) 0.78 (PGS)						
	TOTAL A (All sectorwise Government companies)	3827.44	347.62	75.58 (PS) 47.31 (G)	738.81 (PS) 1040.68 (S) 1736.13 (G) 0.78 (PGS)	83.58 (PS)	897.97 (PS) 1040.68 (S) 1783.44 (G) 0.78 (PGS)	185.00	3038.67	-	499.91	-	499.91
B. WORKING STATUTORY CORPORATIONS													
1	KSWC			13.00 (G)			13.00 (G)						
	Sectorwise Total			13.00 (G)			13.00 (G)						
FINANCING SECTOR													
2	KSFC	118.35						77.00	577.21				
	Sectorwise Total	118.35	-	-	-	-	-	77.00	577.21				
SERVICES SECTOR													
3	KSRTC			59.94 (G)	77.80 (S)	-	59.94 (G) 77.80 (S)						

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SL No.	Sector & Name of the Company	Equity/ loans received out of budget during the year		Grants and subsidy received during the year			Guarantees received during the year and commitment at the end of the year [©]		Waiver of dues during the year				
		Equity	Loans	Central Government	State Government	Others	Total	Received	Commitment	Loans repayment written off	Loans converted into equity	Interest/ penal interest waived	Total
(1)	(2)	3 (a)	3 (b)	4 (a)	4 (b)	4 (c)	4 (d)	5 (a)	5 (b)	6 (a)	6 (b)	6 (c)	6 (d)
4	BMTC			43.76 (G)	36.39 (G) 42.27 (S)		80.15 (G) 42.27 (S)						
5	NWKRTC	26.01			1.00 (G) 45.87 (S)		1.00 (G) 45.87 (S)						
6	NEKRTC	54.98	-	0.04 (G)	18.41 (S)		0.04 (G) 18.41 (S)						
	Sectorwise Total	80.99	-	103.74 (G)	184.35 (S) 37.39 (G)	-	184.35 (S) 141.13 (G)						
	TOTAL B (all sectorwise Statutory corporations)	199.34	-	116.74 (G)	184.35 (S) 37.39 (G)	-	184.35 (S) 154.13 (G)	77.00	577.21				
	Grand total (A + B)	4026.78	347.62	75.58 (PS) 164.05 (G)	738.81 (PS) 1225.03 (S) 1773.52 (G) 0.78 (PGS)	83.58 (PS)	897.97 (PS) 1225.03 (S) 1937.57 (G) 0.78 (PGS)	262.00	3615.88	-	499.91	-	499.91
C. NON WORKING GOVERNMENT COMPANIES													
MANUFACTURING SECTOR													
1	MLW		1.07										
	Sector wise Total	-	1.07	-	-	-	-	-	-	-	-	-	-
	TOTAL C (all sector wise non-working companies)	-	1.07	-	-	-	-	-	-	-	-	-	-
	TOTAL (A+B+C)	4026.78	348.69	75.58(PS) 164.05 (G)	738.81(PS) 1225.03 (S) 1773.52 (G) 0.78 (PGS)	83.58 (PS)	897.97 (PS) 1225.03 (S) 1937.57(G) 0.78 (PGS)	262.00	3615.88	-	499.91	-	499.91

[©] Figures indicate total guarantees outstanding at the end of the year.
 Note: Figures are provisional and as furnished by the companies in respect of companies that have not finalised their accounts for 2009-10.
 G = Grants, S = Subsidy, PS = Project Subsidy, PGS = Programme Subsidy.

Annexure – 4
Statement showing the investments made by the State Government in PSUs whose accounts are in arrears at the end of March 2010.
(Referred to in paragraph 1.25)

Sl. No.	Name of PSU	Year up to which accounts finalised	Paid up capital as per latest finalised accounts	Year	Investment made by the State Government during the years for which accounts are in arrears				Subsidy
					Equity	Loans	Grants	Project subsidy	
A. WORKING GOVERNMENT COMPANIES									
1	KSADWCL	2008-09	6.05	2009-10	-	-	3.52	-	-
2	KSSCL	2008-09	3.70	2009-10	-	-	10.00	-	14.00
3	KTDC	First Accounts not yet finalized	-	2009-10	0.01	-	-	21.50	-
4	CHESC	2008-09	79.30	2009-10	8.00	-	-	-	-
5	GESCOM	2008-09	130.14	2009-10	105.00	-	0.20	-	433.46
6	KSTDC	2008-09	6.41	2009-10	-	-	7.49	-	-
B. WORKING STATUTORY CORPORATIONS									
1	KSFC	2008-09	534.06	2009-10	118.35	-	-	-	-
2	NEKRTC	2008-09	149.25	2009-10	54.98	-	-	-	18.41
	Total		908.90		286.34	-	21.21	21.50	465.87

Annexure – 5
Statement showing financial position of statutory corporations.
(Referred to in paragraph 1.15)

Working Statutory corporations

1. Bangalore Metropolitan Transport Corporation, Bangalore

(Rupees in crore)

Particulars	2007-08	2008-09	2009-10 (Provisional)
A. Liabilities			
Paid up Capital	173.53	157.71	157.71
Reserve and Surplus (including Capital Grants but excluding Depreciation Reserve)	637.40	735.03	806.82
Borrowings (Loan Funds)	14.45	49.66	276.43
Current Liabilities and Provisions	73.51	160.94	243.80
Total	898.89	1103.34	1484.76
B. Assets			
Gross Block	699.93	1071.40	1305.66
Less: Depreciation	287.46	359.43	419.63
Net Fixed Assets	412.47	711.97	886.03
Capital works-in-progress (including cost of chassis)	161.07	243.20	451.81
Investments	194.02	20.02	14.20
Current Assets, Loans and Advances	131.33	128.15	132.72
Accumulated losses	0.00	0.00	0.00
Total	898.89	1103.34	1484.76
Capital Employed	631.22	922.38	1226.71

Annexure – 5
Statement showing financial position of Statutory corporations.
(Referred to in paragraph 1.15)

2. Karnataka State Road Transport Corporation, Bangalore

(Rupees in crore)

