CHAPTER-VI

GOVERNMENT COMMERCIAL AND TRADING ACTIVITIES

6.1 Overview Of Government Companies And Statutory Corporation

6.1.1 Introduction

As on 31 March 2005 there were five Government Companies, one Statutory Corporation and one Autonomous Body (all working) under the control of the State Government, the same as on 31 March 2004. The accounts of the Government Companies (as defined in Section 617 of Companies Act, 1956) are audited by the Statutory Auditors who are appointed by the Comptroller and Auditor General of India (CAG) as the per 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 (4) of the Companies Act, 1956. The CAG is the sole auditor of the Jharkhand State Electricity Board under Rule 14 of the Electricity Supply (Annual Accounts) Rules, 1985 read with Section 185 (2) (d) of the Electricity Act, 2003 and the Jharkhand State Electricity Regulatory Commission under Section 104 (2) of the Electricity Act, 2003

Working Public Sector Undertakings (PSUs)

6.1.2 Investment in working PSUs

Total investment in six PSUs (five Government Companies and one Statutory Corporation) at the end of March 2004 and March 2005 respectively was as follows:

(Amount: Rs in crore)

Year	Number of PSUs	Investment in PSUs			
		Equity	Share application money	Loan	Total
2003-04	6	7.25	0.05	493.84	501.14
2004-05	6	7.55	-	808.14	815.69*

Sector-wise investment in working Government companies and Statutory Corporation

The investment (equity and long term loan) in various sectors and percentage thereof at the end of March 2004 and March 2005 are indicated in the following pie charts:

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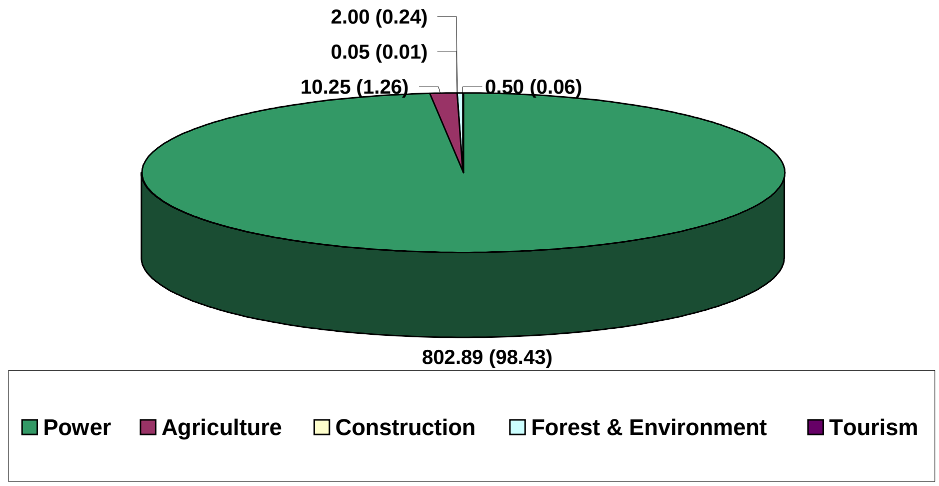
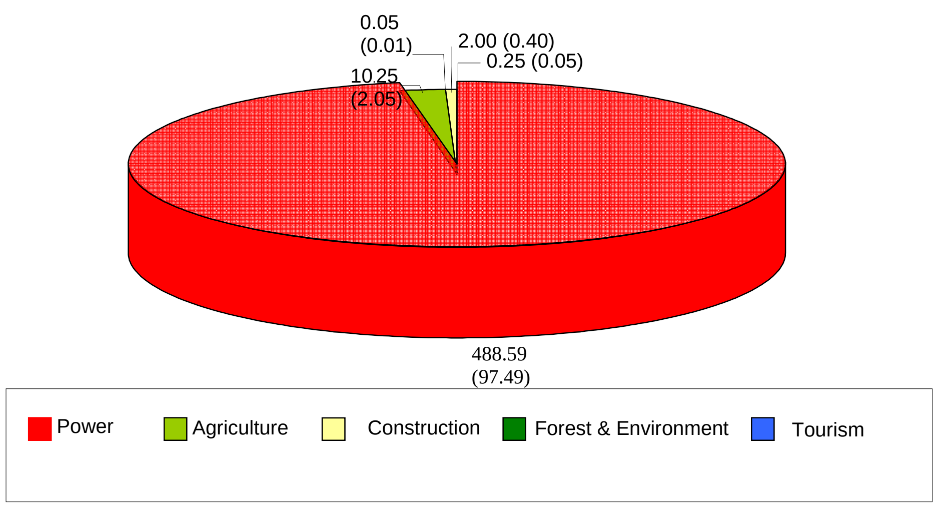
* State Government Investment in working PSUs was Rs. 750.15 crore (Others: Rs. 65.54 crore). Figure as per Finance Accounts 2004-05 (provisional) is Rs.1058.59 crore. The difference is under reconciliation.

Investment in Government companies and Statutory corporation as on 31 March 2005
(Figures in brackets are percentages of investment)
(Amount Rupees in crore)



Investment in Government companies and Statutory Corporation as on 31 March 2004
(Figures in brackets are percentage of investment)
(Amount Rupees in crore)



6.1.3 Working Government companies

Total investment in five working Government companies at the end of March 2004 and March 2005 was as follows:

(Amount Rupees in crore)

Year	Number of Government companies	Investment in working companies			
		Equity	Share application money	Loan	Total
2003-04	5	7.25	0.05	5.25	*12.55*
2004-05	5	7.55	-	5.25	*12.80*[*]

The summarised position of Government investment in these Government companies in the form of equity and loans is detailed in ***Appendix-6.1.***

As on 31 March 2004 and 31 March 2005, the total investment in these Government companies comprised 58 *per cent* and *59 per cent* of the equity capital and 42 *per cent* and 41 *per cent* of loan respectively.

6.1.4 Working Statutory Corporation

The total investment in one working Statutory Corporation (Jharkhand State Electricity Board) was not available at the end of March 2004 and March 2005 due to non-apportionment of assets and liabilities between the Bihar State Electricity Board and the Jharkhand State Electricity Board. The long term loans given by the Jharkhand Government during 2003-04 and 2004-05 were, however, Rs 103.59 crore and Rs 295.76 crore respectively. The loans outstanding as on 31 March 2005 stood at Rs 802.89 crore (State Government–Rs 737.35 crore, Others– Rs 65.54 crore) as against Rs 488.59 crore (State Government–Rs 441.59 crore, Others – Rs 47 crore) as on 31 March 2004.

