CHAPTER III: ECONOMIC SECTOR
(Public Sector Undertakings)

3.1 Overview of State Public Sector Undertakings

Introduction

The State Public Sector Undertakings (PSUs) consist of State Government Companies and Statutory Corporations. The State PSUs are established to carry out activities of commercial nature while keeping in view the welfare of people. The State PSUs registered a turnover of ₹ 419.52 crore as per their latest finalised accounts as of September 2012. This turnover was equal to 2.13 *per cent* of Gross State Domestic Product (GSDP) for 2011-12. Thus, the State PSUs occupy an insignificant place in the State economy. Major activities of Tripura State PSUs were concentrated in power and manufacturing sectors. The State PSUs incurred a loss of ₹ 104.98 crore in aggregate as per their latest finalised accounts as of September 2012. They had employed 7360[1] employees as of 31 March 2012. The State PSUs do not include Departmental Undertakings (DUs), which carry out commercial operations but are a part of Government departments.

3.1.2 As on 31 March 2012, there were fourteen PSUs as per the details given below. None of the companies were listed on the stock exchange.

Table No. 3.1.1

Type of PSUs	Working PSUs	Non-working PSUs[2]	Total
Government Companies[3]	12	1	13
Statutory Corporations	1	-	1
Total:	**13**	**1**	**14**

Audit Mandate

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

[1] As per the details provided by PSUs, except one non-working PSU and one newly incorporated company.
[2] Non-working PSUs are those which have ceased to carry on their operations.
[3] Includes one 619-B company namely Tripura Natural Gas Company Limited. During the year 2011-12, one 619-B company named North Eastern Industrial Consultants Limited (NEICL), which was hitherto audited by this Office has been shifted to our other Office namely MAB-I, Kolkata and hence the same has been excluded from the list. Besides, one newly incorporated company named Tripura Urban Transport Company Limited (TUTCL) has been added to the list during the current year.

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

3.1.4 The accounts of State Government companies (as defined in Section 617 of the Companies Act, 1956) are audited by Statutory Auditors, who are appointed by CAG as per the provisions of Section 619(2) of the Companies Act, 1956. These accounts are also subject to supplementary audit conducted by CAG as per the provisions of Section 619 (4) of the Companies Act, 1956.

3.1.5 Audit of Statutory corporations is governed by their respective legislations. CAG is the sole auditor of the only Statutory corporation in the State *viz*., Tripura Road Transport Corporation.

Investment in State PSUs

3.1.6 As on 31 March 2012, the investment (capital and long-term loans) in 14 PSUs (including 619 B companies) was ₹ 796.71 crore as *per* details given below.

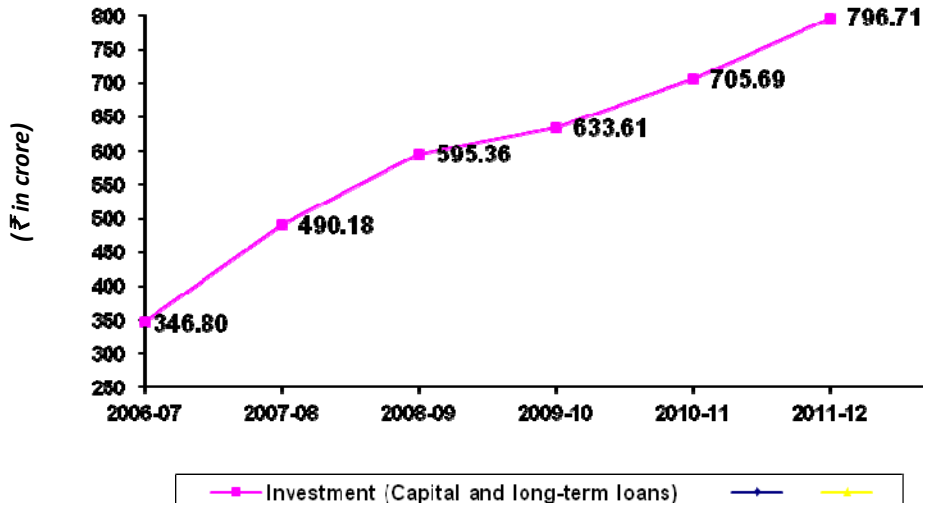
Table No. 3.1.2

(₹ in crore)

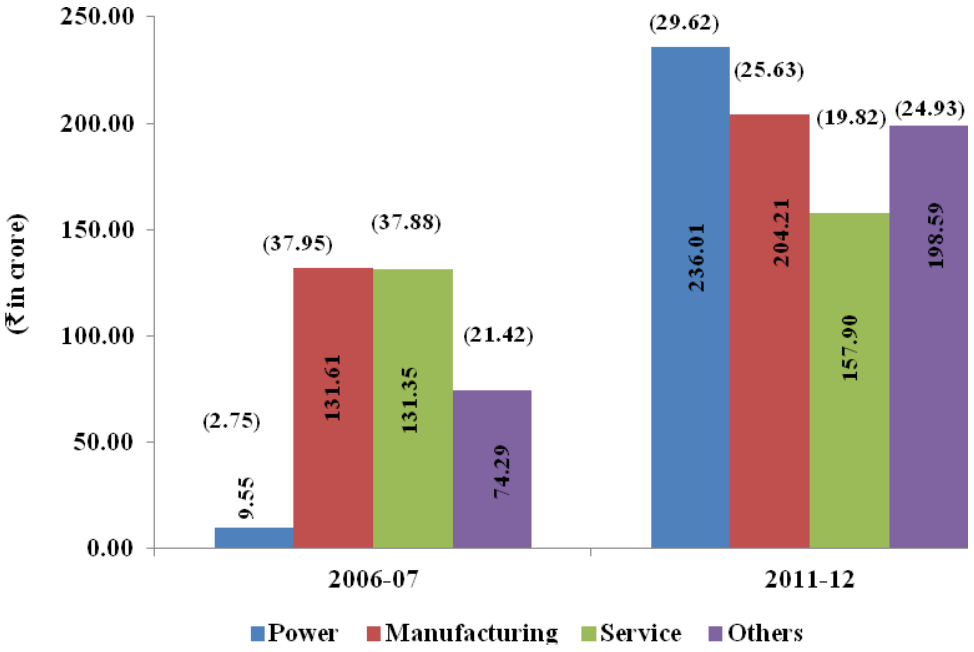
Type of PSUs	Government Companies			Statutory Corporations			Grand Total
	Capital	Long Term Loans	Total	Capital	Long Term Loans	Total	
Working PSUs	435.45	203.52	638.97	157.45	0.25	157.70	796.67
Non-working PSUs	0.04	-	0.04	-	-	-	0.04
Total:	**435.49**	**203.52**	**639.01**	**157.45**	**0.25**	**157.70**	**796.71**

A summarised position of Government investment in State PSUs is detailed in **Appendix- 3.1**.

3.1.7 As on 31 March 2012, of the total investment in State PSUs, 99.99 *per cent* was in working PSUs and the remaining 0.01 *per cent* in non-working PSUs. This total investment consisted of 74.42 *per cent* towards capital and 25.58 *per cent* in long-term loans. The investment had grown by 129.73 *per cent* from ₹ 346.80 crore in 2006-07 to ₹ 796.71 crore in 2011-12 as shown in the graph below.



3.1.8 The investment in various important sectors at the end of 31 March 2007 and 31 March 2012 are indicated below in the bar chart.



(Figures in brackets show the percentage of total investment)

It may be noticed that the major thrust of investment during 2006-07 was in manufacturing and service sectors. After transfer (January 2005) of activities relating to generation, transmission and distribution of electricity from the Power Department, Government of Tripura to a newly formed (June 2004) PSU (namely, Tripura State Electricity Corporation Limited), the investment in power sector had grown rapidly and

reached at the highest among other sectors at 29.62 *per cent* of total investments during 2011-12. The manufacturing sector was the second major sector of investment in PSUs as on 31 March 2012.

Budgetary outgo, grants/subsidies, guarantees and loans

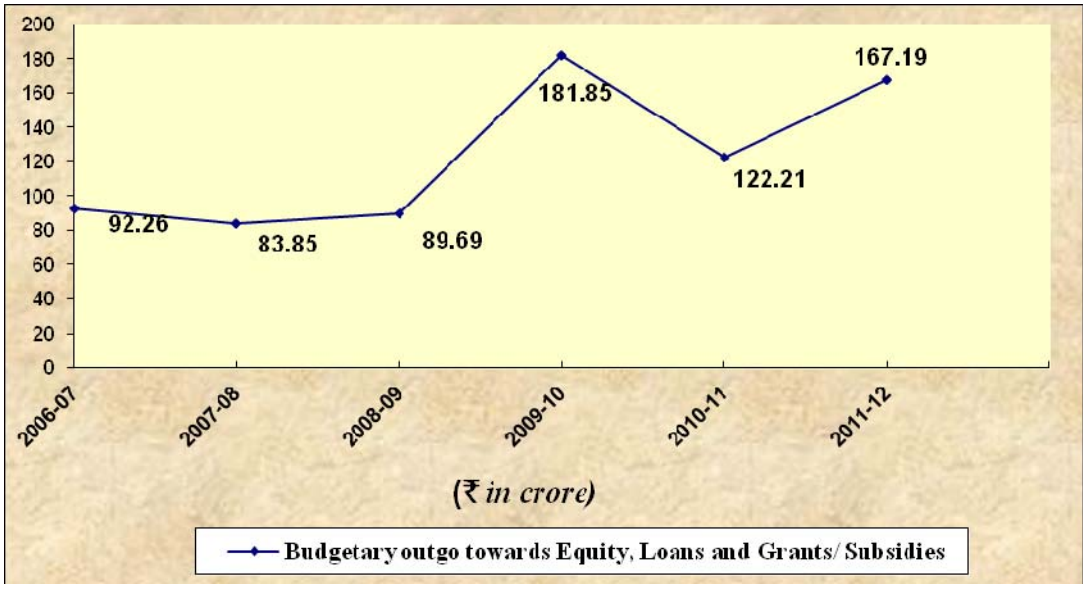
3.1.9 The details regarding budgetary outgo towards equity, loans, grants/subsidies, guarantees issued, loans written off, loans converted into equity and interest waived in respect of State PSUs are given in **Appendix 3.3**. The summarised details are given below for three years ended 2011-12.

