CHAPTER-III

3. Performance reviews relating to Statutory corporations

3.1 Tariff, billing and collection of revenue in Bihar State Electricity Board.

Highlights

The Board did not revise the tariff fixed in June 2001 and also failed to file petition before SERC, for tariff fixation (March 2006). Due to non-revision of tariff, the Board was deprived of revenue of Rs 165.21 crore during 2001-06.

(Paragraph 3.1.10)

Against the norm of 15.5 *per cent o*f transmission and distribution losses prescribed by the Central Electricity Authority, the transmission and distribution losses of the Board ranged between 38.20 and 62.05 *per cent.* Excess T&D losses of the Board over the CEA norms resulted in loss of potential revenue of Rs 3,200.99 crore during 2001-06.

(Paragraph 3.1.12)

Due to non-installation/replacement of energy meters, the Board suffered loss of Rs 5.24 crore. Similarly, due to non-implementation of the decision regarding release of new connections, the Board lost potential revenue of Rs 1.15 crore.

(Paragraphs 3.1.14 and 3.1.16)

The Board's inaction in raising of bills for use of transformers of higher capacity resulted in loss of revenue of Rs 18.97 crore. The Board also lost revenue of Rs 8.29 crore due to adoption of incorrect measurement of induction furnace.

(Paragraphs 3.1.18 and 3.1.22)

The Board failed to take action under the provisions of the Electricity Act for the recovery of its dues from consumers resulting in blocking up of revenue of Rs 5,086.22 crore as on 31 March 2005 and consequential loss of interest amounting to Rs 1,858.42 crore.

(Paragraph 3.1.25)

The Board's failure to initiate timely action for recovery of dues resulted in revenue recovery amounting to Rs 26.79 crore becoming time barred.

(Paragraph 3.1.30)

Introduction

3.1.1. Government of Bihar was required, in pursuance of Section 82 of the Electricity Act, 2003, to set up a State Electricity Regulatory Commission (SERC) for fixation of tariff etc. The SERC was notified in April 2002 but was operationalised only in May 2005.

The Bihar State Electricity Board (Board), in the absence of SERC, was empowered to fix tariff for the different categories of consumers under Sections 46 and 49 of the Electricity Act 1948. Though the Commission was constituted in May 2005, the Board had not submitted any application for fixation of tariff, to the Commission. As such, the tariff fixed in the year 2001 by the Board continued to be applied (March 2006).

As against the required rate of return (RoR) of three *per cent* on the capital base[1], the RoR of the Board was negative ranging from 48 to 161 during 2001-06. Tariff rationalisation, prompt billing and collection of revenue assume great importance in the context of negative returns which affect the liquidity of the Board.

The policy for tariff, billing and collection of revenue for the sale of energy, is formulated at the Board Headquarters by Member (Finance and Revenue) and Chief Engineer (Commercial), who are responsible for periodical fixation and updation of tariff. Billing of High Tension (HT) consumers is done in Circles, whereas the billing of consumers of Domestic Service (DS), Non-Domestic Service (NDS) and Low Tension Industrial Service (LTIS) is done in divisions/sub-divisions.

A review on tariff, billing and collection of revenue was included in the Report of the Comptroller & Auditor General of India for the year 2001-02 (Commercial), Government of Bihar.

Scope of audit

3.1.2. The present review covers the performance of the Board with regard to tariff billing and collection of revenue for the last five years ended March 2006. Audit was carried out between February 2006 to May 2006 through examination of records at the Board headquarters at Patna as well as six (37 *per cent*) out of 16 Circles and 15 (28 *per cent*) out of 54 Divisions, selected on the basis of geographical distribution.

Audit objectives

3.1.3. Performance audit of tariff, billing and collection of revenue was carried out to assess whether and to what extent:

- the tariff was fixed as per norms and revised regularly
- the consumption of energy was measured correctly, and bills issued promptly

[1] Capital base represents the value of fixed assets in service (net of cumulative depreciation and consumers contribution for service lines) at the beginning of the year.

- adequate and prompt action was taken to collect revenue and, in case of defaulting consumers, prompt penal action was taken as per the extant provisions.
- the Board had taken action to contain the T&D[1] losses within the norms applicable.

Audit criteria

3.1.4. The following audit criteria were adopted:

- Provisions of the Electricity (Supply) Act 1948/2003. Terms and conditions of tariff.
- Targets for revenue collection.
- Decisions of the Board of Directors/ directions/ rules/ circulars/ regulations of the Government/Board.
- CEA norms for T&D losses
- Terms & conditions of the agreements for sale of power.

Audit methodology

3.1.5. The following mix of methodologies was adopted:

- Examination of the records maintained at the Board Headquarters,
- collection of data and evidence from records such as minutes and agenda papers, returns submitted by field offices, records of sub-stations, circles, divisions and sub-divisions etc.
- interaction with the management at various levels.

Audit findings

3.1.6 The audit findings were reported to the Government/Board in June 2006 and discussed at the meeting of the Audit Review Committee for Public Sector Enterprises (ARCPSE) held on 9 November 2006, where the Government was represented by the Additional Secretary, Energy Department, and the Board was represented by the Chief Engineer (Commercial) respectively. The review was finalised after considering the views of the Government/Board.

The audit findings are discussed in the succeeding paragraphs

Poor internal resource generation

3.1.7. It was noticed during audit that the Board was saddled with poor internal resource generation due to deficient tariff fixation for different categories of consumers, operational inefficiencies, excessive transmission and distribution (T&D) losses[2], theft of energy, poor collection of revenue and

[1] Transmission and distribution.
[2] T&D Loss is the difference between power available for sale and power actually sold.

non-revision of tariff periodically, etc. The financial position of the Board had deteriorated over the years. The Board had accumulated huge deficit inspite of grants and subsidies given by the Central and the State Governments, as detailed below:-

(Amount: Rupees in crore)

Year	Capital base	Deficit for the year without subsidy, and prior period adjustment	Deficit as per the accounts after subsidy and prior period adjustment	Rate of return on capital base (*per cent*)	Cumulative deficit
2001-02	767.25	1,570.01	1,308.94	(-) 170.60	3,755.50
2002-03	931.99	460.64	460.64	(-) 49.43	4,216.14
2003-04[1]	931.99	678.34	678.34	(-) 72.78	4,894.48
2004-05	931.99	442.82	442.82	(-) 47.51	5,337.30
2005-06	931.99	1,349.09	1,349.09	(-) 144.75	6,686.39

It would be seen from the above table that after adjusting the grants and subsidy, the Board's deficit of Rs 3,755.50 crore at the end of 2001-02, increased to Rs 6,686.39 crore at the end of 2005-06.

The deficit shown above, is to be seen in the light of the revenue loss of Rs 10,886.92 crore as worked out by Audit. The deficit could have been turned into profit, had proper and timely action on controllable factors such as regular revision of tariff, reduction in system losses, proper application of tariff and appropriate action against defaulting consumers been taken by the Board, as discussed in succeeding paragraphs.

Tariff Structure

3.1.8 As per Section 86 of the Electricity Act, 2003, the State Electricity Regulatory Commission is empowered to fix the tariff with effect from the date (May 2005) the SERC became functional. Further, according to Section 61 of the Electricity Act, 2003, the tariff fixed under Electricity Act, 1948 was applicable up to 10 June 2004.

Fixation of tariff

The tariff was fixed without any norm.

3.1.9 According to the Electricity (Supply) Act, 1948, and the Electricity Act, 2003, the tariff should be fixed to ensure three *per cent* return on the capital base. It was, however, noticed during audit that neither had the Board nor the State Government formulated any rules or prescribed any principle for fixation of tariff for different categories of consumers viz. domestic, non-domestic, low tension industrial service (LTIS), high tension industrial service (HTIS), high tension specified service (HTSS), railway traction service (RTS), agriculture and public lighting. The fixation of tariff was not based on any norm relating to cost, and was formulated by simply calculating surplus/deficit on the basis of expected energy sales/revenue expenditure, revenue receipt at the existing as well as proposed tariff without considering transmission and distribution losses, and minimum return of three *per cent* on the capital base as required under the Act. As such the tariff determination was neither adequate nor scientific, which resulted in a large gap between the cost of supply and revenue realisation.

[1] Figures for the year 2003-06 are provisional, as the accounts have not been finalised.

A statement showing the cost of sales, average selling price, and loss per unit for the last five years up to 2005-06 is given below: -

Sale rate was less than the cost of sales.

	Purchase plus other cost[1] (Rupees in crore)	**Units sold (MU)**	**Cost of sale per unit (Rupees)**	**Average sale rate (Rupees)**	**Loss**	
					Per unit (Rupees)	**Amount (Rupees in Crore)**
2001-02	3,327.84	2,695.19	12.35	3.44	8.91	2,401.41
2002-03	1,771.96	2,538.52	6.98	3.58	3.40	863.10
2003-04	2,187.37	2,771.30	7.89	3.42	4.47	1,238.77
2004-05	2,041.53	2,922.55	6.99	3.37	3.62	1,057.96
2005-06	2,578.97	N A	N A	N A	N A	N A
Total						**5,561.24**

It would be seen from the above table that the cost of sales ranged from Rs 6.98 to Rs 12.35 per unit whereas the sale price ranged between Rs 3.37 and Rs 3.58 per unit resulting in loss of Rs 5,561.24 crore (upto March 2005) which could have been avoided by reducing operational cost, T&D losses and fixation of tariff according to the provisions of the Act.

Non-approval of tariff by the State Government

3.1.10 A proposal for revision of tariff was sent (October 2002) to the State Government for approval but was not approved by the Government for want of some clarifications/information (November 2002).

Non-approval of tariff by the State Government resulted in loss of Rs 165.21 crore

Due to non-approval of the tariff revision proposal, the Board could not bill its consumers at the revised rates. As a result the Board was deprived of revenue of Rs 165.21 crore, up to March 2006.

Tariff was not revised regularly

3.1.11 It was noticed during audit that the Board had not periodically revised the tariff. The Board revised its tariff for HTSS category in April 2001, and other categories in June 2001. The tariff for HT category was last revised in July 1993.

Tariff for HT category was not revised since July 1993

It was further noticed during audit that the tariff for HTSS was effective up to March 2002. Neither was the tariff revised nor was the period of prevailing tariff extended.

Excess system loss

3.1.12 In State Electricity Boards, transmission and distribution of power are done over long distances which necessarily involves some loss of energy at various stages. Central Electricity Authority (CEA), while issuing (May 1992) guidelines for Energy Audit, fixed the acceptable level of transmission and distribution (T&D) losses at 15.5 *per cent* (8.5 *per cent* transmission/ sub-transmission, and 7 *per cent* distribution losses).

Details of energy available for sale, energy sold, and T&D losses in the Board during the last five years up to 2005-06 are given below:-

[1] Establishment and other overhead expenditure

(Amount: Rupees in crore)

Year	Energy available for sale	Energy sold	T&D loss	Percentage of T&D loss
2001-02	6,215.09	3,840.83	2,374.26	38.20
2002-03	6,162.76	2,338.52	3,824.24	62.05
2003-04	6,071.20	2,771.30	3,299.90	54.35
2004-05	6,555.20	2,922.55	3,632.65	55.42
2005-06	7,374.84	N.A	N.A	N.A
Total	**25,004.25**		**13,131.05**	

The Board lost potential revenue of Rs 3,200.99 crore

It would be seen from the table above that against the norm of 15.5 *per cent*, actual T&D losses ranged between 38.20 and 62.05 *per cent*. The Board lost 10,225.38 million units in excess, reckoned against the CEA norms, valued at Rs 3,200.99 crore. It was noticed during audit that the transmission loss was within the norm and thus the excess loss was in the distribution system. The Board had not analysed the reasons for such abnormal loss. Reasons for the abnormal loss, as analysed by Audit, were non-implementation of system augmentation/improvement schemes under APDRP[1] and failure of the Board to control pilferage and theft of energy.