6.1.5 Budgetary outgo, grants/subsidies, guarantees, waiver of dues and conversion of loans into equity

The details regarding budgetary outgo, grants/subsidies, guarantees issued, waiver of dues and conversion of loans into equity by the State Government in respect of working Government companies, the Statutory Corporation and the Autonomous Body are given in ***Appendix-6.1*** and ***6.3.***

The budgetary outgo in the form of equity capital and loans and grants/subsidies from the State Government to working Government Companies, the Statutory Corporation and the Autonomous Body for 2003-04 and 2004-05 are given below:

[*] The figure as per Finance Accounts is Rs 2.05 crore, the difference is under reconciliation.

(Amount: Rupees in crore)

	2003-04						2004-05					
	Companies		Corporation		Autonomous Body		Companies		Corporation		Autonomous Body	
	No	Amount	No.	Amount	No.	Amount	No.	Amount	No.	Amount	No.	Amount
Equity capital outgo from budget	1	0.05	-	Nil	-	Nil	1	0.25	-	Nil	-	Nil
Loans given from budget	-	Nil	1	103.59	-	Nil	-	Nil	1	295.76	-	Nil
Other grant/subsidy	-	Nil	1	95.39	1	0.70	-	Nil	1	348.39	1	0.75
Total outgo	**1**	**0.05**	**1**	**198.98**	**1**	**0.70**	**1**	**0.25**	**1**	**644.15**	**1**	**0.75**

During 2004-05, the Government did not give any guarantee.

6.1.6 Finalisation of accounts by working PSUs

The accounts of the Government companies for every financial year are required to be finalised within six months of the end of the financial year under sections 166, 210, 230 and 619 of the Companies Act, 1956 read with Section 19 of the Comptroller and Auditor General's (Duties, Powers and Conditions of Service) Act, 1971. They are also required to be laid before the Legislature within nine months of the end of the financial year. In the case of Statutory Corporation, accounts are finalised, audited and presented to the Legislature as per the provisions of Section 185 (2) (d) of Electricity Act, 2003.

As would be seen from ***Appendix-6.2***, out of five Government Companies, one Statutory Corporation and one Autonomous Body only one company could submit its accounts for the year 2002-03 and 2003-04, two companies could submit their accounts for the year 2002-03 and one Statutory Corporation could submit its accounts for the year 2001-02.The accounts of two Governments companies were in arrears for three years, two Government companies for two years and one Government company for one year. The accounts of the Statutory Corporation and the Autonomous Body were in arrears for three years and two years respectively as on 31 August 2005.

Though the concerned administrative departments and officials of the State Government were apprised by the Accountant General regarding arrears in finalisation of accounts, no effective measures have been taken by the Government and as a result the net worth of the PSUs could not be assessed.

6.1.7 Financial position and working results of working PSUs

The summarised financial results of working PSUs (Government Companies and Statutory Corporation) as per their latest finalised accounts are given in ***Appendix-6.2***.

According to the latest finalised accounts, three working Government Companies earned an aggregate profit of Rs 3.15 crore and one the Statutory Corporation incurred a loss of Rs 49.45 crore.

6.1.8 Jharkhand State Electricity Regulatory Commission

The Jharkhand State Electricity Regulatory Commission (Commission) has been constituted by the Government of Jharkhand under Section 82 of the Electricity Act, 2003 (earlier under section 17 of the Electricity Regulatory Commission Act, 1998, since repealed) and the Commission became operational with effect from 24 April 2003. The Commission issued five regulations during the year 2004-05.

6.1.9 Position of discussion of Audit Reports (Commercial) by the Committee on Public Undertakings (COPU)

The position of discussion of Audit Reports (Commercial) by COPU, reviews and paragraphs pending for discussion in COPU as on 30 September 2005 was as under:

Period of Audit Report	No. of reviews and paragraphs appeared in the Audit Report		No. of reviews/ paragraphs pending discussion	
	Reviews	Paragraphs	Reviews	Paragraphs
2001-02	Nil	1	Nil	1
2002-03	Nil	1	Nil	1
2003-04	Nil	2	Nil	2

Review relating to Statutory Corporation

6.2 Computerised energy billing system of Ranchi Electric Supply Circle of Jharkhand State Electricity Board

Highlights

Jharkhand State Electricity Board (JSEB) is a Statutory Organisation set up for the development, operation and maintenance of a co-ordinated efficient and economic system of electricity in the State. A review of the computerised Energy Billing System of Ranchi Electric Supply Circle revealed that entire operations of billing right from meter reading to courier delivery of bills were assigned to three private agencies. These agencies prepared inaccurate bills and did not fulfill the contractual obligations. JSEB did not monitor their performance, as a result it lost a revenue of Rs 20.52 crore with blockage of Rs.85.74 crore.

Goal of Jharkhand State Electricity Board to achieve specific improvements and to increase the revenue by outsourcing was not met. Cost of outsourcing has increased by 45 *per cent* whereas number of consumers has increased by only 11 *per cent.*

(Paragraph 6.2.5)

JSEB did not demonstrate any ability to monitor performance of the three agencies. As against at least 10 *per cent* of meter readings to be cross-checked by JSEB, it checked only 0.32 *per cent* in January 2003 (Urban-I). Agency's meter reading, on an average, was 78.20 *per cent* incorrect with reference to that of the Board in the cases test-checked for one month in December 2003.

(Paragraph 6.2.5)

Change of rules and tariffs by the JSEB were not reflected in software that led to incorrect categorisation of consumers and consequential loss of revenue to JSEB- Rs 73.22 lakh.

(Paragraphs 6.2.7 and 6.2.9)

Blockage of fund of Rs 30.86 lakh due to anonymous consumers.

(Paragraph 6.2.8)

Accumulation of arrears of Rs. 85.43 crore against consumers

(Paragraph 6.2.10)

Loss of revenue of Rs 18.91 crore to JSEB due to cases becoming time barred.