Table No. 3.1.3

(₹ in crore)

Sl. No.	Particulars	2009-10		2010-11		2011-12	
		No. of PSUs	Amount	No. of PSUs	Amount	No. of PSUs	Amount
1.	Equity Capital outgo from budget	8	25.79	3	13.27	**6**	**27.29**
2.	Loans given from budget	1	16.50	-	-	2	75.85
3.	Grants/Subsidy received[4]	4	139.56	5	108.94	6	**64.05**
4.	Total Outgo (1+2+3)	10	181.85	7	122.21	**10**	**167.19**
5.	Guarantee Commitment	-	-	-	-	-	-

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



The increase in the budgetary outgo of the State Government during the period from 2006-07 to 2009-10 was mainly directed to the power sector. The decrease in annual budgetary outgo in 2010-11 was due to decrease in outgo towards equity and grants to the PSUs. The annual budgetary outgo increased in 2011-12 mainly due to loan of ₹ 75.75

[4] Amount represents outgo from State Budget only.

crore extended to one company namely Tripura Industrial Development Corporation Limited. During 2011-12, the State Government also provided significant financial support in the form of equity (₹ 15.80 crore) and grants (₹ 13.25 crore) to two State PSUs namely, Tripura Jute Mills Limited and Tripura Road Transport Corporation respectively.

Reconciliation with Finance Accounts

3.1.11 The figures in respect of equity, loans and guarantees outstanding as per records of State PSUs should agree with that of the figures appearing in the Finance Accounts of the State. In case the figures do not agree, the concerned PSUs and the Finance Department should carry out reconciliation of differences. The position in this regard as on 31 March 2012 is stated below.

Table No. 3.1.4

(₹ in crore)

Outstanding in respect of	Amount as per Finance Accounts	Amount as per records of PSUs	Difference
	2011-12	**2011-12**	**2011-12**
Equity	871.79	585.43	286.36
Loans	43.50	203.77	160.27
Guarantees	49.59	-	49.59

It was observed that the differences occurred in respect of 11 PSUs and the differences were pending reconciliation since many years. The Government and the PSUs should take concrete steps to reconcile the differences in a time-bound manner.

Performance of PSUs

3.1.12 The financial results of PSUs, financial position and working results of the only working statutory corporation are detailed in **Appendices 3.2, 3.5** and **3.6** respectively**.** A ratio of PSU turnover to State GDP shows the extent of PSU activities in the State economy. The following table provides the details of working PSU turnover and State GDP for the period 2006-07 to 2011-12.

Table No. 3.1.5

(₹ in crore)

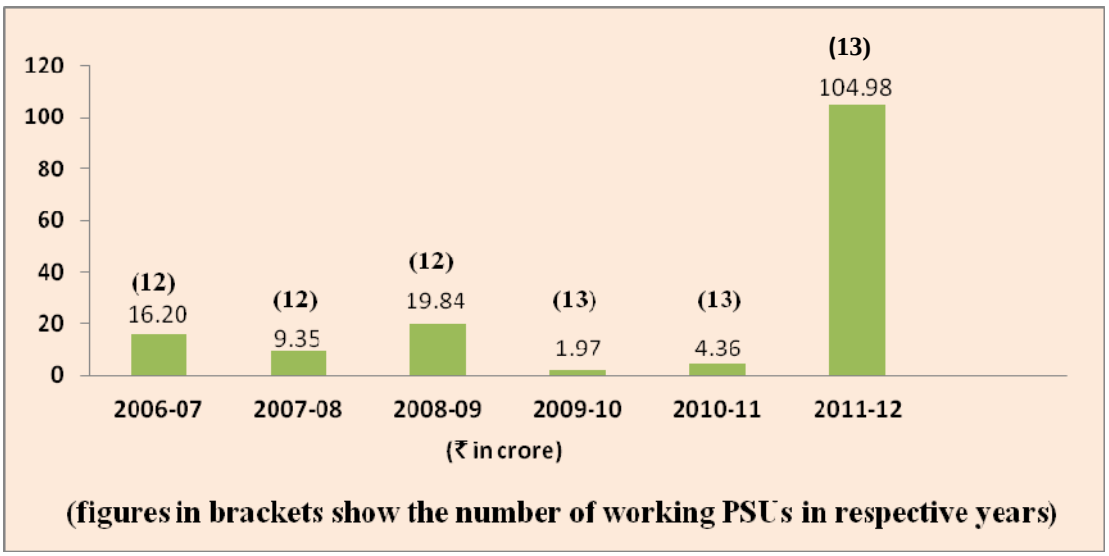
Particulars	2006-07	2007-08	2008-09	2009-10	2010-11	2011-12
Turnover[5]	50.43	251.65	260.69	288.48	331.33	419.52
State GDP	10,914.23	11,797.07	13,104.47	14,604.28	16,327.89	19730.96[6]
Percentage of Turnover to State GDP	0.46	2.13	1.99	1.98	2.03	2.13

It may be noticed from the table that the turnover of the State working PSUs and the State GDP had shown consistent growth during all the six years from 2006-07 to 2011-12. The

[5] Turnover as per the latest finalised accounts of PSUs as of September 2012
[6] Based on Quarterly Review Report of the Finance Minister for third quarter of 2011-12

percentage of turnover to the State GDP had also shown increasing trend during the period of six years except during 2008-09 and 2009-10 when the percentage had marginally declined as the increase in the turnover during these two years was not commensurate with the growth in the State GDP.

3.1.13 Net losses[7] incurred by State working PSUs during 2006-07 to 2011-12 based on their latest finalized accounts during the above period are given below in a bar chart:



From the above it can be seen that the working PSUs incurred overall losses in all the six years during 2006-07 to 2011-12. The overall losses during the five years upto 2010-11 ranged between ₹ 1.97 crore (2009-10) and ₹ 19.84 crore (2008-09), which increased significantly to ₹ 104.98 crore during 2011-12 mainly due to heavy losses incurred by the only power sector PSU. During the year 2011-12, out of 13 working PSUs, 4 PSUs earned profit of ₹ 33.73 crore and 8 PSUs incurred loss of ₹ 138.71 crore. One working PSU (*viz.* Tripura Urban Transport Company Limited) had not finalised its first accounts. The major contributor to profit was Tripura Forest Development & Plantation Corporation Limited (₹ 26.26 crore) while, heavy losses were incurred by Tripura State Electricity Corporation Limited (₹ 95.79 crore), Tripura Road Transport Corporation (₹ 19.24 crore) and Tripura Jute Mills Limited (₹ 13.55 crore).

3.1.14 The losses of PSUs are mainly attributable to deficiencies in financial management, planning, implementation of project, running their operations and monitoring. During the year 2011-12, we selected two PSUs namely Tripura State Electricity Corporation Limited and Tripura Forest Development and Plantation Corporation Limited for detailed audit. The details of revenue, cost, net profit of these

[7] Arrived at before making the below the line adjustments like income tax penalty, refund of income tax etc.

PSUs as per their latest finalized accounts and the money value of audit objections are summarised below.

Table No. 3.1.6

(₹ in crore)

Name of the Company	Revenue	Cost	Net Profit/ Net Loss (-)	Money value of audit objections	
				Excess cost incurred	Revenue forgone
Tripura State Electricity Corporation Limited (latest finalized accounts- 2010-11)	356.61	452.40	(-) 95.79	22.13	0.51
Tripura Forest Development and Plantation Corporation Limited (latest finalized accounts- 2010-11)	50.17	23.91	26.26	-	1.30
Total:	**406.78**	**476.31**	**-69.53**	**22.13**	**1.81**

3.1.15 The above losses pointed out are based on test check of records of PSUs. The actual losses would be much more. The above table shows that with better management, the losses can be eliminated. The PSUs can discharge their role efficiently only if they are financially self-reliant. The above situation points towards a need for professionalism and accountability in the functioning of PSUs.