Particulars	2007-08	2008-09	2009-10 (Provisional)
A. Liabilities			
Paid up Capital	268.39	311.07	291.89
Reserve and Surplus (including Capital Grants but excluding Depreciation Reserve)	41.91	44.83	95.48
Borrowings (Loan Funds)	314.29	313.65	274.75
Current Liabilities and Provisions	277.65	282.25	262.28
Total	902.24	951.80	924.40
B. Assets			
Gross Block	1138.12	1262.59	1340.28
Less: Depreciation	563.52	640.40	732.79
Net Fixed Assets	574.60	622.19	607.49
Capital works-in-progress (including cost of chassis)	68.47	68.48	142.72
Investments	8.05	0.05	0.05
Current Assets, Loans and Advances	125.66	193.33	155.23
Accumulated losses	125.46	67.75	18.91
Total	902.24	951.80	924.40
Capital Employed	490.18	598.16	638.93

Annexure – 5
Statement showing financial position of Statutory corporations.
(Referred to in paragraph 1.15)

3. North Western Karnataka Road Transport Corporation, Hubli
(Rupees in crore)

Particulars	2007-08	2008-09	2009-10 (Provisional)
A. Liabilities			
Paid up Capital	150.63	214.38	212.78
Reserve and Surplus (including Capital Grants but excluding Depreciation Reserve)	32.78	40.52	44.12
Borrowings (Loan Funds)	316.75	314.36	317.79
Current Liabilities and Provisions	215.59	214.77	204.93
Total	715.75	784.03	779.62
B. Assets			
Gross Block	635.82	648.85	593.90
Less: Depreciation	306.65	348.49	327.62
Net Fixed Assets	329.17	300.36	266.28
Capital works-in-progress (including cost of chassis)	11.77	14.29	17.44
Investments	0.00	0.00	0.00
Current Assets, Loans and Advances	109.86	135.87	170.79
Accumulated losses	264.95	333.51	325.11
Total	715.75	784.03	779.62
Capital Employed	236.18	233.81	249.58

Annexure – 5
Statement showing financial position of Statutory corporations.
(Referred to in paragraph 1.15)

4. North Eastern Karnataka Road Transport Corporation, Gulbarga
(Rupees in crore)

Particulars	2007-08	2008-09	2009-10 (Provisional)
A. Liabilities			
Paid up Capital	133.50	149.25	204.23
Reserve and Surplus (including Capital Grants but excluding Depreciation Reserve)	31.47	34.24	43.07
Borrowings (Loan Funds)	109.27	128.77	187.36
Current Liabilities and Provisions	246.30	273.87	348.48
Total	520.54	586.13	783.14
B. Assets			
Gross Block	321.45	403.93	590.64
Less: Depreciation	166.88	203.40	306.06
Net Fixed Assets	154.57	200.53	284.58
Capital works-in-progress (including cost of chassis)	30.83	29.17	34.70
Investments	0.05	0.05	0.05
Current Assets, Loans and Advances	70.75	63.39	70.74
Accumulated losses	264.34	292.99	393.07
Total	520.54	586.13	783.14
Capital Employed	9.05	19.22	41.54

Annexure – 5
Statement showing financial position of Statutory corporations.
(Referred to in paragraph 1.15)

5. Karnataka State Financial Corporation, Bangalore

(Rupees in crore)

Sl. No.	Particulars	2007-08	2008-09	2009-10 (Provisional)
A.	Liabilities			
	Paid up capital	97.85	123.05	509.06
	Share application money	176.83	401.83	143.34
	Reserve fund and other reserves and surplus	56.41	55.67	54.93
	Borrowings			
	i) Bonds and Debentures	654.71	683.31	696.39
	ii) Fixed Deposits	27.93	24.45	38.59
	iii) Industrial Development Bank of India & Small Industries Development Bank of India	856.94	891.56	911.87
	iv) Loan towards Share Capital- Industrial Development Bank of India	9.18	9.18	-
	v) Others (including State Government)	92.33	73.95	19.01
	Other liabilities and provisions	481.98	380.44	430.29
	Total	2454.16	2643.44	2803.48
B.	Assets			
	Cash and Bank balances	233.62	64.98	69.79
	Investments	200.45	354.63	529.96
	Loans and Advances	1354.65	1402.18	1442.24
	Net fixed Assets	61.55	60.94	60.12
	Other assets	65.14	182.12	125.75
	Miscellaneous expenditure	538.75	578.59	575.62
	Total	2454.16	2643.44	2803.48
C.	Capital Employed*	1886.06	2061.77	2262.80

* Capital employed represents the mean of the aggregate of opening and closing balances of paid-up capital, loans in lieu of capital, seed money, debentures, reserves (other than those which have been funded specifically and backed by investments outside), bonds, deposits and borrowings (including refinance).

Annexure – 5
Statement showing financial position of Statutory corporations.
(Referred to in paragraph 1.15)

6. Karnataka State Warehousing Corporation, Bangalore

(Rupees in crore)

Sl. No.	Particulars	2007-08	2008-09	2009-10 (Provisional)
A.	Liabilities			
	Paid-up capital	10.15	10.15	10.65
	Reserves and Surplus	44.75	44.61	54.62
	Borrowings (Government)	18.41	18.41	18.41
	(Others)	50.89	65.31	174.02
	Trade dues and Current liabilities (including provisions)	38.69	53.40	88.42
	Total	162.89	191.88	346.12
B.	Assets			
	Gross block	119.28	142.22	153.66
	Less: Depreciation	14.61	16.44	18.97
	Net fixed assets	104.67	125.78	134.69
	Capital work-in-progress	6.58	3.90	11.37
	Investment	0.00	0.00	0.00
	Current assets, loans and advances	51.64	62.20	200.06
	Total	162.89	191.88	346.12
C.	Capital employed**	124.20	138.48	257.70

**Capital employed represents net fixed assets, (including capital work-in-progress) plus working capital.

Annexure – 6
Statement showing working results of Statutory corporations.
(Referred to in paragraph 1.15)

