

CHAPTER VII: GOVERNMENT COMMERCIAL AND TRADING ACTIVITIES

7.1 Overview of Government companies and Statutory corporation

7.1.1 Introduction

As on 31 March 2007, there were ten Government companies (nine working and one non-working) and one Statutory corporation (**Appendix 7.1**) as against the same number of companies and corporations as on 31 March 2006. The accounts of the Government companies (as defined in Section 617 of the Companies Act, 1956) are audited by the Statutory Auditors appointed by the Comptroller and Auditor General of India (CAG) as per provisions of Section 619(2) of the Companies Act, 1956. These accounts are also subject to supplementary audit by the CAG as per provisions of Section 619 (4) of the Companies Act, 1956. The audit of the accounts of Tripura Road Transport Corporation (TRTC), the only Statutory Corporation, is conducted by the CAG, as sole Auditor, under Section 33 (2) of the Road Transport Corporations Act, 1950.

Working Public Sector Undertakings (PSUs)

7.1.2 Investment in the PSUs

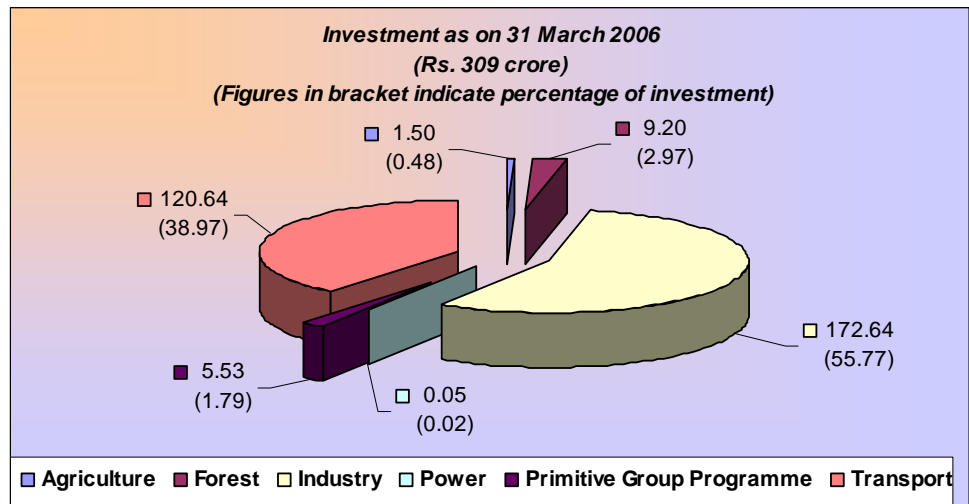
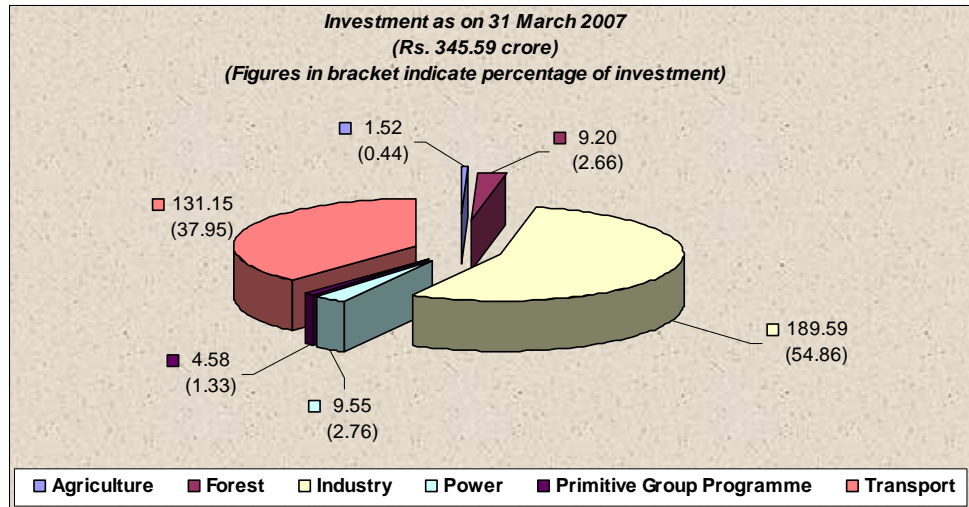
As on 31 March 2007, the total investment in ten working PSUs was Rs. 345.59 crore¹ (equity: Rs. 337.71 crore; long term loans: Rs. 7.88 crore²), as against Rs. 309.56 crore (equity: Rs. 301.48 crore; long term loans: Rs. 8.08 crore) as on 31 March 2006 (**Appendix 7.1**). The increase was due to increase in investment in PSUs in the industry and transport sector.

7.1.3 Sector-wise investment

The investments (equity and long term loans) in various sectors and percentage thereof at the end of 31 March 2007 and 31 March 2006 is indicated in the following pie charts:

¹ State Government's investment was Rs. 335.25 crore (Others: Rs. 10.34 crore). The figure as per Finance Accounts is Rs. 367.23. The difference is under reconciliation.

² Long term loans mentioned in paragraphs 7.1.2, 7.1.3, 7.1.4 and 7.1.5 are excluding interest accrued and due on such loans.



7.1.4 Working Government companies

The total investment in the working Government companies at the end of March 2006 and March 2007 (**Appendix 7.1**) is summarised below:

Table No. 7.1.1

Year	Number of working Government companies	Equity	Long term loans	Total
<i>(Rupees in crore)</i>				
2005-06	9 ³	181.09	7.83	188.92
2006-07	9 ³	206.81	7.63	214.44

The increase in the investment was mainly due to investment made by the Government in the equity capital of Tripura Jute Mills Limited (Rs. 9.49 crore) and Tripura State Electricity Corporation Limited (Rs. 9.50 crore) during the year.

³ Out of nine working Government companies, one company (Tripura Jute Mills Limited, Sl. No. A-6 of Appendix-7.1) has been referred to Bureau of Industrial and Financial Reconstruction (BIFR).

7.1.5 Working Statutory corporation

The total investment in the equity and loans of Tripura Road Transport Corporation (TRTC) at the end of March 2007 was Rs. 130.90 crore equity and Rs. 0.25 crore loan as against Rs.120.40 crore and Rs.0.25 crore as equity and loan respectively as on 31 March 2006. As of 31 March 2007, the total investment in working Statutory corporation comprised 99.81 *per cent* equity capital and 0.19 *per cent* of loans as compared to 99.79 *per cent* and 0.21 *per cent* respectively as on 31 March 2006.

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

The details of budgetary support in the form of equity contribution and loans, grants/subsidies, waiver of dues, conversion of loans into equity and guarantees issued by the State Government to working PSUs are given in **Appendix 7.1 & 7.3** and summarised below:

Table No. 7.1.2

(Rupees in crore)

	2004-05				2005-06				2006-07			
	Companies		Corporation		Companies		Corporation		Companies		Corporation	
	No.	Amount	No.	Amount	No.	Amount	No.	Amount	No.	Amount	No.	Amount
Equity Capital	7	14.19	1	8.80	6	14.11	1	9.30	7	25.72	1	10.50
Loans	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	1	11.04	Nil	Nil
Subsidy	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	1	45.00	Nil	Nil
Total outgo	7	14.19	1	8.80	6	14.11	1	9.30	-	81.76	-	10.50

The Tripura State Electricity Corporation Limited received revenue grant / subsidy of Rs. 45 crore during 2006-07.

7.1.7 Finalisation of accounts by working PSUs

The accounts of the Government companies for every financial year are required to be finalised within six months from the end of the relevant financial year, under Sections 166, 210, 230, 619 and 619-B of the Companies Act, 1956 read with Section 19 of the Comptroller and Auditor General's (Duties, Powers and Conditions of Service) Act, 1971. The accounts alongwith Auditor's Report are to be laid before the State Legislature within nine months from the end of the financial year. As of September 2007, none of the 10 working PSUs had finalised its accounts for the year 2006-07 (**Appendix 7.2**). During the period October 2006 to 30 September 2007, five companies finalised six accounts. TRTC finalised its accounts for 2002-03 during the above period, the audit of which was under progress (September 2007). The arrears in accounts (ranging from 1 to 13 years as on 30 September 2007) are indicated below:

Table No. 7.1.3

Number of working PSUs	Period for which accounts were in arrears	Number of years for which accounts were in arrears	Reference to Sl. No. of Appendix 7.2
1	1994-95 to 2006-07	13	5 of A
1	1996-97 to 2006-07	11	3 of A
1	1998-99 to 2006-07	9	2 of A
1	1999-2000 to 2006-07	8	6 of A
2	2000-01 to 2006-07	7	1 and 7 of A

Number of working PSUs	Period for which accounts were in arrears	Number of years for which accounts were in arrears	Reference to Sl. No. of Appendix 7.2
1	2001-02 to 2006-07	6	4 of A
1	2002-03 to 2006-07	5	1 of B
1	2005-06 to 2006-07	2	8 of A
1	2006-07	1	9 of A

It is the responsibility of the administrative departments to oversee and ensure that the accounts are finalised and adopted by the PSUs within the prescribed period. The concerned administrative departments and officials were apprised quarterly by audit but without any significant results. The arrears in the accounts seriously jeopardised the accountability process.

7.1.8 Financial position and working results of the working PSUs

The summarised financial results of the working PSUs as per their latest finalised accounts are given in **Appendix 7.2**. Besides, the financial position and working results of the Statutory corporation (TRTC) are indicated in **Appendices 7.4** and **7.5** respectively. According to the latest finalised accounts of nine working companies and one Statutory corporation, six companies and one working Statutory corporation had incurred an aggregate loss of Rs. 7.28 crore and Rs. 13.05 crore respectively. Two companies *viz.*, Tripura Forest Development and Plantation Corporation Limited, and Tripura Rehabilitation Plantation Corporation Limited had earned profit of Rs. 4 crore. Accounts of the Tripura State Electricity Corporation Limited for the years 2005-06 and 2006-07 were in arrears (September 2007).

7.1.9 Profit earning companies and dividend

Out of the nine working companies which had finalised their accounts during the period October 2006 to September 2007, two companies⁴ had earned a profit of Rs. 4 crore. None of the companies had declared dividend during 2006-07.

7.1.10 Loss incurring companies

Of the six loss making companies, three⁵ had accumulated losses of Rs. 76.56 crore which exceeded their aggregate paid-up capital by Rs. 17.02 crore. Despite poor performance and erosion of their paid-up capital, the State Government continued to provide financial support in the form of equity, *etc.* The total equity contribution released to these PSUs during 2006-07 amounted to Rs.25.72 crore.

7.1.11 Loss incurring Statutory corporation

The only Statutory Corporation (TRTC) had accumulated loss of Rs. 116.79 crore as on 31 March 2002 (year up to which the accounts were finalised) which exceeded its aggregate paid-up capital of Rs. 83.68 crore by Rs. 33.11 crore. The State Government continued to provide financial support, which was Rs. 10.50 crore in 2006-07, in the form of contribution towards equity.

⁴ Tripura Forest Development and Plantation Corporation Limited and Tripura Rehabilitation Plantation Corporation Limited.

⁵ Tripura Small Industries Corporation Limited, Tripura Handloom and Handicrafts Development Corporation Limited and Tripura Jute Mills Limited.

7.1.12 Operational performance of the TRTC

The following are the highlights of the operational performance of the TRTC (Appendix 7.6).

- The percentage of utilisation of buses decreased from 50 in 2005-06 to 37.36 in 2006-07, while the percentage of utilisation of trucks increased to 70 *per cent* in 2006-07 as compared to 50 *per cent* in 2005-06.
- Operating revenue per kilometer (Rs. 10.31) from the buses was very low in comparison to average expenditure per kilometer (Rs. 92.95) resulting in loss of Rs. 82.64 per kilometer in 2006-07.
- The corporation incurred loss of Rs. 22.53 per kilometer in operating the trucks during 2006-07 as compared to Rs.74.65 per kilometer during 2005-06. The reason for significant fall in loss per kilometer during 2006-07 was reduction of number of employees engaged in the operation of trucks by 50 *per cent*.

7.1.13 Return on capital employed (ROCE)

The details of capital employed and total return on capital employed in case of working Government companies and the Statutory Corporation are given in **Appendix-7.2**. According to the latest finalised accounts (up to September 2007), the capital employed worked out to Rs. 48.66 crore in eight working companies and total return thereon amounted to (-) Rs. 2.61 crore as compared to total return of (-) Rs. 5.40 crore in the previous year, similarly the capital employed and total return thereon in case of the working Statutory corporation according to the latest finalised accounts (for the year 2001-02) worked out to (-) Rs. 25.86 crore and (-) Rs.8.08 crore respectively against the total return of (-) Rs.5.09 crore in the previous year.

In respect of the only two profit making PSUs *viz.* Tripura Forest Development and Plantation Corporation Limited (TFDPCL) and Tripura Rehabilitation Plantation Corporation Limited (TRPCL), the return on capital employed was 6.48 *per cent* and 28.88 *per cent* in the years 1997-98 and 2005-06 respectively, the years for which the accounts were finalised.

7.1.14 Power Sector Reforms

The Tripura State Electricity Corporation Limited (TSECL) was set up in June 2004 under the Companies Act, 1956 and the generation and distribution of electricity were transferred from the Power Department to the TSECL, which started functioning with effect from 1 January 2005. To reduce transmission and distribution losses, the following steps were to be taken as per the MOU signed in August 2003 between the State Government and the Union Ministry of Power:

- Installation of meters on 11 KV feeders by 31 December 2003.
- 100 *per cent* metering on the LT side of distribution transformers.
- 100 *per cent* metering of all consumers by 31 December 2003.
- Development of Distribution Management Information System.

Status of progress achieved by TSECL against the above targets is as under:-

- The metering of 11 KV feeders and HT consumers, to be installed by December 2003, was achieved after a delay of more than 3 years in case of West Tripura and Agartala Projects while it had not been completed in Dhalai, North and South Tripura.
- The progress in metering of distribution transformers was insignificant. The number of DT meters procured as of March 2007 (422) were inadequate to meet the projected requirement of 6498 DT meters.
- Against the target of 100 *per cent* metering of 3.53 lakh consumers, 3.20 lakh (91 *per cent*) were metered as of March 2007. The findings of audit regarding generation and distribution of power are discussed in paragraph 7.2 and 7.3 of this report.
- As of March 2007, an amount of Rs.10.24 crore being revenue realisation against supply of power, was outstanding. Of this amount, Rs. 7.63 crore was outstanding against the Government departments/PSUs.

7.1.15 Investment in non-working PSUs

There was only one company (Tripura State Bank Ltd) which had been non-functional for about 36 years and was under liquidation under Section 560 of the Companies Act, 1956. As on 31 March 2007, the total investment in this company in the form of equity was Rs. 4 lakh only.