3.1.16 Some other key parameters pertaining to State PSUs based on their latest finalized accounts are given below.

Table No. 3.1.7

(₹ in crore)

Particulars	2005-06	2006-07	2007-08	2008-09	2009-10	2010-11	2011-12
Return on Capital Employed (*per cent*)	Negative In All Years				0.59	0.50	Negative
Debt	8.81	8.50	23.74	98.29	108.37	128.28	203.77
Turnover[8]	53.79	50.43	251.65	260.69	288.48	331.33	419.52
Debt/ Turnover Ratio	0.16:1	0.17:1	0.09:1	0.38:1	0.38:1	0.39:1	0.49:1
Interest Payments[8]	5.68	5.69	6.31	5.89	7.27	9.37	9.37
Accumulated losses [8]	196.39	197.98	210.18	243.74	303.21	320.31	348.01

3.1.17 From the table above, it may be noticed that there had been significant increase in the overall debts of the State PSUs during past three years from ₹ 98.29 crore (2008-09) to ₹ 203.77 crore (2011-12) mainly on account of increase in the borrowings of Tripura State Electricity Corporation Limited and Tripura Industrial Development Corporation Limited. As a result, the Debt-Turnover ratio as well as the interest payments had been shown increasing trend after 2008-09. The return on capital employed had been negative during all six years except during 2009-10 and 2010-11 due to high losses incurred by the State PSUs.

3.1.18 The State Government had not yet formulated any dividend policy regarding payment of minimum dividend by the State PSUs. As per their latest finalised accounts as

[8] Turnover of working PSUs and interest as well as accumulated losses as per the latest finalised accounts as of September 2012

on 30 September 2012, four PSUs earned an aggregate profit of ₹ 33.73 crore. None of these PSUs, however, declared any dividend during 2011-12.

Arrears in finalisation of accounts

3.1.19 The accounts of the companies for every financial year are required to be finalised within six months from the end of the relevant financial year under Sections 166, 210, 230, 619 and 619-B of the Companies Act, 1956. Similarly, in case of Statutory corporations, their accounts are finalised, audited and presented to the Legislature as per the provisions of their respective Acts.

The table below provides the details of progress made by working PSUs in finalisation of accounts as of September 2012:

Table No. 3.1.8

Sl. No.	Particulars	2006-07	2007-08	2008-09	2009-10	2010-11	2011-12
1.	Number of working PSUs	12	12	12	13	13	13
2.	Number of accounts finalised during the year	5	6	24	38	27	22
3.	Number of accounts in arrears	80	86	74	49	35	26
4.	Average arrears per PSU (3/1)	6.67	7.17	6.17	3.77	2.69	2.00
5.	Number of Working PSUs with arrears in accounts	12	12	12	13	13	13
6.	Extent of arrears	1 to 13 years	2 to 14 years	2 to 15 years	1 to 9 years	1 to 10 years	1 to 6 years

3.1.20 From the table, it may be seen that there had been a significant improvement in the position of arrears of accounts of the State PSUs after 2007-08. This had reduced the average number of arrears per PSU from 7.17 accounts (2007-08) to 2.00 accounts (2011-12). It may, however, be observed that all the 13 working PSUs were still having arrears of accounts for periods ranging from 1 to 6 years as on 30 September 2011. Thus, concrete steps should be taken by the companies for preparation of accounts as per the statutory requirements with special focus on clearance of arrears in a time bound manner.

3.1.21 The State Government had invested ₹ 198.45 crore (equity: ₹ 31.95 crore, loans: ₹ 75.85 crore, grants: ₹ 50.65 crore and others: ₹ 40.00 crore) in 10 PSUs during the years for which accounts have not been finalised as detailed in **Appendix 3.4**. Delay in finalisation of accounts by these PSUs may result in risk of fraud and leakage of public money apart from violation of the provisions of the Companies Act, 1956.

3.1.22 The administrative departments have the responsibility to oversee the activities of these entities and to ensure that the accounts are finalised and adopted by these PSUs within the prescribed period. Though the concerned administrative departments and officials of the Government were informed of the arrears in finalisation of accounts by Audit from time to time, adequate remedial measures were not taken. As a result of this the net worth of these PSUs could not be assessed in audit.

Winding up of non-working PSUs

3.1.23 There was one non-working PSU (a company *viz*., Tripura State Bank Limited), as on 31 March 2012, which had been non-functional for around 42 years. It was in the process of liquidation under Section 560 of the Companies Act, 1956. The non-working PSU is required to be wound up expeditiously since its existence is not going to serve any purpose. The Company, however, continues to await liquidation for about four decades. The Government may expedite winding up of the Company.

Accounts Comments and Internal Audit

3.1.24 During the year 2011-12 (up to September 2012), 11 working companies had forwarded their 22 audited accounts to AG. Of these 12 accounts of 10 companies were selected for supplementary audit. The audit reports of statutory auditors appointed by CAG and the supplementary audit of CAG indicate that the quality of maintenance of accounts needs to be improved substantially. The details of aggregate money value of comments of statutory auditors and CAG based on the accounts audited during the period from 2008-09 to 2011-12 (till September 2012) are given below:

Table No. 3.1.9

(₹ in crore)

Sl. No.	Particulars	2008-09		2009-10		2010-11		2011-12	
		No. of accounts	Amount	No. of accounts	Amount	No. of accounts	Amount	No. of accounts	Amount
1.	Decrease in profit	1	0.01	9	11.94	5	2.64	1	3.00
2.	Increase in loss	8	9.73	9	8.79	12	14.99	9	23.32
3.	Non-disclosure of material facts	5	12.17	4	3.91	0	0	6	36.83
4.	Errors of classification	9	17.06	11	34.41	0	0	4	13.31

3.1.25 During the year, the statutory auditors had given qualified certificates on all the audited accounts received up to September 2012. The audit comments were based mainly on the non-compliance by the companies with the Accounting Standards namely AS-1 (Disclosure of Accounting Policies), AS-2 (Valuation of Inventories), AS-4 (Contingencies and Events occurring after the Balance Sheet Date), AS-5 (Net Profit or loss for the Period, Prior Period Items and Changes in Accounting Policies), AS-15 (Employee Benefits) and AS-22 (Accounting for Taxes on Income).

3.1.26 Some of the important comments in respect of accounts of Companies audited during the year 2011-12 (up to September 2012) are stated below:

Tripura Handloom and Handicrafts Development Corporation Limited

2010-2011

1. Short provisioning against the actuarial liability of Group Gratuity Scheme resulted in understatement of Current liabilities & Provisions as well as the accumulated loss by ₹ 6.43 crore each.

2. Non-writing off of debit balance in the Sundry Employees' Deductions Balance account resulted in overstatement of Current Assets, Loans & Advances and understatement of accumulated loss by ₹ 43.33 lakh.

Tripura State Electricity Corporation Limited

2008-2009

1. Non provisioning of liability payable against purchase of power and transmission charges has resulted in understatement of Current Liabilities and overstatement of Profit for the year by ₹ 2.95 crore each.

2. Non-booking of revenue against sale of power to the States of Manipur and Mizoram had resulted in understatement of Current Assets, Loans & Advances as well as understatement of Profit for the year by ₹ 4.01 crore.

3. The Company charged depreciation in excess of the rates prescribed under schedule XIV of the Companies Act, 1956 resulting in understatement of the Net Block of the Assets by ₹ 3.70 crore with corresponding understatement of the Profit for the year to the same extent.

2007-2008

1. Non-writing off of the delayed payment surcharge due from the Government of Mizoram and already waived off (2006) resulted in overstatement of Sundry Debtors by ₹ 5.18 crore with corresponding overstatement of accumulated profits to the same extent.

3.1.27 In respect of the only working Statutory Corporation *viz.*, Tripura Road Transport Corporation, no annual accounts were finalised by the corporation during 2011-12.

3.1.28 The Statutory Auditors (Chartered Accountants) are required to furnish a detailed report upon various aspects including internal control/internal audit systems in the companies audited in accordance with the directions issued by the CAG to them under Section 619(3)(a) of the Companies Act, 1956 and to identify areas which needed improvement. An illustrative resume of major comments made by the Statutory Auditors

on possible improvement in the internal audit/internal control system in respect of 9 companies[9] for the year 2011-12 are given below.

Table No. 3.1.11

Sl. No.	Nature of comments made by Statutory Auditors	Number of companies where recommendations were made	Reference to serial number of the companies as *per* Appendix 3.2
1.	No/ inadequate internal audit system	6	A-1, 5, 7, 8, 9, 11
2.	Non maintenance of cost record	3	A-1, 7, 8
3.	Non maintenance of proper fixed asset register	8	A-1, 2, 4, 5, 6, 8, 9, 11

Status of placement of Separate Audit Reports

3.1.29 Separate Audit Reports (SARs) issued by the CAG on the accounts of Tripura Road Transport Corporation were placed in the Legislature by the Government up to 2005-06.

The SARs for the years 2006-07, 2007-08 and 2008-09 which were issued to the Management/Government in September 2011 were yet to be placed in the Assembly. The Government intimated (November 2012) that the SARs had been sent for printing and would be placed in the next session of Assembly. The Government should ensure prompt placement of SARs in the Legislature.

Disinvestment, Privatisation and Restructuring of PSUs

3.1.30 No disinvestment, privatisation or restructuring of PSU occurred during 2011-12.

[9] Serial number A-1, 2, 4, 5, 6, 7, 8, 9, 11 in **Appendix 3.2**

POWER DEPARTMENT

(Tripura State Electricity Corporation Limited)

3.2 Performance Audit of Power Transmission Activities

Highlights

Tripura State Electricity Corporation Limited (TSECL) is responsible for planning and development of the intra-state transmission system. Assessment of demand is an important pre-requisite for planning capacity addition. The Company, however, had not prepared the State Electricity Plan in line with the National Electricity Plan of February 2005. The shortfall in achievement of targets set under the 11th Five year Plan for addition of transmission lines and Substations ranged from 33 per cent to 94 per cent. The Annual Plans for 2007-12 were prepared for combined outlay on transmission and distribution without mentioning the targets in physical terms.