1. Bangalore Metropolitan Transport Corporation, Bangalore

(Rupees in crore)				
Sl. No.	Description	2007-08	2008-09	2009-10 (Provisional)
1	Total Revenue	939.80	1000.63	1129.62
2	Operating revenue ¹	853.72	909.15	1012.29
3	Total Expenditure	799.58	945.45	1065.20
4	Operating Expenditure ²	782.85	929.82	1047.95
5	Operating Profit/Loss	70.87	-20.67	-35.66
6	Profit for the year	140.22	55.18	65.13^Σ
7	Accumulated profit	560.02	587.55	625.21
8	Fixed costs			
	Personnel Costs	282.28	325.05	357.08
	Depreciation	67.57	97.66	103.41
	Interest	0.45	0.67	1.39
	Other Fixed Costs	37.90	27.42	26.99
	Total Fixed Costs	388.20	450.80	488.87
9	Variable Costs			
	Fuel & Lubricants	295.41	365.36	417.36
	Tyres & Tubes	16.70	21.37	16.97
	Other Items/ spares	33.39	47.28	35.39
	Taxes (MV Tax, Passenger Tax, etc.)	44.31	50.28	56.23
	Other Variable Costs	21.57	10.36	50.38
	Total Variable Costs	411.38	494.65	576.33
10	Effective KMs operated (in lakh)	3,766.85	4,062.43	4,383.16
11	Earnings per KM (₹)(1/10)	24.95	24.63	25.77
12	Fixed Cost per KM (₹) (8/10)	10.31	11.10	11.15
13	Variable Cost per KM (₹) (9/10)	10.92	12.18	13.15
14	Cost per KM (₹) (12+13)	21.23	23.28	24.30
15	Net Earnings per KM (₹) (11-14)	3.72	1.35	1.47
16	Traffic Revenue ³ (₹ in crore)	801.49	907.50	1,012.29
17	Traffic Revenue per KM (₹) (16/10)	21.28	22.34	23.09
18	Return on capital employed	140.69	55.85	66.52
19	Percentage on capital employed	22.29	6.06	5.42

¹ operating revenue includes traffic earnings, passes and season tickets, re-imburement against concessional passes, fare realised from private operators under 'KM Scheme', etc.

² operating expenditure include expenses relating to traffic, depreciation on fleet, repair and maintenance, electricity, welfare and remuneration, licences and taxes and general administration expenses.

^Σ after net prior period (credits) of ₹ 0.71 crore.

³ traffic revenue represents sale of tickets, advance booking, reservation charges and contract services earnings.

Annexure – 6
Statement showing working results of Statutory corporations.
(Referred to in paragraph 1.15)

2. Karnataka State Road Transport Corporation, Bangalore

(Rupees in crore)				
Sl. No	Description	2007-08	2008-09	2009-10 (Provisional)
1	Total Revenue	1448.11	1639.35	1746.36
2	Operating Revenue ¹	1401.91	1500.26	1592.86
3	Total Expenditure	1407.57	1581.64	1697.51
4	Operating Expenditure ²	1341.51	1513.75	1628.52
5	Operating Profit/Loss	60.40	-13.49	-35.66
6	Profit / Loss for the year	40.54	57.71	48.85
7	Accumulated profit/Loss	-125.46	-67.75	-18.91
8	Fixed costs			
	Personnel Costs	405.68	427.09	493.85
	Depreciation	142.21	161.50	176.82
	Interest	24.99	31.66	25.13
	Other Fixed Costs	85.40	76.62	80.69
	Total Fixed Costs	658.28	696.87	776.49
9	Variable Costs			
	Fuel & Lubricants	541.70	647.13	671.57
	Tyres & Tubes	54.00	63.38	66.09
	Other Items/ spares	52.33	84.54	99.70
	Taxes (MV Tax, Passenger Tax, etc.)	101.26	89.74	83.66
	Other Variable Costs	0.00	0.00	0.00
	Total Variable Costs	749.29	884.79	921.02
10	Effective KMs operated (in lakh) (Own + hired)	7598.07	8104.27	8428.26
11	Earnings per KM (₹)(1/10)	19.06	20.23	20.72
12	Fixed Cost per Km (₹) (8/10)	8.66	8.60	9.21
13	Variable Cost per KM (₹) (9/10)	9.86	10.92	10.93
14	Cost per KM (₹) (3/10)	18.52	19.52	20.14
15	Net Earnings per KM (₹)(11-14)	0.54	0.71	0.58
16	Traffic Revenue (₹ in crore)	1320.09	1429.53	1515.06
17	Traffic Revenue per km (₹) (16/10)	17.37	17.64	17.98
18	Return on capital employed	65.63	89.37	73.98
19	Percentage on capital employed	13.37	14.94	11.58

¹ operating revenue includes traffic earnings, passes and season tickets, re-imburement against concessional passes, fare realised from private operators under 'KM Scheme', etc.

² operating expenditure include expenses relating to traffic, repair and maintenance, electricity, welfare and remuneration, licences and taxes, general administration expenses and depreciation on fleet.

Annexure – 6
Statement showing working results of Statutory corporations.
(Referred to in paragraph 1.15)

3. North Western Karnataka Road Transport Corporation, Hubli

(Rupees in crore)

Sl. No	Description	2007-08	2008-09	2009-10 (Provisional)
1	Total Revenue	907.25	994.94	961.46
2	Operating Revenue ¹	871.48	922.97	847.40
3	Total Expenditure	974.31	1063.51	1019.28
4	Operating Expenditure ²	910.64	1006.39	968.38
5	Operating Profit/Loss	-39.16	-83.42	-120.98
6	Profit/Loss for the year	-67.06	-68.57	-57.82
7	Accumulated profit/Loss	-264.95	-333.51	-325.11
8	Fixed costs			
	Personnel Costs	286.25	326.63	339.59
	Depreciation	64.15	81.88	88.34
	Interest	28.48	35.29	31.70
	Other Fixed Costs	0.00	0.00	0.00
	Total Fixed Costs	378.88	443.80	459.63
9	Variable Costs			
	Fuel & Lubricants	375.96	427.93	389.52
	Tyres & Tubes	43.52	41.62	37.88
	Other Items/ spares	122.19	106.23	89.07
	Taxes (MV Tax, Passenger Tax, etc.)	53.76	43.93	43.18
	Other Variable Costs	0.00	0.00	0.00
	Total Variable Costs	595.43	619.71	559.65
10	Effective KMs operated (in lakh) (Own + hired)	5457.23	5541.02	5241.34
11	Earnings per KM (₹) (1/10)	16.62	17.96	18.34
12	Fixed Cost per Km (₹) (8/10)	6.94	8.01	8.77
13	Variable Cost per KM (₹) (9/10)	10.91	11.18	10.68
14	Cost per KM (₹) (3/10)	17.85	19.19	19.45
15	Net Earnings per KM (₹) (11-14)	-1.23	-1.23	-1.11
16	Traffic Revenue (₹ in crore)	791.33	863.15	828.14
17	Traffic Revenue per km (₹) (16/10)	14.50	15.58	15.80
18	Return on capital employed	-38.59	-33.28	-26.12
19	Percentage on capital employed	-	-	-