7.1.16 Status of placement of Separate Audit Reports of Statutory corporation in Legislature

The Separate Audit Report (SAR) issued by the Comptroller and Auditor General of India on the accounts of TRTC for 2001-02 was placed in the Legislature on 19 December 2006. The accounts for the year 2002-03 are under audit.

7.1.17 Disinvestment, privatisation and restructuring of PSUs

There was no case of disinvestment, privatisation, merger or closure of any State PSUs during 2006-07.

7.1.18 Results of audit of accounts of State PSUs by the Comptroller and Auditor General of India

During October 2006 to September 2007, three accounts of Government companies *viz.* Tripura Jute Mills Limited, Tripura Rehabilitation and Plantation Corporation Limited, and Tripura Industrial Development Corporation Limited were selected for supplementary audit. The net impact of the audit observations was increase in loss by Rs. 4.10 crore of these PSUs.

Some of the major errors and omissions noticed during the audit of the annual accounts of the above companies are mentioned below:

(a) Tripura Jute Mills Limited (1999-2000)

- Non-adjustment of Rs. 97.16 lakh advanced to the staff for disbursement of salaries, wages, advances and leave encashment had resulted in overstatement of suspense account as well as other liabilities by Rs.97.16 lakh.
- Non provision of retirement benefits on accrual basis as per AS-15 resulted in understatement of current liabilities (Provisions for retirement benefits) as well as loss by Rs. 217 lakh for the year.
- Short provision of Rs. 22.13 lakh payable to EPF authorities resulted in understatement of liability for expenses and loss for the year by Rs. 22.13 lakh.
- Non-provision of statutory liabilities towards penalty for default in issue of share certificates within the time prescribed under the Companies Act, 1956 resulted in understatement of liabilities for expenses by Rs.141.50 lakh and loss for the year by a similar amount.
- Non-provision of the statutory liabilities towards filing fees (as per schedule-X of the Companies Act, 1956) to increase the authorised share capital resulted in understatement of liabilities for expenses and loss for the year by Rs.13.70 lakh.

(b) Tripura Rehabilitation Plantation Corporation Limited (2004-05)

- Non-inclusion in the gratuity fund, interest income of Rs. 5.10 lakh on investments made out of gratuity fund, resulted in overstatement of other income and understatement of Gratuity Fund. Consequently, the profit for the year was overstated by the same amount.
- Non-provision of accrued liability (amount not ascertainable) towards retirement benefits in contravention of provisions of AS-15 resulted in understatement of provisions and gratuity fund.
- Investment amounting to Rs. 1.11 crore made in UTI Schemes were shown as bank balance which resulted in overstatement of bank balance and understatement of investment by Rs. 1.11 crore.

(c) Tripura Industrial Development Corporation Limited (2000-01)

- Rupees 1.60 crore of debts and losses written off during the year 2000-01 were not shown in the accounts for 2000-01. The loans and advances were thus overstated and loss for the year understated by Rs. 1.60 crore.
- Non-provision for Rs. 0.23 crore advanced to Government Departments and private contractors before 1992-93 and remaining unadjusted, resulted in understatement of provisions and loss and overstatement of capital advances to the extent of Rs. 0.23 crore.
- The interest accrued on loans and advances was disclosed as Rs. 5.14 crore instead of Rs. 23.18 crore resulting in non disclosure of Rs. 18.04 crore of accrued interest.

7.1.19 Internal Audit

No internal audit was being conducted in any of the PSUs as of July 2007. None of the companies had introduced regular internal audit control systems.

7.1.20 Recommendations for the PSUs

In view of the poor operating and financial performance of most of the PSUs, the following recommendations are made:

- Government should institute a system of corporate governance in the PSUs with clear lines of responsibility and accountability.
- PSUs should be asked to prepare their pending accounts in a time bound programme so that their correct financial position is established and accountability determined.
- Further financial assistance from the Government should be linked to clearly established performance milestones, in accordance with a clearly established corporate plan, so that the PSUs stop being a drain on scarce public resources.

7.1.21 Response to Inspection Reports, paragraphs and reviews

Audit observations raised during audit and not settled on the spot are communicated to the heads of PSUs and the departments concerned of the State Government through Inspection Reports. The Government had prescribed that the first reply to the Inspection Reports should be furnished by the heads of PSUs through respective heads of departments within one month from the date of their receipt. Review of Inspection Reports issued up to March 2007 to eight PSUs disclosed that replies to 188 paragraphs of 46 Inspection Reports remained outstanding at the end of September 2007. Of these, Inspection Reports containing 140 paragraphs had not been replied to for more than a year. The department-wise break-up of Inspection Reports and paragraphs issued up to 31 March 2007 and outstanding as on 30 September 2007 is given in **Appendix 7.7**.

Similarly, draft paragraphs and reviews are forwarded to the Secretary of the concerned administrative department seeking confirmation of facts and figures and comments within six weeks. Out of four draft paragraphs and two draft reviews forwarded to the Government in August 2007, replies in respect of two draft paragraphs from the Power Department and one draft paragraph from the Industries and Commerce Department had not been received (September 2007).

It is recommended that the Government should ensure that (a) procedure exists for action against the officials who fail to send replies to Inspection Reports/draft paragraphs/reviews as per the prescribed time schedule, (b) action to recover loss/outstanding advances/ overpayment is taken in a time bound manner, and (c) the system of responding to audit observations is streamlined to ensure accountability and prompt response.

7.1.22 Position of ATNs in respect of recommendations of the COPU / PAC on paragraphs / reviews contained in the CAG's Audit Report – Commercial Chapter

Out of 21 reviews and 82 paragraphs that appeared in the Commercial Chapter (titled 'Government Commercial and Trading Activities') of the Audit Reports for 1988-89 to 2005-06, 15 reviews and 30 paragraphs had been discussed by COPU and three reviews and eight paragraphs by the PAC (September 2007).

Of the 15 reviews and 30 paragraphs discussed by the COPU, reports containing the recommendations in respect of six reviews and 14 paragraphs relating to seven Audit Reports had been published. Action taken notes on these recommendations had been received and discussed by the COPU.

Against three reviews and eight paragraphs (relating to the Power Department) discussed by the PAC, action taken notes on the recommendations of the PAC in respect of three reviews and five paragraphs had been received and discussed by the PAC (September 2007).

7.1.23 Section 619-B Companies

Only one company *viz.* the Tripura Natural Gas Company Limited (TNGC) comes within the purview of Section 619-B of the Companies Act, 1956. The TNGC had paid-up capital of Rs. 53.65 lakh⁶. Its accounts upto 2001-02 had been finalised, according to which the TNGC earned a profit of Rs.12.19 lakh during the year.

⁶ Contributed by two Government companies *viz.* Tripura Industrial Development Corporation Limited and Assam Gas Company Limited.

SECTION – A

POWER DEPARTMENT

Tripura State Electricity Corporation Limited

7.2 Performance Review of power projects in Tripura

Highlights

The available capacity (105 MW) of power generation was inadequate to meet the peak demand for power which was expected to grow to 396 MW by 2011-12.

(Paragraphs 7.2.7.1 and 7.2.7.4)

There were major generation constraints due to inadequate availability of gas and water required for thermal and hydropower generations respectively, small sizes of the plants, and major shutdowns.

(Paragraph 7.2.7.2)

Despite the huge gap in supply and peak demand, the annual target fixed for generation correspond to a Plant Load Factor of 56 to 64 per cent against the national average of about 74 per cent.

(Paragraph 7.2.8.1)

The Plant Load Factor at Rokhia was much below the national average and the plant capacity utilisation was sub-optimal.

(Paragraphs 7.2.8.2 and 7.2.8.4)

More reduction in the cost of generation was possible by increasing the generation.

(Paragraph 7.2.9)

There were inefficiencies in the process of fuel management, with lack of adequate supply in Rokhia, excess supply in Baramura and wastage of precious gas at huge cost due to flaring.

(Paragraphs 7.2.8.6 and 7.2.10.1)

The heat rate in the plants was much above the designed heat rate, implying wastage of gas and the attendant monetary loss. The reasons needed to be investigated for corrective action.

(Paragraph 7.2.10.2)

There were abnormal delays in routine inspections and maintenance leading to high wear and tear and system breakdown. The resultant outages led to loss of substantial generation capacity.

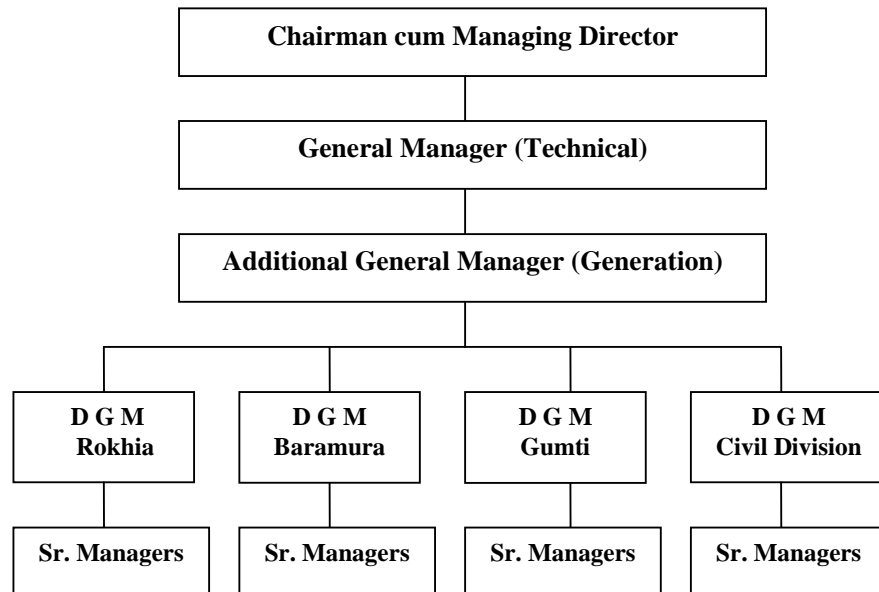
(Paragraph 7.2.12.2)

7.2.1 Introduction

The State of Tripura has installed generation capacity of 142.5 MW of Power as on 31 March 2007 and effective available capacity of 105 MW (**Table 7.2.1**) against the peak demand of 160 MW. The deficit is met by drawing power from the North Eastern Regional grid. Prior to January 2005, the work of generation, transmission and distribution of electricity was being looked after by the Power Department, Government of Tripura. In January 2005, the Power Department transferred these functions to a newly created (9 June 2004) corporate entity “Tripura State Electricity Corporation Limited (Company)”. The effective available installed capacity comprised 10 MW of hydroelectric power and 95 MW of thermal power generated through gas based power plants.

7.2.2 Organisational set up

The Company is headed by a Chairman cum Managing Director. He is assisted by the General Manager (Technical). The Additional General Manager (Generation) controls the generating divisions through Deputy General Managers in the respective generating stations and the civil works through the Deputy General Manager Civil Division. The organisational structure (generation) is depicted in the chart below:-



7.2.3 Scope of audit

A performance audit of the power generating stations confined to thermal power plants for the period 2002-03 to 2006-07 was conducted during February to April 2007 through test check of records in the Corporate Headquarters and the two generating Divisions at Rokhia and Baramura.

7.2.4 Audit Objectives

The audit objectives were to assess whether:

- the Power plants were planned, designed and constructed with due regard to efficiency, economy and effectiveness;
- the power plants were operated efficiently and preventive maintenance as prescribed was carried out minimising the forced outages;
- the generation was in accordance with the prescribed norms;
- the power sector was geared to meet the current and future demand;
- there were adequate linkages for the supply of inputs for the generation and for the optimal and efficient distribution of the power generated; and
- an efficient inventory control mechanism is in place.

7.2.5 Audit criteria

The following main audit criteria were adopted:

- norms / guidelines of Central Electricity Authority (CEA) regarding planning and implementation of the projects;
- standard procedures for award of contract with reference to principles of economy, efficiency and effectiveness;
- targets fixed for generation of power ;
- parameters fixed for plant availability, Plant Load Factor etc;
- prescribed norms for planned outages; and
- agreements with BHEL, ONGC and GAIL

7.2.6 Audit methodology

The audit methodology adopted to assess the audit objectives with reference to audit criteria were examination of:

- progress reports/implementation of Projects with reference to norms/guidelines of CEA, decisions of the BOD and instructions issued by the State Government;
- minutes and agenda notes of the meetings of the BODs;
- records relating to purchase of material/equipment, generation of Power etc; and
- interaction with management and issue of audit queries.

7.2.7 Audit findings

The audit findings emerging from the performance review were reported (July 2007) to the Government/Management and discussed (31 August 2007) at the meeting of the Audit Review Committee for Public Sector Enterprises (ARCPSE), where the Government was represented by the Principal Secretary, Power Department, Government of Tripura and the Management by the Chairman cum Managing Director of the Company. The findings were finalised after considering the views of the Government/Management and are discussed below:

Generation

7.2.7.1 Available capacity less than the installed capacity

Although the Company had total installed capacity of 142.5 MW from the three generating stations *viz.*, Gumti Hydro Electric Project, Baramura Gas Thermal Project and Rokhia Gas Thermal Project (**Appendix 7.8**), the available generating capacity was 105 MW, as detailed below:

Table No.7.2.1

Name of the Project	No. of unit	Installed capacity (MW)	No. of unit	Available capacity (MW)
Gumti Hydroelectric Project	3	15	2 ⁷	10
Baramura Gas Thermal Project	4	37.5	1	21
Rokhia Gas Thermal Project	8	90	6	74
Total	15	142.5	9	105

Source: Data furnished by the Company.

The reasons for low available capacity are as under:

- (i) Shortage of water was a perennial problem for the Gumti Project. The existing capacity of the reservoir is adequate for only two units to run simultaneously at a reduced load of maximum of 8 MW, while the third unit remained as standby. This was ascribed to silting and scanty rainfall.
- (ii) In Baramura Project, the first three units having installed capacity of 16.5 MW had outlived their lives and had been retired (July 1997 to April 2003), leaving an installed capacity of only 21 MW, of which Mizoram has 50 *per cent* share of power generated as per the agreement with the North Eastern Council (NEC).
- (iii) In Rokhia, Units I and II, commissioned in March 1990 and December 1990 respectively, had outlived their normal life of 1,20,000 firing hours and had not been in operation since April 2005 and December 2002 respectively. Considering the high maintenance cost, these units had been declared closed (May 2006) reducing the installed capacity from 90 MW to 74 MW.