(Paragraph 6.2.11)

Loss of revenue to Jharkhand State Electricity Board due to short assessment of Rs 22.74 lakh.

(Paragraph 6.2.12)

Loss of Rs 40.27 lakh due to non levy of Delayed Payment Surcharge on amount kept in abeyance.

(Paragraph 6.2.13)

Over payment of Rs 25.05 lakh to external agencies.

(Paragraph 6.2.14)

6.2.1 Introduction

Consequent upon the reorganisation of the states of Bihar and Jharkhand, a separate electricity board for Jharkhand, Jharkhand State Electricity Board (JSEB) was constituted in March 2001 under section 5(i) of Electricity (Supply) Act, 1948. JSEB is thus a statutory organisation, a body corporate created under the provisions of a Central Law. It is essentially a technical-cum- commercial agency setup for the development, operation and maintenance of a coordinated, efficient and economic system of electricity in the state. JSEB adopted rules and regulation of Bihar State Electricity Board vide resolution dated 20 March 2001. Under Section 18 of the Electricity (Supply) Act, 1948, JSEB is responsible for generation, transmission and distribution of electricity in an efficient and economic manner within the State of Jharkhand. For the revenue purposes, the JSEB is empowered to collect tariff from different categories of consumers as per latest tariff orders.

Ranchi circle, one of the highest revenue generating circles of the JSEB, has outsourced the entire operations of billing right from meter reading to generation of monthly bills to three private agencies for computation and generation of monthly electricity bills of the consumers. Individual FOXPRO based programs have been created by each of the three private agencies to generate electricity bills for all the consumers. The private agencies input information like meter reading (past and present), load, class of consumer, bill due date and other details that are used to generate monthly electricity bills for effective consumers. This information is also used by the agencies to generate periodical reports like consumer ledger, which are sent to the JSEB. Meter reading, which forms the basis of billing, has also been outsourced to the same agencies. In addition, the agencies are also responsible for courier delivery of the bills to the consumers.

6.2.2 Organisational set-up

JSEB consists of six members including the Chairman. Member (Finance) assists the chairman in cash management including billing and collection of revenue. Electrical Superintending Engineers of 13 Supply circles, Electrical Executive Engineers (EEE) of 34 supply divisions and Assistant Electrical Engineers of 110 supply sub-divisions assist JSEB headquarters in collection of revenue and in accounting. The generation of electricity bills is based on meter readings taken by Board authorities in 27 Electric Supply Divisions and meter reading taken by third party agencies in seven Electric Supply Divisions.

6.2.3 Audit objectives

Information technology based review on computerised billing package being used in JSEB was conducted for the period October 2002 to March 2004 in Electric Supply Divisions Urban I and Urban II of Ranchi Electric Supply Circle with a view to ascertain:

- The efficiency and effectiveness of the billing package in realising revenue from the consumers and
- Management of relationship by the JSEB with third party agencies to whom computerised billing process was outsourced so that business and revenue requirements of JSEB were achieved.

6.2.4 Scope and methodology of audit

For the purpose of this review, Electric Supply Circle, Ranchi under Ranchi Electric Supply Area was selected. This consisted of Urban-I, Urban-II and Ranchi Rural Electric Supply Divisions (ESDs). The work of meter reading, meter surveillance, computerised billing and bill distribution for Urban-I and Urban-II divisions was outsourced to three agencies – Prakriti Enterprises, Data Management Service Pvt. Ltd. And Vexcel Computer Pvt. Ltd. As per the contract, the three agencies were responsible for the work of meter reading, meter surveillance, computerised data logging and preparation of consumer bills and courier delivery of bills to consumers and to prepare and submit to the Board, Consumer Ledger and other related reports and statements and provide support/information/clarification in this regard as and when required. Hence, the entire work of billing which begins with meter reading at the consumer's premises and ends at delivery of monthly computerised bills to the consumers was entrusted to the third party service providers.

Computerised data maintained by the three service providers relating to the billing process was analysed using a Computer Assisted Audit Technique namely IDEA 2001(Interactive Data Extraction and Analysis) and MS Excel. Questionnaires were utilised to elicit information from the Board on outsourcing issues, evaluation of controls and management of contract with the vendors. In addition, audit of files relating to tender and billing section of Ranchi Urban-I and Urban-II divisions was also undertaken.

Data from 144 transaction files and 108 master files were analysed by using IDEA 2001 as well as filtering in MS Excel. Besides examining the data, the existence and adequacy of general IT controls in the package being run by the three agencies was also assessed.

Audit Findings

These findings were discussed with the Secretary, Energy, Government of Jharkhand on 26 April 2005. The Secretary agreed with the audit findings and recommendations and assured that suitable action would be taken.

Major audit findings are discussed below:

6.2.5 Outsourcing issues

Cost benefit analysis of outsourcing was not done

According to the Notice Inviting Tender, JSEB entrusted the work of meter reading, meter surveillance and meter billing to third party agencies to increase revenue and to increase effectiveness and accountability process. No planning documents existed in JSEB that documented the services to be outsourced and the current and expected costs. No Cost Benefit Analysis before outsourcing was done. JSEB also had not developed performance indicators or benchmarks prior to outsourcing in order to monitor the quality of services provided by the agencies and to achieve its goal of increasing revenue and increasing the effectiveness and accountability process. Over the period of audit, the cost of outsourcing had increased by 45 *per cent* whereas number of consumers increased by only 11 *per cent.*

Penalty was not levied on defaults committed by outsourced agency

JSEB also did not demonstrate the ability to implement and manage the relationship with the three external agencies. JSEB was completely dependent on the three agencies for periodical reports. Even though the EEEs, Urban-I and Urban-II Divisions claimed that monitoring of agencies' work was done, audit found that the Board did not have adequate mechanism to crosscheck or verify any of the reports prepared by the three agencies. Even though the contract provides for penalty, in no case was penalty ever levied; even for faulty meter reading. According to the agreement, JSEB to cross check at least 10 *per cent* of meter readings taken by the agency. During test check, Audit found that in the month of January 2003, JSEB cross checked only 159 meter readings of Urban-I Division which is 0.32 *per cent* of the total consumers. Records also showed that JSEB cross checked meter readings taken by agency of 211 CS-III consumers in December 2003, out of which 122 cases of short and 43 cases of excess meter readings were found. Thus, in 78.20 *per cent* of the meters checked, the reading taken by the agency was incorrect.