¹ operating revenue includes traffic earnings, passes and season tickets, re-imburement against concessional passes, fare realised from private operators under 'KM Scheme', etc.

² operating expenditure include expenses relating to traffic, repair and maintenance, electricity, welfare and remuneration, licences and taxes, general administration expenses and depreciation on fleet.

Annexure – 6
Statement showing working results of Statutory corporations
(Referred to in paragraph 1.15)

4. North Eastern Karnataka Road Transport Corporation, Gulbarga
(Rupees in crore)

SL. No	Description	2007-08	2008-09	2009-10 (Provisional)
1	Total Revenue	507.38	561.07	663.35
2	Operating Revenue ¹	492.85	523.29	618.90
3	Total Expenditure	523.34	589.72	697.20
4	Operating Expenditure ²	502.38	564.13	670.15
5	Operating Profit/Loss	-9.53	-40.84	-51.25
6	Profit/Loss for the year	-15.96	-28.65	-33.85
7	Accumulated profit/Loss	-264.34	-292.99	-393.07
8	Fixed costs			
	Personnel Costs	157.64	172.91	221.79
	Depreciation	35.00	52.60	69.33
	Interest	9.27	13.60	14.00
	Other Fixed Costs	23.24	24.79	27.05
	Total Fixed Costs	225.15	263.90	332.17
9	Variable Costs			
	Fuel & Lubricants	171.79	232.56	276.23
	Tyres & Tubes	19.42	23.34	28.06
	Other Items/ spares	13.79	16.72	20.78
	Taxes (MV Tax, Passenger Tax, etc.)	34.82	30.93	32.51
	Other Variable Costs	58.37	22.27	7.45
	Total Variable Costs	298.19	325.82	365.03
10	Effective KMs operated (in lakh) (own + hired)	3056.48	3297.27	3836.30
11	Earnings <i>per</i> KM (₹) (1/10)	16.60	17.02	17.29
12	Fixed Cost <i>per</i> Km (₹) (8/10)	7.37	8.00	8.66
13	Variable Cost <i>per</i> KM (₹) (9/10)	9.76	9.88	9.52
14	Cost <i>per</i> KM (₹) (3/10)	17.13	17.88	18.17
15	Net Earnings <i>per</i> KM (₹) (11-14)	-0.53	-0.86	-0.88
16	Traffic Revenue (₹ in crore)	465.80	512.25	600.49
17	Traffic Revenue <i>per</i> km (₹) (16/10)	15.24	15.54	15.65
18	Return on capital employed	-6.77	-15.05	-19.85
19	Percentage on capital employed	-	-	-

¹ operating revenue includes traffic earnings, passes and season tickets, re-imburement against concessional passes, fare realised from private operators under 'KM Scheme', etc.

² operating expenditure include expenses relating to traffic, repair and maintenance, electricity, welfare and remuneration, licences and taxes, general administration expenses and depreciation on fleet.

Annexure – 6
Statement showing working results of Statutory corporations
(Referred to in paragraph 1.15)

5. Karnataka State Financial Corporation, Bangalore

(Rupees in crore)

Sl. No.	Particulars	2007-08	2008-09	2009-10 (Provisional)
1	Income			
	a) Interest on Loans	189.84	172.17	182.14
	b) Other Income	20.07	54.87	26.86
	Total (1)	209.91	227.04	209.00
2	Expenses			
	a) Interest on long term and short term loans	135.92	162.83	137.06
	b) Other Expenses	65.99	60.37	68.92
	c) Provision for non performing assets	(55.29)	43.01	0.00
	Total (2)	146.62	266.21	205.98
3	Profit (+) / Loss (-) before tax (1-2)	63.29	-39.17	3.02
4	Total return on Capital Employed	199.21	166.67	140.08
5	Percentage of return on Capital employed	10.56	8.08	6.19

Annexure – 6
Statement showing working results of Statutory corporations
(Referred to in paragraph 1.15)

6. Karnataka State Warehousing Corporation, Bangalore

(Rupees in crore)

Sl. No.	Particulars	2007-08	2008-09	2009-10 (Provisional)
	Income:			
1	a) Warehousing charges	25.29	26.99	25.20
	b) Other income	6.19	3.30	21.30
	Total (1)	31.48	30.29	46.50
	Expenses:			
2	a) Establishment charges	8.82	8.90	10.46
	b) Other expenses	14.08	16.06	19.25
	Total (2)	22.90	24.96	29.71
3	Profit before tax	8.58	5.33	16.79
4	Provision for tax	2.29	1.94	5.05
5	Amount available for dividend	6.29	3.39	11.74
6	Dividend for the year	0.57	0.68	1.48
7	Total return on Capital employed	8.40	8.45	20.55
8	Percentage of return on Capital employed	6.76	5.65	7.97

Annexure – 7

Statement showing major comments made by the Statutory Auditors on possible improvement in the internal audit / internal control system.