7.2.7.2 Constraints in generation

(i) A general constraint was the small size of the generating units (5,8 and 21 MW), due to difficulty in transportation of bigger units to remote areas at the time of setting up these plants. The spares of these machines were not readily available in the normal manufacturing cycle apart from their excessive fuel consumption particularly when the gas is in short supply. However, there were no concrete plans in place for setting up bigger units even now or in future, despite improvement in communication infrastructure. The Company stated (September 2007) that there was restriction of load up to 30 ton on the existing NH 44.

(ii) The restricted availability of water (for hydel projects) and gas (for the thermal plants) were stated as other major constraints. As per the existing

⁷ Only two units run at a time due to inadequate water supply.

agreement with the Government of India (GOI), the state gets concessional supply of 0.5 MMSCMD⁸ of gas, which is not sufficient for present and future requirement (please also see Para 7.2.8.6).

(iii) Other constraints were ageing of plants resulting in major shutdowns of the generating units and non availability of spares in time delaying the repairs and maintenance reducing thereby the plant's availability.

7.2.7.3 Huge Demand Supply Gap

During the period from 2002-07 the actual generation was substantially less than the peak as well as average demand as shown below:

Table No. 7.2.2

Year	Generation (MW)	Peak demand	Off peak Minimum Demand	Average Demand	Percentage of actual generation to Average Demand	Percentage of actual generation to peak demand
2002-03	69	155	70	93	74	45
2003-04	71	160	72	96	74	44
2004-05	74	165	71	95	78	45
2005-06	71	154	69	92	77	46
2006-07	72	160	65	87	83	45

Source: Data furnished by the Company.

As may be seen from the above, the actual generation was only 74 to 83 per cent of the average demand and 44 to 46 per cent of the peak demand. The Government stated (September 2007) that the shortfall in generation was met by import of power from Central Sector allocation. However, the total supply even after import was not sufficient to meet the peak demand, as shown below:

Table No. 7.2.3

(Figures in MW)

Year	Average Peak demand	Peak demand met	Source of meeting the peak demand		Peak Deficit (percentage of peak demand)
			Own	Import	
2002-03	155	109	69	40	46 (29.68)
2003-04	160	111	71	40	49 (30.63)
2004-05	165	122	74	48	43 (26.06)
2005-06	154	114	71	43	40 (25.97)
2006-07	160	122	72	50	38 (23.75)

Source: Data furnished by the Company.

There remains a shortfall of 38 to 49 MW (about 24 per cent to 31 per cent of the peak demand) even after import. Consequently rotational load shedding is forced on the populace.

⁸ Matric Million Standard Cubic Metre Per Day.

7.2.7.4 Future Planning

The existing facilities were not only inadequate but also ageing:

- Out of 12 thermal units (eight in Rokhia, and four in Baramura), five units (two in Rokhia and three in Baramura) with installed capacity of 33.5 MW had been closed (July 1997 to May 2006).
- Four units (unit III to VI) in Rokhia, commissioned between 1995 and 1997 (nearing completion of their normal life of 15 years or 1,20,000 firing hours), were functioning intermittently due to frequent failure. Since global population of these small machines has reduced, non-availability of critical spares for repairs and maintenance was a major problem.
- The generation capacity of Gumti Hydel Project, commissioned in 1976, had reduced from 15 MW to 8 MW due to ageing turbines and scarcity of water at source.

In order to cope with the rising demand for power as projected by the CEA at 396 MW by 2011-12, keeping in view its own constrained generation capacity the Company had planned for purchase of power from Central Sector allocation and other agencies as detailed below:

- (i) 100 MW from the 750 MW plant planned by the ONGC at Palatana, South Tripura.
- (ii) 100 MW from the 104 MW plant planned to be set up at Monarchak, West Tripura by the North Eastern Electric Power Corporation Limited (NEEPCO).
- (iii) 100 MW from the Central Sector allocations (NHPC, NEEPCO etc.)

In addition, the following capacity addition had been planned by the Company:

- (i) 21 MW gas thermal unit at Baramura,
- (ii) 105 MW gas thermal plant proposed at Chakmaghat subject to availability of gas.
- (iii) Increasing the capacity utilisation (13 MW) at Rokhia (unit available but gas not available).

Based on the above, the Company has projected a peak surplus of 82.5 MW at the end of the Eleventh plan period as detailed below:

Table No. 7.2.4

Peak demand	282 MW
Own generation	64.5 MW
Drawal from Central Sector allocation	100 MW
Drawal from ONGC/NEEPCO projects	200 MW
Peak surplus	82.5 MW

Source: Data furnished by the Company.

The position was, however, critically dependent on the availability of gas about which the uncertainties prevails in view of the supply problems faced by the Company, as discussed hereinafter.

7.2.8 Operational Performance

The overall generation was only about 63-70 *per cent* of the effective utilised capacity in the last five years as shown below:

Table No. 7.2.5

Years	Operative Installed capacity(MW)	Generation (MW) (% to effective capacity)
2002-03	110	69 (62.72)
2003-04	105	71(67.62)
2004-05	105	74(70.48)
2005-06	105	71(67.62)
2006-07	110	72(65.45)

Source: Data furnished by the Company.

Thus, the Company could not utilise even the available installed capacity and the maximum generation attained during the above period was only 70 *per cent* of this capacity.

7.2.8.1 Shortfall in generation

The two gas based (Rokhia and Baramura) plants generated 1872 MU of power during 2003-07, against effective generating capacity of 3200 MU, resulting in shortfall of 41.50 *per cent*. The annual targets for generation fixed by the Company in consultation with CEA, correspond to a PLF of 55.86 *per cent* (2003-04), 58.16 *per cent* (2004-05), 62.89 *per cent* (2005-06) and 64.05 *per cent* (2006-07), which was much lower than the national average of 73.71 *per cent*.

Table No. 7.2.6: Operational performance of the Power Plants

(Million Units)

	2003-04	2004-05	2005-06	2006-07
Rokhia GTP				
Target	310.00	317.60	333.50	342.10
Achievement	293.39	332.96	259.13	350.48
Shortfall (-) / Surplus (+)	-16.61	+15.36	-74.37	+8.38
% Shortfall (-) / Excess (+)	(-) 5.36	(+)4.84	(-)22.30	(+)2.45
Baramura GTP				
Target	131.60	140.90	162.30	162.90
Achievement	143.35	153.69	169.54	169.73
Shortfall (-) / Surplus (+)	+11.75	+12.79	+7.24	+6.83
% Shortfall (-) / Excess (+)	(+)8.93	(+)9.08	(+)4.46	(+) 4.19

Source: Data furnished by the Company and Information for 2002-03 not furnished by the Company.

The table above shows that even at these substantially reduced levels of PLF, there were major shortfalls in Rokhia plant (5.36 *per cent* in 2003-04 and 22.30 *per cent* in 2005-06).

The Government stated (September 2007) that PLF had to be viewed in the light of the declared capacity and the availability of fuel. The reply is not tenable as Company had never declared any capacity as such. Besides, the fact also remains that till November 2006, the plant could not even utilise the full quota of available fuel (Paragraph 7.2.8.6), and the consumption of gas was also in excess of the norms (Paragraph 7.2.10.2).

7.2.8.2 Low Plant Load Factor⁹ (PLF)

The details of maximum possible generation at installed capacity, actual generation and corresponding PLF achieved in each generating unit during five years upto 2006-07 are given in **Appendix 7.9**. The plant-wise position is summarised below:-

Table No. 7.2.7

Sl. No.	Name of Plant	Actual Plant Load factor (in percentage)				
		2002-03	2003-04	2004-05	2005-06	2006-07
1.	Rokhia	42.90	48.50	51.00	41.44	54.56
2.	Baramura	63.10	77.42	83.58	92.20	92.26

Source: Data furnished by the Company.

According to norms fixed by Central Electricity Regulatory Commission (CERC), the PLF for thermal power generating stations should be 80 per cent, against which the national average was 73.71 per cent. While the PLF achieved for Baramura plant was at or above the national average with effect from 2003-04 and the CEA norms from 2004-05 onwards, Rokhia plant was operating much below the said average, at around 41-55 per cent. The estimated shortfall in generation works out to 776.04 MU (at the national average PLF of 73.71%) during 2002-03 to 2006-07, valued at Rs. 91.07 crore at the prevailing selling price after deducting the variable cost of generation¹⁰ as shown below:-

Table No. 7.2.8

(Million Units)

Sl. No.	Particulars	2002-03	2003-04	2004-05	2005-06	2006-07	Total
1.	Actual generation	232.72	294.22	308.32	250.48	353.67	1439.41
2.	Optimal generation from effective installed capacity at 73.71% PLF	399.83	446.74	445.53	445.53	477.82	2215.45
3.	Shortfall	167.11	152.52	137.21	195.05	124.15	776.04
4.	Net loss (Rs. in crore)	14.21	12.97	15.09	29.06	19.74	91.07

Source: Data furnished by the Company.

The main reasons for the low PLF, as observed in audit were:

- i) Low plant availability
- ii) Low capacity utilisation
- iii) Major shut downs and delays in repairs and maintenance
- iv) Shortage of gas

These are discussed in the following paragraphs.

7.2.8.3 Low Plant availability¹¹

Appendix 7.10 shows the details of plant-wise hours available, hours operated, planned/forced outages and relative plant availability. The summarised position

⁹ Plant Load Factor (PLF) denotes the ratio of actual generation to possible generation during total available hours expressed in percentage.

¹⁰ Year-wise average selling price; variable cost and fixed cost of generation are given in table 7.2.12.

¹¹ Plant availability means the ratio of actual hours operated to maximum possible hours available.

in the following table shows that the CERC norm of 80 *per cent* plant availability was achieved only in Baramura. The average plant availability for Rokhia and Baramura was 55.92 *per cent* and 94.18 *per cent* respectively during the five years up to 2006-07.

Table No. 7.2.9: Availability of Plants

Years	Rokhia (90 MW)	Baramura (21 MW)
2002-03	59.47	92.73
2003-04	61.72	87.88
2004-05	57.68	97.47
2005-06	40.38	96.37
2006-07	60.37	96.47
Average	55.92	94.18

Source: Data furnished by the Company.

The low availability of plant in Rokhia was due to longer duration of outages caused by inordinate delays in repair and maintenance (Paragraph 7.2.12.3) and non-availability of required quantity of gas (Paragraph 7.2.8.6).

The Government while admitting the facts stated (September 2005) that the long outages of a few generating units contributed to low availability.

7.2.8.4 Low Plant Capacity utilisation¹²

Based on national average PLF of 73.71 *per cent* and plant availability at 80 *per cent*, the standard capacity utilisation factor works out to be 92.13 *per cent* for gas thermal plants. The actual utilisation in Rokhia plant was always below this level, ranging from 67.61 *per cent* (2002-03) to 87.81 *per cent* (2006-07) except for 2005-06 when it was 96.33 *per cent*. In Baramura, the capacity utilisation was also below the standard capacity utilisation factor upto 2004-05. However, it has shown improvement in the last two years i.e. in 2005-06 (95.67 *per cent*) and in 2006-07 (95.78 *per cent*) (**Appendix 7.11**).

The main reasons for the low utilisation of available capacity during 2002-05, as analysed in audit were:-

- a) Running of units with partial load/without load;
- b) Reduced capacity of old generating unit;
- c) Low gas pressure; and
- d) Constraints on transmission capacity, etc due to existence of only a single circuit 132 KV transmission line.

While the transmission lines were being upgraded by the Power Grid Corporation Limited, some other controllable factors like low gas pressure that could be handled by installing compressors, had not been tackled.

The Government stated (September 2007) that availability of fuel plays a major role in capacity utilisation. The reply is not tenable as the Company had contract for supply of fixed quantum of gas and with the same quantum of gas both

¹² Capacity utilisation means the ratio of actual generation to possible generation during actual hours of operation.

Rokhia and Baramura plants had achieved better capacity utilisation up to 96.33 per cent in 2005-06 (Rokhia) and 95.78 per cent in 2006-07 (Baramura).

7.2.8.5 Major shutdowns

A test check of 12 cases of major shut downs as shown in table below, disclosed that the generating units of Rokhia remained under forced outage for 73,513 hours during 2002-07 due to inordinate delay in repair and shortages of gas which resulted in loss of potential generation of 509.804 MU of power valued at Rs. 65.14 crore at the prevailing average selling price after deducting the variable cost.

Table No. 7.2.10: Shut downs at Rokhia Plant

Unit	Installed capacity	Period	No. of hours	Loss of generation at 73.71% PLF (MU)	Reasons for outages
Unit- III	8 MW	July'02 to April'06 Jan'07 to Feb'07	32715 1154	192.914 6.805	L.P turbine failure Shortage of gas
Unit- IV	8 MW	Dec'02 to April'03 Dec'06 to Feb'07	3392 1730	20.002 10.201	Damaged stage -I bucket Shortage of gas
Unit- V	8 MW	July'02 to Oct'2002 Sept' 03 to March'04 Nov'04 to Jan'05 Jan'07 to Feb'07	2442 3415 1145 766	14.400 20.137 6.752 4.517	Problems in rotor, Air filter/LP electrical problems & Turbine maintenance, AVR/Turbine problems Shortage of gas
Unit- VI	8 MW	April'04 to Sept'04 July'05 to Feb'07	4198 14592	24.755 86.046	Rotor/generator problems, Generator problems
Unit- VII	21 MW	Jan'06 to Oct'06	6579	101.837	Generator problems
Unit- VIII	21 MW	Oct'06 to Dec'06	1385	21.438	Jaw clutch and accessory coupling failure.
Total	90 MW	-	73,513	509.804	

Source: Data furnished by the Company.

The forced shutdowns included:

- 3650 hours on account of shortage of Gas;
- 61671 hours on account of generator/rotor/turbine failure; and
- 8192 hours on account of other mechanical failure.

The reasons for shut down have been analysed under repair and maintenance as discussed in paragraph 7.2.12.1 to 7.2.12.3.

7.2.8.6 Shortage of gas in Rokhia

Although the Union Ministry of Petroleum and Natural Gases had allocated 0.60 MSCMD¹³ of gas for Rokhia Power Station, the contracted quantity was restricted to only 0.50 MSCMD. Further, the actual supply was even less than the contracted quantity which forced outages of 3650 hours during 2006-07 which resulted in potential loss of generation of 21.523 MU valued at Rs. 3.35 crore. The details of requirement, contracted quantity and actual supply are shown below:

¹³ MSCMD = Million Standard Cubic Metre per Day.

Table No. 7.2.11 Availability of Gas for Rokhia Plant

(in MSCM)¹⁴

Year	Required quantity	Contracted quantity (% of requirement)	Actual supply (% of contracted quantity)
2002-03	215.35	182.5(84.75)	163.42(89.55)
2003-04	215.35	182.5 (84.75)	181.39(99.39)
2004-05	215.35	182.5 (84.75)	173.35(94.99)
2005-06	215.35	182.5 (84.75)	134.98(73.96)
2006-07	284.70	182.5 (64.10)	149.85(82.11)

Source: Information furnished by the Company.