The execution of transmission projects by the Company suffered with several deficiencies mainly relating to delays in completing the preparatory/pre-work award activities and deficiencies in realistic assessment of route length of lines resulting in considerable cost and time over-run for the projects. The Company did not have any mechanism to ascertain segment wise energy losses viz., transmission and distribution losses and had adopted a normative loss of six per cent of the energy put in State Bus as transmission loss. The Grid Management system was deficient in absence of adequate facilities for recording real time data and non-maintenance of records as per the requirements of the Grid code regulations. There was no Disaster Management System in place at the level of Sub-Stations, Extra High Tension Lines etc. to face unforeseen situation of black out. The Company has not conducted the energy audit of its transmission and distribution system till date. There was no scientific system in place for management of inventory and the monitoring mechanism of the Company was also deficient.

Following are the main highlights of the performance audit:

In the test-checked five completed projects, there was delay ranging from 12 to 41 months with a cost overrun of ₹ 15.58 crore. Further, test-check of 4 ongoing projects showed that projects had already been delayed by 13 to 46 months.

(Paragraph 3.2.11.1)

The delays in execution of projects occurred mainly on account of delay in completing the preparatory activities like prior route survey of line length, non-finalisation of design, obtaining of Right of Way, obtaining forest clearance etc.

(Paragraph 3.2.11.6 to 3.2.11.13)

The Company did not have any mechanism to determine the transmission and distribution loss and had adopted a normative transmission loss of six *per cent* of the energy put in State Bus.

(Paragraph 3.2.12.7)

The infrastructure for load monitoring at State Load Despatch Centre was not adequate as seven out of eight 66 KV substations of the Company had no provision for recording real time data. The mandatory provisions of Grid code regulations for maintenance of records were also not complied with. The Company had not established Disaster Management programme at the level of Sub-Stations, Extra High Tension Lines etc. to safeguard against the risk of blackout in case of major transmission failures.

(Paragraph 3.2.13)

Though the Tripura Electricity Regulatory Commission had made it mandatory to conduct the energy audit with effect from March 2007, the Company had not conducted any energy audit till date. In the absence of details of metering at boundary points, feeder wise losses could not be ascertained.

(Paragraph 3.2.14)

The Company had no system for effectively planning for procurement of material based on a scientific assessment of future requirements including material budgeting.

(Paragraph 3.2.15)

The internal control and monitoring control mechanism was weak as there was no Management Information and internal audit system.

(Paragraph 3.2.16)

Introduction

3.2.1 With a view to supply reliable and quality power to all by 2012, the Government of India (GOI) prepared the National Electricity Policy (NEP) in February 2005 which stated that the Transmission System required adequate and timely investment besides efficient and coordinated action to develop a robust and integrated power system for the country. It also, *inter-alia* recognized the need for development of National and State Grid with the coordination of Central/State Transmission Utilities. In Tripura, all the activities of generation, transmission, distribution and trading of power are carried out by Tripura State Electricity Corporation Limited (the Company). The Company was incorporated on 9 June 2004 under the Companies Act 1956 and functions under the administrative control of the Power Department, Government of Tripura.

3.2.2 The Management of the Company is vested with a Board of Directors comprising four members appointed by the State Government. The day-to-day operations are carried out by the Chairman cum Managing Director who is the Chief Executive of the Company with the assistance of Director (Technical) and three General Managers (Technical) and one General Manager (Finance). During 2007-08, 622.35 MUs of energy was transmitted

by the Company which increased to 888.25 MUs in 2011-12, *i.e.* an increase of 42.72 *per cent* during 2007-12. As on 31 March 2012, the Company had transmission network of 818.30 CKM and 19 Sub-stations (SSs) with installed capacity of 551.10 MVA, capable of annually transmitting 4103.49 MUs at 132 KV and 66 KV. The overall turnover of the Company was ₹ 348.22 crore in 2011-12, which was equal to 1.76 *per cent* of State Gross Domestic Product[1]. It employed 3678 employees as on 31 March 2012.

A Performance Audit on the distribution activities of the Company was included in the Report of the Comptroller and Auditor General of India (Civil/Commercial), Government of Tripura for the year ended 31 March 2011. The Report had not been discussed by COPU (October 2012).

Scope of Audit

3.2.3 The present Performance Audit conducted during May 2012 to September 2012 covers performance relating to the transmission activities of the Company during 2007-08 to 2011-12. Audit examination involved scrutiny of records of different wings at the Head Office, State Load Despatch Centre (SLDC), the only Transmission Circle headed by Additional General Manager and one out of three Transmission Divisions headed by a Deputy General Manager.

During 2007-12, the Company constructed two SSs[2] (capacity: 70 MVA), 132 KV lines[3] (capacity: 47.87 CKM) as well as augmented the existing transformation capacity by 104.70 MVA[4]. The present performance audit covered examination of five[5] out of total 19 SSs in two out of four districts selected on the basis of capacity of SSs, geographic location and population of the districts. As regards the project execution coverage, both the new SSs (70 MVA[6]) constructed, SSs augmentation of 30 MVA[7] out of 104.70 MVA completed and transmission line projects of 30 CKM[8] out of 47.87 CKM executed during 2007-12 were selected based on the contract value.

[1] ₹ 19,730.96 crore
[2] Bodhjungnagar (50 MVA) and Jirania (20 MVA)
[3] 132 KV lines from Ambassa to Kamalpur (30 CKM), Satchand to Sabroom (13 CKM) and Agartala-Dharmanagar line to Bodhjunnagar (4.87 CKM)
[4] 132 KV SSs at Banduar, Udaipur (20 MVA), Ambassa (22.50 MVA), Gamaitilla (15 MVA), Gournagar (7.50 MVA), 66 KV SSs at Badharghat (15 MVA), Rabindranagar (8.70 MVA), Amarpur (5 MVA), Banduar (8.70 MVA), Bogafa (2.30 MVA)
[5] Four 132 KV SSs namely Grid, Agartala (130 MVA), Bodhjunnagar (50 MVA), Udaipur (50 MVA) and Jirania (20 MVA) and one 66 KV SS at Badharghat (50 MVA)
[6] 132 KV SSs at Bodhjunnagar (50 MVA) and Jirania (20 MVA)
[7] 132 KV Gamaitilla SS (15 MVA) and 66 KV Badharghat SS (15 MVA)
[8] 132 KV line from Ambassa to Kamalpur

Audit Objectives

3.2.4 The objectives of the performance audit were to assess whether:

- Perspective Plan was prepared in accordance with the guidelines of the National Electricity Policy/Plan and Tripura Electricity Regulatory Commission (TERC) and assessment of impact of failure to plan, if any;
- The transmission system was developed and commissioned in an economical, efficient and effective manner;
- Operation and maintenance of transmission system was carried out in an economical, efficient and effective manner;
- Effective failure analysis system was set up;
- Disaster Management System was set up to safeguard its operations against unforeseen disruptions;
- Efficient and effective energy conservation measures were undertaken in line with the National Electricity Plan (NEP) and establishment of Energy Audit System;
- Efficient and effective system of procurement of material and inventory control mechanism exists; and
- There is a monitoring system in place to review existing/ongoing projects, take corrective measures to overcome deficiencies identified, respond promptly and adequately to Audit/Internal audit observations.

Audit Criteria

3.2.5 The audit criteria adopted for assessing the achievement of the audit objectives were derived from the following sources:

- Provisions of National Electricity Policy/Plan and National Tariff Policy;
- Perspective Plan and Project Reports of the Company;
- Standard procedures for award of contracts with reference to principles of economy, efficiency, effectiveness, equity and ethics;
- Report of the Task force constituted by the Ministry of Power to analyse critical elements in transmission project implementation;
- Report of the Committee constituted by the Ministry of Power recommending the "Best Practices in Transmission";
- Directions from State Government/Ministry of Power (MoP);
- Norms/Guidelines issued by TERC/Central Electricity Authority (CEA);
- Reports of North-Eastern Regional Power Committee (NERPC)/North-Eastern Regional Load Dispatch Centre (NERLDC);

- ❖ Manual of Transmission Planning Criteria (MTPC);
- ❖ Code of Technical Interface (CTI)/Grid Code consisting of planning, operation, connection codes; and
- ❖ Circulars, Manuals and MIS reports of the Company.

Audit Methodology

3.2.6 Audit followed the following mix of methodologies:

- ❖ Explaining audit objectives, scrutiny of records, interaction with the auditee personnel, analysis of data and raising of audit queries;
- ❖ Review of Agenda notes and minutes of Company/Board/NERPC/NERLDC, annual reports, accounts and regional energy accounts (REA);
- ❖ Scrutiny of loan files, physical and financial progress reports;
- ❖ Scrutiny of records relating to project execution, procurement, receipt of funds and expenditure; and
- ❖ Interaction with the Management during entry and exit conference.