Billing system

3.1.13 The main source of revenue of the Board is from the sale of energy to the consumers. Electricity is one industry where sales are invariably on credit and receipt of revenue takes place after a certain period. Therefore, prompt and accurate billing is important, as any laxity may entail huge losses. This work assumes greater importance in view of the critical financial position of the Board. In order to ensure that all the dues of the Board are billed promptly and accurately as per the approved tariff, the following are the basic requirements.

- Installation of meters of required capacity before commencement of supply, and replacement of defective meters immediately.
- Taking of meter readings on due dates.
- Prompt billing in accordance with the tariff provisions.
- Imposition of penalty in case of violation of supply conditions, and immediate disconnection in case of non-payment.
- Adequate anti power-theft measures.

The billing function of the Board has been computerised except for HT consumers. The Board has its own computerised billing system for Patna Electricity Supply Undertaking (PESU) area, whereas the computerised billing for other divisions is done through private agencies. The collection is done manually and after manual adjustment of collections, bills for the subsequent months are prepared. Audit scrutiny revealed that excess payments of Rs 35.60 lakh on account of excess number of copies of documents, and items not specified in the agreement[2] were made to the private agencies engaged in computer billing.

Other irregularities/deficiencies noticed in the billing system are discussed in the subsequent paragraphs.

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[1] Accelerated Power Development and Reforms Programme.
[2] Date-wise collection report, abstract of bill issued, etc.

Non-installation and delayed installation of meters

3.1.14 The Board has two types of consumers urban and rural. In urban areas, the electricity is supplied to the consumers through meters, whereas in rural areas, the supply is un-metered. Under the Electricity Act, 2003, unmetered power supply is not permitted. For 100 *per cent* metering of consumers of four circles, the Board had placed orders for supply and installation of 2.46 lakh single-phase meters at Rs 23.05 crore at the rate of Rs 935.83 per meter including Rs 180 for installation and commissioning. 2.23 lakh meters were received but only 1.26 lakh meters were installed (March 2006).

Non-installation of energy meters resulted in loss of Rs 5.24 crore

Audit scrutiny revealed that the consumers of the Board Colony feeder of New Capital Division in PESU West Circle, where almost all consumers were either unmetered or were having defective meters, were billed for only 4.06 MU against the actual supply of 29.31 MU. Thus, due to non-installation/replacement of defective meters, 25.25 MU energy remained unbilled. As a result, the Board suffered loss of Rs 5.24 crore during the period 2001-06, calculated at the rate of Rs 2.25 per unit[1].

The Board stated (November 2006) that action for installation of new meters was being taken.

Short billing

3.1.15 The Board recovers electricity charges at the flat rate of 144 units (Rs 279) in case of unmetered consumers/defective meters. In case of its employees staying in the Board's quarters in Patna, however, the bills are not prepared even for the minimum amount due and the consumption is shown within the limit of permissible free units. In the case of Bihar Military Police quarters at Patna, an amount of only Rs 100 per month is being charged. Thus, by irregularly charging the unmetered consumers at less than the flat rate of 144 units, the Board suffered loss of Rs 58.23 lakh during the five years up to 2005-06.

The Board stated (November 2006) that billing is done on the basis of monthly consumption. The reply is not tenable as all these connections were unmetered.

Delayed release of new connections

Delay release of new connections resulted in loss of revenue Rs 1.15 crore

3.1.16 The Board's circulars provide for release of new connections to consumers within one month from the date of completion of all formalities. The period of one month was subsequently reduced (June 2005) to three days by the Board. It was, however, noticed during audit that even after completion of all the formalities by the consumers, there were delays of 1 to 38 months in release of new connections, which resulted in loss of potential revenue of Rs 1.15 crore during 2002-06.

The Board stated (November 2006) that non-compliance of formalities by the consumers were the main reasons for non-release of new connections. The reply is not acceptable, as the consumers had already deposited security after completing all formalities.

[1] Average rate for domestic consumer

Undue benefit to a consumer

3.1.17 For supply of power to HT consumers, an agreement in the prescribed form is required to be entered into between the Board and the consumer. According to Clause 1 (b) of the standard/prescribed agreement, the consumer should commence to take supply within six months of receipt of intimation from the Board regarding availability of power. In case of failure on the part of the consumers to take supply the agreement shall be terminated and the Board shall be entitled to realise an amount equivalent to 50 *per cent* of the value of minimum guaranteed consumption plus 50 *per cent* of monthly demand charge from the consumer, for three years.

It was noticed during audit that Ice Berg Industries Ltd., had applied for an electricity connection of 1,000 KVA load, which was sanctioned (January 2004) by the Board and an agreement was signed on 16 April 2004. Due to delay in construction of 33 KV line by the consumer, the connection for the supply of power commenced from 6 May 2005 i.e. 16 months after the date of sanction.

The Board failed to recover Rs 71.55 lakh from consumer

The agreement was required to be terminated, and Rs 71.55[1] lakh recovered from the consumer due to delay on the part of the consumer. But the Board did not take any action resulting in undue benefit of Rs 71.55 lakh to the consumer.

The Board accepted (November 2006) the audit observation.

Detection of unauthorised load

3.1.18 According to clause 16.4 of the Tariff (1993) for HT consumers and Board's circular dated 29 October 2002, the transformer capacity of a HT consumer shall not be more than 150 *per cent* of the contract demand. In case of installation of transformer of higher capacity than admissible, compensation[2] shall be payable by the consumer at two thirds of the transformer capacity, for the entire period of malpractice, and at twice the existing rate under appropriate tariff, less the amount already charged. In case such period of malpractice cannot be ascertained, six months period prior to the detection of such malpractice shall be taken.

The Board suffered loss of Rs 18.97 crore due to non-recovery on account of unauthorised load

Audit scrutiny revealed that Kalyanpur Cement Limited, Banjari, an EHT consumer under Electrical Transmission Circle, Dehri-on-Sone, having a contract demand of 15,000 KVA was found using transformer of 32,000 KVA (January 2005). As such the consumer should have been charged at the contract demand of 21,333 (two third of 32,000) KVA at twice the tariff rate with effect from July 2004. **The Board, however, did not take any action against the defaulting consumer resulting in undue benefit to the consumer and loss of revenue of Rs 18.97 crore[3] to the Board.**

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[1] Demand Charge =50% of Contract Demand x Rate/KVA x period in months (500x115x36=Rs 20,70,000) -A
Energy Charge=Contract Demand x Power Factor x Load Factor x Hours x No. Of days (1000x0.9x0.25x24x365x3x1.72)=1,01,70,360/2=Rs 5085180 -B
A + B = 71.55 lakh.

[2] Equivalent to amount at twice the existing rate for two third of the transformer capacity less amount already charged

[3] Energy charge Rs 15.54 crore plus demand charge Rs 3.43 crore = Rs 18.97 core.

The Board accepted (November 2006) the audit observation.

Non-transfer of dues

Non-transfer of dues resulted in loss of interest of Rs 3.23 crore.

3.1.19 According to the Board's circular dated 29 October 2002, the outstanding dues in respect of a disconnected consumer should be transferred to a running connection of the same consumer. It was noticed during audit that in Electrical Divisions, Muzaffarpur (Urban) and Gopalganj, the outstanding dues of Rs 4.99 crore in respect of disconnected consumers had not been transferred to the running accounts of 61 consumers, resulting in loss of interest of Rs 3.23 crore[1] on the blocked amount of Rs 4.99 crore up to 31 March 2006.

Inadequate security deposit

3.1.20 According to clause 15.3 (c) of the Tariff (1993), if half of the aggregate amount of six months bill from October to March or from April to September exceeds the existing security deposit by 20 *per cent*, the same is to be enhanced to that extent and the consumer served notice to deposit the additional security deposit.

Audit scrutiny revealed that additional security of Rs 1.45 crore was not demanded from the 183 consumers. Due to insufficiency of security deposit, arrears remained unsecured and the Board was deprived of liquidity to that extent.

Wrong categorisation of consumers of rural areas

Wrong categorisation of consumer resulted in loss of Rs 1.25 crore.

3.1.21 The Board issued notification (May 2001) that the consumers in rural areas who were being fed from urban/town feeders were to be categorised under Domestic Service-II (DS-II) for billing. It was noticed during audit that 3,594 domestic consumers receiving power from urban feeders were categorised under DS-I instead of DS-II in violation of the notification. Thus due to wrong categorisation, the Board suffered loss of Rs 1.25 core during 2001-06.

The Board accepted (November 2006) the audit observation.

Wrong measurement of induction furnace capacity

3.1.22 Revenue assessed from a consumer having induction furnaces comprises fixed charge depending on the capacity of the furnaces (Rs 600 per MT) and unit charge based on the electricity consumed (Rs 1.20 per unit). Thus measurement of capacity is an important factor for correct assessment of revenue in case of induction furnace consumers**.**

The Board's team inspected (16 September 1999) the premises and determined the capacity of the two furnaces (together) of Jagdamba Ispat as 8.799 MT. But the Electrical Superintending Engineer (ESE), ignoring the measurement taken by the team made agreement with the consumer for 5.5 MT on 24 September 1999, on the basis of declaration of the capacity of the furnace made by the consumer to the Central Excise Department. The measurements

[1] At the rate of 13 *per cent* as charged by the State Government on loans.

Incorrect measurement of furnace capacity resulted in loss of Rs 8.29 crore.

were again taken on 25 August 2001, 1 September 2001, and 30 September 2001, and the capacity of the furnaces was determined as 4.97 MT after deducting 'ramming mass,' which was not admissible till September 2004.

Thus due to wrong calculation of the capacity of the furnaces the Board suffered a loss of revenue amounting to Rs 8.29 crore.

The Board accepted the audit observation (November 2006).

Violation of Board's decision

3.1.23 JMD Alloys Ltd., Bihta, having a contract demand of 4,850 KVA and transformer capacity of 7,200 KVA was found (August 1999) indulging in theft of energy, as detected by the Anti Power Theft cell of the Board. An FIR was lodged with the police, and a punitive bill as per Clause 16.9 of the tariff was raised. The line was disconnected on 28 August 99 due to non-payment. The consumer filed an SLP in the Hon'ble Supreme Court. The Court ordered (11.5.2000) restoration of power subject to payment of Rs 60 lakh. The consumer informed that the capacity of his induction furnance was 9 MT. As an independent agency, IIT, Kanpur was requested to measure the capacity of the furnace. IIT Kanpur determined the capacity of the furnace (June 2000) as 9.3 MT with the remarks that "in one furnace the bottom was found to be raised and the coil joint was reduced, although the outside iron susceptive were still of original length". This is important because the coil can be increased to its original level and in that case the furnace would be of higher capacity. The Board's team inspected the furnace and on the basis of measurement (June 2000), found the capacity of the furnace to be 11 MT.

The Board asked the consumer (5 July 2000) to execute an agreement for 11 MT (6,600 KVA). But the Electrical Superintending Engineer, in violation of the above order, executed an agreement for 9 MT (5,400 KVA). Though the Board again ordered taking of payment on 11 MT, the Electrical Superintending Engineer continued to accept payment on 9 MT.

Thus, the Electrical Superintending Engineer had extended undue benefit to the consumer in violation of the direction of the Board resulting in revenue loss of Rs 8.80 crore to the Board.

The Board has not furnished any specific reply.