(Referred to in paragraph 1.35)

PSU	Year	Comments
Karnataka State Tourism Development Corporation Limited	2008-09	The Company had not formed an Audit Committee as required under section 292A of the Companies Act, 1956.
		The Company had not maintained fixed assets register and proper records of inventory.
		The work of internal auditors was not commensurate with the size of the activities of the company.
Karnataka Scheduled Tribes Development Corporation Limited	2008-09	Considering the nature of business, volume of transactions and location of its branches, it was necessary to devise an effective internal audit department.
Karnataka Rural Infrastructure Development Limited	2008-09	The Internal Audit system was not adequate and was not commensurate with the size of the company.
D Devaraj Urs Backward Classes Development Corporation Limited	2008-09	The Company had not formed an Audit Committee as required under section 292A of the Companies Act, 1956.
		Documentation, monitoring and utilization of funds were to be strengthened.
Karnataka State Seeds Corporation Limited	2008-09	The Internal Audit system was not commensurate with the size of the company and nature of its business.
Karnataka Togari Abhivrudhi Mandali Limited	2008-09	Verification of fixed assets was not carried out regularly.
		Accounts were maintained through computer in 'Tally' software. There were no controls over modification of accounting records and there was risk of unauthorized alteration of accounting records.
Karnataka Compost Development Corporation Limited	2008-09	The company had no proper security policy of software and hardware.
Karnataka State Forest Industries Corporation Limited	2008-09	The scope and coverage of internal audit needed to be suitably enlarged having regard to the nature of business and activities carried on by the company.
Karnataka State Small Industries Development Corporation Limited	2008-09	Frequency of Audit Committee Meetings should be increased and there should be adequate interaction with Internal and Statutory Auditors.
		The reporting system, scope and compliance mechanism of internal audit was inadequate.
Karnataka Renewable Energy Development Limited	2008-09	Irregularities reported by the Internal Auditors needed to be rectified in a time-bound manner.
Karnataka Sheep and Wool Development Corporation Limited	2008-09	Fixed Assets Register was not maintained.
		Scope of internal audit and frequency of reporting was to be widened.
Karnataka Silk Industries Corporation Limited	2008-09	The internal audit system was not adequate and commensurate with the size of the company. Further, internal audit had not been conducted for the period 1 August 2008 to 31 March 2009 in respect of Chennai, Hyderabad and Trivandrum showrooms.

PSU	Year	Comments
Karnataka Vidyut Kharkhane Limited	2008-09	The scope of internal audit needed to be increased in areas pertaining to raw materials and inventory.
Karnataka State Construction Corporation Limited	2008-09	The company did not have an internal audit system.
Karnataka Forest Development Corporation Limited	2008-09	The Audit Committee was not functioning.
Hubli Electricity Supply Company Limited	2008-09	The entire system of internal audit needs to be overhauled, to ensure that there is an effective internal audit of all the departments.
Bangalore Electricity Supply Company Limited	2008-09	The Company has set up its own internal audit staff who are not having any professional qualification, for pre-auditing the day-to-day transactions. The internal audit, in general, is not commensurate with the size of the company.
Chamundeshwari Electricity Supply Corporation Limited	2008-09	Internal Financial Control/Internal Audit System is very weak and needs to be strengthened. It may be examined for entrusting it to external agencies of Chartered Accountants/Firms.
Gulbarga Electricity Supply Company Limited	2008-09	Though Audit Committee was formed, it was not meeting periodically. During the financial year 2008-09, not even a single audit committee meeting was held.
Dr. B R Ambedkar Development Corporation Limited	2009-10	The internal control measures are not adequate with regard to receipts and expenditure, particularly at District Offices.
Karnataka Soaps and Detergents Limited	2009-10	Major sales were booked in the month of March, showing huge cheques in transit and cash at bank. This system is to be changed to book sales on delivery basis.
Karnataka State Women's Development Corporation	2009-10	Adequate financial records are not made available to review the financial controls at field level. There is much scope to improve the system and maintenance of accounts and house keeping.
The Karnataka Minorities Development Corporation Limited	2009-10	Security measures need to be implemented for protection of software/hardware. Backups should also be maintained in another safe place apart from the office.
Marketing Consultants and Agencies Limited	2009-10	Terms and conditions mentioned in the invoices are not uniform with respect to service and sales. In respect of media billing, due dates are mentioned along with levying interest on overdue interest. There is continuing failure in the system of charging interest on over due amounts.
Karnataka State Industrial Investment and Development Corporation Limited	2009-10	The scope and coverage of Internal Audit needs to be enhanced so as to cover verification of financial statements prepared at the end of the year, periodic review of Non-Performing Assets and monitoring the same and review of periodical financial results.

Audit Report (Commercial) for the year ended 31 March 2010

PSU	Year	Comments
The Mysore Electrical Industries Limited	2009-10	The Company is having Fixed Asset Register and the same is yet to be updated with regard to quantitative details and situation of assets.
Karnataka Compost Development Corporation Limited	2009-10	The Company does not have an internal audit system commensurate with its size and nature of business.
Karnataka Handloom Development Corporation Limited	2009-10	Internal Audit Reports are submitted after the year end and in respect of some units, such reports were not received even after completion of statutory audit. Such reports serve no purpose and no corrective action can be taken during the year. Frequency of report needs to be made at least quarterly and all major points should be put up to Audit Committee. It is also recommended to enlarge the scope and coverage of the internal audit and improve the compliance mechanism.
Karnataka State Small Industries Development Corporation Limited	2009-10	The scope and extent of Internal Audit needs to be enlarged having regard to the complexity and diversified operations of the Company. The frequency of coverage has to be increased. Follow-up action by the management needs to be strengthened as no compliance reports on the internal audit reports from the branches were available.
Karnataka Road Development Corporation Limited	2009-10	The Audit Committee has not reviewed and discussed with the management, internal auditors and external auditors, the adequacy and effectiveness of the accounting and financial controls, including the company's financial and risk management policies.
Jungle Lodges and Resorts Limited	2009-10	The Company needs to strengthen the recovery process in respect of agents and regular customers, reconcile the old outstanding balances in debtors and walk-in-customers' accounts and also review credit limits to agents periodically.
Sree Kanteerava Studios Limited	2009-10	Journal entries are being passed directly in the system and details of such entries and workings are not available as rectification entries are being passed by internal auditors.

Annexure – 8

List of projects taken up by the Karnataka Power Corporation Limited during the period from 2002-03 to 2009-10.