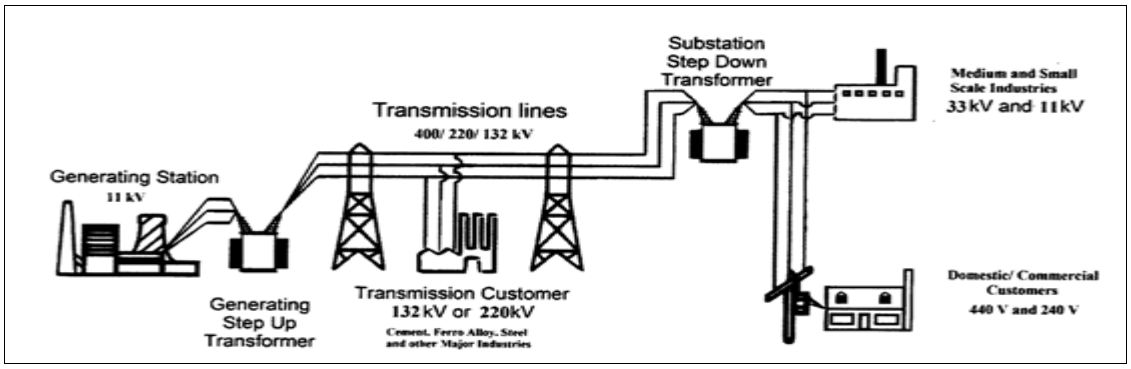
Besides, the audit objectives were also explained to the Company during an 'Entry Conference' held on 28 June 2012. Subsequently, audit findings were reported to the Company and the State Government in November 2012 and also discussed in an 'Exit Conference' held on 25 March 2013. The exit conference was attended by the Additional Chief Secretary, Government of Tripura, Chairman-cum-Managing Director (CMD) of the Company and other concerned officers. The Company replied to the audit findings in April 2013. The views expressed by them have been considered while finalising the Performance Audit.

Brief description of transmission process

3.2.7 Transmission of electricity is defined as bulk transfer of power over long distances at high voltages, generally at 132 KV and above. However, in Tripura, 66 KV and above voltages are treated under Transmission. Electric power generated at relatively low voltages in power plants is stepped up to high voltage power before it is transmitted to reduce the loss in transmission and to increase efficiency in the Grid. Sub-stations (SSs) are facilities within the high voltage electric system used for stepping-up/ stepping down voltages from one level to another, connecting electric systems and switching equipment in and out of the system. The step up transmission SSs at the generating stations use transformers to increase the voltages for transmission over long distances.

Transmission lines carry high voltage electric power. The step down transmission SSs thereafter decreases voltages to sub transmission voltage levels for distribution to consumers. The distribution system includes lines, poles, transformers and other equipment needed to deliver electricity at specific voltages.

Electrical energy cannot be stored; hence generation must be matched to need. Therefore, every transmission system requires a sophisticated system of control called Grid management to ensure balancing of power generation closely with demand. A pictorial representation of the transmission process is given below:



Audit Findings

3.2.8 The audit findings of the performance audit have been finalised after taking into account the replies of the Company and views expressed by the representatives of the Company and State Government in the exit conference. The formal replies of the State Government were, however, yet to be received. The audit findings are discussed in subsequent paragraphs.

Planning and Development

National Electricity Policy/Plan

3.2.9 The Central Transmission Utility (CTU) and State Transmission Utilities (STUs) have the key responsibility of network planning and development based on the National Electricity Plan in coordination with all concerned agencies. At the end of 10th Plan (March 2007), the transmission system in the country at 765/HVDC/400/230/220/KV stood at 1.98 lakh circuit kilometres (CKM) of transmission lines which was planned to increase to 2.93 lakh CKM by end of 11th Plan *i.e.* March 2012. The National Electricity Plan assessed the total inter-regional transmission capacity at the end of 2006-07 as 14,100 MW and further planned to add 23,600 MW in 11th Plan bringing the total inter-regional capacity to 37,700 MW.

The Company's transmission network at the beginning of 2007-08 consisted of 17 nos. of Sub-Stations (132 KV and 66 KV levels) with a transmission capacity of 376.40 MVA

and 770.43 CKM of transmission lines. The transmission network as on 31 March 2012 consisted of 19 SSs with a transformation capacity of 551.10 MVA and 818.30 CKM of transmission lines.

The Company is responsible for planning and development of the intra-state transmission system. Assessment of demand is an important pre-requisite for planning capacity addition. It was, however, observed that neither TERC had given any direction to the Company for submission of the State Electricity Plan (SEP) nor the Company had submitted any SEP to TERC.

However, the physical targets projected in the 11th Five Year Plan of the State (2007-08 to 2011-12) and the actual achievements are shown below:-

Table No.3.2.1

Sl. No.	Particulars	Target	Achievement[9]	Shortfall *(in per cent)*
1	Construction of 132 KV Lines (in CKM)	417	27	94
2	132 KV Sub-stations (capacity in MVA)	172.50	75.00	57
3	66 KV Sub-stations (capacity in MVA)	15.00	10.00	33

It would be seen that the shortfall in addition of transmission lines and substations during 2007-12 against the targets set under 11th Five Year Plan ranged from 33 *per cent* to 94 *per cent*. In the Draft 12th Five Year Plan submitted (January 2012) by the Company to Government of Tripura (2012-17) showing the actual achievement against the 11th Plan, the details of Scheme wise funds sanctioned/received under the 11th Plan, the actual expenditure incurred thereagainst and the reasons for shortfall were not indicated. The Financial Statements of the Company did not reflect the separate physical and financial figures for three activities *viz*., generation, transmission and distribution. Thus, the actual reasons for shortfall in achievement against the 11th Plan targets could not be analysed.

Based on the 11th Five Year Plan, the Company prepared and submitted their Annual Plans to Government of Tripura for the years from 2007-08 to 2011-12. A review of the Annual Plans revealed that the said plans contained only proposed combined financial outlay in respect of transmission and distribution together without mentioning the targets in physical term. In the absence of details relating to transmission activities separately both in physical and financial terms, the analysis of the actual achievements with reference to the targets of Annual Plans could not be carried out.

[9] In the absence of item wise details of achievement, the spillover works of previous Five year Plans could not be segregated.

Transmission network and its growth

3.2.10 The transmission capacity of the Company at 132 KV and 66 KV levels during 2007-08 to 2011-12 is given below

Table No.3.2.2

Sl. No.	Description	2007-08	2008-09	2009-10	2010-11	2011-12	Total
A. Number of Sub-stations (Numbers)							
1	At the beginning of the year	17	17	19	19	19	
2	Added during the year	Nil	2	Nil	Nil	Nil	2
3	Total sub stations at the end of the year **(1+2)**	17	19	19	19	19[10]	
B. Transformers capacity (MVA)							
1	Capacity at the beginning of the year	376.40	413.90	508.60	533.60	551.10	
2	Capacity added during the year	37.50	94.70	25.00	17.50	Nil	174.70
3	Capacity at the end of the year **(1+2)**	413.90	508.60	533.60	551.10	551.10	
C Transmission lines (CKM)							
1	At the beginning of the year	770.43	770.43	770.43	818.30	818.30	
2	Added during the year	Nil	Nil	47.87	Nil	Nil	47.87
3	Total lines at the end of the year **(1+2)**	770.43	770.43	818.30	818.30	818.30	

From the above, it would be seen that during the period from 2007-08 to 2011-12, there was substantial increase in transmission capacity by 174.70 MVA (46.41 *per cent*) by adding two new Sub-stations as well as augmentation of the existing Sub-stations. There was, however, no significant increase in transmission lines, which increased by only 47.87 CKM (6.21 *per cent*) during 2007-12. Further, the additions included spillover works of 10th Five Year Plan completed during the period 2007-12, which could not be segregated in the absence of item wise details. It was, however, observed that the existing transmission capacity was far in excess of the requirement as discussed under paragraph **3.2.12.1** *infra*.

Project management of transmission system

3.2.11 A transmission project involves various activities from concept to commissioning. Major activities in a transmission project are (i) Project formulation, appraisal and approval phase and (ii) Project Execution Phase. For reduction in project implementation period, the Ministry of Power, Government of India constituted a Task Force on transmission projects (February 2005) with a view to:

- ❖ analyse the critical elements in transmission project implementation;
- ❖ implementation from the best practices of CTU and STUs; and

[10] Include 132 KV Sub stations (11 nos.) and 66 KV Substations (8 nos.)

- ❖ suggest a model transmission project schedule for 24 months' duration.

The Task Force suggested and recommended (July 2005) the following remedial actions to accelerate the completion of Transmission systems.

- ❖ Undertake various preparatory activities such as surveys, design and testing, processing for forest and other statutory clearances, tendering activities etc. in advance/parallel to project appraisal and approval phase and go ahead with construction activities once Transmission Line Project sanction/approval is received;
- ❖ Break-down the transmission projects into clearly defined packages such that the packages can be procured and implemented requiring least coordination and interfacing and at same time it attracts competition facilitating cost effective procurement; and
- ❖ Standardise designs of tower fabrication so that 6-12 months can be saved in project execution.

It was observed that the Company had undertaken transmission projects funded mainly by the Ministry of Development of North-Eastern Region (DONER), Government of India through North Eastern Council (NEC) and Non-lapsable Central Pool of Resources (NLCPR) in addition to the projects financed out of own funds. For obtaining sanction from DONER, the Company prepared and submitted Detailed Project Reports (DPRs) for execution of projects. However, projects executed out of own funds were undertaken only based on estimates without preparation of DPRs. It was observed that the Company did not follow the recommendations of the Task Force mentioned above and the projects were undertaken and executed without any realistic assessment of load growth, survey of route length of lines, ensuring Right of Way (ROW), impact analysis of project in quantifiable terms etc. These led to abnormal variation in quantities during actual execution, delay in execution, cost overrun, creation of excess capacity, idle infrastructure etc.