Collection of revenue

3.1.24 The energy bills issued to the consumers on monthly basis are payable within the time prescribed. The daily revenue of the Board collected at sub-division levels is required to be deposited daily in non-operating Receipt Accounts in various banks. The banks are required to transfer the deposits to their main branches at Patna, where the same are to be credited into the Board's main Collection Account. Audit scrutiny of the process of collection and remittance of revenue and transfers by banks, revealed the following deficiencies/irregularities: -

Poor recovery performance

3.1.25 The Position of energy available for sale, energy actually sold, recovery made including arrears during 2001-06 is detailed below: -

(Amount: Rupees in crore)

Sl. No.	Particulars	2001-02	2002-03	2003-04	2004-05
1.	Power available for sale (MU)	6,216.72	6,162.76	6,071.20	6,555.20
2.	Power sold (MU)	3,843.61	2,338.52	2,771.30	2,922.55
3.	Percentage of power sold to power available for sale	61.80	37.95	45.65	44.58
4.	Total revenue assessed	1,196.83	1,313.19	1,452.78	1,547.69
5.	Opening dues at the beginning of the year	2,819.83	3,171.74	3,698.17	4,387.06
6.	Total realisable amount	4,016.66	4,484.93	5,150.95	5,934.75
7.	Revenue collected (including arrear)	844.92	786.76	763.89	848.53
8.	Percentage of collection to realisation	20.01	17.54	14.83	14.30
9.	Amount outstanding at the end of the year	3,171.74	3,698.17	4,387.06	5,086.22
10.	Increase in outstanding dues	351.91	526.43	763.89	699.16
11.	Percentage of increase	12.48	16.60	14.83	16.08
12.	Loss of interest at the rate of 13%	366.58	412.33	480.76	570.32
13.	Arrear in terms of number of months' assessment	26.73	37.08	40.10	39.44

Note: Figures for 2005-06 was not available.

It would be seen from the table that the percentage of power sold to power available during 2001-06 which ranged between 37.95 and 61.80 had declined over the years from 61.80 in 2001-02 to 44.58 in 2004-05 and in 2002-03 when it was at its lowest of 37.95. The position of actual realisation was poor and ranged between 14.30 and 20.01 *per cent* of the total outstanding dues.

As per the provision of the Electricity Act, 1910 read with Section 56 of Electricity Act, 2003, consumers defaulting in payment are to be given 15 days notice after expiry of one month from the due date of payment and if the amount is not deposited during the noticed period, the supply is to be disconnected so that arrear do not accumulate any further. The Board, however, failed to ensure the compliance of the provisions of the Act resulting in huge accumulation of arrears. The poor realisation resulted in heavy accumulation of energy debtors, which increased from Rs 3,171.74 crore (2001-02) to Rs 5,086.22 crore (2004-05) which was equivalent to 26.73 to 39.44 month's revenue assessment as against the availability of security deposit from consumers to the extent of only three months assessment. Besides, due to blocking of fund on account of non-realisation of arrears, the Board sustained loss of interest to the extent of Rs 1,858.42 crore during 2001-2005.

Untraceable consumers

Consumers having dues of Rs 71.12 lakh were not traceable

3.1.26 According to the general terms and conditions for the supply of power, if a consumer fails to pay any bill presented to him within the due date mentioned in the bill, the Board shall take action under sub-section 1 of Section 24 of Indian Electricity Act, 1910, read with Section 56 of Electricity Act, 2003, and disconnect the supply, after giving such consumer not less than 15 days clear notice in writing, without prejudice to its right to recover the amount of the bill by appropriate legal action. It was noticed during audit that the above provision of the Act/tariff was not followed. As a result 89 consumers with outstanding amount of Rs 71.12 lakh are untraceable. The recovery of Rs 71.12 lakh is, therefore, doubtful.

The Board accepted the audit finding in the meeting (November 2006) and assured to take appropriate action.

Unsettled claim of remission

3.1.27 According to Clause 13 of the standard agreement for high tension consumers as well as the notification of the Board, if at any time the consumer is prevented from using the electricity, due to strike, riots, fire, flood, explosion or any other cause, reasonably beyond the control of the consumer or due to stoppage of power for 30 minutes and above either due to load shedding or system failure beyond the Board's control, the demand charge mentioned in the tariff shall be proportionately reduced. General Manager-cum-Chief Engineer (GM-cum-CE) of the respective area is the sole arbitrator for deciding the cases within four months of the date of filling the claim.

Audit scrutiny revealed that the claim of remission of Rs 9.17 crore filed by 253 consumers up to 2005-06 remained undecided by the GM-cum-CE of the respective area due to non receipt of interruption report from the respective Supply circle/division. As a result, the Board could not recover the amount.

The Board accepted (November 2006) the audit findings.

Loss of interest due to defective agreement

3.1.28 According to the arrangement with the banks, the bank branches are required to remit all deposits made by revenue divisions/sub-divisions to their main branch at Patna, for crediting in the current account of the Board, on daily basis.

The Board suffered loss of Rs 1.12 crore due to delayed transfer of amount by banks.

It was noticed during audit that revenue of Rs 39.20 crore deposited during 2001-06 was not remitted by banks to their main branch at Patna, on daily basis. The delays in remittance ranged between 10 and 770 days. Interest lost by the Board on this account worked out to Rs 1.12 crore at the rate of 13[1] *per cent per* annum. In the absence of any penal provision in the agreement for compensation to the Board in case of delay in transfer by the banks, the Board could not claim any interest from the banks.

The Board stated that correspondence had been made with the banks for realisation of interest. However, no supporting records were made available to Audit.

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[1] Rate of interest charged by the State Government on loan given to the Board.

Missing credits

Credits for revenue of Rs 2.23 crore deposited missing.

3.1.29 The Board receives revenue at its Patna HO in 11 bank accounts. It was noticed during audit that Rs 2.23 crore deposited by the field units were not credited by their main branch at Patna to the accounts of the Board headquarters. The Board suffered loss of interest of Rs 15.07[1] lakh on uncredited amounts besides blocking of fund of Rs 2.23 crore during 2004-05.

The Board stated (November 2006) that out of Rs 2.23 crore pointed out by audit, Rs 2.01 crore have been credited by the banks and Rs 22 lakh are missing. However, no action was taken by the Board with regard to loss of interest.

Time barred revenue

3.1.30 According to clause 15.4 (e) of the tariff (2001) read with Section 56 of Electricity Act, 2003, if a consumer fails to pay the bill presented to him within the due date, 15 days notice would be served by the Board, and in case of non-payment, the line was to be disconnected, and legal action initiated for recovery of dues. It was, however, noticed in audit that though the line was disconnected by the Board, legal action was not taken during the limitation period of three years from the date of disconnection. As a result, dues aggregating to Rs 26.79 crore up to March, 2006, against various consumers, became irrecoverable under the provisions of the Limitation Act. Neither was any investigation carried out to ascertain the reasons for such lapses nor was any action taken against the officers/staff responsible for such omission. Besides, the Board is not left with any legal recourse for realisation of such time barred revenue.

Anti power theft measures

3.1.31 According to the norms of the Central Electricity authority, transmission and distribution losses together should not exceed 15.5[2] *per cent.* The transmission and distribution losses of the Board, however, were 5 *per cent* (1,250.21MU) and 47.52 *per cent* (11,880.84 MU) respectively, during the four years up to 2004-05. The losses were on account of inherent defects in the transmission and distribution system, as well as power theft by consumers and others.

In order to detect such theft of power, the Board had constituted an Anti-power theft (APT) cell at the Board headquarters under the Chief Engineer (Energy Accounting) as well as in all area board offices. These cells conducted periodical raids to detect theft of power by the consumers and others. There was no system of fixing targets for conducting raids in a particular period.

Anti Power theft measure was inadequate.

Audit scrutiny revealed that against 5,889 teams available, the Board utilised only 1,961 teams (33.30 *per cent*) during 2002-06 (upto June 2005). Despite instructions of the Board (July 2002) to increase the number of raids, focusing on big factories/HTIS consumers, no raid on any HTIS consumer was conducted during the period. Audit further noticed that even after detection of theft of energy, the Board failed to take appropriate action.

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[1] Calculated at the rate of 13 *per cent* charged by the Government on loan.
[2] Transmission/subtransmission 8.5 *per cent* and Distribution 7 *per cent*

An illustrative case is discussed below:

Raid for load verification by engineers of the Board, alongwith a magistrate, was conducted in the premises of a commercial consumer (Hotel Bhawana International) having connected load of 30 KW (November 2005), and actual load of 132 KW was detected. Accordingly a penal bill for Rs 13.29 lakh was issued to the consumer (3 December 2005) under HT category consumer. Due to non-payment, the line was disconnected (26 December 2005). But without receiving any payment from the consumer the line was restored on 15 January 2006. Second load verification was done in January 2006, when the load was found to be 49 KW. The penal bill already issued was also cancelled without any recorded reasons.

It was noticed in audit that during the second verification, that the number of air conditioners was less than that during the previous verification as 34 air conditioners had been removed. According to the provisions of the tariff applicable the minimum period of contract for HT consumer is three years. As the consumer, as per the actual load of 132 KW, pertained to HT category, an agreement was to be entered into and the consumer charged Rs 20.43 lakh (at the sanctioned load of 132 KW inclusive of double rate for six months) up to March 2006. Non-levy/recovery resulted in loss of revenue of Rs 20.43 lakh.

The Board stated (November 2006) that after the second verification the load was found to be 49 KW and hence the bill was raised at 49 KW. The reply is not correct as the connected load of the consumer at the time of the raid was found to be 132 KW, and accordingly the consumer should have been categorised as an HT consumer. As per the tariff, HT consumers have to pay the minimum guaranteed contract demand for a minimum period of three years.

Non-implementation of franchisee agreement of Gulzarbagh division

3.1.32 The work of franchisee for collection of revenue in Guzarbagh division of PESU area was awarded to the highest bidder, Balaji Consultancy, Patna, but due to non-deposit of full security, Letter of Intent (LoI) was cancelled (April 2005). After cancellation of LoI issued to Balaji Consultancy, the work was awarded to Prakriti Enterprises, Patna, the second highest bidder at a lower rate of recovery and higher rate of commission. Though this firm also did not deposit the security money in full, an agreement was executed with the firm (August 2005). The work was to be taken up from 1 September 2005 but the Board, without any reason on record, ordered that the execution of the agreement be kept in abeyance till further orders. The firm had submitted bills for three months from September to November 2005 at the rate of Rs 24.62 lakh per month amounting to Rs 73.86 lakh. The Board had not made the payment so far (September 2006).

The Board incurred liability of Rs 73.86 lakh due to keeping the agreement in abeyance.

Thus, failure of the Board to take final decision in this regard resulted in liability of Rs 73.86 lakh. Besides, reasons for irregularities in awarding the work to the firm with lower return at higher commission without fulfilling the conditions were not on record.

Internal control and Internal audit

3.1.33 Internal control is a management tool to provide reasonable assurance that an organisation fulfils accountability obligations, carries out orderly and efficient operations, safeguards assets and discloses reliable financial data through timely reporting. Internal control includes budgetary control, accounting control, cost control, periodic operating reports, statistical analysis and internal audit.

Audit scrutiny revealed the following deficiencies in the regard:

In accordance with the provisions of Section 61 of Electricity (Supply) Act, 1948, the Board was required to submit the financial statement for the ensuing year and the supplementary financial statement for the current year in the month of February each year to the State Government for laying on the table of the House. It was, however, observed that the budget for the years 2002-03, 2004-05 and 2005-06 were approved by the Board in May 2002, and June 2005 after delay of three months, one year, and four months respectively. Besides, there were wide variations (from 12 to 57 *per cent*) between the budget/revised budget and actuals during the four years upto 2004-05. Statistical Report for the years 2002-06 had not been prepared by the Board.

As per Section 69 of the Electricity (Supply) Act, 1948, the annual accounts of the Board have to be finalised within six months of the close of the financial year. However, the accounts of the Board have been finalised only up to the year 2002-03 so far (September 2006).

Against 490 internal audit units, the internal audit of 128 units only (26 *per cent*) was conducted by the internal audit wing of the Board during the five years upto 2005-06. Internal audit suggested recovery of Rs 41.34 crore from the consumers/employees against which only Rs 32 lakh (0.77 *per cent*) were recovered. The irregularities pointed out by the internal audit were not placed before the Board for appropriate action.

Thus internal control and internal audit were not effective in the Board.

Conclusion

The performance of the Board with regard to tariff, billing and collection of revenue is characterized by operational inefficiencies, deficient tariff fixation for various categories of consumers and ineffective revenue collection. Tariff revision has also not been undertaken periodically.