The Management stated (June 2005) that due to extreme shortage of staff, work of computerised energy billing was outsourced to competent agency. Management further stated that due to shortage of manpower, cost benefit analysis could not be done. Management also claimed that in the long term, outsourcing might prove economical.

The reply of the Management is not tenable as the agencies were not competent as was evident from their performance discussed above and in succeeding paragraph. The cost benefit analysis, before executing the agreement is a prime requirement of any contract which was completely ignored by JSEB. The claim that outsourcing might prove to be beneficial in the long term was unfounded in the absence of a cost benefit analysis.

6.2.6 Performance measurement and service level agreements

Though JSEB receives regular reports from service providers neither was any evidence available to indicate that JSEB uses these reports to manage the performance of service providers against agreed standards, nor was there any verification of the quality of these reports by the JSEB. Moreover, JSEB does not appear to have a performance measurement mechanism independent of regular reports from service providers.

Service Level Agreements, or similar documents, identify in a reasonably clear way the accountability arrangements between the agency and individual service providers. JSEB claimed that service level agreements were executed with the agencies but copies of agreements were not furnished to audit. In addition, there are no clearly identified personnel to manage the relationship with the external agency. Moreover, personnel dealing with the three agencies have no knowledge of IT and hence find it difficult to ensure compliance/ detect violation of contract.

The management stated that the NIT prepared by the Board and agreements executed with the agencies had no provision to deploy IT personnel from the Board side. Management claimed that the Board had prepared scheme to train their staff in IT in future. The reply is not tenable as no 'Service Level Agreement' was executed. Further, Board is still contemplating imparting IT training to its staff.

6.2.7 Assessment of controls

Control activities are an integral part of an agency's planning, implementing, and reviewing processes. They are essential for proper stewardship and accountability of government resources and for achieving effective and efficient program results. General controls include the structure, policies, and procedures that apply to the agency's overall computer operations. It applies to all information systems, mainframe, minicomputer, network and end-user environments. General controls create the environment in which the agency's application systems operate.

It was observed in audit that two agencies (Prakriti Enterprises and Vexcel Computer Pvt. Ltd) had not laid down any computer security policy regarding safety of hardware and software. This could result in critical data being lost due to damage to software/hardware. Moreover, Audit found that there were no change management controls in place at the three agencies to modify the program due to any changes in business rules of the Board e.g. Changes in categories under new Low Tension Industrial Service (LTIS) [refer to para 6.2.9] where tariff notifications of 1993 and 2002 were not implemented till 2004. Thus the management has failed to assess the importance of control activities and no framework to assess control activities was put in place by JSEB.

The management noted the audit observation for future guidance.

Results of Data Analysis

6.2.8 Blockage of funds of Rs 30.54 lakh due to nameless consumers

Non realization of revenue of Rs. 30.54 lakh due to non recording of name and address of 362 consumers

The scope of work for agencies to whom the meter reading, meter surveillance, computerised billing and bill distribution for Electricity Supply Division (ESD), Urban-I was outsourced, stipulated preparation of master data files containing names and addresses of consumers and other details. Further, the agency has to provide consumer ledger, meter reading book and submit acknowledgement to the EEE every month for review as per the contract. For all these reports, names and addresses of the consumers are required. CAAT scrutiny of computerised billing database of consumers of Urban-I, Ranchi revealed that without recording names and addresses of 362 consumers, energy bills amounting to Rs 30.54 lakh were prepared and shown as delivered by the agencies during the period from October 2002 to March 2004. The cost of outsourcing on these works amounted to Rs. 0.32 lakh which were included in the monthly bills paid to the agencies as per agreement.

As the consumers names and address were not on record, energy bills could not have been served to them. This led to blocking of revenue to the extent of Rs 30.54 lakh and wasteful expenditure of Rs. 0.32 lakh incurred towards the cost of preparation and delivery of bills by the outsourcing agencies.

The Management, while accepting the audit observation, stated that corrective measures to trace the consumers had been taken and till identification of these consumer was done, billing had been stopped.

6.2.9 Incorrect categorisation of consumers resulting in loss of Rs.73.22 lakh to JSEB

As per Tariff Notification (1993) of the Board, commercial consumers (CS) having load upto 60 KW were to be categorised under new LTIS tariff which was applicable for use of electrical motor and other industrial appliances of less than 80 Horse Power. Consumers having load above 80 Horse Power/ 75 Kilo Volt Ampere/ 60 Kilo Watt were to be categorised and billed under High Tension tariff schedule. Further, the Jharkhand State Electricity Board's circular issued in August 2002 stated that existing LTIS consumers having a contract load of 107 Horse Power should be converted to High Tension category within two months from the issue of registered notice by the Board and be billed accordingly.

Loss of revenue of Rs.73.22 lakh due to incorrect categorisation of consumers

CAAT scrutiny of computerised database of energy billing system of Electric Supply Division, Urban-I, Ranchi for the period October 2002 to March 2004, revealed that contrary to the tariff provisions, five connections having loads between 144 HP & 115 KW were billed under CS-III tariff and one connection having connected load of 144 HP was billed under LTIS tariff instead of HT tariff. This resulted in loss of revenue to the tune of Rs. 73.22 lakh during the above period. Moreover no notice was served on the consumers for execution of fresh agreement under HT Tariff.

The Management stated (June 2005) that the matter related to higher load detected by inspecting team rather than incorrect categorisation. The reply of management is not tenable as the consumers should have been categorised as per Bihar State Electricity Board (BSEB) tariff notification (1992) before executing the agreement with the consumers, which was not done in these cases.

6.2.10 Accumulation of arrears of Rs. 85.43 crore against the consumers

Arrears were allowed to accumulate upto 10 to 100 times the security deposit

As per clause 15.4 of Tariff Notification (1993) in case of non- payment of monthly energy bills, seven days notice is to be served to the consumers. Thereafter, their line is to be disconnected if no payment has been received within this period. In no case, the amount of arrears should exceed the security money deposited by the consumer. CAAT scrutiny of computerised database of energy billing systems of Electric Supply Division, Urban I and II for the period October 2002 to March 2004 revealed that against 1597 LTIS, 13,199 Commercial Service and 50,176 Domestic Service consumers, Rs 9.78 crore, Rs 42.82 crore and Rs 32.83 crore (total Rs 85.43 crore) respectively were shown as arrears of revenue upto March 2004. It was also noticed that arrears were allowed to accumulate upto 10 to 100 times the security deposit but notices for disconnection were not served by JSEB.