Thus, while the contracted supply was only 64 to 85 per cent of the requirement, the quantity of the gas supplied was 74 to 95 per cent of the contracted quantity except in 2003-04 when the supply was 99.39 per cent of the contracted quantity. Even though GAIL was in a position to supply the full contracted quantity of gas during the period upto 2005-06, Company failed to lift the full quantity due to outages of the generating units. In the year 2006-07 only, there was failure on the GAIL's part to supply the full quantity requiring outages for 3650 hours only due to shortage of gas.

Further, Unit VIII (21 MW) of the plant was commissioned on 31 March 2006 without any arrangement for the enhanced requirement of 0.19 MSCMD of gas. Since its commissioning, the unit was running by alternately shutting down other units. As a result, the creation of additional capacity did not serve the intended purpose and thus the investment of Rs. 80.94 crore proved to be unproductive and entailed further loss of interest of Rs. 1.07 crore per annum (@ 12 per cent per annum).

The Government, while accepting the fact, stated (September 2007) that the Company was continuously pursuing for enhancement of gas allocation. The reply does not justify the Company's decision to go for expansion of the plant without proper arrangement for the enhanced requirement of gas. Further, against allocation of 0.60 MSCMD the Company was availing only 0.50 MSCMD.

7.2.9 Cost of generation

The cost per unit of generation during 2003-07¹⁵ is given in **Appendix 7.12**. Plant wise summarised position of variable and fixed cost of generation is shown below:

Table No. 7.2.12

Sl. No.		2003-04	2004-05	2005-06	2006-07
1	Rokhia				
	(i) Cost of Generation (Rs.in lakh)	5976.962	5,387.463	5,518.780	6,269.594
	(ii) Generation (MU)	293.388	332.961	259.132	350.477
	(iii) Variable Cost/ per unit (in Rs.)	1.308	0.979	1.138	0.994
	(iv) Fixed Cost / per unit (in Rs.)	0.728	0.638	0.991	0.794
	(v) Total unit cost (Rs.)	2.036	1.617	2.129	1.788

¹⁴ MSCM = Million Standard Cubic Metre.

¹⁵ Information in respect of years upto 2002-03 could not be furnished by the Company, hence cost of generation, variable cost, fixed cost and cost of sale for 2003-04 is taken into account while calculating loss for the year 2002-03.

Sl. No.		2003-04	2004-05	2005-06	2006-07
2	Baramura				
	(i) Cost of Generation (Rs.in lakh)	2,138.139	2,138.772	2,250.712	2,306.149
	(ii) Generation (MU)	143.349	153.688	169.544	169.728
	(iii) Variable Cost/ per unit (in Rs.)	0.879	0.820	0.837	0.879
	(iv) Fixed Cost / per unit (in Rs.)	0.611	0.571	0.489	0.479
	(v) Total unit cost (in Rs.)	1.490	1.391	1.326	1.358
3	Average unit cost (in Rs.)	1.858	1.546	1.812	1.648
4.	Average fixed cost /per unit (in Rs.)	0.690	0.617	0.793	0.691
5.	Average variable cost/per unit (in Rs.)	1.168	0.929	1.019	0.957
6.	Average selling price /per unit (in Rs.)	2.02	2.03	2.51	2.55

Source: Data compiled from the relevant records of the Company and information in respect of 2002-03 not furnished by the Company.

It would be seen from the above:

(i) the unit fixed cost followed a erratic pattern without following the normal trend of increase or decrease over annual decrease or increase in generation.

(ii) following the principal of higher the generation lower the fixed cost, further reduction in the unit fixed cost was possible had the units been operating at a higher capacity.

The table below shows the reduction in unit fixed cost of generation at the national average PLF of 73.71 *per cent*.

Table No. 7.2.13

	2003-04	2004-05	2005-06	2006-07
Total fixed cost (Rs. in lakh)	3014.20	3003.45	3400.29	3598.12
Actual generation (MU)	436.737	486.649	428.676	520.205
Generation at 73.71% PLF(MU)	582.706	581.129	581.129	613.413
Fixed cost per unit on actual gross generation (Rs.)	0.69	0.62	0.79	0.69
Cost per unit (Rs.) at 73.71% PLF	0.52	0.52	0.59	0.59
Difference in cost (Rs.) per unit.	0.17	0.10	0.20	0.10

Source: Data furnished by the Company.

It was observed that due to shortfall in generation, the Company failed to recover the fixed cost to its full extent. The shortfall ranged between 10 paise (2004-05) to 20 paise (2005-06) considering PLF at 73.71 *per cent*.

The Government's reply (September 2007) that more needed to be done in this area indicated lack of control over cost of generation.

7.2.10 Fuel management

The generating units of both Rokhia and Baramura are designed to run on natural gas as fuel. The State Power Department, had entered (March 1990) into an agreement with ONGC (and subsequently GAIL) for supply of gas for both the projects. The following points were noticed in respect of the fuel management:

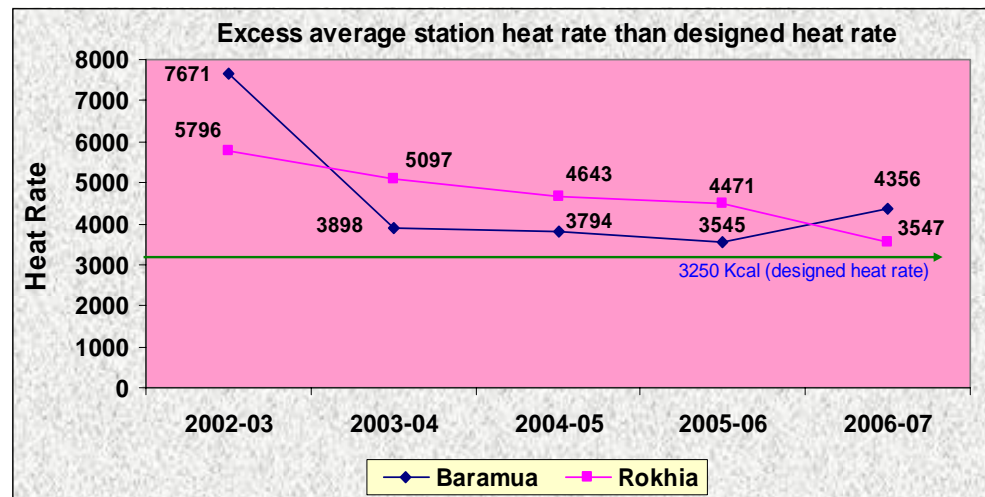
7.2.10.1 Excess supply of gas in Baramura

While the Baramura unit required 1.90 lakh MSCMD¹⁶ at full load, the supply agreement (April 2002) with GAIL was for 2 lakh SCMD, effective September 2002. GAIL, however, continued to supply more than 2 lakh SCMD on a regular basis. As a result, a good quantity of surplus gas ended up in wastage through flaring at the cost of the generating station. The Company's request (February 2003) to restrict the supply within 1.90 lakh SCMD had not been complied by GAIL as of March 2007. Scrutiny revealed that, GAIL supplied (January 2003 to March 2007), 168.06 MSCM¹⁷ gas in excess of the requirement resulting in flaring of surplus gas valuing Rs. 2.95 crore.

The Government stated (September 2007) that considering the low calorific value, the gas requirement in Baramura is 2.02 lakh SCMD, that the contract for 2 lakh SCMD was made accordingly and that there was no surplus. The reply is not tenable in view of the repeated written requests of the plant authorities to GAIL to restrict the supply to 1.90 lakh SCMD, citing wastage of excess gas through flaring.

7.2.10.2 Excess consumption of natural gas

The designed heat rate¹⁸ per unit of generation was 2937 Kcal for the 8MW units and 3250 Kcal for the 21 MW units. As against this, the actual average heat rate of generation was much higher and varied between 3545 and 7671 in case of Baramura and between 3547 and 5796 in case of Rokhia, as shown in the graph below:



As a result, the stations consumed 27.43 lakh M Kcal of excess heat energy equivalent to 332.065 MSCM of gas worth Rs. 57.43 crore (**Appendix 7.13**). The Company did not seem to be serious about the excessive heat rate and had not taken any corrective action so far.

¹⁶ Standard Cubic Metre per Day.

¹⁷ Million Standard Cubic Metre.

¹⁸ Heat rate means the heat energy input in Kilo Calorie (Kcal) required to generate one Kwh of electrical energy at generator terminals.

The Government stated (September 2007) that the performance loss (upto 2.5 *per cent*) with increase in the age was natural. The reply is not tenable as the heat rate had shown a declining trend over time (see the graph) though still much above the designed heat rate and the performance loss ranged between 9 and 136 *per cent* in Baramura and between 9 and 78 *per cent* in Rokhia.

7.2.10.3 Lack of control over flow of gas

As per agreement (April 2002) with GAIL the seller shall deliver gas to the buyer at the point of delivery at a gauge pressure of 20 kg/cm² subject to matching pressure from ONGC. In case the pressure fell short of the minimum requirement, the seller shall install, maintain and operate gas compressors, the cost of which, along with additional monthly service charges, would be charged to the buyer. Alternatively, the purchaser may also make its own arrangement for compression. Scrutiny, however, revealed that no compressors were installed by GAIL or Company either although running of the units in both the plants (Rokhia and Baramura) at partial load or no load was frequent due to lack of adequate pressure of gas.

The Government stated (September 2007) that the particular clause of the agreement would not be applicable unless there was massive reduction of gas pressure in the well-head permanently. The reply is not tenable as the particular clause specified the minimum supply pressure (20 kg/cm²) below which a compressor was required and it was Company that stood to lose if the required pressure was not maintained.

7.2.10.4 Inequitable agreement with GAIL

As per agreement (April 2002), the purchaser had to pay for actual quantity of gas supplied by GAIL subject to a minimum of 80 *per cent* of the agreed quantity (MGO¹⁹). If the quantity lifted by the plant fell short of MGO, it had to pay for the quantity of gas not drawn. The agreement further provided that the buyer should inform the seller and vice versa about any accident or defects in their installations calling for complete or partial stoppage of supply of gas. However, in case of buyer the MGO clause should be applied in all such cases while there was no reciprocal clause for payment of penalty by GAIL in the event of its failure to supply the committed quantity of gas.

Audit scrutiny revealed that the Company had paid Rs. 1.30 crore to GAIL towards MGO charges during 2002-07 (Rokhia Rs. 76.54 lakh and Baramura Rs. 53.85 lakh) for short drawal of gas due to defects in installations etc.

The Government stated (September 2007) that proposal for inclusion of a penal clause was under consideration of GAIL. Further development are awaited.

7.2.10.5 Non-installation of metering devices

The quantity of gas delivered by GAIL is measured by meters installed by it; the Company had not yet installed any meter of its own, to independently verify the

¹⁹ Minimum Guaranteed Off take

quantity of gas claimed to have been supplied by GAIL, even though a provision for this existed in the agreement with the GAIL. The Government stated (September 2007) that a joint verification of seller's meter was being done every 15 days and that installation of a separate meter in the buyer's premises was expensive. However, the Government did not provide further details indicating the cost vis-à-vis long term benefits.

The sale price of gas charged by GAIL is based on actual calorific value of gas as intimated by GAIL from time to time. The plants do not have the facility to verify the actual calorific values of gas consumed, although a lower calorific value increases the quantum of gas consumption and results in running of the units at partial load and thereby increasing the cost of production.

7.2.11 Project implementation

During 2002-06, three Gas Turbine units of 21 MW each (one in Baramura and two in Rokhia) were installed. Audit scrutiny revealed as under:

7.2.11.1 Time overrun

Despite the decision to procure equipments from Bharat Heavy Electricals Ltd. (BHEL), dispensing with the tendering process, there were delays in placement of orders on BHEL, consequentially delaying the commissioning of the units ranging from 76 to 162 days, as shown below:-

Table No.7.2.14

Sl. No	Particulars	Rokhia		Baramura
		Unit – VII	Unit – VIII	Unit – IV
1.	Date of sanction	October 1999	17.1.2004	19.10.2000
2.	Date of main plant order	20.6.2000	10.3.2004	12.01.2001
3.	Scheduled date of commissioning	20.02.2002	10.11.2005	12.09.2002
4.	Actual date of commissioning	2.8.2002	31.03.2006	27.11.2002
5.	Delay (days) in commissioning	162	140	76
6.	Generation loss (MU)	81.64	70.56	38.30
7.	Total generation loss (MU)	190.50		

Source: Data furnished by the Company.

It may be seen from the above that the Management took as much as eight months and two months time respectively in respect of Unit VII and VIII of Rokhia Plant for mere placement of supply orders from the respective dates of sanction. The time taken for placement of order from the date of sanction was almost three months in respect of Unit IV of the Baramura Plant. There was further delays in actual commissioning of the plants from the scheduled dates of commissioning i.e. of 162 days in respect of Unit VII and 140 days in respect of Unit VIII of Rokhia and 76 days in respect of Unit IV of Baramura. The resultant potential loss of generation for the total delays of 378 days worked out to 190.50 MU valuing Rs. 20.71 crore (net surplus) at the then prevailing average selling price reduced by the variable cost. The Government stated (September 2007) that the delay in payment of initial advance to the supplier and transportation bottlenecks in rainy season contributed to the time overrun. The reply is not tenable as necessary finance should have tied up well before the decision for procurement of the plants and receipt of equipments could have

been advanced to obviate the heavy monsoon days if the delays in placement of orders had been cut short.

7.2.12 Repair and Maintenance of Gas based power plants

7.2.12.1 Absence of a maintenance policy

Though the gas based power plants were commissioned long back (Baramura: 20 years and Rokhia: 16 years), the Power Department/Company had not laid down maintenance policy and drawn maintenance schedule.

7.2.12.2 Non-adherence to scheduled inspection of the plant

Audit revealed poor record of inspection and maintenance of the plants. Scheduled inspections recommended by the original equipment manufacturer (BHEL) in respect of 8 MW capacity Frame-3 machines (Unit I to VI of Rokhia) were required to be carried out for first combustion and Baroscopic Inspection (CI& BI) after 12,000 firing hours, Hot Gas Path Inspection (HGPI) after 24,000 firing hours and Major Inspection (MI) between 32,000 to 48,000 firing hours. As against this, the first CI & BI and HGPI (except Unit II) had not been conducted at all in any of the six 8 MW Gas Turbines (Rokhia) while MI of Unit V, due on 48,000 hours, had not been conducted even at 73,592 firing hours as on March 2007. In some units, the MI was conducted between 53,000 and 66,631 firing hours.