More than half of the power purchased by the Board is wasted through transmission and distribution losses. The revenue collected by the Board declined over the years resulting in huge recoverables and consequential loss of interest. The Board's revenue collection system also suffered from infirmities like delayed remittance by collecting banks, missing credits, short billing and untraceable consumers.

The Board violated its own directions with regard to transfer of dues of disconnected consumers to running connections, revision of security deposits, categorisation of rural consumers and measurement of induction furnace capacity. Inaction on the part of the Board resulted in recovery becoming time barred. Theft detection and prevention was ineffective and internal controls were weak.

Recommendations

The Board needs to:

- fix the tariff as per the Act, and revise the same regularly.

- issue correct bills promptly to consumers.
- take action against defaulting consumers and theft of power, to avoid amounts becoming time barred and consumers becoming untraceable.

The audit findings were reported to Government (August 2006); replies are awaited.

3.2 Power Sector Reforms including Accelerated Power Development & Reforms Programme

Highlights

Even after five years of signing the MoU, Bihar State Electricity Board had not achieved any of the targets committed there under.

(Paragraph 3.2.1)

The Board sustained a loss of Rs 57.37 crore by fixing agricultural tariff below the norm.

(Paragraph 3.2.7)

The Board incurred avoidable expenditure of Rs 27.86 crore due to assigning the work to PGCIL by not calling competitive bids, it also lost the opportunity to avail the benefit of competitive rates.

(Paragraph 3.2.8)

Under the Accelerated Power Development and Reforms Programme (APDRP), the Board received grants/loans of Rs 334.63 crore from GoI and Rs 121.48 crore from Power Finance Corporation as loan. The State Government treated the grant of Rs 147.57 crore as loan thereby overburdening the Board with interest of Rs 22.71 crore.

(Paragraph 3.2.10)

The Board paid advance of Rs 12 crore before signing the agreement with PGCIL, resulting in blocking up of funds and consequential loss of interest of Rs 1.17 crore.

(Paragraph 3.2.12)

Despite spending Rs 306.42 crore and despite the scheduled date of completion having elapsed, none of the works have been completed by PGCIL.

(Paragraph 3.2.13)

Introduction

3.2.1 A Memorandum of Understanding (MoU) was signed in September 2001 between the Government of Bihar (GoB) and the Government of India (GoI), as a measure of joint commitment to undertake Power Sector Reforms in a time bound manner. The MoU was valid for five years and subject to annual review. The MoU expired in September 2006 and has not been extended so far (October 2006).

The objectives of the Power Sector Reforms Programme were to ensure uninterrupted power supply to all households at affordable rates and to attain commercial viability in the power sector so that necessary investment could be made to cater to the increasing demand for power, thereby accelerating economic growth in the State.

The commitments made by the GoB in the MoU for power sector reforms, inter alia, included functional unbundling of the Board, power supply to all villages by 2006, ensuring break even by 31 March 2003, achievement of three *per cent* return on fixed assets, reduction in system losses to 18 *per cent* by 2002, development of an effective Distribution Management Information System, ensuring minimum agricultural tariff of 50 paise per unit, undertaking measures to improve Power Load Factor of thermal power stations, installing feeder meters by December 2001, operationalising energy audit by 2003 and ensuring 100 *per cent* consumer metering.

As per the provisions of the MoU, GoI was to provide funds under the Accelerated Power Development Programme (APDP) for renovation and modernisation, and up rating of thermal and hydroelectric power generating units, and improvement of the sub-transmission and distribution system to bring down T&D losses to 18 *per cent* by December 2002. APDP was rechristened as the Accelerated Power Development & Reforms Programme (APDRP) during 2002-03, in order to integrate the incentive financing with the existing investment programme to achieve commercial viability of the SEBs. APDRP focused on upgradation of the sub-transmission and distribution system in densely electrified zones in the urban and industrial areas, and improvement in commercial viability of SEBs.

The primary objectives of the APDRP were reduction of aggregate technical and commercial (AT&C) losses, bringing about commercial viability in the power sector, reduction of outages and interruptions and increasing consumer satisfaction. To achieve these goals, GoI would provide additional Central Plan Assistance[1] for strengthening and up-gradation of the sub-transmission network as well as grant an incentive equal to the actual reduction in cash losses.

Scope of audit

3.2.2 The present performance review conducted during April to May and September to October 2006 evaluates the implementation of Power Sector Reforms and APDRP during 2001-02 to 2005-06, covering six[2] out of 12 circles under APDRP. These six circles were selected on Simple Random Sampling without Replacement basis. The estimated cost of the projects in the selected circles was Rs 320.67 crore, against which the Board had incurred expenditure of Rs 199.93 crore up to September 2006.

Audit objectives

3.2.3 Performance audit of implementation of Power Sector Reforms and the APDRP was carried out to assess whether:

- the projects were carefully designed with adequate planning, the schemes were implemented as per the time schedule ensuring accrual of the envisaged benefits;
- the funding requirements were realistically assessed, and funds were sanctioned and released in time by the GoB and the Board;

[1] 25 *per cent* of the project cost as grant and 25 *per cent* as loan for non-special category States.

[2] Bhagalpur, Darbhanga, Gaya, PESU (East), PESU (West) and Purnea

- there was an effective monitoring mechanism at the Board level so as to ensure achievement of targets as per the commitments made under the MoU ;
- available funds were used efficiently, economically and effectively;
- the aggregate technical and commercial (AT&C) losses were reduced in accordance with the benchmarks and targets specified in the MoU and MoA;
- the tendering and evaluation processes were conducted in a transparent manner and competitive rates were ensured; and
- the extent of loss reduction and increase in revenue realisation was on course with the target specified in the detailed project reports.

Audit criteria

3.2.4 The implementation of Power Sector Reforms and APDRP was assessed with reference to:

- the benchmarks and targets specified in the MoU/MoA;
- GoI/GoB guidelines
- APDRP scheme guidelines ;
- terms and conditions of the agreement with PGCIL;
- time schedule set for completion of the turnkey project.

Audit methodology

3.2.5. The following mix of methodologies was adopted

- Study of the MoU/MoA and GoI/GoB guidelines
- Examination of records relating to proposals, detailed project reports of projects
- Examination of records regarding award of works and their execution.
- Interaction with the management.

Audit findings

3.2.6 The audit findings were reported to the Government/Board in June 2006 and discussed at the meeting of the Audit Review committee for Public Sector Enterprises (ARCPSE) held on 9 November 2006, where the Government was represented by the Additional Secretary, Energy, Department and the Board was represented by Chief Engineer (Commercial). The review was finalised after considering the views of the Government/Board.

The audit findings are discussed in the succeeding paragraphs:

Status of implementation of reforms programme by the Government of Bihar/Bihar State Electricity Board

3.2.7 The areas in which there had been delays in implementation of reforms by the GoB, with reference to the commitments made in the MoU are indicated in **Annexure – 14.**

It would be seen from the **Annexure** that the Board failed to implement the commitments made in the MoU. A few major deficiencies are detailed below

- Against the target of electrification of 45,103 villages, the Board could complete electrification of only 20,473 villages (45.39 *per cent*) so far (March 2006).
- The State Government has not passed the Bihar Electricity Reforms Bill. As a result unbundling of the Bihar State Electricity Board has not taken place.
- The Board has neither installed feeder meters so far (October 2006), nor has operationalised energy audit at 11 KV level by June 2002 and all levels by 2003.
- Target of reduction in T&D losses to 18 *per cent* has not been achieved by the Board.
- The renovation and modernisation of thermal generating units to improve Plant Load Factor is yet to be taken up (October 2006).
- The tariff structure of the agricultural consumers has not been revised (March 2006) to enforce the decision taken in the Chief Ministers/Power Ministers' Conference (March 2001). While it was decided to fix agricultural tariff at a minimum of 50 paise per unit, the Board charged 31.08 paise to 32.89 paise per unit from agricultural consumers during 2002-03 to 2004-05. As a result, the Board lost revenue of Rs 57.37 crore during 2002-03 to 2004-05.

Implementation of Accelerated Power Development & Reforms Programme

Project planning

3.2.8 The Ministry of Power (MoP), GoI appointed (August 2001) PGCIL as adviser-cum-consultant (AcC) for APDRP schemes of Bihar, for taking up detailed study in the selected circles and to prepare need based Detailed Project Report (DPR) for the Board, for which consultancy charges at actual cost basis (limited to 5 *per cent* of the project cost) were to be paid.

As per GoI guidelines (June 2003), SEBs were to implement the projects on turnkey basis through prequalified contractors selected through competitive bidding, so as to ensure quality and expeditious implementation of the work. In violation of the GoI guidelines, the Board nominated (July 2002) PGCIL to execute the APDRP schemes without going through the process of competitive bidding. The Board asked (December 2002) PGCIL, pending finalisation of modalities for the execution of the scheme, to invite tenders and execute work.

Two agreements, one for three circles viz. PESU (East), Patna and Muzaffarpur at an estimated cost of Rs 163.89 crore, and the second for another eight circles[1] at an estimated cost of Rs 461.89 crore (total Rs 625.78 crore) were signed with PGCIL in December 2003 for the execution of the projects on turnkey basis to be completed within 18 months from the date of signing of the agreement or payment of initial advance, whichever was later.

Thus the work was to be completed by June 2005. It was noticed during audit that no project has been completed so far (September 2006) due to delays in

[1] PESU (West), Rohtas, Purnea, Chapra, Saharsa, Bhagalpur, Darbhanga and Gaya.

handing over land by the Board to PGCIL, delays in awarding work and supply of materials to the sub-contractors by PGCIL, and lack of monitoring and control by the Board.

It was noticed that Jharkhand State Electricity Board, separated from Bihar State Electricity Board, executed the work on its own, and accordingly saved 10 *per cent* on consultancy fee. PGCIL was also executing the work by awarding work to sub-contractors. Had the Board executed the APDRP on its own, Rs. 62.58 crore payable to PGCIL by way of consultancy fee at 10 *per cent* of the agreement cost of Rs 625.78 crore could have been saved. Till March 2006, the Board had made a payment of Rs 306.42 crore to PGCIL including consultancy fee. Thus, the Board has already incurred an extra expenditure of Rs 27.86 crore (Rs 306.42 crore x 10/110) in payment of consultancy fee due to entrusting the entire work to PGCIL. The Board had also lost the benefit of competitive rates.

The Board incurred extra expenditure of Rs 27.86 crore on consultancy charges.

Funding patterns

3.2.9 The funds for the execution of APDRP projects are provided by the MoP, GoI, through a combination of grant and loan to the State Government, as additional Central Plan Assistance for implementation of the scheme. GoI would finance 50 *per cent* of the project cost, the ratio of grant and loan being 1:1. The Board was required to arrange the remaining 50 *per cent* of the fund requirement from Power Finance Corporation of India Limited (PFC) /Rural Electrification Corporation Limited (REC) or other financial institutions, as matching fund.

GoI had sanctioned (July 2002) three projects (in three circles[1]) for Rs 146.68 crore. Subsequently, 12 projects (in nine circles[2]) for Rs 707.37 crore were added to the scheme during September 2002 to September 2004. Thus 15 projects with aggregate estimated cost of Rs 854.05 crore were sanctioned in five phases, out of which two projects (Rs. 93.72 crore) were yet to be taken up.

Delayed/non-release of funds by the State Government

3.2.10 The State Government received Rs 21.45 crore under APDP during 2001-02 (Rs 10.725 crore loan and Rs 10.725 crore grant) and Rs 313.18 crore (Rs 156.59 crore as loan and Rs 156.59 crore as grant) under APDRP during 2002-03 to 2005-06. It was noticed during audit that the State Government released only Rs 10.73 crore and Rs 8.06 crore as grant during 2001-02 and 2002-03 respectively and an amount of Rs 313.92 crore as loan to the Board. The remaining amount of Rs 1.92 crore[3] had lapsed and revalidation from the GoI was awaited (October 2006). The State Government treated Rs 147.57 crore[4] as loan to the Board instead of grant, as envisaged in the scheme. As such, the very purpose of APDRP i.e. making the Board financial viable was defeated and the Board was burdened with additional interest of Rs 22.71 crore.