Audit scrutiny also revealed that overlooking the contractual scope of work, security deposits of consumers were not being recorded in the database by all the three computer agencies to whom the work of computerised billing was outsourced. Thus, due to incomplete entries in the database and lack of proper monitoring and non-adherence to tariff provisions by JSEB, arrears were allowed to accumulate. This defeated the very purpose of outsourcing for realisation of revenue that accumulated and remained unpaid to the tune of Rs 85.43 crore upto March 2004.

The Management accepted (June 2005) the audit observation and stated that sincere efforts had been initiated for recovery of dues and assured that in future, arrears would not be allowed to exceed three months security amount.

6.2.11 Loss of revenue of Rs.18.91 crore to JSEB due to cases becoming time barred.

Revenue amounting to Rs. 18.86 crore became irrecoverable

Scrutiny of computerised database of energy billing system of Electric Supply Division, Urban-I & II, Ranchi for the period October 2002 to March 2004 revealed that though the outsourcing agencies supplied lists of defaulting consumers to JSEB as per their scope of work, yet both the divisions neither took timely action for recovery of dues from defaulters nor were the consumers disconnected. This defeated the purpose for which outsourcing was resorted to. As a result thereof, the electricity dues aggregating to Rs 18.86 crore upto March 2004 against LTIS, domestic and commercial consumers became irrecoverable/time barred as per the Limitation Act. In the absence of proper monitoring, action was not taken by filing certificate cases against defaulters and disconnected consumers within the stipulated period of three years from the date of disconnection. It was also noticed that outsourcing agencies raised bills on disconnected consumers for the works of meter reading, preparation of bill, courier delivery of bills at the rates specified in agreement, the cost of outsourcing for these works amounted to Rs. 5.45 lakh which was included in the monthly bills paid to the outsourcing agencies. Thus, JSEB was left without any legal recourse for realisation of revenue of Rs 18.86 crore, which had become time barred and the expenditure of Rs. 5.45 lakh incurred on meter reading, bill preparation and delivery of bills proved to be nugatory.

The Management stated (June 2005) that in some instances certificate cases had been filed. Some consumers had been transferred to HT tariff and for the rest, efforts were being made to recover arrears. The reply of the management is not acceptable because no evidence of any certificate case was shown to audit. Audit contends that on time barred cases, change in the category of consumer is of no use in recovery of outstanding dues as the cases have already become time barred and thus barred from recovery.

6.2.12 Loss of revenue of Rs 22.74 lakh to JSEB due to less assessment

Provision of unmetered connections overlooking Board's norms, resulted in short assessment of Rs. 12.06 lakh

Analysis of computerised data of Electricity Supply Divisions (ESD) Urban –I and Urban – II for the period October 2002 to March 2004 revealed that unmetered connections were provided to 91 CS (Urban) consumers overlooking Board's norms which stipulated that no unmetered connection should be provided in township area (Urban area) for any category except DS–I and CS – I. Further, the outsourcing agencies, while raising energy bills resorted to billing on monthly minimum consumption or at the rate of 144 units per KW per month instead of 288 units per KW per month as per the provision of applicable clause 16.9 of Tariff Notification (1993). This resulted in short assessment of revenue to the tune of Rs 12.06 lakh as 7,59,355 units were short billed.

The Management stated (June 2005) that some progress had been made in installation of energy meters and balance would be installed within 15 days. The Management thus accepted its failure in providing service connections without energy meters in township area.

Non adoption of provisions of tariff notification relating to average billing resulted in short assessment Rs.10.68 lakh

Similarly in the case of average billing of CS consumers under ESD, Urban-I, Ranchi for the period October 2002 to March 2004, it was noticed that overlooking provisions of applicable clause 16.9 of Tariff Notification (1993), energy bills were raised for 2,082 CS consumers on average rate of 144 units per KW per month instead of 288 units per KW per month per consumer. This resulted in short assessment of revenue to the tune of Rs 10.68 lakh to JSEB as 6, 69,168 KW units were short billed.

The Management stated (June 2005) that clause-16.9 was applicable in case of theft of power only. The reply of the Management is not acceptable. This is because for DS category (having power factor of 0.20) average Billing was done at the rate of 144 units per month for consumers with defective meters.

But, in the case of CS Category consumers (having power factor of 0.40) average at the rate of 288 units per month per KW should have been charged.

6.2.13 Loss of Rs 40.27 lakh due to non-levy of delayed payment surcharge on amount kept in abeyance

Revenue amounting to Rs. 1.32 crore was kept in abeyance without specifying reasons and DPS amounting to Rs. 40.27 lakh was not levied

As per the provisions contained in clause 16.2 of the Tariff Notification (1993), if the consumer does not pay the bill in full by the date indicated in the bill, Delayed Payment Surcharge (DPS) at the rate of two *per cent* per month on the outstanding amount or part thereof for the period of delay is chargeable by the Board. Scrutiny of computerised database of energy billing system of ESD, Urban-I & II, Ranchi revealed that revenue amounting to Rs 1.32 crore was shown as kept in abeyance in the database of agencies i.e. pending for collection during the period October 2002 to March 2004. No reason for keeping the amount in abeyance was recorded by the Board. It was also noticed that the Board had not charged DPS amounting to Rs 40.27 lakh on amount kept in abeyance.

The Management stated (June 2005) that reasons for keeping amount in abeyance would be furnished. The reply of the Management is not tenable as the Management itself was not sure of the reasons for keeping the amount in abeyance.

6.2.14 Loss of Rs 25.05 lakh due to over payment to the external agencies

As per clause 2(A) & (B) (i) of the agreements for computerised Energy Billing system executed with the three agencies the payment was to be made to the agencies for the works of meter reading, processing, preparation and issueance of monthly energy bills for effective consumers, under clause 1(B) (ii) payment was to be made for courier delivery of bills to consumers and under clause (C) for quarterly surveillance of meter per consumer.