Non-adherence to maintenance schedule led to the units being operated over considerable periods of time on risk hours with the increased probability of malfunctioning and under-performance. The machines were also subjected to faster wear and tear due to prolonged use without proper maintenance. Forced outages due to malfunctioning of Frame-3 units worked out to be 1,20,938 hours representing 49.28 *per cent* of the total availability during 2002-03 to 2006-07 which could have been averted/minimised with timely inspection and preventive maintenance.

The Government stated (September 2007) that the demand for and critical availability of power prevented the stations from taking outages for scheduled maintenances. The fact however, remains that forced outages as mentioned above could not be averted.

7.2.12.3 Inordinate delay in repairs

Inordinate delay in undertaking repair of units is a major area of concern as it results in forced outages and loss of generation. A few illustrative cases of forced outages and their prolonged repair cycle, as analysed in audit, are discussed below:

- Unit III installed (1995) by BHEL was put under forced shutdown (July 2002 to April 2006) for 32,715 firing hours due to turbine failure. Baroscopic inspection (July 2002) by site engineers revealed failure of nozzle and bucket etc. After a delay of about one year in decision taking, the procurement order was issued (July 2003) to BHEL – JEE and the materials reached (October 2003) the site. Repair of the 11 KV generator of the Unit was put to tender (May 2003) and the repaired generator was received (January 2005) after over two years. Meanwhile, LP rotor of the GI was found (March 2004) damaged beyond repair.

Supply order for new LP rotor was placed (July 2005) after a delay of more than 16 months. On reaching the site (December 2005), deformation of casings was detected. The unit was finally put on bus²⁰ (April 2006) after a new set of 2nd stage shroud was procured. Thus, at every stage there were delays, accentuated by the piecemeal detection of damages consuming valuable time. Thus, in the absence of a proper maintenance schedule indicating life and replacement of critical parts there were avoidable forced outages. Further, had the repair of the generator and major inspection been planned immediately on machine failure, the machine could have been put to operation much earlier.

- Forced outage of 3392 hours and potential loss of Rs. 1.42 crore in respect of Unit IV (10 December 2002 to 30 April 2003) was due to damaged stage-I Bucket. There was no spare Bucket in the inventory and a new Bucket was procured (March 2003) and the unit put to bus. The delay of 141 days could have been avoided if a minimum inventory of important and critical spares was maintained.

- Unit VII (21 MW) was put under forced shutdown (11 January 2006 to 10 October 2006) due to high vibration. BHEL engineers inspected the damage and recommended major repairs at their workshop in Hyderabad. Considering the long transportation and repair cycle, BHEL was asked (31 January 2006) to supply a new generator by March 2006. The generator however, reached the site in July 2006. Meanwhile, the transformer of Unit VII was dismantled and shifted to Unit VIII (commissioned in March 2006) where it ran upto September 2006 till the transformer and switchyard for unit VIII was installed. As a result, the Unit VII could be assembled (28 September 2006) only after the new generator was acquired (18 July 2006) and the transformer released from Unit VIII (September 2006). Thus, the expediency for which the purchase of a new generator (Rs. 5.25 crore) was preferred to repair of the old set was lost due to inordinate delay in its receipt (6 months) and installation (2 months).

- Unit VIII (21 MW) was stopped within seven months of commissioning from 18 October 2006 due to disengagement of jaw clutch and ratcheting problem. The supplier (BHEL) pointed out that the failure was due to improper manual intervention by the Company. The disagreement between the supplier (BHEL) and the Company over the expenditure of Rs. 32 lakh on replacement (within the warranty period) delayed the repair. The unit was ultimately repaired on 12 December 2006, after 56 days, when the Company undertook to bear the cost.

The Government stated (September 2007) that spares of these small size machines were not readily available resulting in delay in restoration, and that non-functioning of some units did not affect the generation due to limited availability of gas at Rokhia. The reply is not tenable as the shut downs caused by the delays in repairs limited the capacity utilisation and consequently affected the generation.

7.2.13 Conclusion

While the available generating capacity was much less than the peak demand, the existing generating units were ageing and performing below the desired level. There were also constraints on the inputs like supply of gas and water

²⁰ Bus means putting the generating unit in the transmission and distribution system.

needed for power generation and inefficiencies in the generation process due to wastage of fuel and inefficient utilisation of resources due to high heat rate etc. and poor maintenance of record. The Company and the Government needed to take concerted action to remove the various constraints and take remedial measures to effectively meet the requirements of power in the State.

7.2.14 Recommendations

It is recommended that the Company should:

- Formulate a strategic action plan identifying both short term and long term strategies to address the problems facing its power plants.
- Formulate and enforce a strict maintenance schedule i.e. weekly or monthly and annual overhaul (as required) to eliminate forced outages and replace/overhaul equipment according to their life span.
- Formulate and adhere to a fuel management policy clearly identifying the wastages and inefficiencies as well as a time bound remedial action plan.
- Maintain a minimum inventory of important and critical spares keeping in view delivery time and requirement as per maintenance schedules of major and minor breakdowns.
- Insist on a liquidated damages clause in all supply agreements including those with GAIL, ONGC, BHEL etc.

7.3 Performance Review of Accelerated Power Development Reforms Programme (APDRP)

The APDRP was launched in the State in 2001 with the objectives of reducing AT&C losses, increasing consumer satisfaction, reducing cash losses and reducing outages and interruptions. A review of the programme brought out the following main points:

Highlights

There was delay in release of Central funds due to failure of the State Government to sign the Memoranda of Agreements as also to initiate the stipulated reform measures.

(Paragraph 7.3.6.2)

There was wide variation in estimates made in DPR and procurement actually made.

(Paragraph 7.3.7.1)

The delay in project implementation were mainly due to delays in signing the MoAs, not following the turn-key contract concept and inefficient contracting system, apart from failure to enforce a strict implementation schedule.

(Paragraphs 7.3.7.2 and 7.3.7.3)

None of the major components viz., improvement of sub-transmission and distribution systems and 100 per cent metering had been implemented in any of the projects.

(Paragraphs 7.3.8 and 7.3.11)

The system for energy accounting and auditing was not implemented and the current estimates of AT&C losses were unreliable. Notwithstanding, the losses showed an increasing trend and were nowhere near the APDRP target of 15 per cent.

(Paragraph 7.3.9)

The distribution losses ranged between 19 to 40 per cent during 2005-06 and 2006-07.

(Paragraph 7.3.9.3)

The shortfall in consumer metering was further compounded by purchase of sub-standard meters.

(Paragraphs 7.3.11.3 and 7.3.11.4)

Very little was done to benefit from information technology developments and other technological options available to reduce the technical and commercial losses.

(Paragraphs 7.3.12 and 7.3.12.1)

7.3.1 Introduction

In February 2001, the Government of India (GOI) launched the “Accelerated Power Development Programme” (APDP), to enable State Electricity Boards (SEBs)/Utilities to take up distribution sector reforms through upgrading and strengthening of sub-transmission and distribution network (below 33 KV or 66 KV), including energy accounting and metering in the distribution circles in a phased manner.

The APDP was rechristened as “Accelerated Power Development and Reforms Programme” (APDRP) in March 2003 following the formulation by the Union Ministry of Power (MoP), of a six-level intervention strategy for distribution reforms, encompassing initiatives at the national level, State level, SEB/utility level, distribution circle level, feeder level and consumer level. The main objectives of the programme are:

- Reduce Aggregate Technical and Commercial (AT&C) losses to 15 *per cent* in five years;
- Bring about commercial viability of Electricity Utilities by improving revenue realisation;
- Reduce outages and interruptions;
- Increase consumer satisfaction; and
- Reduction in cash losses.

In Tripura, seven projects with an outlay of Rs. 150.56 crore were sanctioned under the APDRP during 2001-2005 (**Table 7.3.1**). The projects were being implemented by the Tripura State Electricity Corporation Limited (Company)²¹. The Power Grid Corporation of India Limited (PGCIL) had been designated as the Lead Advisor-cum-Consultant (AcC).

The Chairman-cum-Managing Director (CMD) of the Company is in overall charge of the implementation of the APDRP. He is assisted by the General Manager (Technical), Additional General Manager (Planning) and Deputy General Managers (Planning) in the Headquarter. The field level implementation is done through Additional General Managers (in three electrical circles) assisted by Deputy General Managers and Senior Managers.

7.3.2 Scope of audit

The performance audit on implementation of APDRP projects, conducted during August- September 2006 and May 2007, covers the performance of the Company in planning and implementation of the APDRP during 2002-03 to 2006-07. Implementation of the programme was reviewed in audit, based on test check of records in the corporate headquarters and five²² out of 13 Divisions responsible for its implementation.

²¹ Company was incorporated in June 2004, took over all the function of the Power Department in matters of generation and distribution of power with effect from January 2005.

²² Agartala Division I, Agartala Division III, Udaipur Division, Transmission and Material Management Division.

7.3.3 Audit objectives

The audit objectives were to verify whether:

- the projects were carefully designed with adequate planning and were efficiently implemented;
- the funding requirement was realistically assessed and funds were sanctioned/released in time;
- the funds released were utilised efficiently, economically and effectively to achieve the programme objectives;
- the AT&C losses were reduced in accordance with the action plan and target;
- adequate system of energy accounting and audit exists;
- the satisfaction level of the consumers was improved in terms of quality, regularity of supply and affordability; and
- effective monitoring mechanism exists at all levels.

7.3.4 Audit criteria

The performance of the Company with regard to the APDRP was assessed against the following audit criteria:

- Target for implementation of various components of the APDRP;
- Government policy decisions and guidelines regarding implementation of the APDRP;
- Parameters contained in the Detailed Project Reports (DPRs) approved by the MoP;
- Prescribed rules and regulations for execution of works through contractors; and
- Prescribed mechanism for co-ordination and monitoring of implementation and evaluation of the performance of the programmes.

7.3.5 Audit methodology

The audit methodology adopted to assess the audit objectives with reference to audit criteria were examination of:

- Bench marks conditions of MoU / MoA and guidelines issued by the GOI / State Government;
- Policy formulated by the Company for implementation of the programme;
- DPRs, tender files, purchase order files and other records relating to execution of the projects;
- Monthly progress reports on physical and financial performance; and
- Interaction with Management and issue of audit enquiries.

7.3.6 Audit findings

The audit findings were reported (July 2007) to the Government/Company and discussed at the meeting of the Audit Review Committee for Public Sector Enterprises (ARCPSE) (31 August 2007) attended by the Principal Secretary, Power Department, Government of Tripura and the CMD, Company. The review was finalised after considering the views of the Government/Management.

The Audit findings are discussed in succeeding paragraphs.

7.3.6.1 APDRP projects undertaken

With a view to achieve the main objectives of APDRP as stated in paragraph 7.3.2, the projects for metering of the feeders and distribution transformers, consumer metering, augmentation of sub-transmission and distribution systems and computerisation of billings were undertaken. The project cost, date of sanction, schedule of completion and status as on 31 March 2007 are indicated as under:-

Table No. 7.3.1

Sl. No.	Name of the project	Project cost (Rs. in crore)	Revised cost (Rs. in crore)	Date of sanction	Scheduled date of completion	Date of signing of MoA and delay in signing (-- months)	Status as on 31 March 2007
1	100% metering of feeder in the entire State, metering of distribution transformers & consumer metering & augmentation of sub-transmission & distribution system in West Tripura District	13.27	13.27	19-03-01	19-03-03	28-08-2003 (30 months)	In progress
2	Metering, Computerisation of consumer billing & collection and sub-transmission & distribution improvement for Agartala town	14.27	14.27	06-06-03	06-06-05	28-08-2003 (2 months)	In progress
3	Sub-transmission & distribution improvement for outer Agartala	20.57	19.60	01-10-04	01-10-06	01-02-2005 (5 months)	In progress
4	Sub-transmission & distribution improvement for South Tripura District	31.11	29.63	01-10-04	01-10-06	01-02-2005 (5 months)	In progress
5	Sub-transmission & distribution improvement for North Tripura District	28.70	27.33	01-10-04	01-10-06	01-02-2005 (5 months)	In progress
6	Sub-transmission & distribution improvement for Dhalai District	18.99	18.99	01-04-05	04-04-07	Not signed	In progress
7	SCADSA/DMS scheme for Agartala town	23.65	23.65	04-04-05	04-04-07	Not signed	Yet to be started
	Total	150.56	146.74				

Source: Information furnished by the Company.

7.3.6.2 Delays in finalising the Memorandum of Agreement (MoA)

Signing of a Memorandum of Agreement (MoA) with the MoP for power reforms was made a pre-requisite for release of funds under APDRP. It will be seen from the above that there was a delay of two months to 30 months in signing the MoA. As a result MoP released Rs. 59.31 crore only after signing of MoAs. In two cases despite a lapse of 24 months the MoAs had not been signed hence Rs. 42.64 crore had not been released. As a result the State could

not undertake these works to reduce AT&C losses as well as augmentation of sub transmission distribution system and computerisation etc.

While the State Government did not give any reason for not signing the MoAs, the delay in signing the MoAs was attributed (September 2007) by the State Government to the time taken in the 'settlement' of some clauses.

The delays in finalising the MoAs led to delays in release of funds by the GoI and consequent delay in implementation of the programme. While the State Government maintained (September 2007) that the funding was not affected, the fact remained that out of Rs. 146.74 crore sanctioned for the APDRP projects, only Rs. 59.31 crore had been released by GOI as of March 2007, though all the projects had to be implemented by April 2007.

7.3.6.3 Financial Management

The MoP funding under the APDRP has the following two components:

- Investment for strengthening and upgradation of the sub-transmission and distribution system, with a view to reduce Transmission & Distribution (T&D) losses; and
- Incentive to encourage/motivate utilities to reduce cash losses.

7.3.6.4 Funding and Fund Management

Initially, the full project cost was to be provided by the MoP (90 *per cent* grant and 10 *per cent* loan) being special category State. From November 2005, the States were required to arrange portion of loans from Financial Institutions (FIs) or through internal resources.

Contrary to the APDRP guidelines that the funds should be released in separate tranches for each project and linked to the release of counterpart funds and project spending, the MoP released (2000-07) the funds in lump sum for the whole State, without indicating project-wise allocation. As of March 2007, funds released amounted to Rs. 59.31 crore (40 *per cent* of the total project cost of Rs. 146.74 crore), of which Rs. 58.72 crore had been utilised as of March 2007 (**Appendix 7.14**). The State Government had not contributed its share of 10 *per cent* of the project cost as of March 2007.