Further, the State Government was required to transfer the funds to the Board within a week of their receipt failing which it was to be treated as diversion. It

[1] Muzaffarpur, Patna and PESU (East) Circles
[2] Bhagalpur, Chapra, Darbhanga, Gaya, Munger, PESU (West), Purnea, Saharsa and Rohtas.
[3] (Rs 334.63 crore –Rs 313.92 crore = Rs 20.71crore) – Rs 18.79 crore = Rs 1.92 crore.
[4] Total grant received (Rs 167.32crore – Rs 0.96 crore) –18.779 crore = Rs 147.57 crore.

was, however, noticed during audit that the State Government released funds after delays ranging from 24 to 346 days.

The Board obtained loan of Rs 121.48 crore from PFC (2004-05 to 2005-06) incurring an interest liability of Rs 49.37 crore during 2003-04 to 2005-06 on Government loan and Rs 5.63 crore on PFC loan as on March 2006.

Defective agreement with PGCIL

There was no penal provision in the agreement with PGCIL to recover liquidated damages

3.2.11 The Board approved (August 2003) that in case of cost overrun of more than 20 *per cent* of the estimated cost in respect of various schemes, PGCIL would submit revised estimates and completion schedule to the Board for approval of MoP. Liquidated damages recovered from the contractor by PGCIL due to delay in completion of the work were to be suitably adjusted in the project cost. It was noticed during audit that while executing agreement with PGCIL, the aforesaid conditions were not included. Thus the Board had not safeguarded its interest in case of time and cost overrun of the projects. In order to avoid obtaining revised sanction due to cost overrun PGCIL arbitrarily reduced the scope of the work as discussed in paragraph 3.2.14.

Besides, the MoA envisaged performance guarantee provisions under the standard specification for turnkey contracts. There was, however, no provision in the agreement entered into with PGCIL for performance guarantee.

Payment of advance before signing of the agreement

The Board suffered loss of interest of Rs 1.17 crore due to release of advance to PGCIL before signing the agreement

3.2.12 As per the agreement with PGCIL, work was required to be completed within 18 months from the date of signing of the agreement or the date of release of initial advance, whichever was later. It was noticed during audit that the Board had paid Rs. 12 crore in March 2003 as initial advance, but the agreement with PGCIL was signed only in December 2003. As a result, the fund of Rs 12 crore remained with PGCIL without any tangible benefit to the Board and resulted in loss of interest of Rs 1.17 crore (calculated at the rate of 13 *per cent* per *annum* for 9 months) on blocked fund.

Delay in execution of the work

3.2.13 The total work of the APDRP scheme has been divided into 49 packages for 11 circles (excluding Munger circle), 11 packages were for Muzaffarpur, Patna and PESU (East), and 38 packages for the remaining 8 circles[1]. Subsequently, these 49 packages were sub-divided into 54 packages by PGCIL while awarding the work to sub-contractors. As per the agreement with PGCIL the entire work was to be completed by June 2005. Of these 54 packages, PGCIL awarded contract for only 47 packages, none of which has been completed (March 2006), despite payment of Rs 306.42 crore. The physical progress of the works as on 31 March 2006 is detailed below:

Sl. No.	Circle	Renovation and Modernisation of Power Sub Stations		New Power Sub Stations		New & Re-conductoring of line		New Distribution Transformers (including feeder metering)		Consumer Meter		Total Progress Achieved
		Supply	Erection	Supply	Erection	Supply	Erection	Supply	Erection	Supply	Installation	
1.	PESU	90	87	46	Nil	51	26	95	77	BSE	BSE	59.0

[1] PESU (West), Rohtas, Purnea, Chapra, Saharsa, Bhagalpur, Darbhanga and Gaya.

	(East)									B	B	
2.	Patna	98	78	NA	NA	95	81	95	35	BSEB	BSEB	80.0
3.	Muzaffarpur	98	69	NA	NA	95	91	5	5	BSEB	BSEB	60.5
4.	PESU (West)	98	61	77	30	Nil	Nil	12	12	BSEB	BSEB	34.0
5.	Rohtas	98	84	92	35 %	31	20	33	28	70	12	50.0
6.	Purnea	56	Nil	12	Nil	70	Nil	Nil	Nil	3	Nil	14.0
7.	Chapra	38	1	38	Nil	54	Nil	Nil	Nil	1	Nil	14.0
8.	Saharsa	37	Nil	Nil	Nil	18	Nil	Nil	Nil	Nil	Nil	5.5
9.	Bhagalpur	Supply-99 *per cent*, Erection-34 *per cent*				Nil	Nil	21	21	30	Nil	20.5
10.	Darbhanga	Supply-86 *per cent*, Erection-28 *per cent*				10	5	20	15	15	1	18.0
11.	Gaya	Supply-57 *per cent*, Erection-25 *per cent*				42	2	Nil	Nil	32	Nil	17.0

Due to delay in completion of work by PGCIL, the Board lost envisaged benefit of Rs 143.96 crore

It would be seen from the above table that the physical progress in three circles (1 to 3) ranged between 59 and 80 *per cent*, while in the remaining eight circles the progress was between 5.5 and 50 *per cent*. As a result the benefit worth Rs 143.96 crore that would have accrued on account of reduction transmission and distribution loss, increase in revenue realisation and increase in availability of power, as envisaged in the cost benefit analysis of APDRP scheme, could not be derived during the period July 2005 to March 2006.

During a joint inspection/verification undertaken by Audit with the Board officials (October 2006) the following defects/deficiencies in respect of works executed by PGCIL in six circles[1] came to notice:

- The Board had reported (October 2006) completion of reconductoring of 33 KV existing lines from Aurangabad PSS to Uchauli (12 Km) and Aurangabad to Daudnagar (35 Km). It was, however, found that only 38.50 Km had actually been completed.
- Earthing pipes of only 10 feet length had been provided in the PSS, whereas at least 40 feet pipes were required to withstand the heat in summer season. Thus earthing work done was substandard and would not be able to safeguard the transformers from burning.
- AB Switches could not be operated, as they were not properly aligned. Terminal connectors, from bus bar to pipes and pipes to isolators and at several points were not provided and twisted with wire. These caused sparking and risk accident to the PSS.
- Lightening arrestors were not properly connected with the terminal connectors and conductors. These were connected with single wires and simply twisted with the main conductors of 33 KV and 11 KV lines. Thus there was risk of fire in the PSS
- One existing 5 MVA 33/11 KV transformer of Nawadah PSS was burnt in September 2006, as its Oil Circuit Breaker was removed for installing Vaccum Circuit Breaker by the contractor of PGCIL and directly connected to the 33 KV incoming feeder. As such a new 5 MVA transformer costing Rs. 18 lakh was diverted from Manpur PSS and installed at Nawadah PSS to meet the exigency. The Board had not raised any claim in this regard against PGCIL so far (October 2006).

[1] Bhagalpur, Darbhanga, Gaya, PESU (East), PESU (West) and Purnea.

Unilateral reduction of scope of work by PGCIL

3.2.14 The Board found (February 2005) that PGCIL had unilaterally modified and substantially reduced the scope of work and quantity of materials against those originally provided in the DPR. PGCIL had apparently done this with the objective to keep the awarded rates within the estimated DPR amount in view of high tendered rates. The details of reduction in scope is as under: -

Sl. No.	Item description	As per DPR[1]	As per LoA[2]	Quantity reduction	Percentage reduction
1	Consumer meter, 3-phase (in nos.)	22,057	8,370	13,687	62.00
2	Consumer meter 1-phase (in nos.)	2,74,414	2,57,306	17,108	6.23
3	Feeder meter (in nos.)	884	1052	-168	-
4	DT meter (in nos.)	10,990	4,975	6,015	54.73
5	New PSS (in nos.)	50	36	14	28.00
6	R&M of PSS (in nos.)	135	135	0	-
7	New DT (in nos.)	3,338	1,354	1,984	59.44
8	R&M of DT (in nos.)	9,656	9,656	0	-
9	New Line (in kms.)	5,397	2,979	2,418	44.80
10	R&M of line (in kms.)	4,493	2,079	2,414	53.73

The substantial reduction in the scope of work had rendered the original DPR redundant and the payment of Rs 31.29[3] crore made to PGCIL for its preparation was rendered wasteful.

The reduction in the scope of work and quantity of materials was attributed by PGCIL to the following reasons:

- Difference in requirement of quantity during site survey, and non-provision for many items, which had to be incorporated in the tender for system completion.
- Non-provision for entry tax and service tax in the DPR totaling around eight *per cent* at the time of tendering by PGCIL.
- Non-provision for price variation (base 2001-02), and substantial increase in price of raw materials like steel, copper, aluminum, etc, at the time of tendering.

The above cited reasons indicated that the DPR was prepared by PGCIL without due care and requisite surveys.

The Board apprehended (April 2005) that the quantity reduction made by PGCIL, without consulting the Board, would defeat the objective of the system improvement and strengthening through APDRP, as reduction in scope of work ranged from six to 62 *per cent*, as detailed in the above table. In spite of the reduction in quantity, PGCIL maintained that the award of work would duly cover safety, efficiency and reliability of the system. Since none of the

[1] DPR = Detailed Project Report
[2] LoA = Letter of award
[3] Five *per cent* of the total estimated cost Rs 625.78 crore = Rs 31.29 crore.

projects under the scheme was completed (October 2006), the efficacy of the system could not be ascertained.

Aggregate Technical and Commercial losses

3.2.15 The aggregate Technical and Commercial (AT&C) losses ranged from 87.92 *per cent* in 2001-02 (Bhagalpur Circle) to 37.25 *per cent* in 2004-05 (Darbhanga Circle) as reported by the Circles, which are at variance with the figures reported by PGCIL to the GoI. (**Annexure-15).** The Board constituted (July 2006) a committee of representatives of the Board and PGCIL to ascertain the exact AT&C losses during the period 2001-06. The committee reported (August 2006) that the AT&C losses were between 45.61 and 49.56 *per cent* during the above period. Thus the target of reduction of AT&C losses by 9 *per cent* each year had not been achieved.

Monitoring and Control

3.2.16 The Board had constituted an APDRP Cell, headed by the Chief Engineer (Transmission), and assisted by an Electrical Executive Engineer (Transmission). As per the provisions of the MoA, the Electrical Superintending Engineer of the circle was to be declared as nodal officer for the circle and designated as Chief Executive Officer of the circle, by December 2002. During audit it was noticed that this was done only in February 2005 after delay of 26 months. The Board also decided to exclusively post for APDRP work an Electrical Executive Engineer and an Assistant Electrical Engineer in each circle, to assist the Electrical Superintending Engineer of the circle. It was, however, noticed during audit that the Electrical Executive Engineers were posted only in Bhagalpur, Gaya and Purnea circles. A Junior Engineer was to be designated as a feeder manager for upto three feeders. The Board, however, had not appointed any Junior Engineers as feeder managers so far (October 2006). As a result monitoring and control work suffered.

In terms of the MoA, the Board had constituted a four[1] member State-level Distribution Reforms Committee (SDRC). The Committee was to meet once in two months to review the progress of APDRP scheme implementation. Audit scrutiny revealed that only one meeting of the committee was held in March 2003 and thereafter no meeting was held. The Board, stated (November 2006) that the implementation was reviewed by the Secretary (Power), GoI from time to time. The fact, however, remains that regular meetings as envisaged in the MoA were not held to monitor implementation.

Conclusion

Performance of the Board with regard to the commitments under the power sector reforms and implementation of schemes under APDRP was found to be unsatisfactory as the Board had failed to achieve any tangible progress despite lapse of about three years and expenditure of over Rs 306 crore.