Overpayment of Rs. 4.31 lakh was made to outsourcing agencies

Test check of records revealed that agencies claimed payments for registered consumers, JSEB passed the bills of external agencies on effective consumers, which were less than the registered consumers as claimed by the agencies during the period of audit. Even then, the sum total of running (Effective) consumers which were paid by the Electric Supply Circle, Ranchi was higher than the running consumers as recorded in Revenue statement-I maintained in the two Electric Supply Division. This resulted in over payment of Rs 4.31 lakh to the external agencies.

Further, as per the contract, the external agencies were to be paid according to number of effective consumers. But in April 2003 Ranchi, Electric Supply Area, issued letter in which payment terms were altered, that is, payment on "effective consumers" were changed to payment on "registered consumer". This change in nomenclature from effective consumers to registered consumers increased the number of consumers without corresponding increase in the actual work, as 6171 consumers were disconnected.

Alteration in payment terms resulted in over payment of Rs. 20.74 lakh

The records showing such payments to the external agencies were not produced to audit. Over payment of Rs. 20.74 lakh as worked out by audit from the scope of work (which specifies payment for meter reading, bill preparation, bill issue and courier delivery & surveillance) cannot be ruled out.

6.2.15 Non adherence to contract provisions by the agencies

Additional security deposit bills were not raised by outsourcing agencies and no penalty for default was imposed

As per clause 15.3 (C) of the Tariff Notification (1993), if half of the aggregate amount of six months bill from April to September or from October to March exceeded by 20 *per cent* of the existing security deposit, the same was to be enhanced to that extent and consumers were to be served notice to deposit additional security. As per the scope of work issued to external agencies, they were to do a six monthly review of security deposits of consumers as per tariff provisions and issue additional security bills, if required. Further, they are required to compute annual interest on security deposit and make adjustments of the same in the bills of the consumers in the month of April every year. Scrutiny of computerised database revealed that all the three agencies were not making entries regarding security money deposited by each consumer. As a result, they are unable to issue additional security bills or compute annual interest on security deposit. Consequently, arrears against defaulting consumers could not be recovered from the security money resulting in loss to the Board. In addition, the Board's accounts could not reflect correct liability to that extent. Moreover, no penalty was imposed on the external agencies for this default.

The Management stated (June 2005) that review of security amount could not be done in absence of records and shortage of manpower. Further, external agencies were being pressurised to review security amount and issue additional security bills. The reply of the Management is not acceptable as the scope of work of the contract clearly spelt out review of security deposit and issuance of additional security deposit bills by the external agencies, which was not done even in a single case.

The matter was reported to the Government/Board (May/September 2005); their replies had not been received so far.

6.2.16 Conclusion

JSEB has outsourced electricity billing for the Ranchi Electric Supply Circle to three external agencies who prepare and deliver computerised bills to the consumers falling under this supply circle. Audit found that the three external service providers prepared inaccurate bills by applying incorrect tariff, charges like energy charges were not billed and undue benefit was given to consumers. There were cases of short assessment, non-levy of Delayed Payment Surcharge and time barred cases. Neither was the performance of the three external agencies monitored by JSEB nor were they penalised for non-fulfillment of contractual obligations like maintaining full address of consumers, making entry of security deposit in the database and reviewing additional requirement of security deposit. As a result JSEB lost revenue of Rs. 20.52 crore and Rs 85.74 crore were blocked.

6.2.17 Recommendations

Government / Board should:

- draw up specific performance indicators to measure and monitor the performance of the third party agencies.

- ensure that the tariff billed and collected was according to the rules of the organisation and any changes in the tariff provisions should be implemented immediately by the third party agencies.

- ensure that the service providers perform all the work allotted to them as per the contract/scope of work.

- take timely action to disconnect lines of defaulters and file certificate cases against them.

6.3 Environment Management System in Jharkhand State Electricity Board

6.3.1 Introduction

Environment Management System (EMS) is a comprehensive approach to managing environmental issues and integrating environment-oriented thinking into every aspect of business management. An EMS ensures that environmental considerations are a priority along with other concerns such as cost, product quality, investments, productivity and strategic planning.

An EMS generally makes a positive impact on a company's bottom line. It increases efficiency and focuses on customer needs and market conditions improving both the company's financial and environmental performance. By using an EMS to convert environmental problems into commercial opportunities, companies usually become more competitive.

Patratu Thermal Power Station (PTPS), a unit of Jharkhand State Electricity Board, was selected for EMS review because it has 10 Power Generating units which are prone to environmental hazards.

In exercise of the powers conferred by sections 17 (1) (g) & (m) of The Water (Prevention and Control of Pollution) Act 1974 (WPCP Act) and 17 (1) (g) of The Air (Prevention and Control of Pollution) Act 1981 (APCP Act), the State Pollution Control Board of Jharkhand (JSPCB) prescribed the standards for discharge of effluents and emissions by all thermal power stations. Under section 25/26 of WPCP Act and Section 21 of APCP Act, JSPCB is empowered to grant consent for running of an industry.

6.3.2 Environment Protection Policy

Ministry of Environment & Forest (MoEF), GOI has enacted various statutes to enforce environmental protection as well as to ensure sustainable development. It has also established regulatory bodies like Central/ State Pollution Control Boards and the Bureau of Energy Efficiency to maintain and enforce the provisions of these statutes. Important enactments and rules made thereunder are Water (Prevention & Control of Pollution) Act, 1974, Water (Prevention & Control of Pollution) Act, 1977, Air (Prevention & Control of Pollution) Act, 1981, The Energy Conservation Act, 2001, The Environment (Protection) Act, 1986, The Environment Protection Rules, 1986 and The Hazardous Waste (Management and Handling) Rules, 1989. In exercise of powers conferred under Section 4 of the Water & Air Act, State Government constituted (9 September 2001) Jharkhand State Pollution Control Board (JSPCB) as a regulatory body to prevent and control Environment Pollution.

6.3.3 Sources of pollution and Control measures

The actual SPM Emission was much higher than the prescribed norms

Combustion of coal in thermal power stations emits pollutants like Suspended Particulate Matter (SPM), Sulphur dioxide (SO_2) and Oxides of Nitrogen (Nox). Pulverised coal fired boilers produce approximately 80 *per cent* fly ash and 20 *per cent* bottom ash. Electrostatic Precipitators (ESP) reduce SPM in flue gases.