The MoP released (March 2001) Rs. 5 crore for the first Project (West Tripura) but the same was retained by the Finance Department of State Government for more than one year. It was observed that due to slow pace of utilisation in other projects resulted in non-release of second and subsequent installments, while no funds had been released for projects 6 and 7 (refer table 7.3.1) as the MoAs had not been signed.

7.3.6.5 Incentive for reduction of losses

Under the APDRP, the Company was eligible for incentives up to 50 *per cent* of the actual total loss reduction by the State utilities as grant. The Company's claim for Rs. 30.74 crore pertaining to the year 2003-04 had not been admitted by the MoP as of September 2007, due to non-agreement on the quantum and methodology of working out the reduction in losses (on cash basis, as opposed to accrual basis, during the relevant period when the Company was not set up).

The Government stated (September 2007) that the State Government and the Company were pursuing the matter vigorously.

Thus, due to delay in finalisation of methodology for working out the reduction in losses for the year 2003-04 resulted in non-receipt of incentive of Rs. 30.74 crore.

7.3.6.6 Delay in release of funds by the State Government

The APDRP guidelines required the State Government to release the funds received from MoP for APDRP projects to the utilities within a week of their receipt from MoP, failing which it would be treated as diversion of funds and the diverted amount would be adjusted with 10 *per cent* interest against the next release.

Audit scrutiny revealed that State Government had transferred the funds received from MoP after delays ranging from 33 to 408 days, as shown below, without attracting any penal action by the MoP, as contained in the guidelines.

Table 7.3.2

Year	Central release		Release by the State Government		Delay in release (days)
	Date	Amount (Rs. in crore)	Date	Amount (Rs. in crore)	
2000-01	March 2001	5.00	24.5.02	5.00	408
2002-03	4.4.02	2.67	24.5.02	2.67	43
2003-04	25.3.04	6.10	4.6.04	2.50	63
			21.6.04	1.00	80
			6.7.04	1.00	95
			18.8.04	1.60	138
2004-05	31.3.05	28.87	29.6.05	28.87	82
2006-07	20.6.06	16.67	31.7.06	16.67	33

Source: Information furnished by the Company.

The Management stated (December 2006) that as it had unspent funds throughout the period it had not pursued for further release of funds. The reply corroborates the audit contention that work was slow, projects lacked proper approach and planning, there was no monitoring and supervision and the Department was not in any hurry to execute works by which it would benefit from better revenue collection, efficient computerised billing, augmentation of sub transmission and distribution systems necessary for reducing AT&C losses and better consumer satisfaction. In short improved quality and reliability of power was not achieved.

7.3.6.7 Separate account head for APDRP funds not opened

The conditions under APDRP required the State to open separate account/sub-account heads as well as bank account for APDRP funds. This had not been done as of March 2007. Instead, APDRP funds were clubbed with Company's general cash. In the absence of separate accounts, the expenditure under various projects vis-à-vis funds received could not be verified in audit. The

Government stated (September 2007) that separate accounts would be started shortly.

7.3.6.8 Advances reported as expenditure

The Company reported inflated expenditure to MoP in the following cases:

- Rupees 7.82 crore advanced (November 2004 and January 2006) to PGCIL for implementation of projects relating to sub transmission and distribution improvement for North Tripura District and SCADA/DMS²³ projects on turnkey basis, scheduled to be completed by April 2007, was shown as final expenditure though the PGCIL had failed to start the projects.
- Rs. 20 lakh advanced (October 2004) to Tripura Housing Board (THB) for construction of a workshop building under Agartala Town project was shown as final expenditure, though the work was cancelled in March 2007. The THB claimed Rs. 1.57 lakh being the expenditure on preparing estimates and on tendering processes.

Thus, Rs. 8.02 crore remained unaccounted outside the Government account.

7.3.7 Implementation

The major areas of implementation under APDRP were:

- Improvement of sub-transmission and distribution systems.
- 100 *per cent* metering and,
- Energy accounting and audit.

Of the seven projects sanctioned, implementation of one project (SCADA/DMS), sanctioned in April 2005 and stipulated to be completed in two years, had not yet started (March 2007), owing to non-finalisation of the turn-key contract by the implementing agency (PGCIL). The work on North Tripura Project was commenced in December 2006, after a delay of more than two years from the date of sanction (October 2004), while the pace of progress in other projects (**Appendix 7.16**) was unsatisfactory, as discussed in the following paragraphs.

7.3.7.1 Unrealistic estimates in DPR

Significant variations were noticed in the quantities of several items included in the Detailed Project Reports (DPRs) prepared by the PGCIL and the quantities finally adopted. The requirements for various components were later on changed by the Company unilaterally, without the required prior approval of the MoP. **Appendix 7.15** shows that in a number of cases, the procurement of material was made much in excess of the quantities projected in the DPRs, while in other cases, the mandatory components provided in the DPRs were not procured adequately. The deviations ranged between (-) 25 *per cent* to 1340 *per cent*. The under-assessment was especially evident in case of electronic meters for consumer premises, where the DPR quantity (79,338)

²³ Supervisory Control And Data Acquisition / Distribution Management System.

was grossly inadequate for the actual requirement (3,26,139). This shows that DPRs were prepared without proper studies keeping in view the ground realities.

7.3.7.2 Delay in implementation

Though the projects were to be completed within two years of the approval, five projects sanctioned between March 2001 and October 2004, were yet to be completed, even after delays of 6 to 48 months from the scheduled dates of completion (**Table 7.3.1**).

As of March 2007, none of the major components like addition and augmentation of distribution chain through construction of sub-stations, reconductoring of feeders, replacement/repair of transformers, reduction in LT length, metering of Distribution Transformers (DTs) etc. had been completed in any of the projects (**Appendix 7.16**). Thus due to delay in completion of APDRP projects, the intended benefits of the schemes could not be achieved.

Some of the main reasons for the delay were failure to sign MoAs leading to delays in receipt of Central funds, not following the turn-key concept and failure to enforce a strict implementation schedule, as discussed in the succeeding paragraphs.

7.3.7.3 Turn-key concept not followed

As per MoP guidelines and the conditions contained in the MoAs, the SEBs/utilities had to invite tenders on turn-key basis for implementation of the APDRP projects with a view to maintaining a rigid completion schedule and single point responsibility for execution. The standard specifications for turn-key contracts as well as the list of accredited contractors should have been in place within two months of signing the MoA, and the project execution mechanism finalised within six months of signing the MoA.

It was noticed that the Company did not adhere to the turn-key concept and executed six projects involving Rs. 123.09 crore departmentally or on semi-turn-key basis i.e. procurement of material was done departmentally, while only major construction, erection and installation works were put to contract, mostly through local contractors.

While admitting, the Government stated (September 2007) that this was due to non-availability of vendors. The reply is not tenable as any evidence indicating invitation of tenders from empanelled turn-key contractors was neither produced nor available in record.

7.3.7.4 Delays in procurement of items

The Company made centralised procurement of the items required for implementation of the programmes. **Appendix 7.17** shows that inefficient handling of this process contributed significantly to the delay in implementation as indicated below:

(i) The time gap between the date of Notice Inviting Tender (NIT) and the issue of work order ranged from four to nine months, while the projects were required to be completed in only two years time.

(ii) The purchases were not made after pooling the requirements for similar items. Separate NIT was invited for each item, adding substantially to the administrative burden and the time taken for procurement. In many instances, several tenders were invited for the same item, required for different projects. For example:

- Five separate tenders were invited (October 2005 to July 2006) for 532 Distribution Transformers (DTs) and 298.5 kms 11 KV conductor in quick succession²⁴.
- Three tenders for three 3.15 MVA, 33/11 KV power transformer with related equipment were invited separately in quick succession²⁵ during January 2006 to August 2006.
- three separate tenders were invited for revamping of 405 DTs in the same month (May 2006), of which two were on the same date (25 May 2006).

Review of item wise rates of lowest bids accepted in each case for similar works revealed wide variations in rates although the works were put to tender in close succession. Had the requirement of similar items for different works been pooled together for centralised procurement, the Company could have avoided incurring excess expenditure as discussed below:

- Supply and erection of new 11 KV primary distribution feeders in two divisions (Udaipur and Bagafa) were awarded to two different contractors on the same day (9 August 2000). Considering the lowest accepted rates of common major items in these works, disclosed excess expenditure of Rs. 20.70 lakh (in 10 items) in case of Udaipur and Rs. 5.07 lakh (in 8 items) in case of Bagafa.
- Supply and erection of new Distribution Sub-station in Division IV, Udaipur and Division VI, Bagafa were awarded to two different contractors on the same day (9 August 2006) at different item rates, disclosed excess expenditure of Rs. 8.23 lakh (in 10 items) in Udaipur and Rs. 4.67 lakh (in 10 items) in Bagafa, calculated in the two works.
- Re-vamping of 11 KV Distribution Sub-station in three Divisions were awarded (Bagafa: October 2006; Udaipur: December 2006 and Agartala – III: March 2007) at different rates to three different contractors resulting in excess expenditure of Rs. 4.70 lakh (15 items), Rs. 3.41 lakh (16 items) and Rs. 4.91 lakh (12 items) respectively, considering item wise lowest accepted rates in the above works.
- 7.5 MVA, 33/11 KV Sub-station in Jogendranagar (December 2006) and Durjayanagar (April 2007) registered excess expenditure of

²⁴ 29 October 2005, 14 November 2005, 14 November 2005, 4 January 2006 and 21 July 2006.

²⁵ 31 January 2006, 10 March 2006 and 4 August 2007.

Rs. 18.39 lakh (seven items) and 3.08 lakh (five items) respectively, at lowest accepted rates for the items in question.

- Construction of 11/0.433 KV Distribution Sub-station in Agartala-I (April 2006), Agartala-III (August 2006) and Ambassa (April 2007) awarded separately at different item rates resulted in excess expenditure of Rs. 5.18 lakh, Rs. 7.28 lakh and Rs. 4.00 lakh respectively considering the lowest accepted item rates in the said works.
- 33/11 KV, 3.15 transformer sub-station at Kalyanpur (November 2006) and Manu (April 2007) recorded excess expenditure of Rs. 1.68 lakh (six items) and Rs. 7.19 lakh (six items) respectively, considering lowest accepted rates in the two works.

The State Government stated (September 2007) that sanctions for projects were given at different times (between March 2001 and April 2005), making it impossible to club the component wise packages. The reply is not tenable as the tenders were floated only after September 2005, hence the Company had sufficient time for clubbing the similar requirement in one NIT. Further, as per APDRP guidelines all works were to be executed on turnkey basis, but, in contravention of the guidelines the Department executed the works themselves resulting in excess expenditure as mentioned above, which in turn would result in time and cost overrun.

Achievement of objectives

7.3.8 Non-achievement of improvement in Sub-transmission and distribution system

In the six²⁶ APDRP projects sanctioned (March 2001 to April 2005) for improvement in sub-transmission and Distribution systems, the proposed additions to and strengthening of the system had not been achieved. As of March 2007, the major areas of shortfall are indicated below:

- (i) Out of seven new sub stations proposed, only one (Bordowali in Agartala) had been set up as of March 2007. Augmentation of only five sub-stations had been completed till March 2007 as against 26 planned; the work had not even started in most of the remaining cases.
- (ii) Out of nine sectors planned, new 33 KV lines had been laid only in two sectors as of March 2007. The progress in others ranged from 0 to 80 *per cent*. Similarly, reconductoring of only one 33 KV line sector had been completed (**Appendix 7.16**), out of four sectors planned.
- (iii) Laying of new 11 KV line, reconductoring of 11 KV line and laying of new LT lines had not been completed in any of the projects as of March 2007.
- (iv) Similarly, in none of the projects, the work of new DTs and augmentation of existing DTs had been completed as of March 2007. The achievement was nil in outer Agartala and South Tripura as of March 2007.

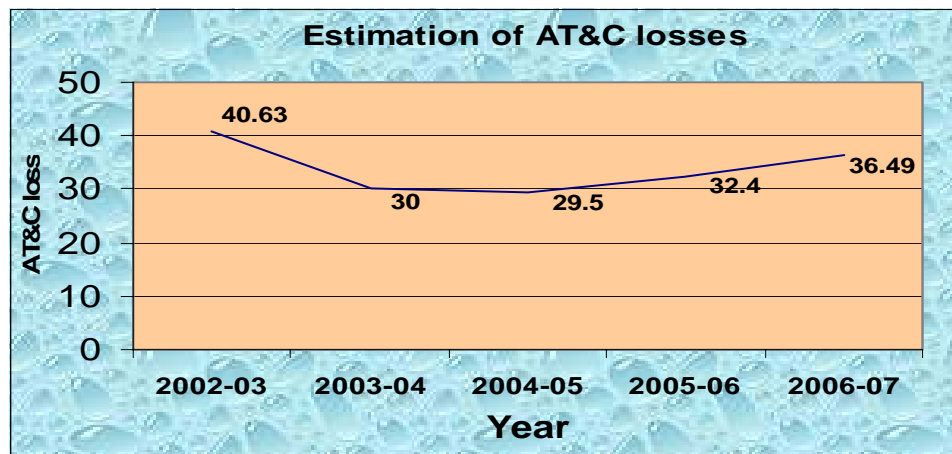
²⁶ West Tripura, Agartala Town, Outer Agartala, south Tripura, North Tripura and Dhalai.

The Government stated (September 2007) that the works in most of the cases were in progress and that in a few cases the tenders were under finalisation. Thus, due to non-completion of above works as per schedule, the intended benefits of APDRP scheme could not be achieved.

7.3.9 Reduction in AT & C losses.

The APDRP envisages reduction of AT & C²⁷ losses from the existing 60 per cent to 15 per cent in five years. The technical interventions required to contain AT&C losses like installation of shunt capacitors at all levels, reconductoring of overloaded sections, reduction of LT length, provision for DTs etc were not fully implemented as of March 2007. These, together with incomplete commercial interventions like metering, development of Information Technology (IT) enabled automatic data logging, meter reading, billing etc, severely constrained the ability to contain as well as estimate the AT&C losses in reliable manner.

The Company’s own estimation of AT&C losses during 2002-07 showed a declining trend from about 40 per cent in 2002-03 to about 30 per cent in 2004-05, but an increasing trend was noticed thereafter, as shown in the chart.



However, these levels were far from the levels²⁸ desired under the APDRP. In addition, the reliability of the estimates of AT&C losses was also doubtful, primarily due to the following reasons:

7.3.9.1 Absence of proper guidelines/procedures and supporting records

The Company had not issued any detailed guidelines to the field offices regarding calculation of AT & C losses, nor had it evolved any system for study and correct assessment of losses separately at each voltage level. The Management stated (September 2007) that the detailed guidelines has since been issued to all concerned. The reply indicates delayed action towards achieving the primary objective of the programme.