Committed targets for metering of 11 KV lines and all consumers, reduction in T&D losses and improvement in plant load factor were not

[1] Chairman, Bihar State Electricity Board, and a representative each of the State Governemnt, PGCIL and CEA or MoP.

achieved. Action for reorganisation of the Board or for Energy audit of the system was not initiated.

Instead of taking up the work of implementation of schemes under APDRP, the Board assigned the entire work to PGCIL without call of competitive bids, which resulted in additional expenditure of Rs 27.86 crore on consultation charges payable to PGCIL. The agreement with PGCIL was defective as there was no penal provision for delay in completion. The pace of implementation of works by PGCIL was slow and despite the scheduled completion date having elapsed no work was completed, resulting in non-accrual of the envisaged benefits of the scheme.

PGCIL had unilaterally reduced the scope of the work by about half rendering the achievement of objectives of the schemes doubtful.

Recommendations

The Board needs to

- Speed up the implementation of schemes by better monitoring and control;
- Undertake review of the scheme regularly to identify slippages in the schedule, reasons therefor and take remedial measures; and
- Take up the matter of quick release of funds with the State Government.

The above audit findings were reported to the Government/Board (November 2006); their replies are awaited.

Bihar State Road Transport Corporation

3.3 Operational Performance of Bihar State Road Transport Corporation

Highlights

Due to failure to utilise the available fund of Rs 18.41 crore for purchase of new buses, the Corporation lost potential revenue of Rs 76.08 crore during 2001-06.

(Paragraph 3.3.7)

Instead of utilising Depreciation Reserve Fund for the purchase of new buses, as directed, the Corporation kept the fund in a bank which resulted in loss of Rs 1.63 crore on account of differential interest payable to the Government of Bihar.

(Paragraph 3.3.8)

The Corporation failed to auction requisite number of buses and spare materials, and thereby lost the opportunity to purchase 113 new buses which resulted in loss of contribution of Rs 27.15 crore during 2004-06.

(Paragraph 3.3.9)

The Corporation lost Rs 82.07 crore during 2001-06 due to low fuel efficiency, premature failure of tyres and low occupancy.

(Paragraphs 3.3.14, 3.3.16 and 3.3.17)

The fleet utilisation of the Corporation was low and ranged between 11.5 and 78.6 *per cent* during 2001-06 as compared to 82.15 and 99.49 *per cent* in other States.

(Paragraph 3.3.12)

Due to decline in effective kilometers as compared to yearly targets fixed, the Corporation could not cover 1,672.41 lakh scheduled kilometers during 2001-02 to 2005-06, leading to loss of contribution of Rs 220.29 crore.

(Paragraph 3.3.15)

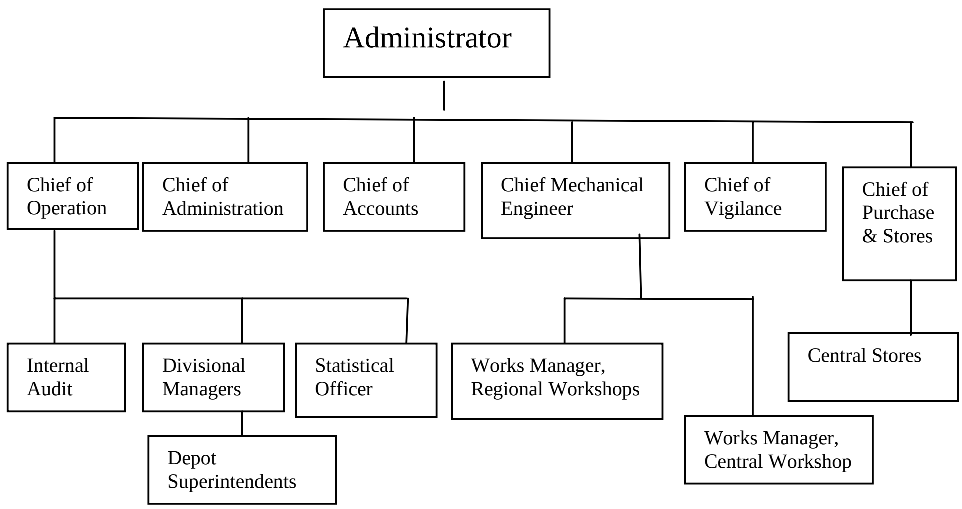
Introduction

3.3.1. Rajya Transport, which was a department of the Government of Bihar, was converted into Bihar State Road Transport Corporation (Corporation) in May 1959 under Section 3 of the Road Transport Corporations Act, 1950 (Act) with the objective of providing an efficient, adequate, economical and properly co-ordinated road transport service in the State.

Section 38 (1) of the Act provides that if the State Government is of the opinion that a Corporation established by the Government is unable to perform the duties imposed upon it, the State Government may, with the previous approval of the Central Government, supersede the Corporation for a specified period.

Accordingly, the State Government dissolved the Board of the Corporation (June 1999) and appointed an Administrator (October 1999), who is assisted by Chiefs of Accounts, Vigilance, Purchase & Stores, Operation, Administration and Chief Mechanical Engineer and also by 11 Divisional Managers, 29 Depot Superintendents, three Works Managers and Stores Officers.

Organisation chart of Bihar State Road Transport Corporation



During the period from August 1999 till date (May 2006), the post of Administrator has been held by nine persons. The average tenure of each Administrator was only around nine months. Moreover, from February 2004 till date (May 2006), no full time Administrator was appointed by the State Government. The State Government has not appointed any Chief Accounts Officer since February 2002.

A Scheme was framed (April 1998) pursuant to Hon'ble Supreme Court's orders (January 1998 and March 1998) for revival of the Corporation. The Government of Bihar filed affidavits stating that it would strictly comply with the said Scheme. The Scheme is effective since April 1, 1998 and envisages, *inter alia*, (i) raising the strength of on road buses to 800, (ii) retrenchment/removal of surplus staff after retaining the number required for 800 on road buses, and (iii) maintaining the indices of fuel consumption, staff-bus ratio, load factor, Income Per Effective Kilometer, fleet utilisation, tyre use, etc as per the norms.

Comprehensive reviews on the working and on the operational performance of the Corporation were included in the Reports of the Comptroller and Auditor General of India for the years 1990-91 and 1999-2000 (Commercial), Government of Bihar.

Scope of audit

3.3.2. The present review, conducted during January to May 2006, covers the operational performance of the Corporation, after the Revival Scheme, for the last five years ended March 2006.

Evidence was gathered through scrutiny of records at the Headquarter's Office, six [1] out of 11 divisions along with their 17 out of 29 depots, Central Workshop, Regional Workshops, and Central Stores at Phulwarisharif, selected on the basis of number of fleet.

Audit objectives

3.3.3. The audit was undertaken with a view to assess whether:

- the Corporation was able to provide efficient, adequate, economical road transport services in Bihar as per the Revival Scheme.
- there was proper implementation of the Revival Scheme as filed by the State Government with the Hon'ble Supreme Court of India.
- the funds available for the purchase of buses were utlised in time and efficiently for the purpose, and scrap was disposed of and as per the policy.
- the available fleet of buses purchased during 2001-06 was optimally utilised and whether the available plant and machinery, equipments and infrastructure facilities were utilised for proper and timely repairs and maintenance of buses.
- the Internal Control system and monitoring mechanism, particularly in respect of material management, consumption of resources and generation of revenue were adequate and effective.

Audit criteria

3.3.4. The following audit criteria were adopted for achievement of the audit objectives.

- provisions of the fleet augmentation/replacement policy
- standard norms set for vehicle productivity, route operation, fuel efficiency and tyre performance
- standards set of staff productivity/bus-staff ratio
- scheme provisions and government directives and Association of the State Road Transport Undertaking (ASTRU) norms

Audit methodology

3.3.5. A mix of the following methodologies was used

- Study of scheme details, government-guidelines and orders of the government
- Examination of the records of operation at the Corporation headquarters and divisions, depots, Central Workshop and Regional Workshop.
- Collection of data and evidence from various records such as orders passed by the Administrator
- Scrutiny of annual plan/budget, records relating to procurement of materials for maintenance and repairs of buses, tender files, contract

[1] Bhagalpur, Chapra, Dharbhanga, Dumka, Gaya and Muzaffarpur

files, purchase of lubricants and spare parts, statistical records/reports of operational performance of buses purchased during 2001-06.

- Interaction with the management

Audit findings

3.3.6 The audit findings were reported to the Government/Management in May 2006 and discussed in the meeting of the Audit Review Committee for State Public Sector Enterprises (ARCPSE) held on 9 November 2006 where the Management was represented by the Chief Mechanical Engineer. The review was finalised after considering the views of the management. The Government viewpoint, however, could not be taken into account due to non-representation.

Audit scrutiny revealed that the management failed to turnaround the Corporation due to its failure to augment its fleet, improve operational efficiency and due to high bus-staff ratio/idle staff as discussed in the succeeding paragraphs.

Loss of potential revenue due to failure of the Corporation to utilise funds for purchase of new buses.

3.3.7 During 2001-06, a sum of Rs 69.73[1] crore was available with the Corporation for purchase of new buses. It was noticed during audit that out of Rs 69.73 crore, the Corporation utilised a sum of Rs 51.32 crore only upto March 2006 for purchase of 467 buses. Due to failure of the Corporation to utilise the balance sum of Rs 18.41 crore for purchase of new buses, the Corporation suffered loss of potential revenue of Rs 76.08 crore during 2001-06 as given in **Annexure - 16.**

It was further noticed during audit that out of Rs 69.73 crore, the Hon'ble Supreme Court had ordered (November 2000) that Rs 60.51 crore be utilised for the purchase of new buses to be put on the road within a period of eight months, i.e., on or before 31 July 2001. The buses were, however, purchased and put on road during September 2002 to September 2004, much beyond the stipulated period of eight months, due to delay in inviting tenders, finalisation of tenders, issue of purchase orders, etc.

The management stated (September 2006) that during 2001-06, a sum of Rs 58.09 crore only was available out of which a sum of Rs 50.74 crore was utilised for purchase of 467 buses. The reply is not correct as the Corporation had received a sum of Rs 69.73 crore for the purchase of new buses.

Loss of Rs 1.63 crore due to keeping unutilised Depreciation Reserve Fund in a Bank.

3.3.8 As per the orders of the Hon'ble Supreme Court, the Corporation was required to utilise the Depreciation Reserve Fund (DRF) amounting to Rs 7.43 crore, received as loan at an interest rate of 15.5 *per cent* (13 *per cent* and 2.5 *per cent* penal interest) per annum from the Government of Bihar during 2002-05, for purchase of new buses. Instead of utilising the fund to purchase new buses, the corporation kept it in Term Deposits in a bank. Due to diversion of

[1] Rs 69.73 crore (Package provision – Rs 60.51 crore + Depreciation Reserve fund, Rs 7.43 crore and realisation from auction, Rs 1.79 crore).

DRF in violation of the court order the Corporation suffered loss of Rs 1.63 crore on account of excess interest payable to the Government of Bihar, over what was earned on the term deposits. It also lost contribution from the new buses not purchased.

The management stated (September 2006) that the State Government was being requested to waive off the interest.

Loss due to non-disposal of condemned buses and spare materials

3.3.9 As per the Revival Scheme, a sum of Rs 12 crore was to be raised through disposal of useless and old buses and scrap. The funds so raised were to be utilised for purchasing 130 new buses. It was, however, noticed during audit that out of 1,373 buses (1350 in 2002-03 and 23 in 2004-05) which were condemned for auction (October 2002 and June 2004), the Corporation could auction only 207 buses (96 buses in 2003-04 and 111 in 2004-05 at rates ranging between Rs 1.79 lakh and Rs 0.36 lakh per bus) thereby realising Rs 1.59 crore only. Another lot of 142 buses could not be auctioned due to non/under bidding, non acceptance of bids despite their being above the reserve price in anticipation of a better price and law and order problems.