(Referred to in paragraph 2.1.5)

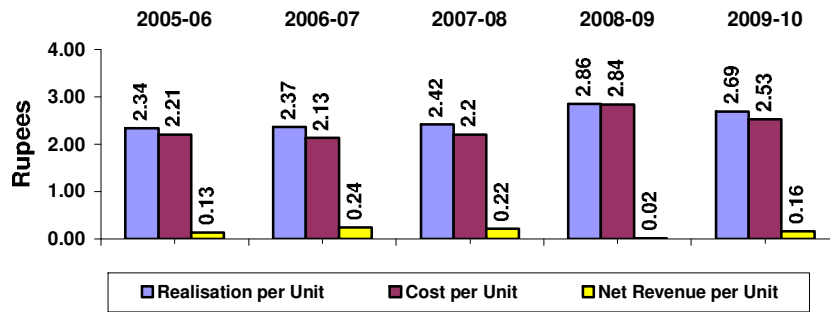
Sl. No.	Project	Capacity addition (MW)	Remarks
1	Raichur Thermal Power Station Unit 7	210	Project completed.
2	Bidadi Combined Cycle Plant	350	Project yet to commence.
3	Almatti Dam Power House	290	Project completed.
4	Upgrading of Nagjhari Powerhouse	45	Project was completed only to the extent of 15 MW, which was selected for review.
5	Bellary Thermal Power Station Unit 1	500	Project completed. Selected for review.
6	Varahi Underground Power House Stage 2 (Units 3 and 4)	230	Project completed. Selected for review.
7	Bellary Thermal Power Station Unit 2	500	Project in progress.
8	Raichur Thermal Power Station Unit 8	250	Project in progress.
9	Gundia hydro project	400	Project not taken up.
10	Upgrading of Sharavathy Generating station	65	Project not taken up.
11	Kappadagudda Wind Farm	2.50	Project completed.
12	Solar Photo-voltaic Plant	9	Project was completed to the extent of 6 MW.
		2,851.50	

Annexure 9

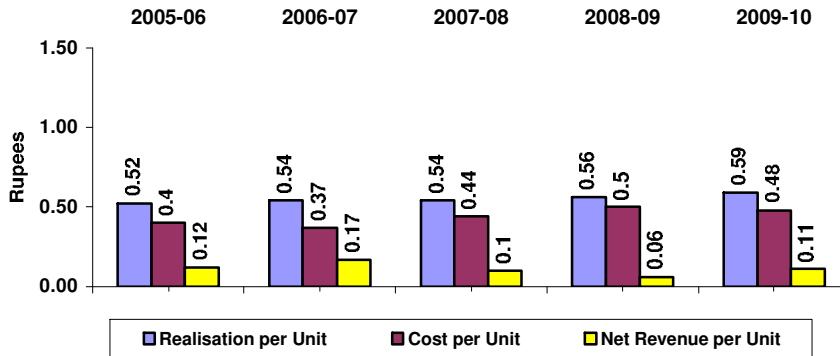
Realisation, Fixed Cost, Variable Cost, Total Cost, Contribution and Profit / Loss per unit of different sources of energy for the last five¹ years in Karnataka Power Corporation Limited.

(Referred to in paragraphs 2.1.16, 2.1.22)

		2005-06	2006-07	2007-08	2008-09 ²	2009-10 ²
Thermal ³	Realisation (₹)	2.34	2.37	2.42	2.86	2.69
	Variable Cost (₹)	1.59	1.63	1.65	2.06	1.87
	Fixed Cost (₹)	0.62	0.50	0.55	0.78	0.66
	Total Cost (₹)	2.21	2.13	2.20	2.84	2.53
	Contribution (₹)	0.75	0.74	0.77	0.80	0.82
	Profit (₹)	0.13	0.24	0.22	0.02	0.16



		2005-06	2006-07	2007-08	2008-09	2009-10
Hydro ⁴	Realisation (₹)	0.52	0.54	0.54	0.56	0.59
	Variable Cost	0.04	0.04	0.04	0.04	0.05
	Fixed Cost (₹)	0.36	0.33	0.40	0.46	0.43
	Total Cost (₹)	0.40	0.37	0.44	0.50	0.48
	Contribution (₹)	0.48	0.50	0.50	0.52	0.54
	Profit (₹)	0.12	0.17	0.10	0.06	0.11



¹ Source: Cost Audit reports.

² weighted average realisation per unit.

³ bars up to 2007-08 depict information pertaining to RTPS only whereas bars of 2008-09 and 2009-10 pertains to both RTPS and BTPS.

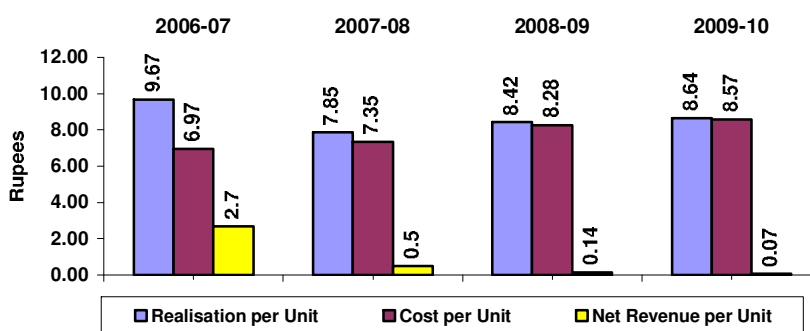
⁴ Weighted average basis is considered for arriving at realization per unit during 2005-10 (excludes mini hydro stations).

Annexure 9

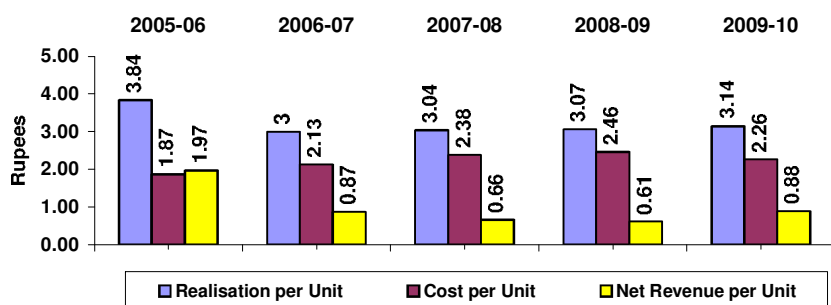
Realisation, Fixed Cost, Variable Cost, Total Cost, Contribution and Profit / Loss per unit of different sources of energy for the last five⁵ years in Karnataka Power Corporation Limited.