²⁷ Aggregate Technical & commercial (AT&C) losses are a measure of the overall efficiency of power distribution which measures technical and commercial losses.

²⁸ (38% in 2002-03, 33% in 2003-04; 27% in 2004-05; 20% in 2005-06 and 15% in 2006-07).

7.3.9.2 Incorrect reporting of losses

- AT & C losses reported to MoP were with reference to the energy input in the system from sub-station to the consumers' premises only and did not cover the transmission loss from the generation points to the sub-stations. Thus, the AT & C losses reported to MoP were incomplete and misleading.
- The collection efficiency is to be worked out as a percentage of the amount realised against the amount billed. The amount billed as generated by the computerised billing system, however, did not include the arrear amounts, whereas the amount realised included the arrears, resulting in the collection efficiency being more than 100 *per cent* in many cases. This inaccuracy in calculating the collection efficiency resulted in lowering the AT & C loss percentage.

7.3.9.3 Billing done on assessment basis

Despite the stated objectives of 100 *per cent* transmission and distribution system metering as well as consumer metering, a significant number of installations remained unmetered. The computation of energy consumed was made on "assessment" basis in such cases, affecting adversely the veracity of the source data for computation of AT & C loss. The details of AT&C loss on the basis of source data are indicated in **Appendix 7.18**.

It was observed that:

- (i) During 2005-07, the distribution losses ranged from 19 to 40 *per cent*.
- (ii) The energy billed was only about 60 to 81 *per cent* of the output, the percentage actually decreased in Agartala town and outer Agartala in 2006-07.
- (iii) The unmetered energy billed on assessment basis amounted to about 10-14 *per cent* of the billed energy.

Thus, the Company failed to achieve 100 *per cent* transmission and distribution system metering as well as consumer metering as envisaged in the APDRP guidelines resulting in loss of revenue due to billing on ad hoc basis.

Different billing authorities applied different criteria (average for last 3 months, connected load, minimum charge or even lump sum) which were insufficient for correct and accurate assessment of T&D losses. The Government stated (December 2006) that action was being taken for calculating the losses more accurately.

7.3.10 Reliability and Quality of Power Supply

One of the expected benefits of APDRP was improved quality and reliability of power supply, which would encourage usage of energy efficient equipment/appliances and lead to improvement in availability of energy. Some key performance parameters for quality and reliability are:

- Frequency of feeder tripping and average duration of feeder outages;
- Consumer Complaints and redressal time /coverage.

Significant deficiencies were observed in this area, as described in the succeeding paragraphs.

7.3.10.1 Feeder tripping and outages

The reliability index in terms of feeder/DT outages / stoppages for Agartala Town projects for September 2005 onwards varied between 89 *per cent* and 95 *per cent*, against the benchmark of reducing the failure rate to 3 *per cent* in 2005-06 and the target level of 1.5 *per cent* in 2006-07. The existing reliability index (89 to 95 *per cent*) effectively meant that in a year, the outage duration would vary from 438 to 964 hours.

The Government stated (September 2007) that steps were being taken to reduce the frequency of the trippings and outage hours.

7.3.10.2 Consumer complaints

Reduction in the number of consumer complaints is one of the benchmarks for improved quality and reliability of power supply. This, coupled with effective redressal of complaints, would reflect better customer satisfaction.

Though complaint registers were being maintained at sub-divisional offices, the details of complaints received, the nature of complaints and time taken for rectification, frequency of each type of complaints etc were neither recorded nor sent to the Division/Circle/Corporate Headquarters for monitoring and analysis. Due to non-maintenance of register complete in all respect it was difficult to assess the response time and the level of consumer satisfaction.

7.3.11 System and Consumer Metering

The APDRP envisages 100 *per cent* system metering and consumer metering for ensuring proper energy accounting and auditing, improved reliability of power supply, improved billing and collection efficiency and customer satisfaction. In particular, feeder metering and DT metering were highlighted as critical items targeted to reduce the commercial losses. The deficiencies noticed in metering are discussed in the succeeding paragraphs.

7.3.11.1 Feeder metering

As per MoA, 100 *per cent* static meters on 11 KV feeders and HT consumers were to be installed by December 2003. This was, however, achieved after a delay of more than 3 years in case of West Tripura and Agartala (March 2007), while it had not been completed in Dhalai (20 *per cent*), North Tripura and South Tripura (0%), as of March 2007.

The Government while accepting the audit observation stated (September 2007) that the work was in progress in other sub-divisions.

Consequently the Company failed to exercise control over energy accounting and reliability of quality power supply although there was no fund constraints.

7.3.11.2 DT metering

To facilitate detailed accounting of energy flows and gathering information on consumption pattern for demand management, 100 *per cent* energy metering on the LT side of distribution transformers was required on priority basis. As of March 2007, of the existing 5702 DTs none had been metered. While 422 DT meters valuing Rs. 83.05 lakh had been procured as of March 2007, the procurement of another 2730 meters was stated (July 2007) to be in progress. The procurement action for 3152 DT meters was highly inadequate to meet the projected requirement of 6498 DT meters. Consequently control on AT&C losses and adequate energy accounting and auditing was badly affected.

7.3.11.3 Consumer metering

The APDRP emphasized 100 *per cent* metering of all consumers to ensure correct and accurate energy accounting, determination of actual commercial loss and follow up measures. The table below shows that while all the consumers were not metered, a significant number had defective meters:

Table No. 7.3.3

Year	No. of total consumers	Numbers of consumers metered	Number of defective meter	Number of Unmetered Consumers	Total number of defective/ unmetered Consumers
2003-04	2,49,260	NA ²⁹	NA	NA	82,559 (33.12) ³⁰
2004-05	2,89,719	NA	NA	NA	81,814 (28.24)
2005-06	3,34,623	2,98,880	63,833	35,743	99,576 (29.76)
2006-07	3,52,576	3,19,831	37,687	32,745	70,432 (19.98)

Source: Information furnished by the Company.

Thus, the MoA provision for 100 *per cent* consumer metering by December 2003 remained unachieved as of March 2007 even though there was no funds constraints. As a result, about 20-30 *per cent* of consumers were billed on assessment basis and energy flows from feeders through DTs to consumers could not be properly measured with consequent lack of control on accurate energy accounting.

7.3.11.4 Purchase of inferior quality meters

In order to meet the requirement of consumer meters, the Power department / Company purchased (February 2004) inferior quality meters at cheaper rates of Rs. 214 – Rs. 219 per meter, against the DPR provision of Rs. 1200 per meter. The durability performance of these meters, installed during 2003-04 to 2005-06 in two sub-divisions under project ‘Agartala Town’, showed that 9.47 to 55.50 *per cent* meters became defective/out of order within 12 months of installation, as shown below:

²⁹ Not Available.

³⁰ Figure in bracket indicates percentage of defective / unmetered consumers to total consumers.

Table No. 7.3.4

Sl.No.	Name of sub-division	Year	Meter installed (Nos.)	Meter becoming defective (Nos.)	Percentage of defective meters
1	Electrical Sub-Division -II Agartala	2003-04	5617	600	10.68
		2004-05	5735	543	9.47
		2005-06	6041	970	16.06
2	Electrical Sub-Division -III Agartala	2003-04	1146	636	55.50
		2004-05	1011	451	44.61
		2005-06	1455	632	43.44

Source: Information furnished by the Company.

The position in other Sub-Divisions could not be ascertained due to non-maintenance of proper records relating to installation and replacement of the meters.

The Government while admitting the observation stated (September 2007) that the procurement was made on the basis of lowest rate obtained through call of tender with the provision of replacement of defective meters during warranty period as per purchase orders and accordingly, the supplier had already replaced 5,000 defective meters. It further stated that the specification of consumer meters had since been upgraded as per CEA recommendations. The Company, however, did not specify the total number of defective meters and the number of meters actually due for replacement.

7.3.12 Information Technology Development

The APDRP envisaged Information Technology as an important tool for reduction of AT&C losses by automation in meter reading, billing, automatic data logging and management information system. The Company achieved little in this area, especially in customer indexing and digital mapping, computerised data logging and computerised billing, as shown below:

Table No. 7.3.5

Particulars	Actual requirement	Actual progress as of March 2007	Shortfall
Mapping and indexing consumers	11 Divisions	5 Divisions	6 Divisions
Computerised data logging	42 Sub-stations	1 Sub-station	41 Sub-stations
Computerised billing	11 Divisions	2 Divisions	9 Divisions

Source: Information furnished by the Company.

The collection of data / information, meter reading etc. were still being done manually, while computerised billing was being done in only two project areas as of March 2007 (two divisions comprising Agartala town and outer Agartala projects). The Government stated (September 2007) that action to procure the hardware for taking meter reading and energy billing was being taken. The fact remains that progress is very slow.

7.3.12.1 Technology options not implemented

There was poor or no progress in the adoption of several technological options for control of theft and reducing commercial losses as envisaged in the APDRP guidelines:

- Laying of Aerial Bunched Cables (ABC) /insulated cables in theft prone areas;
- Automated Meter Reading (AMR);
- Digital interface for automated data logging;
- Making the distribution system less LT oriented, and minimizing the imbalance in the LT/HT ratio; and
- Computerisation of feeder outages.

Against the benchmark of achieving LT/HT ratio of 1:1 by 2006-07, the current level stood at 1:0.54 (LT 15,407 km and HT: 8373 km) as of March 2007, indicating inadequate attention to reduction of LT/HT ratio. While there was tardy progress in AMR and automatic data logging etc, laying of insulated cables and computerisation of feeder outages etc had not been provided in the DPRs.

The Government stated (September 2007) that the price of ABC (not included in the DPR) was high, that AMR was not viable now, and that the programme for LT orientation had been taken up. The fact remains that ABC and AMR were not included in the DPR although 90 *per cent* grant is receivable for implementation of this scheme.

7.3.13 Pilferages and theft of energy

Pilferage/theft of energy was one of the major contributors to AT & C losses. The following table shows the details of number of theft cases detected and penalty realised during the period from 2002-07.

Table No. 7.3.6

Year	No. of theft cases detected	Penalty realised (Rupees in lakh)
2002-03	22,554	11.37
2003-04	30,344	59.68
2004-05	18,498	42.00
2005-06	14,699	40.05
2006-07	11,610	44.50
Total	97,705	197.60

Source: Information furnished by the Company.

The above table shows that the number of theft cases detected had dropped substantially during the last two years, after registering an increase in 2003-04, even though the distribution loss had increased substantially in Agartala town (about 50%) and outer Agartala (about 100%); see para 7.3.9.3 and **Appendix 7.18**. This pointed to inadequacy of anti-pilferage / theft measures.

The Government had set up a vigilance squad headed by a Dy. Superintendent of Police (Vigilance) with three units stationed in three electrical circles comprising one Sub-inspector of Police and eight constables in each unit. The number of cases registered and the conviction rate for the last three years are shown below:

Table 7.3.7

Year	No. of cases registered	No. of cases convicted	Percentage of conviction
2004-05	325	9	2.77
2005-06	233	36	15.45
2006-07	358	NA	NA

Source: Information furnished by the Company.

Very low number of cases registered and the percentage of conviction shows that the vigilance machinery needed to be stepped up. The State Government had not put up any special police stations or special courts, as envisaged in the Electricity Act, 2003. The Company had also not taken concrete action to arrest theft/pilferage by:

- identification of meddling areas and taking corrective measures; and
- development of computerised monitoring system for centralised monitoring of pilferage/theft.

The Government stated (September 2007) that the special courts had since been set up and police were asked to register FIRs in every case of theft / pilferage.

7.3.14 Monitoring and evaluation

The Company failed to evolve adequate monitoring mechanism and mid-term evaluation as stated below:

- No project level monitoring system was put in place.
- The State Level Distribution Reforms Committee (SLDRC) met only thrice, the last being held in March 2007 after a gap of 3 years, against the MoA stipulation of meeting once in every two months.
- No mid-term evaluation of any project was done by any independent external or internal agency.

7.3.15 Internal Control and Internal Audit

Internal control and Internal Audit is important appraisal activity within the organisation to examine and evaluate the activity of the organisation. Non-maintenance of accounts for APDRP, poor fund flow as well as unrealistic assessment in DPRs, non-prioritisation of works and inordinate delay in implementation indicated absence of proper internal control mechanism. The Company also had neither set up any internal audit wing nor deployed any outside agency to conduct the internal audit hence, the important element of internal control is missing.

7.3.16 Conclusion

More than six years after its launch, the impact of APDRP on reduction of AT&C loss was negligible, if any, which was the result of a number of factors including inertia in initiating the required reforms measures, defective planning, inefficient contracting and tardy implementation of the projects without subjecting them to a rigorous implementation schedule. While the power generation sector continued to grapple with the issues like systemic inefficiencies, fuel constraints, plant obsolescence and capacity constraints, the transmission and distribution losses were unabated, putting severe burden on the State's generation, transmission and distribution sector. The problem was further compounded by the lack of plans for implementation of technology options and inadequate measures to arrest the theft and pilferage.

7.3.17 Recommendations

It is recommended that the Company should:

- execute works on turnkey basis as provided in the guidelines. This will also bring down Company's overhead costs and reduce time and cost overrun;
- take effective steps to minimize AT&C and T&D losses;
- improve execution of projects through constant monitoring and efficient management and accounting of funds for timely completion and full utilisation of funds;
- evolve an effective system for evaluation of the progress and performance of works to identify weak areas for remedial action;
- make contracting process more efficient and requirements should be pooled to get the advantage of the economy of scale;
- ensure greater involvement of Lead Advisor-cum-Consultant to get the advantage of expertise and experience;
- strengthen anti-pilferage and theft measures with adequate legal provisions and strengthen energy audit and energy accounting.

SECTION-B

INDUSTRIES AND COMMERCE DEPARTMENT Tripura Industrial Development Corporation Limited

7.4 Performance of loan management activity

7.4.1 Introduction

Tripura Industrial Development Corporation Ltd. (Company) was incorporated in March 1974 with the objective of aiding, assisting and financing industrial undertakings, projects or enterprises, through equity participation, extension of loans or financing of machines or raw material purchases.

The source of finance of the Company comprises mainly from the share capital contributed by the State Government, interest receipts and other income. The details of the Company's receipts and loans disbursed as per its provisional accounts for the period 2001-02 to 2005-06³¹ are as under:

(Rupees in crore)

Year	Contribution to Share Capital	Interest Received on Loans and Advances	Other Income	Total	Loans Disbursed
2001-02	0.45	0.78	0.14	1.37	0.69
2002-03	0.80	0.38	0.16	1.34	0.70
2003-04	0.68	0.78	0.42	1.88	0.75
2004-05	0.29	0.39	0.56	1.24	0.65
2005-06	0.51	0.34	0.72	1.57	0.61
Total	2.73	2.67	2.00	7.40	3.40

Source: Information furnished by the Company.