The management did not take any action to auction the remaining 1,024 buses. The Corporation realised a sum of Rs 19.77 lakh from auction of scrap. Thus the Corporation could generate only Rs 1.79 crore against the Revival Scheme target of Rs 12 crore. Due to failure of the Corporation to auction all the condemned buses and scrap material, it lost an opportunity to purchase 113 new buses, which resulted in loss of potential contribution of Rs 27.15 crore during 2004-06 as detailed in the table below:

Year	Number of Buses	Average Bus Productivity per day (in kilometers)	Number of days	Contribution per Effective Kilometer (Rs)	Total loss (Rupees in crore)
1	**2**	**3**	**4**	**5**	**6 (2×3×4×5)**
2004-05	113	226	365	13.55	12.63
2005-06	113	230	365	15.31	14.52
Total					**27.15**

The management stated (September 2006) that action was being taken to dispose of the old buses and scrap material through auction.

Operational performance

3.3.10 The operational results of the Corporation for the period 2001-02 to 2005-06 are detailed in **Annexure - 17**. It would be seen from the Annexure that the percentage of utilisation of buses during the last five years upto 2005-06 ranged between 11.5 to 78.6 and the occupancy during the same period ranged between 57 and 66 *per cent*. The number of breakdowns and loss per kilometer increased whereas the overall operational performance declined during this period. The vehicle staff ratio was also very high during 2001-02 to 2002-03 which was reduced during 2003-06. The operational efficiency of the Corporation assessed on the basis of important parameters is discussed in the succeeding paragraphs.

Vehicular strength and age profile.

3.3.11 According to the ASRTU norms, 60 *per cent* of the fleet of buses should be less than four years old. The normal life of a bus should be considered as eight years or five lakh kilometers, whichever is early.

The position of the fleet holding, utilisation and overaged buses and their respective percentages as at the end of the last five years upto 31 March 2006 is given in **Annexure - 18.**

The percentage of on road buses to total fleet was very low

It would be seen from the annexure that against the total fleet, the percentage of buses less than four years old was much below the standard norm of 60 *per cent* in 2001-02 (11 *per cent*). Due to condemnation of 1,373 buses and introduction of 467 new buses [in 2002-03 (55) and 2003-04 (412)], the percentage of buses less than four years old improved during 2002-03 (74.6), 2003-04 (88.3) and 2004-05 (73.3), but again declined to 64.6 *per cent* in 2005-06.

The Management stated (September 2006) that the Corporation could not be compared with other state transport corporations, as due to financial constraints it had not been able to purchase new buses and remove old buses every year. The reply is not tenable because, as mentioned in Para 3.3.7, despite availability of funds of Rs 18.41 crore the Corporation failed to purchase additional new buses.

Fleet utilisation

Compared to the norms of ASRTU, fleet utilisation of the Corporation was poor

3.3.12 According to ASRTU norms, 92 *per cent* of the fleet should be road worthy (90 *per cent* in operation and two *per cent* as reserve). The Corporation has, however, fixed a norm of 75 *per cent* of its own under the Revival Package programme. The overall fleet utilisation of the Corporation, however, ranged between 11.5 and 78.6 *per cent* during 2001-06. During the quarter ended June 2003 and June 2004[1], the fleet utilisation was 71.03 and 78.28 *per cent* respectively, whereas in other States it ranged between 82.15 and 99.49 *per cent* as detailed below:

State Corporation / Quarter ended	Andhra Pradesh	Delhi	Bihar	Hima-nchal	Karna-taka	Madhya Pradesh	Mahara-shtra	Rajasthan
June 2003	99.44	86.93	**71.03**	98.83	95.52	89.55	95.05	94.10
June 2004	99.49	82.15	**78.28**	98.78	94.96	83.95	96.40	93.78

The main reason for poor fleet utilisation in the Corporation was poor maintenance of buses and excessive breakdown of buses due to poor road conditions.

The management stated (September 2006) that besides poor road conditions and financial constraints, non-availability of technical staff in its workshops was also responsible for poor fleet utilisation. The reply is not tenable as due to poor manpower planning, the management failed to deploy idle technical staff in the workshops for repairing buses (as discussed in para 3.3.19).

[1] Source: Review of the performance of State Road Transport Undertakings – Passengers Services, Ministry of Shipping, Road Transport & Highways, Government of India (March 2005). Information available only of these two quarters.

Bus productivity

Bus productivity was very low in comparison to other States

3.3.13 The Corporation has fixed a productivity norm of 280 kilometers of daily running for its buses. Against this norm, the actual bus productivity of the Corporation ranged from 226 to 251 kilometers per day during 2001-06. The reasons for shortfall in productivity were non-operation of all the routes and cancellation of schedules, etc. In other States, the bus productivity ranged from 298.29 to 375.52 kilometers per day during the quarter ended June 2003 and June 2004 as compared to an average of 198.01 to 202.08 kilometer per day in the Corporation, as detailed below:

State Corporation / Quarter ended	Andhra Pradesh	Bihar	Gujrat	Karnat -aka	Mahar-ashtra	Rajasthan	Punjab	Karnat-aka
June 2003	328.26	**202.08**	315.68	348.78	308.22	322.45	298.29	344.55
June 2004	332.23	**198.01**	307.63	342.81	317.23	324.08	301.62	375.52

Loss of contribution due to low bus productivity, i.e. shortfall in scheduled kilometer has been discussed in para number 3.3.15.

The management, while admitting the audit observations stated (September 2006) that besides non operation of all the routes and cancellation of schedules, lack of long distance routes, non-operation of inter-state bus services, poor road conditions, poor maintenance of buses due to shortage of technical staff and financial constraints, etc. were also responsible for poor bus productivity.

Occupancy ratio

3.3.14 The standard occupancy (load factor) per vehicle fixed by the Corporation (1994) was 90 *per cent* of the sitting capacity. The actual occupancy ratio was very low and ranged from 57 to 66 *per cent* during 2001-06. In other States, the occupancy ratio ranged from 64 to 100.93 *per cent* during the quarters ended June 2003 and June 2004 as compared to 64 *per cent* in the Corporation.

The table below indicates the loss of contribution due to poor occupancy:

Period	Actual occupancy ratio	Actual contribution (Rupees in crore)	Shortfall in occupancy ratio (as compared to norm)	Shortfall in contribution (Rupees in crore)
1	**2**	**3**	**4**	**5 (3÷2×4)**
2001-02	66	18.94	24	6.89
2002-03	62	19.77	28	8.92
2003-04	57	29.22	33	16.92
2004-05	66	51.51	24	18.73
2005-06	65	58.48	25	22.49
Total				**73.95**

Poor occupancy ratio led to revenue loss of Rs 73.95 crore

It would be seen from the above table that the overall loss sustained by the Corporation during 2001-06 due to poor occupancy as compared to the standard norm worked out to Rs 73.95 crore. The main reason for low occupancy ratio, as attributed by the Corporation, was permission granted by the State Government to run contract/private buses on the same routes, leakage of passenger revenue due to ticketless travelling, plying of buses on uneconomical routes and frequent breakdowns of buses. The Corporation had not, however, taken any effective measure to check and control these problems.

Effective kilometers

3.3.15 The table below indicates scheduled kilometers, effective kilometers and loss of contribution due to curtailment of schedules:

Period	[1]Scheduled kilometers (In lakh)	Effective kilometers (In lakh)	Kilometers curtailed (in lakh)	IPEKM (Rs)	Contribution loss (Rupees in crore)	Achievement in percentage
1	2	3	4 (2-3)	5	6 (4×5)	7 (3÷2)
2001-02	607.30	152.54	454.76	12.42	56.48	25.11
2002-03	606.68	143.52	463.16	13.77	63.78	23.66
2003-04	596.64	246.22	350.42	11.87	41.59	41.27
2004-05	574.32	380.13	194.19	13.55	26.31	66.19
2005-06	591.85	381.97	209.88	15.31	32.13	64.54
Total	**2,976.79**	**1,304.38**	**1,672.41**		**220.29**	

Cancellation of scheduled kilometers led to contribution loss of Rs 220.29 crore.

It would be seen from the above table that the percentage of effective kilometers ranged from 23.66 (2002-03) to 66.19 (2004-05). Due to shortfall in effective kilometers as compared to yearly targets fixed, the Corporation could not cover 1,672.41 lakh scheduled kilometers during 2001-06 leading to loss of contribution of Rs 220.29 crore.

The management stated (September 2006) that due to increased number of off road buses, there was decline in effective kilometers and increase in cancelled kilometers upto 2003-04, and that the position improved thereafter. Further, poor road conditions and poor maintenance of buses due to shortage of competent mechanical staff and poor condition of workshops also contributed to decrease in effective kilometers. The reply is not tenable as the management could neither increase its fleet strength despite availability of fund nor did it improve the quality of bus maintenance in its workshops. Further, the scheduled kilometers were fixed by the Corporation on yearly basis keeping in view all the above factors.

Fuel efficiency

3.3.16 The Corporation had fixed the norm of consumption of High Speed Diesel (HSD) oil at 4.5 kilometers per litre for its Tata[2] make buses. Against this norm, the actual mileage during 2001-06 ranged between 3.79 to 4.04 kilometers per litre. In other States, the fuel efficiency ranged from 4.05 to 5.40 kilometers per litre during the quarters ended June 2003 and June 2004, as compared to 3.78 to 4.14 kilometers per litre in the Corporation, as detailed below:

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[1] Scheduled kilometer means targeted kilometers fixed by the Corporation for its fleet for a particular year.
[2] Manufactured by Tata Engineering and Locomotive Company Limited (TELCO)

Consumption of fuel in excess of the norm resulted in extra expenditure of rupees seven crore.

State Corporation / Quarter ended	Andhra Pradesh	Bihar	Gujrat	Karnataka	Madhya Pradesh	Rajasthan	Karnata-ka
June 2003*	5.40	**4.14**	5.27	5.09	4.05	4.93	5.24
June 2004*	5.28	**3.78**	5.21	5.30	4.07	4.95	5.40

Thus, approximately 26.65 lakh litres of oil was consumed in excess of the norm, resulting in excess expenditure of rupees seven crore (as per **Annexure -19**). The main reasons for excess consumption of oil were poor maintenance of buses, lack of skilled drivers, ill-equipped workshops and poor road conditions.

The Management accepted (September 2006) the audit observations.

Performance of tyres

The corporation lost Rs 1.12 crore due to premature failure of tyres

3.3.17 The norm fixed by the Corporation for the life of a new tyre is 85,000 kilometers with two retreadings, against the national average of 1,25,604 kilometers. It was, however, noticed in audit that the overall actual tyre performance during 2001-06 ranged between 39,800 kilometers (May 2004) to 76,670 kilometers (November 2002) only, which was substantially lower than the norm fixed by the Corporation. The average life of a tyre was only 55,455 kilometers against the norm of 85,000 kilometers. The shortfall in the life of these tyres was equivalent to the 1,511 new tyres. The loss due to premature failure of tyres amounted to Rs 1.12 crore, calculated at the rate of Rs 7,400 per tyre which includes the average cost of new tyre at Rs 5,000 and cost of two retreadings at Rs 2,400 (expenditure booked by Central workshop to divisions).

The management stated (September 2006) that the poor road conditions and poor maintenance of buses due to non-availability of competent mechanics contributed to poor tyre performance. The reply is not tenable as the norm of 85,000 kilometers had been fixed by the Corporation itself, considering all the above factors.

Unauthorised plying of buses

The corporation lost Rs 23.86 lakh due to unauthorised plying of buses

3.3.18 The Corporation provides domestic as well as inter-state services to its passengers. The number of routes operated ranged from 144 to 212 during 2001-06. It was noticed during audit that the Corporation did not have the required valid/operative domestic and inter-State road permits for a large number of its buses. Out of 637 buses held as on 31 March 2006, the Corporation had valid/operative permits for 187 buses only. The Corporation had not applied for permits for 102 buses, whereas applications in respect of 348 buses were pending with the concerned authorities. Further, during 2001-06, buses of the Corporation plying in 11 inter-State routes violating the provisions of Section 20 of the Motor Vehicles Act were seized by the State/other State transport authorities on 30 occasions for want of valid road permits. The Corporation had to pay penalty of Rs 8.90 lakh to get these seized buses released. Besides, due to non-plying of the seized buses, the Corporation suffered loss of contribution amounting to Rs 14.96 lakh. Thus, due to unauthorised plying of buses, the Corporation suffered a total loss of revenue of Rs 23.86 lakh.