(Referred to in paragraphs 2.1.16, 2.1.22)

Diesel		Amalgamated with the Company only during 2006-07	2006-07	2007-08	2008-09	2009-10
			Realisation (₹)	9.67	7.85	8.42
Variable Cost (₹)	5.43	6.46	7.73	8.19		
Fixed Cost (₹)	1.54	0.89	0.55	0.38		
Total Cost (₹)	6.97	7.35	8.28	8.57		
Contribution (₹)	4.24	1.39	0.69	0.45		
Profit (₹)	2.70	0.50	0.14	0.07		



Wind		2005-06	2006-07	2007-08	2008-09	2009-10
		Realisation (₹)	3.84	3.00	3.04	3.07
Variable Cost (₹)	0.00	0.00	0.00	0.00	0.00	
Fixed Cost (₹)	1.87	2.13	2.38	2.46	2.26	
Total Cost (₹)	1.87	2.13	2.38	2.46	2.26	
Contribution (₹)	3.84	3.00	3.04	3.07	3.14	
Profit (₹)	1.97	0.87	0.66	0.61	0.88	



⁵ Source: Cost Audit reports.

Annexure 10

Statement showing operational performance of the Karnataka Power Corporation Limited for five years ending March 2010.

(Referred to in paragraph 2.1.24)

Sl. No.	Particulars	2005-06	2006-07	2007-08	2008-09	2009-10
1	Installed Capacity	(in MW)				
2	Thermal	1,470.00	1,470.00	1,970.00	1,970.00	1,970.00
3	Hydro	3,165.95	3,392.36	3,407.36	3,637.35	3,637.35
4	Gas	-	-	-	-	-
5	Others (Wind Farm and Diesel Generating Plant, Solar Photo-voltaic Plant)	4.56	132.47	132.47	132.48	138.48
	TOTAL	4,640.51	4,994.83	5,509.83	5,739.83	5,745.83
6	Normal maximum demand	5,949	6,401	6,732	7,051	8,094
7	Percentage increase/decrease(-) over previous year	(-) 0.37	7.60	5.17	4.74	14.79
	Power generated	(in MU)				
8	Thermal	9,164.73	11,483.43	10,875.82	11,717.45	13,262.93
9	Hydro	10,709.12	14,997.53	14,509.12	12,897.78	12,249.09
10	Gas	-	-	-	-	-
11	Others - Wind Farm, DG Plant and Solar Photo-voltaic Plant	15.09	154.48	228.22	465.07	508.17
	TOTAL	19,888.94	26,635.44	25,613.16	25,080.30	26,020.19
12	Percentage increase/decrease(-) over previous year	4.72	33.92	-3.84	-2.08	3.75
	Less: Auxiliary consumption (including transformation losses)					
13	Thermal	790.65	943.55	905.66	1003.43	1072.88
14	(Percentage)	8.63	8.22	8.33	8.56	8.09
15	Hydro	128.52	214.95	236.21	216.05	190.30
16	(Percentage in respect of major stations)	1.20	1.43	1.63	1.68	1.55
17	Others - Wind Farm, DG Plant and Solar Photo-voltaic Plant	0.44	5.34	7.88	15.72	19.79
18	(Percentage)	2.92	3.46	3.45	3.38	3.89
	Total Auxiliary consumption and Transformation Loss	919.61	1,163.84	1,149.75	1,235.20	1,282.96
19	(Percentage)	4.62	4.37	4.49	4.92	4.93
20	Net power generated	18,969.33	25,471.60	24,463.41	23,845.10	24,737.23
21	Gross demand (in MU)	34,515	41,161	41,102	44,226	47,027
22	Deficit(-)/Surplus(+) power (in MU)	(-) 15,545.67	(-) 15,689.40	(-) 16,638.59	(-) 20,380.90	(-) 22,289.77
	Power sold	(in MU)				
23	Within the State					
	(i) Government	18,651.77	25,121.16	24,463.41	23,845.10	24,737.23
	(ii) Private	-	-	-	-	-
	Other States	317.56	350.44	0.00	0.00	0.00
	Total power sold	18,969.33	25,471.60	24,463.41	23,845.10	24,737.23

Annexure 11

Statement showing extra expenditure due to excess consumption of coal resulting from non-adherence to designed specific coal consumption in Karnataka Power Corporation Limited.

(Referred to in paragraph 2.1.57)

Name of the Unit	Designed specific coal consumption (Kg/Kwh)	Gross generation (MU)	Coal to be consumed as per designed norms (in lakh MT)	Actual coal consumption (in lakh MT)	Excess Coal consumed (in lakh MT)	Rate of coal (₹ per MT)	Extra expenditure (₹ in crore)
(1)	(2)	(3)	(4) = (3x2)/100	(5)	(6) = (5-4)	(7)	(8) = ((6x7)/100)
2005-06:							
RTPS Units 1 and 2	0.4854	2,534.17	12.30				
RTPS Unit 3	0.6328	1,294.24	8.19				
RTPS Unit 4	0.6486	1,284.45	8.33				
RTPS Units 5 and 6	0.6562	3,020.95	19.82				
RTPS Unit 7	0.6519	1,030.92	6.72				
Total		9,164.73	55.36	60.90	5.54	2,168	120.11
2006-07:							
RTPS Units 1 and 2	0.4854	3,282.92	15.94				
RTPS Unit 3	0.6328	1,532.01	9.69				
RTPS Unit 4	0.6486	1,607.63	10.43				
RTPS Units 5 and 6	0.6562	3,397.04	22.29				
RTPS Unit 7	0.6519	1,663.83	10.85				
Total		11,483.43	69.20	76.25	7.05	2,233	157.43
2007-08:							
RTPS Units 1 and 2	0.4854	2,983.23	14.48				
RTPS Unit 3	0.6328	1,583.10	10.02				
RTPS Unit 4	0.6486	1,522.29	9.87				
RTPS Units 5 and 6	0.6562	3,169.86	20.80				
RTPS Unit 7	0.6519	1,616.38	10.54				
Total		10,874.86	65.71	72.30	6.59	2,250	148.28
2008-09:							
RTPS Units 1 and 2	0.4854	2,598.06	12.61				
RTPS Unit 3	0.6328	1,454.69	9.21				
RTPS Unit 4	0.6486	1,644.07	10.66				
RTPS Units 5 and 6	0.6562	3,135.62	20.58				
RTPS Unit 7	0.6519	1,686.15	10.99				
Total		10,518.59	64.05	68.13	4.08	2,869	117.06
BTPS Unit 1	0.4850	1,198.86	5.81	8.10	2.29	2,305	52.78
2009-10:							
RTPS Units 1 and 2	0.4854	2,640.40	12.82				
RTPS Unit 3	0.6328	1,609.82	10.19				
RTPS Unit 4	0.6486	1,633.38	10.59				
RTPS Units 5 and 6	0.6562	3,189.80	20.93				
RTPS Unit 7	0.6519	1,328.70	8.66				
Total		10,402.10	63.19	71.64	8.45	2,488	210.24
BTPS Unit 1	0.4850	2,860.83	13.88	17.86	3.98	2,499	99.46
Grand Total			337.20	375.18	37.98		905.36