The norms as envisaged in the Acts relating to Air and Water, and adopted by JSPCB, vis-à-vis actual emissions of particulate matter (PM) during 2000-05 are detailed at ***Appendix 6.4***. It was observed in audit that actual SPM emission ranged between 731.46 mg/Nm^3 and 3288mg/Nm^3 against the prescribed norm of 150 mg/Nm^3.

Air Pollution

6.3.4 Emission of excessive air pollutants-norms with regard to the capacity/efficacy/monitoring of electro static precipitator

To control air pollution, PTPS installed ESPs during 1992 to 2003 at a total cost of Rs 53.36 crore.

The derated capacity of PTPS, which comprises 10 generating units, is 770 MW. Though ESPs to control emission of excessive air pollutants within prescribed standard have been commissioned, the actual results of the test reports show SPM levels far in excess of the norm prescribed. The details of running hours of the unit, test results, percentage of excess SPM emission are tabulated in ***Appendix 6.4.***
It was noticed in audit that:

- Though Unit No. five was operated for 24118 Hours during April 2000 to March 2005, monitoring of SPM level was never done.

- Unit eight and nine were operated for 13340 Hours and 28081 Hours respectively during the five years ended March 2005 but SPM test was conducted only once and twice respectively.

The excess emission ranged between 388 per cent and 2088 per cent over the prescribed norm

- Audit noticed that the actual SPM emission ranged between 731.46 mg/Nm^3 to 3288 mg/Nm^3 and the excess emission over the prescribed norm also ranged from 388 *per cent* to 2088 *per cent*.

- Audit further noticed that PTPS did not fix any periodicity for conducting such tests for each unit in any year.

Though the designed level of ESPs except for unit 9 and 10 did not match the prescribed standard of SPM emission, no action was taken to improve their efficiency.

Work order for renovation, retrofitting of ESP for unit 10 was issued in May 2002 to Alstom Power India Ltd. (APIL) for Rs 6.33 crore. Erection activities of ESP were completed (March 2003) and ESP was commissioned in October 2003.

Dust emission from stack was 199 mg/Nm^3 against guaranteed 100 mg/Nm^3

Performance guarantee test conducted (February 2004) showed dust emission from the stack at 199 mg/Nm^3 against guaranteed emission level of 100 mg/Nm^3.

Reasons for non achievement of guaranteed emission level were stated to be as under:

- Boiler was operating on 65 MW load due to outage of Low Pressure (LP) Heaters instead of required full load of 110 MW or at least 80 *per cent* of full load (increase in boiler load will decrease the outlet emission).
- Total air flow measured at the outlet of the Induced Draft (ID) Fan was 317.5 m^3/sec as against designed value of 222.7 m^3/sec whereas maximum acceptable limit is five *per cent* below or above the design value.

Improper Ash evacuation system caused tripping of field of the ESP

- Improper operation of Ash evacuation system causing frequent tripping of field of the ESP.

  No further performance guarantee test was conducted. The unit was shutdown from 25 April 2004 till May 2005 due to fire hazard.

Water Pollution

6.3.5 Effluence of excessive water Pollutants–Compliance of the norms fixed for treatment of chemicals etc.

The ash generated from coal firing is mixed with water and the ash slurry is sent to the ash pond. The water flowing out of the pond after sedimentation of ash contains ash particles. To control the water pollution level before flowing into the drain, the water is passed through the shaft well which is provided with filter media.

Against the prescribed standard of 100 mg/litre of Total Suspended Solids, the TSS ranged between 219 mg/litre and 2074.50 mg/litre

To minimise water pollution, PTPS has been adopting 'Flow and Sedimentation System'. The ash slurry is carried to Permanent Ash Dams through two 400 mm Cast Iron (CI) ash disposal pipelines for each dam. After settlement of ash in the dam, the water is passed through the shaft well fitted with filter media. The remaining ash particles in the water are filtered by the shaft well and the pollutant reduced water is discharged into the nearest drain. Storm water passes through shaft well of temporary ash dams. A review of the water analysis reports revealed the following:

- During 2000-01, 2001-02 and 2003-04, the effluent water analysis was done only once in each year against prescribed monthly testing. Against the prescribed standard of 100 mg/litre of Total Suspended

Solids (TSS), the actual TSS ranged from 219 mg/litre to 2074.50 mg/litre.

- No water analysis was done during 2002-03.

- During 2004-05, effluent water analysis was done 18 times without any specific periodicity. Effluent samples from Ash dam I and II were not collected 11 and 4 times respectively signifying that no monitoring was done on these occasions. The suspended solids ranged from 40 mg/litre to 350 mg/litre.

Filter media were not efficient to bring TSS to the tolerance limit

It is thus evident that the filter media fitted in shaft wells were not efficient enough to bring down the TSS to within the tolerance limit.

Soil Pollution

6.3.6 Excessive Soil Pollution

Disposal of ash into ponds caused soil pollution

Disposal of ash into ponds by making ash slurry also causes soil pollution. Disposal of dry ash by utilising it for backfilling of abandoned coal mines and in brick and cement manufacturing are the controlling measures of soil pollution.

Ash generated from burning of coal in thermal power stations creates soil pollution. Government of India, Ministry of Environment and Forests issued (September 1999) a notification for utilisation of fly ash by thermal power stations. In order to implement the provisions of the notification and instructions of the Delhi High Court which is monitoring the implementation of the provisions of the notification, the status of action proposed to be taken by PTPS was as given below:

Disposal of ash by PTPS was not arranged as per Government notification

- Work for transportation of fly ash/pond ash for back filling of abandoned mines of Central Coalfields Limited, Saunda was awarded to a contractor on 25 July 2005.

- Consultant for construction of dry ash collection system and collector (SILO) was appointed on 10 August 2005.

- Appointment of agency for installation of flue gas conditioning system was under process (August 2005).

During 2004-05, only 0.90 lakh ton of ash was utilised and the estimated balance quantity of ash in ash pond as on 31 March 2005 was 25 lakh ton.
Thus, PTPS did not make arrangements for disposal of ash according to the requirement of the notification (August 2005).