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* Figures for only two years are available.

The management admitted (September 2006) the audit observations.

Manpower analysis

3.3.19 The table below indicates the manpower position of the Corporation during 2001-06.

Sl. No.	Category	2001-02	2002-03	2003-04	2004-05	2005-06
1	Driver	612	551	542	458	428
2	Conductor	2503	2453	2327	2113	2111
3	Supervisor	105	100	95	85	81
4	Others	99	68	53	49	45
5	Workshop Maintenance	1705	1505	1485	1262	1201
6	Administration	709	469	405	400	365
	Total	**5733**	**5146**	**4907**	**4367**	**4231**
	No. of buses on Road	178	189	432	490	431
	Standard man- power required (based on 7.08 staff per on road bus)	1260	1338	3059	3469	3051
	Surplus man- power	4473	3808	1848	898	1180
	Percentage of surplus staff to total staff	355	284.60	60.41	25.88	38.68
	Bus staff Ratio	1:32	1:27	1:11	1:9	1:10

Retention of surplus staff resulted in huge accumulation of liability of salary

The standard staff bus ratio as fixed by the Corporation is 7.08 per bus. It would be seen from the above table that the number of surplus man power ranged between 898 to 4,473, computed as per the Corporation's standard ratio during 2001-06.

In other States[1], the staff/bus ratio ranged from 4.30 to 6.47 as compared to 21.03 in the Corporation during the quarter ended June 2003 and June 2004.

The Management stated (September 2006) that the Revival package had provision for retrenchment of surplus staff. The requisite funds as envisaged in the package for retrenchment of surplus staff could not, however, be utilised by the Corporation as the Hon'ble Supreme Court in its order (November 2000) had instructed to divert the funds for purchase of new buses. Consequently, retrenchment of surplus manpower could not be done and that with the induction of new buses the staff bus ratio will improve. The reply is not tenable as the Corporation had not utilised all the available funds for purchase of new buses.

Poor performance of workshops

3.3.20 The Corporation had two Regional Workshops, one each at Muzaffarpur and Ranchi, and one Central Workshop at Phulwarishariff for carrying out major repairs/overhauling of buses and reconditioning of assembly components, retreading of tyres and reconditioning of batteries, etc.

[1] Andhra Pradesh, Gujrat, Himanchal, Karnataka, Madhya Pradesh, Orissa and Rajasthan

The main aim of establishment of the workshops was to repair the buses in all respects, according to schedules and targets.

Operational performance of workshops

Performance of workshop was poor

3.3.21 The operational performance data of all the three workshops are given in **Annexure-20**. It would be seen from the Annexure that as against the annual target of 23,300 items, the actual performance of the workshops ranged between 1,449 to 5,637 items, which works out to 6.21 to 24.19 *per cent* of the targets during 2001-06. Poor performance was due to non-supply of spare parts and disconnection of electricity line of Ranchi and Muzaffarpur workshops due to non-payment of electricity dues. Since then all the men and machinery deployed at these workshops are idle.

The management stated (September 2006) that the manpower at the two Regional Workshops was deployed for repairing works in the adjacent divisions as well as for security of the assets of the workshops. The reply is not tenable as the management could not optimally utilise these idle staff as per their specialisation.

Avoidable expenditure on tyre retreadings

3.3.22 The Corporation has a tyre retreading plant in its Central Workshop at Phulwarisharif. It was noticed in audit that despite having its own tyre retreading plant, the tyre retreading work was got done from private parties at a cost of Rs 6.93 lakh for 353 tyres during 2001-06. The main reason for getting tyres retreaded from private parties by the Division/Depot, was delay in retreading of tyres by the Central Workshop.

The management stated (September 2006) that the capacity of the Central Workshop to retread tyres had been increased to 21 from seven tyres per day. The fact, however, remains that due to poor planning the tyre retreading capacity of the Central Workshop could not be increased to its present capacity well in advance.

Payment of Salary and allowances to idle staff

3.3.23 Despite no work at Ranchi and negligible work at Muzaffarpur (only 15 buses were repaired and only four items were repaired against the target of 16,500 items, in five years), it was noticed during audit that the payment of salary and allowances to the staff deployed in these two workshops amounted to Rs 1.31 crore during 2001-06 as detailed below:

The corporation incurred idle establishment expenditure of Rs 1.31 crore in two workshops

Year	Muzaffarpur		Ranchi	
	Number of staff	Payment (Rupees in lakh)	Number of staff	Payment (Rupees in lakh)
2001-02	63	15.88	64	10.07
2002-03	55	7.46	59	16.34
2003-04	50	13.19	55	15.33
2004-05	40	13.53	52	13.05
2005-06	34	12.52	50	13.27
Total		**62.58**		**68.46**

The management stated (September 2006) that payment of salary and allowances to the staff deployed in the two Regional workshops was made in compliance with of the directives of the Hon'ble Supreme Court. The reply does explain as to why on the one hand the quality of maintenance was stated to be poor due to shortage of qualified mechanics while idle wages were being paid to workshop staff on the other hand.

Premature retirement of buses

3.3.24 As per the ASRTU norms, the standard life of a new bus is eight years or five lakh kilometers of running, whichever is earlier.

The corporation lost Rs 152.30 crore due to premature retirement of buses

It was noticed during audit that 1,373 buses, which were within their useful life and had been sent to different workshops of the Corporation, could not be repaired in time due to shortage of materials[1]. These buses have been condemned by the Corporation (1,350 buses on 11 October 2002 and 23 buses on 21 June 2004).

Had these buses been repaired in time, the Corporation could have earned contribution of Rs 152.30 crore[2] which was lost during 2002 to 2004 as detailed below:-

Sl.No.	Buses running kilometers	No.	Shortfall (lakh kilometers)	Total shortfall (lakh kilometers)
1.	Less than 1 lakh kilometers	22	4	88
2.	1 lakh to 2 lakh kilometers	66	3	198
3.	2 lakh to 3 lakh kilometers	238	2	476
4.	More than 3 lakh kilometers	1047	1	426
	Total	**1,373**		**1,188**

The management stated (September 2006) that the buses were condemned as per the provision in the Revival package. The reply is silent on the delay in the repairing of these buses due to which they lost their useful life.

It was noticed during audit that a sum of rupees four crore was available with the Corporation (March 1998) for repairing 320 buses. The Corporation could, however, get only 44 buses repaired utilising a sum of Rs 2.08 crore. Out of the balance amount, a sum of Rs 63.23 lakh was diverted for payment of income tax, electricity dues, etc., Rs 31.66 lakh were utilised for the purchase of new buses and the balance amount of Rs 97.22 lakh remained unutilised.

Revenue Collection

3.3.25. Income from the sale of tickets is the major source of revenue for the Corporation. Sales revenue is collected over a vast geographical area by hundreds of conductors. Under the Revival Package programme, the State Government had authorised the Corporation to fix the fares at its own level, on sound business principles (January 2000).

The Revival Scheme provided that apart from traffic-earnings, the Corporation should explore non-traffic areas for revenue generation. It was noticed during audit that during 2001-06, non-traffic income ranged between Rs 1.72 to Rs 7.75 crore which was 5.55 to 29 *per cent* of the total operational income of the Corporation in the respective years. There was a decline of nearly 75 *per cent* in 2002-03 over the non-traffic earnings in 2001-02. During 2003-06, the

[1] Due to non-repair their useful balance life elapsed
[2] Average IPEKM during 2002-04 Rs 12.82×11.88 crore kilometers =Rs 152.30 crore.

non-traffic income remained below seven *per cent*. It was noticed during audit that there was no effort on the part of management to seriously explore the non-traffic areas for augmenting its revenue.

The depots retain 55 *per cent* of the revenue collected for the payment of HSD oil, lubricants, small stores and spare parts for their workshops etc. and 45 *per cent* revenue is sent to the headquarters for payment of salary, purchase of tyres, tubes, flaps, batteries etc. The revenue earned from operations as well as expenditure incurred on operations during 2001-06 are as under:

(Amount: Rupees in crore)

Year	2001-02	2002-03	2003-04	2004-05	2005-06
Operational income	18.94	19.77	29.22	51.51	58.48
Operational expenditure	50.14	50.30	63.75	71.32	96.75
Operational loss	31.20	30.53	34.53	19.81	38.27

Reasons for such high operational losses are:

- Poor occupancy ratio (discussed in paragraph no. 3.3.14)
- Curtailment of scheduled kilometers (discussed in paragraph no. 3.3.15)
- Excess consumption of HSD oil (discussed in paragraph no 3.3.16)
- Excess manpower (discussed in paragraph no. 3.3.19)
- Poor performance of workshops which includes payment of salary and allowances to idle staff (discussed in paragraph nos. 3.3.20 to 3.3.23)

The management accepted (September 2006) the audit observations.

Non-realisation of dues from contract buses

The corporation could not realise dues of Rs 26.33 lakh from private operators

3.3.26 The Corporation had introduced a scheme (September 1995) under which private bus operators were permitted to run on contract basis, on specified routes. Due to shortage of their own buses, these buses were allowed to ply on the same routes on which Corporation's own buses were already plying. As per the agreement, the bus owners were required to pay 12 *per cent* commission on each schedule calculated at 85 *per cent* load capacity, guaranteed for 26 days in a month. The scheme was discontinued (February 2003) as the Corporation found it uneconomical. It was noticed during audit that as on 31 March 2006, a sum of Rs 26.33 lakh was recoverable from the private operators in four divisions since November 2000 and was doubtful of recovery as the Corporation had not made any serious efforts to realise these dues.

Internal audit

3.3.27 The Corporation has an Internal Audit Wing comprising one Audit Officer, three Junior Auditors, one Accountant and one clerk. The Internal Audit Report is submitted to the Administrator through Chief of Operations who is in-charge of Internal Audit. It was noticed in audit that against the sanctioned strength of 26, the actual strength of Internal Audit Wing was only six. Further, during 2001-06, the internal audit teams remained unsupervised except for one supervision during 2004-05.

It was further noticed during audit that out of 230 auditable units for the period 2001-06, the Internal Audit Wing had covered only 17 units upto March 2006 which works out to only 7.4 *per cent* of the total auditable units. Further, the Internal Audit Wing had never audited the Corporation's headquarter.

Conclusion

The performance of the Corporation with regard to implementation of the revival scheme was found to be deficient as, despite assistance from the State Government under the Revival Scheme, the Corporation failed to improve its operational performance and financial position. Besides, the Corporation also failed to generate revenue through auction of condemned buses and scrap for purchase of new buses, as envisaged under the Scheme due to which the fleet strength could not be augmented. The average number of buses held was 637 against the target of 800 buses.

The operational income was not sufficient to meet the expenditure, primarily due to fleet utilisation, bus productivity, and occupancy ratio of buses being below the norms. There was no effort on the part of the Corporation to seriously explore non-traffic areas of revenue generation. Further, effective kilometers of buses was also far below the targets set.

The Corporation also failed to keep operational expenditure within the norms due to excessive consumption of HSD oil, poor performance of tyres, high staff-bus ratio, low staff productivity and large number of buses having been retired on account of poor maintenance due to poor performance/non-functioning of workshops.

Recommendations

The Corporation needs to:

- purchase new buses by utilising available funds instead of keeping the same in fixed/term deposits in banks.
- take steps to achieve norms set regarding vehicular strength, retirement of vehicles, bus productivity, occupancy ratios, consumption of HSD oil, life of tyres.
- re-deploy idle staff at Ranchi and Muzaffarpur Regional Workshops to depot workshops at various places so as to improve the performance of the workshops.

The audit findings were reported to the Government (May 2006); reply has not been received so far (October 2006).