A statement showing the receipts of applications, sanction and disbursement during the last five years upto 2005-06 is given in **Appendix 7.19**. Out of 681 applications for Rs. 11.58 crore, loans to 374 applicants involving Rs. 5 crore were sanctioned against which Rs. 3.40 crore (298 cases) were disbursed; 56 applications (8.22 per cent) for Rs. 0.61 crore (5.29 per cent) were rejected, while 251 applications (36.86 per cent) involving Rs. 5.96 crore were pending (March 2006), as shown in **Appendix 7.19**.

7.4.2 Sanction of loans

It was further observed that out of 298 cases of loans disbursed during 2001-06, only 49 loans involving Rs.0.70 crore (20.65 per cent) were for industrial purposes while the remaining 249 loans involving Rs. 2.70 crore were disbursed mainly to Small Road Transport Operators as detailed in **Appendix 7.20** for purchase of auto rickshaw, jeep, bus, trucks etc. The percentage of the loans sanctioned for non-industrial purposes varied from 64.68 to 92.44 per cent. Eighty one out of the pending 251 applications (32.27 per cent) involving Rs. 2.89 crore, pertained to industrial loans, while the remaining 170 involving Rs. 3.07 crore pertained to Small Road Transport Operators.

³¹ The accounts for 2006-07 were not yet ready (September 2007).

7.4.3 Deficiency in the due diligence process

The Company had sanctioned bulk of the overdue loans prior to 1990 without any collateral security. The Company stated (October 2007) that these loans were sanctioned with liberal terms as its objective was promotion of industries rather than commercial. For the loans sanctioned subsequently, the Company stated that stringent collateral security norms were being imposed. However, it was observed that guarantees from the State Government servants were accepted based on their salary certificates but could not be enforced in cases of default. After 1997, the assurance letters from their DDOs were obtained but again the response in case of default was stated to be poor. In other cases, the assets mortgaged as security for loans became old and obsolete with negligible realisable value. Due to this, these assets have no buyers. From the above it emerges that loans were not disbursed to the right beneficiaries. Had the beneficiaries succeeded in their endeavours they would have been able to repay the loans. Further, since mortgaged assets had little sale value, it goes to show that the Company did not safeguard its interest before giving loan. The fact is that the Company's future working is dependent on loans recovered and reuse by others. By not recovering loans the Company was jeopardising its own future working.

7.4.4 Poor Recovery of Loans

The details of loans (Principal and Interest) due and recovered for the period 2001-02 to 2005-06 are summarised in the following table.

(Rupees in crore)

Year	Due for recovery (Principal +Interest)	Target fixed for recovery (Percentage of Targets against dues for recovery)	Recovery against dues (Percentage of recovery against dues)	Percentage of recovery against the target fixed for recovery	Per capita recovery by the staff
1	2	3	4	5	6
2001-02	38.42	-	1.73 (4.50)	-	0.22
2002-03	39.43	1.70 (4.31)	1.68 (4.26)	98.82	0.21
2003-04	44.31	1.60 (3.61)	1.84 (4.15)	115.00	0.23
2004-05	47.61	1.60 (3.36)	1.51 (3.17)	94.37	0.19
2005-06	50.47	1.50 (2.97)	1.33 (2.64)	88.67	0.17

It may be observed that the Company's performance in recovery of loans was not only poor but had deteriorated over the years:

- While the targets fixed for recovery had fallen from 4.31 *per cent* of the amount due in 2002-03 to 2.97 *per cent* in 2005-06, the percentage of recovery had declined from 4.50 *per cent* in 2001-02 to 2.64 *per cent* in 2005-06. Consequently, the amount outstanding for recovery had increased from Rs. 38.42 crore at the beginning of 2001-02 to Rs. 49.14 crore at the end of 2005-06.
- The recovery rate had declined despite the regular reduction in the targets for recovery year after year. It was observed that target for recovery was fixed on the basis of recovery in the previous year. The per capita output of the eight staff engaged in the recovery work was deteriorating from year to year.

- The Company did not analyse the reasons for this decline nor did it take any effective steps to improve the recovery. No records were made available regarding the number of units visited by the recovery staff and the number of recovery campaigns held. Even the quarterly demand notices to the loanees were not sent regularly.
- A sample check of 94 cases revealed that in 32 cases, there was no evidence of demand notice/reminders for repayment of loans having been issued while in 39 cases, the quarterly demand notices to the loanees were not issued in time (**Appendix 7.21**).
- The matter was not supervised or monitored effectively at the senior management level nor did it get adequate oversight at the Board level.
- The recovery through the judicial process was also not encouraging. During 2001-06, 77 cases were filed in the Tripura Public Debt Recovery (TPDR) court, involving Rs. 23.08 crore, but the recovery orders had been passed by the Court only in eight cases for Rs. 90 lakh, against which recovery had been made in only two cases for Rs. 14 lakh.

Thus, it is evident from above that targets for recovery of loans are not being fixed on realistic basis and recoveries are not being effected in time resulting in non receipt of sufficient funds for recycling purposes. This indicated lack of control and seriousness in monitoring the recovery of loans.

7.4.5 Large amounts of loans written off

During 2001-06 the TIDC Company had written off/waived with the approval of BoD, recovery from 148 loan cases involving Rs. 9.50 crore (Principal + Interest) as detailed below:

(Rupees in crore)

Year	Principal written off	Interest waived	Total	Percentage of outstanding
2001-02	0.39	2.95	3.34	8.71
2002-03	0.05	0.39	0.44	1.14
2003-04	0.02	1.51	1.53	3.44
2004-05	-	2.67	2.67	5.60
2005-06	-	1.52	1.52	3.00
Total	0.46	9.04	9.50	

Source: Business Planning of Resource Forecast (BPRF) statements of TIDC.

It was observed that out of these 148 cases involving Rs. 9.50 crore, 78 cases of Rs. 2.92 crore³² related to purchase of auto rickshaw, jeep, bus, truck etc; 5 cases (Interest: Rs. 0.17 crore) related to purposes like beauty parlour, X-ray clinic, tailor shop and PCO etc, and 65 cases involving Rs. 6.41 crore³³ related to industrial activity. The amounts written off each year varied from 1.14 per cent to 8.71 per cent of the total outstanding in that year.

³² Principal: Rs. 0.20 crore; Interest: Rs. 2.72 crore.

³³ Principal: Rs. 0.27 crore; Interest: Rs. 6.14 crore.

7.4.6 Conclusion

Thus, poor selection of loanees coupled with weak and deficient recovery process led to wastage of large public funds without any addition to the industrial development of the State. The Company had no written policy for monitoring the recovery of dues, and for enforcement of accountability. The supervision by the senior management and the BoD oversight needed strengthening.

7.4.7 Recommendations

It is recommended that the Company may:

- critically review its lending policy to ensure that funds are lent to priority areas in accordance with its objectives;
- institute a sound system of appraisal of loan proposals, in accordance with industry norms and best practices; and
- institute a system of strict monitoring and recovery mechanism with accountability to ensure that funds due are recovered on time.

The matter was reported to the Government in June 2007; reply had not been received (September 2007).

7.5 Non-realisation of dues

The Company failed to establish an effective system for timely realisation of outstanding dues from Industrial Units at the Growth Centre, Bodhjunnagar leading to non-realisation of Rs. 27.29 lakh and loss of interest of Rs. 5.58 lakh as of March 2007.

The lease deed agreement executed between Tripura Industrial Development Corporation Limited (Company) and the industrial units at the Growth Centre, Bodhjunnagar, stipulate that each entrepreneur would deposit a premium of Rs. one lakh each for every acre of land and for every shed as one time deposit and pay lease rent of Rs. 4000 per acre per month for the land and Rs. 5000 per month for the shed. A rebate of 10 *per cent* for timely payment is allowed and penal interest of 10 *per cent* per annum is to be imposed for delayed payment.

It was observed that the Executive Engineer, Growth Centre, Bodhjunnagar revealed that 72.60 acres of land and nine sheds were allotted to 29³⁴ industrial units (July 2000 and September 2006). Out of these, 25 units were operational. However, the Company failed to realise lease rent of land and sheds on time (along with water charges) from 18 units amounting to Rs. 27.29 lakh (**Appendix-7.22**) as at the end of March 2007, and to impose penal interest of Rs. 5.58 lakh for delayed payment of dues ranged between two to 60 months. Although the Company had issued reminders from time to time, few lessees had responded. It was also noticed that while the Company was allowing the

³⁴ 20 Units – land only; 1 Unit – land and one shed; 8 Units – 8 sheds.

rebate on timely payments, it did not impose penalty for delayed payments. Further, the agreement with Videocon International had been terminated (May 2007) without realising the dues amounting to Rs. 3.36 lakh. The Company did not initiate any effective action to realise the dues, along with penal interest, from the defaulting units, which led to increase in the arrears over time (**Appendix 7.22**).

Thus, failure of the Company to establish an effective system for timely realisation of outstanding dues and inability to enforce the provisions of the agreement led to non-realisation of Rs. 27.29 lakh of lease rent and Rs. 5.58 lakh as penal interest (March 2007).

The Government stated (September 2007) that the matter would be discussed in the meeting of the BoD and action would be taken to realise the outstanding lease rent as per the decision of the BoD.

POWER DEPARTMENT (TRIPURA STATE ELECTRICITY CORPORATION LIMITED)

7.6 Loss due to payment of transmission charge without supply of gas

The Company incurred a loss of Rs. 11.76 crore paid as transmission charge to GAIL without any supply of gas.

The Oil and Natural Gas Corporation Limited (ONGC) supplied gas to the Gas Thermal Power Project (GTPP) upto February 1992 and subsequently after taking over the marketing of gas from the ONGC's Gas Gathering Station (GGS) at Rokhia, GAIL (India) Limited (GAIL) started supplying gas to GTPP. Anticipating shortfall of gas at the Rokhia GGS in 1997, GAIL laid (March 1998) a separate pipeline linking ONGC's Konaban Gas field with GTPP Rokhia (10 km). However, this remained unutilised till September 2002 since ONGC, in the meantime, had created (1997-98) additional reserves in Rokhia, for meeting the enhanced gas requirement. Notwithstanding, the Power Department renewed (April 2002) the agreement with GAIL (1 January 2002 to 31 December 2006 extended up to 30 June 2007). However, a new clause imposing transmission charges @ Rs. 19.93 lakh per month with effect from 1 March 2002 was incorporated for the facilities provided for supply of gas to the delivery point with additional annual incremental charges @ 3 per cent. The agreement further provided that during the currency of the contract, irrespective of total/partial/non-supply of gas, monthly transmission charges and taxes thereof were payable to GAIL.

Test Check of records of the Tripura State Electricity Corporation Limited (Company)³⁵ revealed that the GAIL supplied 1.90 lakh SCMD³⁶ (38 per cent

³⁵ The Company took over the generation and transmission of power from the Power Department from January 2005.

³⁶ Standard Cubic Metre per Day.

of total supply) of gas through Konaban–Rokhia pipeline for only 5 months (September 2002 to January 2003) when, on a request of the Power Department, the supply was temporarily stopped and diverted to the Ramchandra Nagar power plant of NEEPCO, to avert any power crisis during the Assembly elections scheduled in March 2003. In the interim period, the gas requirement of Rokhia plant was met from the GGS at Rokhia. However, the original arrangement of part supply to the Rokhia plant through Konaban–Rokhia pipeline was not resumed even after the elections were over. In the meantime, the Company continued to pay the transmission charges at the agreed rate as per the agreement. It had paid Rs. 11.76 crore as on March 2007 without any supply of gas.

On this being pointed out, the Company stated (June 2007) that reversion to prior arrangement was not necessary as ONGC-GGS at Rokhia was capable of supplying the total contractual quantity of gas for the Rokhia Plant and that the payment of transmission charges was a contractual obligation irrespective of utilisation /non-utilisation of the pipeline. He also stated that the Company had requested GAIL on 29 March 2007 to incorporate a clause in the new contract that “no transportation charge will be paid if the gas is not transported by the seller to the buyer”. The reply is not tenable as despite the fact that no gas had been supplied through the Konaban pipeline since February 2003 no fruitful efforts had been made by the Company to have the provision reviewed bilaterally, even though Article 18 of the contract had a provision for amendment to the contract. This led to loss of Rs. 11.76 crore paid as transmission charges during the period from February 2003 to March 2007 without any supply of gas.

The matter was reported to the Government in June 2007; reply had not been received (September 2007).

7.7 Unfruitful expenditure and loss

Despite construction of a diversion road in 2003, the Company did not take timely action for closing the road passing through the Rokhia Project which resulted in unfruitful expenditure of Rs. 26.41 lakh on the diversion road and also in loss of Rs. 12.15 lakh on account of damages to the diversion road due to its non utilisation.

Tripura State Rifles recommended (April 2001) that the Bishalgarh-Boxanagar road passing through the Rokhia Gas Thermal Project (RGTP) be closed (one kilometre) to public and vehicular traffic as being unsafe for security. The Power Department³⁷ requested (May 2001) the PWD to construct a diversion road. The construction of diversion road (1.754 km), commenced in November 2001 and completed by PWD in June 2003 at a cost of Rs. 26.41 lakh.

³⁷ The work of generation and transmission of power was transferred from the Power Department to Tripura State Electricity Corporation Limited in January 2005, following its incorporation in June 2004.

Test-check of records of the Company and PWD revealed that after completion (June 2003) of the diversion road, the PWD handed over (January 2004) the portion of the original road passing through the RGTP to Power Department. However, the Power Department did not take any action to close that portion of the road; the PWD also did not open the diversion road to the public (May 2007). Consequently, the stretch of the road passing through the project continued to be used by the public and vehicular traffic, despite the fact that the Intelligence Bureau had reported (July 2005) serious threats to the project from insurgents, terrorists etc.

Due to its non-utilisation since June 2003, the condition of the diversion road had deteriorated. According to the PWD (September 2006), the road had become unusable because of the weakening of the top crust and indiscriminate dumping of excavated material by the RGTP.

Thus, lack of timely action by the Power Department/Company, the expenditure of Rs. 26.41 lakh on the diversion road remained unfruitful for 50 months besides posing threat to the security of the project. In addition, it led to avoidable estimated expenditure of Rs. 12.15 lakh on repairs of the diversion road.

The matter was reported to the Government in June 2007; reply had not been received (September 2007).

Agartala
The 2007

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Accountant General (Audit),
Tripura, Agartala

Countersigned

New Delhi
The 2007

(Vijayendra N. Kaul)
Comptroller and Auditor General of India