3.2.11.1 Notwithstanding the elaborate guidelines given by the Task Force Committee for timely completion of the projects, the Company executed several SSs and Lines during 2007-12 with time overrun ranging from 12 to 41 months and cost overrun of ₹ 15.58 crore as shown below:

Table No.3.2.3

Particulars	Actual additions	Test-checked in Audit	Range of time overrun (in months)	Cost overrun (₹ in crore)
New Sub-stations	2 nos. (70 MVA)	2 nos. (70 MVA)	12 to 41	10.43
Augmentation of capacity	104.70 MVA	30 MVA	14	3.04
Transmission lines	47.87 CKM	30 CKM & renovation, strengthening of lines	34	2.11
			Total:	**15.58**

The stage wise details of time taken in pre and post work award activities of the projects relating to two new SSs (70 MVA), augmentation of SSs (30 MVA) and renovation/laying of new transmission line (30 CKM) completed during 2007-12 and test-checked in audit are tabulated in **Table 3.2.4**.

Table 3.2.4

Sl. No.	Name of the Project	Date of sanction of DPR/ project estimate	Date of Notice Inviting Tenders (NIT)	Date of work order	Time taken in issue of work order after sanction of DPR/project estimates (in months)	Schedule date of completion as per sanction order/ work order	Actual date of completion	Delay in months
	Construction of Substations							
1	Jirania	January 2005	July 2005	May 2007	28	January 2006	June 2009	41
2	Bodhjungnagar	September 2007	December 2006	May 2007	No delay	December 2008	December 2009	12
	Augmentation of Sub-station							
3	Gamaitilla	March 2007*	December 2006	May 2007	2	December 2007	February 2009	14
	Transmission line							
4	Ambassa to Kumarghat (renovation work)	January 2005	August 2005	August 2006	19	January 2006	November 2008	34
5	Ambassa to Kamalpur (drawing of line)	January 2007	Executed as additional work with the renovation work at serial no. 4 above.	January 2007	-	No separate date was available	No separate date was available	-

*** Date of approval of revised work estimates after incorporating additional LILO line**

Similarly, the stage wise details of time taken in pre and post work award activities in respect of four ongoing projects (one SS and three transmission lines) test-checked are tabulated in **Table 3.2.5** below:

Table No.3.2.5

Sl. No.	Name of the Project (Ongoing)	Date of sanction of DPR/ project estimates	Date of Notice Inviting Tenders (NIT)	Date of work order	Time taken in issue of work order after sanction of DPR/project estimates (in months)	Schedule date of completion	Actual date of completion	Delay in months up to December 2012
	Augmentation of substations							
1	Dhalabil	March 2010	October 2010	April 2011	13	November 2011	Work in progress	13
	Drawing of Transmission lines							
2	Gamaitilla to Dhalabil	January 2008	November 2007	July 2008	6	February 2009	Work in progress	46
3	Surjyamaninagar to Bodhjungnagar	December 2010	August 2010	January 2011	-	November 2011		13
4	Surjyamaninagar to Grid substation, Agartala	December 2010	August 2010	January 2011	-	November 2011		13

From the **Tables 3.2.4** and **3.2.5** above, it may be noticed that the delays in execution of four out of five projects (excluding the additional work at serial no. 5 of the table) completed during 2007-12 test-checked in Audit ranged between 12 and 41 months. In case of ongoing projects, it may be observed that in four ongoing projects test-checked, the completion of works had already been delayed for a period ranging between 13 and 46 months (till December 2012).

The delays in completion of the projects occurred mainly on account of non-undertaking of the preparatory activities like finalisation of design, conducting of prior route survey, timely issue of work orders, obtaining forest clearance, ensuring Right of Way etc., which are discussed below**.**

Delay in finalisation of design/drawings

3.2.11.2 Standardisation of design is essential for execution of any project to save time in finalisation of drawings after the work order is issued and also to avoid excessive time to be taken in approval of frequent changes in design and drawings. The Task Force constituted by the Government of India also recommended that design should be finalised as a part of preparatory activities of the project in advance/parallel to the project appraisal and approval stage. During test-check of five completed and four ongoing projects, it was noticed that in two[11] completed projects, there was delay in completion of the project ranging between 12 and 14 months mainly due to non-finalisation of design in advance resulting in frequent changes in design and drawings after the work was awarded, which could have been avoided if the task force recommendation was followed.

[11] Serial no. 2 and 3 of Table 3.2.4

Non-conducting of prior route survey

3.2.11.3 The conducting of prior route survey is a pre-requisite for any transmission line project so that the post-work award delay due to changes in actual route length resulting in changes in scope of work, approval of excess quantities etc., can be avoided. The Task Force constituted by the Government of India also recommended that the survey has to be conducted in advance/parallel to project appraisal and approval phase. It was, however, noticed that in the test-checked four projects[12] (two completed and two ongoing projects), prior route survey was not conducted, which contributed in delaying the projects for periods ranging between 13 and 34 months.

Delay in award of works

3.2.11.4 The Task Force recommended that tendering activity may be undertaken in advance/parallel to the project appraisal and approval phase so that execution can be commenced upon receipt of approval of the project. It was, however, noticed that in the test-checked three completed and two ongoing projects, the Company had taken abnormally high period ranging from 2 to 28 months in issuing the work orders after sanction of DPR/project estimates. The delays in release of award letters for the works had correspondingly pushed back the scheduled dates of project completion.

Delay in obtaining forest clearance

3.2.11.5 Obtaining of forest clearance is very essential for execution of any project and at the same time, procedural uncertainties are also involved in completing the process. To ensure timely completion of project, it is essential to ensure the necessary forest clearance before award of work. In two[13] test-checked projects, however, it was noticed that non-availability of forest clearance had contributed towards overall delay of 34 months in completion of works

Case study

The case study of project execution and deficiencies observed by audit during the test-check of records are enumerated in the succeeding paragraphs.

Completed projects

Construction of 132 KV SS at Jirania (20 MVA)

3.2.11.6 NEC sanctioned (January 2005) the project for construction of 132 KV SS in Jirania at a cost of ₹ 4.83 crore with scheduled completion period of 12 months (January 2006). The project intended to improve the voltage profile at the consumer ends, provide reliable power supply in the State, and reduce transmission losses with corresponding

[12] Serial no. 4 and 5 of Table 3.2.4 and serial no. 3 and 4 of Table 3.2.5
[13] Serial no. 4 and 5 of Table 3.2.4

reduction in the financial burden on the State budgets. As per the approved funding pattern, the project cost was to be provided by NEC in the form of grant (90 *per cent*) and loan (10 *per cent*). The scope of Project included commissioning of two transformers (2X10 MVA), construction of 132 KV Double Circuit (D/C) transmission lines and associated civil works. It was observed that though, as per the sanction order, the project was scheduled for completion by January 2006, it could be completed only in June 2009 at a total final cost of ₹ 8.21 crore. Thus, the project was completed with a cost overrun of ₹ 3.38 crore (₹ 8.21 crore *minus* ₹ 4.83 crore) and overall time overrun of 41 months from the scheduled completion period of the approved project (January 2006). The reason analysis for delays in execution of the project has been brought out in the succeeding paragraphs.

Pre-work award delays

Delay in finalisation of tender within the validity period of offer

As per the Task Force recommendation, tendering activities should be undertaken in advance/parallel to the project appraisal and approval phase so as to accelerate the completion of the project. It was, however, observed that the Company floated (July 2005) open tender for supply, erection and commissioning of transformers after a lapse of 5 months period from the approval of the project (January 2005). The technical bids and the price bids were opened in August 2005 and October 2005 respectively. Among the three bidders who participated in the tender, M/s Techno Corporation had emerged to be the lowest (L-1) with quoted price of ₹ 5.17 crore (inclusive of taxes and duties). The validity of the price bid was 120 days (*viz*., up to 3 February 2006) from the date of opening of tender.

As per the ideal practice, the Company needed to freeze the technical issues at the stage of opening of technical bids itself so as to place the work order within the validity period. It was, however, observed that the Standing Tender Committee (STC-1) of the Company conducted negotiations with L-1 bidder regarding technical clarifications on rating of transformers after opening of the price bids. After negotiations, it was decided to supply one transformer departmentally and exclude the same from the scope of work order. Besides, certain other items such as, bus couple breaker and panel, etc. were also excluded from the work scope. Based on the above adjustments, the value of the work order was reduced to ₹ 4.02 crore.

The above adjustments had necessitated taking of additional time in finalisation of tenders and work order. The STC-1 finally recommended (25 March 2006) the proposal for placement of order to the Board of Directors, when the validity of offer had already expired. As a result, when the order was placed (25 March 2006), M/s Techno Corporation declined (May 2006) to execute the order.

The Company had no other option but to retender the work. It was observed that the Company placed (May 2007) order for the above work, after including one transformer

excluded earlier, on another firm (M/s Areva T&D India) on restrictive tender basis. The work was scheduled to be completed within 15 months *viz*., by August 2008. The work was finally completed (June 2009) at a total cost of ₹ 5.97 crore, which was higher than the quoted value (₹ 5.17 crore) of M/s Techno Corporation.