6.3.7 Operation of Thermal Power Station

PTPS applied (February and August 2002) for Consent for the period 1 January 2002 to 31 December 2002 under Air Act, 1981 and for the period

1 April 2001 to 31 March 2003 under Water Act, 1974 to JSPCB respectively. Before according Consent, JSPCB collected (June and July 2002) samples and the test results showed that SPM and TSS exceeded the standard prescribed. Accordingly JSPCB directed (February 2003) PTPS to attend its office on 4 March 2003 and show cause for non compliance of CPCB/SPCB's direction. On 4 March 2003 it directed PTPS to submit by the end of March 2003, the details of action taken for controlling pollution in the form of an affidavit. But PTPS failed to respond. JSPCB again collected and analysed samples in March/April 2003 and issued (July 2003) fresh notice. PTPS submitted (August 2003) various proposals like construction of dry ash collection and storage, utilisation of dry ash and pond ash for back filling of abandoned mines, appointing agencies for analysing and monitoring of effluents/emissions to be implemented for controlling pollution. Not satisfied with the performance, JSPCB rejected (September 2003) the applications and directed to close the unit till emissions/effluents were brought down to the prescribed standards. PTPS, nevertheless, continued its operation. JSPCB intimated (March 2004) that non compliance of its earlier direction might lead to filing of a court case. As PTPS failed to take up the matter with JSPCB properly, the latter filed (March 2005) a court case.

JSPCB filed a court case against PTPS as the SPM and TSS exceeded the standard prescribed

6.3.8 Impact of assessment plan, its implementation and outcome

Till March 2004, PTPS had not devised any plan to regularly assess the impact of excess emission/effluent of the unit on the environment. Only during 2004-05, the unit proposed an action plan for monitoring of environmental parameters and promoting pollution control measures. It, however, failed to fully implement the control measures (May 2005).

PTPS failed to fully implement the pollution control measures

6.3.9 Corporate social responsibility

For utilisation of fly ash, notices regarding availability of ash free of cost were published and also sent to blocks, bricks and tiles manufacturers, cement industries and other industries using fly ash as raw material. Sufficient land exists with PTPS for creation of green belt but no action has been taken by PTPS in this regard (May 2005).

Inspite of available land PTPS could not create green belt and proved itself a socially irresponsible corporate unit

Thus, despite having the ESPs for controlling the air emissions and filter media for controlling the effluent discharge, PTPS failed to keep the pollutants within the standards prescribed by the SPCB. Hence, PTPS has not been able to stop polluting the environment and has also failed to act as a socially responsible Corporate Unit.

6.3.10 Summary

The infrastructure in PTPS for controlling pollution is inadequate. PTPS had not devised any plan to regularly assess the impact of excess emissions/effluents of the unit on the environment. Ash disposal too was ineffective and ash disposed of was negligible compared to the quantity generated.

6.4 *Avoidable expenditure due to delayed decision*

The Board had to incur avoidable extra payment of Rs 14.89 lakh due to delay in placing order for supply of transformer oil

Jharkhand State Electricity Board (Board) invited tenders (March 2002) for supply of 1000 Kilo Litres (KL) of transformer oil. Two parts of the tender viz. Part-I (Technical and Commercial) and Part-II (Price) were opened on 10 April 2002 and 10 June 2002 respectively. Out of the eight firms whose part-II bids were opened, two firms quoted firm prices and the others quoted variable prices. Savitha Chemicals, the lowest tenderer of variable prices, quoted a landed cost (including excise duty and freight) of Rs 25466.60 per KL (after allowing three *per cent* discount on the basic price for payment through letter of credit). The Board requested (August 2002) all the six tenderers who quoted variable prices to intimate whether they would supply the material at firm prices. In response, Savitha Chemicals quoted a revised landed cost of Rs 28457.17 (after taking into account IEEMA[52] price variation formula on the earlier quoted rate) applicable for deliveries only up to September 2002.

The Board placed (October 2002) an order with the above tenderer to supply 500 KL of the Transformer Oil at the rate of Rs 28457.17 per KL and 498 KL of transformer oil was supplied. Audit noticed that the Board did not place the order with the supplier immediately after opening of tenders. Had the order been placed in time, the material could have been procured at the originally quoted rate of Rs 25466.60 per KL. The time taken by the Board in opening of price bids and requesting the tenderers to concur for treating the quoted price as firm led to delay in making the procurement decision. Consequently, the Board had to procure the material at Rs 28457.17 per KL resulting in additional payment of Rs 14.89 lakh[53] which was avoidable.

The matter was reported to the Government/Board (May 2005). The Board stated (June 2005) that the supplier updated its quoted variable price up to 30 September 2002 and the price was treated as firm till completion of supply (March 2003). The reply is not tenable as a timely decision would have enabled the Board to take supply at the quoted rate for June 2002.
Government reply had not been received so far (November 2005).

General

6.5 Response to Inspection Reports and Draft Paras

Response to audit observation was negligible as no procedure exist for action against erring officials

Audit observations noticed during audit and not settled on the spot are communicated to the heads of PSUs and concerned departments of the State Government through Inspection Reports. The heads of PSUs are required to furnish replies to the Inspection reports through the respective heads of department within a period of six weeks. A review of the Inspection Reports

[52] Indian Electrical & Electronics Manufacturers Association.
[53] Rs. 2990.57 difference in price between the earlier rate and the revised rate x 498 KL.

issued up to March 2005 pertaining to the Jharkhand State Electricity Board disclosed that 766 paragraphs relating to 745 Inspection Reports remained outstanding at the end of March 2005 as detailed in ***Appendix 6.5***. Similarly, Draft Paragraphs on the working of PSUs are forwarded to the Principal Secretary/Secretary of the administrative department concerned demi-officially seeking confirmation of facts & figures and their comments thereon within a period of six weeks. It was, however, observed that two paragraphs forwarded to the Energy Departments during May 2005 to September 2005 have not been replied to so far (November 2005).

It is recommended that Government should ensure that (a) procedure exists for action against the officials who failed to send replies to Inspection Reports/Draft Paragraphs as per the prescribed time schedule, (b) action to recover loss/outstanding advances/over payments is taken as per a time bound schedule; and (c) the system of responding to audit observations is revamped.

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