Annexure 12

Statement showing station-wise details of generation/plant load factor (design versus actuals) in Karnataka Power Corporation Limited.

(Referred to in paragraphs 2.1.62 and 2.1.68)

Year	Energy Generation (MU)		Plant Load Factor (<i>per cent</i>)	
	As per Design	Actual	As per Design	Actual
RTPS:				
2005-06	12,877.20	9,164.73	100	71.17
2006-07	12,877.20	11,483.43	100	89.18
2007-08	12,912.48	10,874.86	100	84.22
2008-09	12,877.20	10,518.59	100	81.68
2009-10	12,877.20	10,402.10	100	80.78
BTPS:				
2007-08	Not applicable	0.96	Not applicable	Not applicable
2008-09	4,380.00	1,198.86	100	27.37
2009-10	4,380.00	2,860.83	100	65.32
Total	73,181.28	56,503.40		
	Shortfall	16,677.88 MU		

Annexure 13

Statement showing the targeted generation *vis-à-vis* actual generation for hydro projects of Karnataka Power Corporation Limited during the period from 2005-06 to 2009-10.

(Referred to in paragraph 2.1.64)

Name of Project	No of Units	Unit Capacity (MW)	Total installed capacity (MW)	Targets fixed for 2005-10 (MUs)	Achievements for 2005-10 (MUs)	Total shortfall (-) / Excess(+) (MUs)
Linganamakki Dam Powerhouse	2	27.5	55	1,193	1,440.12	247.12
Mahatma Gandhi Hydro Electric Station	4	13.2	139.2	641	1,349.81	708.81
	4	21.6				
Sharavathy Generating Station	10	103.5	1,035	22,917	26,749.73	3,832.73
Gerusoppa Dam Powerhouse	4	60	240	2,465	2,918.55	453.55
Supa Dam Powerhouse	2	50	100	1,929	2,400.48	471.48
Nagjhari Powerhouse	2	135	870	12,317	15,083.79	2,766.79
	4	150				
Kodasalli Dam Powerhouse	3	40	120	1,490	1,883.75	393.75
Kadra Dam Powerhouse	3	50	150	1,563	2,000.05	437.05
Mani Dam Powerhouse	2	4.5	9	134	134.97	0.97
Varahi Underground Powerhouse	4	115	460	4,834	5,852.70	1,018.70
Almatti Dam Powerhouse	1	15	290	2,559	2,859.65	300.65
	5	55				
Ghataprabha Dam Powerhouse	2	16	32	490	538.01	48.01
Bhadra Left Bank Powerhouse	2	12	26	232	250.53	18.53
	1	2				
Bhadra Right Bank Powerhouse	1	7.2	13.2	76	105.90	29.90
	1	6				
Munirabad Dam Powerhouse	2	9	28	221	394.38	173.38
	1	10				
Shiva	4	6	42	675	1,267.23	592.23
	6	3				
Shimsha	2	8.6	17.2	264	288.10	24.10
Mini hydro stations:						
Mallapur	2	4.5	9	120	70.64	-48.77
Sirwar	1	1	1		0.25	
Kalmala	1	0.4	0.4		0.27	
Ganekal	1	0.35	0.35		0.07	
Total			3,637.35	54,120	65,588.98	

Annexure 14
Statement showing the department-wise outstanding Inspection Reports (IRs).
(Referred to in paragraph 3.16)

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	7	9	36	2001-02
2	Animal Husbandry and Fisheries	2	2	23	2002-03
3	Commerce and Industries	28	45	276	1998-99
4	Co-operation	1	2	13	2002-03
5	Energy	8	177	954	1996-97
6	Finance	5	10	54	1998-99
7	Food and Civil Supplies	1	2	15	2003-04
8	Transport	4	52	148	2005-06
9	Housing	1	1	13	2003-04
10	Urban Development	2	2	21	2002-03
11	Information, Tourism and Youth Services	3	5	26	2002-03
12	Water Resources	3	168	592	2003-04
13	Public Works	2	3	12	2002-03
14	Rural Development and Panchayat Raj	1	3	30	2001-02
15	Social Welfare	3	5	33	2001-02
16	Information Technology	1	1	22	2003-04
17	Forest, Ecology and Environment	3	3	27	2001-02
18	Home	1	2	25	2003-04
19	Women and Child Development	1	2	8	2002-03
	Total	77	494	2328	

Annexure 15

Statement showing the department-wise draft paragraphs and reviews replies to which are awaited.

(Referred to in paragraph 3.16)

Sl. No.	Name of the Department	No of reviews	No. of Draft Paragraphs	Period of issue
1	Energy	1	5*	May to August 2010
2	Commerce and Industries	-	1	June 2010
3	Water Resources	-	1	August 2010
4	Agriculture	-	1	June 2010
5	Public Works and Inland Water Transport	-	1	July 2010
6	Rural Development and Panchayat Raj	-	1	July 2010
7	Home		1	September 2010
	Total	1	11	

* One draft para issued to both Energy and Public Works & Inland Water Transport Departments.