Thus, due to failure in finalising the tender within the validity period (February 2006) of the bid, additional time of 15 months was taken in issuing (May 2007) the work order after retendering. This had also caused avoidable extra expenditure of

₹ 0.80 crore (₹ 5.97 crore - ₹ 5.17 crore) in execution of the work.

Post-work award delay

The work was completed by M/s Areva in June 2009 after a delay of 10 months from the scheduled period of completion (August 2008) as per the work order mainly due to delay caused by the Company in approval of additional quantities of earthing and control cables (seven months) and in finalisation of 33 KV Switchyard layout (three months). It was observed that though M/s Areva submitted the revised BOQ in March 2008, the Company approved the same only in November 2008 after a delay of seven months. Further, the Company belatedly arranged (December 2008) the joint field visit of the project site with M/s Areva after a lapse of 19 months from the commencement (May 2007) of work, which delayed finalisation of the Switchyard layout.

Construction of 132/33 KV Sub-station at Bodhjungnagar (50 MVA)

3.2.11.7 Before planning the construction of a SS, it is essential that the growth of load and anticipated increase of demand in future along with permissible limits of voltage regulations are appropriately considered to avoid any mismatch between the infrastructure created *vis-à-vis* actual requirement. The load forecasts for the proposed new schemes should also consider the anticipated physical and financial benefit to be derived.

Based on anticipation of the power requirement as provided by the Department of Industries, Government of Tripura in respect of Industrial Growth Centre at Bodhjungnagar to the tune of 40 MW (47 MVA) by 2011, the Company undertook the project of construction of new 132/33 SS at Bodhjungnagar along with 50 MVA capacity (2 X 25 MVA) transformers, 132/33 KV LILO line from Agartala to Dharmanagar, control room building etc. The project was sanctioned (September 2007) under NLCPR at a cost of ₹ 9.37 crore with scheduled completion period of 15 months by December 2008. The project was completed in December 2009 at a final cost of ₹ 16.42 crore with a cost overrun of ₹ 7.05 crore and time overrun of 12 months.

For supply, erection, testing and commissioning of the SS, the Company placed (May 2007) letter of award (LOA) on M/s Areva (contractor) on restrictive tender basis with the scheduled completion period of 15 months (August 2008) at a value of ₹ 9.55 crore. It was observed that the Company failed to finalise the designs at project appraisal stage contrary to the Task Force recommendations and carried out revisions in the design even after award of the work. As a result, there was delay in execution of the project due to additional time taken by the Company for approval of additional quantities for earthing and control cables by the Company (4 months) and additional order of steel structure (8 months).

Management replied (April 2013) that scope of work had to be enlarged during project execution due to technical necessity. The reply is not acceptable as the Company should have finalised the necessary designs for the project before award of work so as to avoid subsequent delays in revision of the work scope.

Idle Infrastructure

The project for creation of additional transmission capacity of 50 MVA was taken up by the Company on the basis of anticipated power requirement of Industrial Growth Centre at Bodhjungnagar. It was observed that in anticipating the future load growth requirement, the Company relied upon the future load assessment provided by the Department of Industries, without any supporting details of the industrial units to be operationalised with the additional load. It was, however, observed that as against the total transmission capacity of 50 MVA created by the Company, the maximum demand as of August 2012 was only to the extent of 10 MW (12 MVA). Thus, the substation capacity created by the Company remained underutilised to the extent of 38 MVA[14] (76 *per cent*). In view of this, necessary action should be taken by the State Government for utilisation of the entire newly created capacity.

Augmentation of Gamaitilla SS (15 MVA)

3.2.11.8 NEC sanctioned (January 2005) the project for augmentation of Sub-station at Gamaitilla to 132/11 KV level by addition of 1X15 MVA transformer at a cost of ₹ 1.57 crore. A revised estimate after including 132 KV LILO line from Agartala to Dharmanagar (via Ambassa) was also approved (March 2007) by NEC for a total cost of ₹ 3.25 crore with scheduled completion period of 9 months (December 2007). The project was completed in February 2009 at a final cost of ₹ 6.29 crore with a cost overrun of ₹ 3.04 crore (₹ 6.29 crore- ₹ 3.25 crore) and time overrun of 14 months. It was observed that the Company placed (May 2007) the LOA for supply and erection works without finalising the necessary drawings and designs for the project contrary to the recommendations of the Task Force. As a result, additional time of almost five months

[14] The proportionate investment involved (excluding civil works) was ₹ 12.15 crore.

was taken in approval of design and extra quantity in respect of earthing materials after the award of the work causing delays in completion of the project.

Besides, the project was further delayed by eight months on account of the reasons attributable to the contractor (M/s Areva) such as late supply of foundation bolts (six months) and mesh grounding into the Switchyard area (two months) causing delay in execution of associated civil works by another agency. The Company, however, did not impose the liquidation damages amounting to ₹ 19.21 lakh on the contractor as per the contract terms.

Renovation of 132 KV Ambassa-Kumarghat Transmission lines and drawing of Ambassa-Kamalpur line

3.2.11.9 NEC sanctioned (January 2005) the Scheme of renovation and strengthening of 132 KV S/C line from Ambassa to Kumarghat (45 KM) at a cost of ₹ 3.88 crore with scheduled completion period of 12 months (January 2006). The work was, however, completed (November 2008) with a delay of 34 months at a total cost of ₹ 5.99 crore. The broad reasons for delay in completion of the project have been discussed in the succeeding paragraphs.

Pre-work award delay

As per the recommendations of the Task Force, all preparatory activities like, survey, design, processing for forest/statutory clearance, tendering activities, etc. should be undertaken at project appraisal stage and should go ahead with construction activities once project sanction is received. It was, however, observed that the Company took six months in floating (August 2005) the tenders after sanction (January 2005) of the project. The issue of work order was further delayed due to backing out by the L-1 bidder claiming for price variation without ceiling despite the tenders being invited on firm price basis. After negotiations (July 2006), the L-2 bidder (M/s Sikha Electric Store) agreed to match with L-1 price subject to allowance of price variation with upper ceiling of 20 *per cent* of the contract value. The work order was finally placed (August 2006) on L-2 bidder at reduced work scope for a value of ₹ 3.40 crore with scheduled completion period of 12 months (August 2007).

Thus, due to failure of the Company in finalising the tendering activities parallel to the project appraisal/approval stage caused delay of 19 months (January 2005 to August 2006) in award of work.

Post-work award delay

As per the recommendations of the Task Force, the Company was supposed to obtain forest clearance and complete the route survey of lines before award of work order. It

was, however, observed that the Company failed to ensure the forest clearance for the project before award of work, which caused delays in execution of works.

It was further noticed that the Company conducted the route survey of lines only after award of the work. Based on the route survey, the actual route length of the line to be renovated was found to be only 34 CKM as against the length of 45 CKM envisaged in the sanction order resulting in substantial savings in the project cost, complete details of which were not available. It was observed that instead of surrendering the amount so saved to NEC, the Company diverted the same on additional work of construction of Ambassa to Kamalpur line (30 CKM[15]) without prior concurrence of the NEC. The work for construction of the additional line was entrusted (January 2007) to the same contractor under the same agreement without calling for the tender. The execution of the renovation work as well as additional line work, however, suffered due to non-availability of the forest clearance. The entire project, including the work of the additional line was finally completed (November 2008) after an overall delay of 34 months against the scheduled date of completion (January 2006) as stipulated in the sanction order.

Thus, the failure of the Company to undertake/complete the preparatory activities such as finalisation of tendering activities, obtaining the forest clearance and conducting of route survey, etc. before taking up the project as per the Task Force recommendations had resulted in avoidable delay in execution of the project. Diversion of the project funds on additional works without the prior approval of the sanctioning authority (*viz*., NEC) was also irregular.

Ongoing projects

Augmentation of Dhalabil SS

3.2.11.10 Considering the overload situation of existing 132/11 KV Dhalabil SS, project was approved (March 2010) for augmentation of the SS by addition of 1X15 MVA Transformer. After inviting (October 2010) open tenders, the Company placed (April 2011) Letter of Award (LOA) on M/s United Steel Products (contractor) for supply and erection works at a value of ₹ 1.88 crore with scheduled completion period of six months (November 2011). All the materials were to be dispatched by the contractor to the project site only after issuance of Material Inspection Clearance Certificate by the Company. No separate time frame for supply of the material by the contractor was, however, fixed in the work agreement.

It was observed that despite the enabling provision in the agreement, the Company did not conduct prior inspection of material without any recorded reasons. The contractor had supplied (November 2011) transformers along with its accessories such as transformer oil

[15] The precise line length of 29.10 CKM rounded off to 30CKM.

valued ₹ 1.20 crore after a lapse of seven months from the date of issue of LOA. The Company also accepted the material supplied by the contractor and made (2 January 2012) payment of ₹ 1.13 crore against the supplies. It was observed that while opening (17 January 2012) the transformer oil barrels for filtration before pouring into the transformer, the Company noticed high water contents in the oil, which was not suitable for use.

The Company, instead of taking any action against the contractor, asked for replacement of transformer oil by fresh consignment on the plea to complete the work by February 2012. The contractor could replace the transformer oil only in March 2012 after a delay of three months from the original supply.

The work was further delayed due to delayed submission (August 2012) of design, drawings of civil foundation, switchyard etc., by the contractor and approval (December 2012) thereof by the Company. As against the scheduled completion of the work by November 2011, the project had already delayed by 13 months and the same was yet to be completed (December 2012). The Company, however, had not taken any action against the contractor for delays as per the contract conditions. (December 2012).

Thus, the waiver of contract condition for pre-despatch inspection of material and not taking any action against the contractor for supply of substandard quality of material as well as for delays in completing the works was unjustified.

It was further seen that the SS was presently able to cater to load demand of only 6 MW against the demand of 8.5 MW. Thus, due to delay in commissioning of the above 15 MVA transformer, there was less supply of energy to the tune of 1.8 MU per month causing corresponding load shedding in the region for the period of delay.

Construction of 132 KV Transmission Line between Gamaitilla SS to Dhalabil SS

3.2.11.11 For reliable power flow between 132 KV SS at Gamaitilla to 132 KV SS at Dhalabil, Khowai, the Company decided to construct 132 KV Transmission line (estimated route length 26 KM) out of its own funds. A LOA was issued (July 2008) on M/s Hi-Tech Engicon Limited at a value of ₹ 2.19 crore with scheduled period of completion by February 2009. The work was, however, yet to be completed (December 2012). The project was delayed mainly on account of the deficiencies in completing the preparatory activities by the Company before taking up the works as discussed in the succeeding paragraphs.

The major activities before taking up the works in a transmission project are project formulation, appraisal and approval. With a view to accelerate the completion of transmission project, the Task Force had recommended to undertake and complete all preparatory activities before award of the work. It was, however, observed that the Company failed in addressing the issues relating to Right of Way (ROW) and settlement

of land compensation, etc. before award of work. As a result, the project work was hampered due to obstruction created by the local people during execution of works**.** In the absence of detailed records relating to payment of land compensation for resolving of ROW issues, the delay analysis of the project on account of this factor could not be made.

It was further observed that the Company awarded the work based on the estimates prepared without proper route survey, realistic assessment of the exact route length, and assessment of actual quantities of material (*viz*., tower materials and conductors, etc.) available departmentally for use in project works. In the absence of proper route survey, there was increase in the route length from 26 CKM to 30.40 CKM necessitating additional costs and time for the project. Further, abnormal deviation to the tune of ₹ 1.88 crore (82.73 *per cent)* were noticed in quantities of material to be used in the project. These deviations occurred mainly due to incorrect assessment of materials to be issued departmentally by the Company for use in the project works. The Board of the Directors of the Company decided (September 2011) to engage M/s Power Grid Corporation of India Limited for conducting the re-survey of the line route and re-assess the line length as well as the requirement of materials for the project. No further developments in the matter were noticed (December 2012).

Thus, due to Company's failure in adequately addressing the preparatory activities related issues before award of works, the execution of the project had already been delayed by 46 months and the same was still in progress (December 2012).

Construction of 132 KV lines from Surjyamaninagar to Bodhjungnagar and from Surjyamaninagar to Grid S/S, Agartala

3.2.11.12 The Company decided (July 2010) to construct 132 KV lines from Surjyamaninagar to Bodhjungnagar (estimated length 11.9 KM) (first work) and 132 KV lines from Surjyamaninagar to Grid S/S, Agartala (estimated length 11.14 KM) (second work) for dispersal of power to be received at Surjyamaninagar from upcoming Palatana Power Plant. The Ministry of Development of North-Eastern Region (DONER), Government of India approved (December 2010) the projects under Non-lapsable Central Pool of Resources (NLCPR) at a cost of ₹ 7.38 crore and ₹ 9.51 crore respectively. The Company floated (August 2010) tenders and placed (January 2011) two separate LOAs for first and second works on L-1 bidder for a value of ₹ 6.65 crore and ₹ 6.80 crore respectively with scheduled completion period of ten months (November 2011). While the first work was put on trial run (September 2012) at a cost of ₹ 11.86 crore, the second work was yet to be completed (December 2012).

It was observed that the Company prepared both the DPRs without undertaking preparatory activities such as route survey of lines, which was essential for realistic assessment of route length and requirement of material for the project. As a result, there

was increase in route length by 6.325 KM (52.70 *per cent*) and by 5.656 KM (47.13 *per cent*) in the first and second works respectively. The increase in the line length had resulted in increase in the tentative costs of first and second works by ₹ 3.99 crore and ₹ 4.67 crore respectively besides causing delays in completion of the projects on account of execution of additional works by the Company. The revised cost estimates for the two works were, however, yet to be submitted to DONER for approval (December 2012).

Thus, Company's failure in precisely assessing the route length of the project at planning stage based on the route survey of lines had resulted in increase in the cost of two works by an aggregate amount of ₹ 8.66 crore as well as delays in completion of the projects.

Shifting of Transmission Lines-Diversion of project fund

3.2.11.13 The Power Department of the State Government received sanction of ₹ 1.80 crore from the Finance Department of the Government of Tripura for execution of the work of shifting of a portion of existing 132 KV lines in the proposed secretariat area in Capital Complex. The funds allocated by the Finance Department were to be utilised specifically for the purpose of release. The Power Department reallocated (May 2006) the funds to the Company for executing the work. After inviting (September 2006) open tenders, the Company placed (April 2007) the work order at a value of ₹ 1.67 crore with scheduled completion period of six months (October 2007).

It was observed that on account of post work award revisions in the line length, there were savings of ₹ 0.87 crore in the project cost against the sanctioned amount of ₹ 1.80 crore as the work was almost completed (July 2008) at an aggregate cost of ₹ 0.93 crore.

It was, however, observed that instead of surrendering the unutilised amount of ₹ 0.87 crore, the Company diverted (July 2008) the same on other works *viz*., construction of 132 KV Transmission line from 132 KV Ambassa-Baramura Transmission line to ongoing 132/11 KV SS at Gamaitilla without obtaining approval of the Finance Department, Government of Tripura. It was also noticed that the project relating to augmentation of Gamaitilla SS, which included construction of the above 132 KV lines as well had already been sanctioned (March 2007) separately by NEC for ₹ 3.25 crore.

Thus, diversion of unutilised amount by the Company without prior concurrence of the Finance Department of the State Government for the purpose not covered under the original sanction was irregular.

Performance of transmission system

3.2.12 The performance of the Company mainly depends on efficient maintenance of its EHT transmission network for supply of quality power with minimum interruptions. In

the course of operation of sub-stations and lines, the supply-demand profile within the constituent sub-systems is identified and system improvement schemes are undertaken to reduce line losses and ensure reliability of power by improving voltage profile. These schemes are for augmentation of existing transformer capacity, installation of additional transformers, laying of additional lines and installation of capacitor banks. The performance of the Company with regard to O&M of the system is discussed in the succeeding paragraphs.

Transmission capacity

3.2.12.1 The Company in order to evacuate the power from the Generating Stations and to meet the load growth in different areas of the State constructs lines and SSs at different EHT voltages. A Transformer converts AC voltage and current to a different voltage and current at a very high efficiency. The voltage levels can be stepped up or down to obtain an increase or decrease of AC voltage with minimum loss in the process. In Tripura, the evacuation is normally done at 132 KV and 66 KV SSs. The transmission capacity (132 KV and 66 KV) created *vis-à-vis* the transmitted capacity (peak demand met) at the end of each year by the Company during the five years ending March 2012 are as follows:

Table No.3.2.6

Transmission capacity (in MVA)				
Year	**Installed**	**After leaving 30 *per cent* towards margin**	**Peak demand including non-coincident demand**	**Excess**
(1)	**(2)**	**(3)**	**(4)**	**(5)= (3) - (4)**
2007-08	413.90	289.73	188.24	101.49
2008-09	508.60	356.02	190.58	165.44
2009-10	533.60	373.52	220.00	153.52
2010-11	551.10	385.77	238.82	146.95
2011-12	551.10	385.77	260.00	125.77

From the above table it could be observed that the overall transmission capacity was in excess of the requirement during each of the five years under review. The existing transmission capacity excluding 30 *per cent* towards redundancy worked out to an excess of 125.77 MVA as at the end of March 2012 involving estimated investment of ₹ 9.51 crore (₹ 1.89 crore per 25 MVA PTR). The financial burden of the said investment was passed on to the consumer by way of inclusion of depreciation component on idle transmission infrastructure in the power tariff. Existence of extra/idle capacity in the transmission network reflects unscientific planning in creation of transmission network.

Sub-stations

Adequacy of Sub-stations

3.2.12.2 Manual on Transmission Planning Criteria (MTPC) stipulates the permissible maximum capacity for different SSs *i.e.*, 320 MVA for 220 KV and 150 MVA for 132 KV SSs. Scrutiny of the maximum capacity levels of 132 KV SSs revealed that all the SSs were within the maximum capacity levels.

Voltage management

3.2.12.3 The licensees using intra-state transmission system should make all possible efforts to ensure that grid voltage always remain within limits. As per Indian Electricity Grid code STUs should maintain voltages ranges between 380-420 KV (in 400 KV line), 198-245 KV (in 220 KV line) and 119-145 KV (in 132 KV line). A review of the 132 KV bus voltages was conducted in five SSs in out of total 19 SSs in four districts. It was seen that while four SSs were recording the voltage profile in daily log sheets, one SS did not record the voltage profile. No consolidated position of voltage either monthly or on annual basis was maintained by any of the five SSs test-checked and it was also not a part of any returns submitted by SSs to the Divisions. A test-check of the log sheets of 10 months during the period from 2007-08 to 2011-12, however, revealed that in all the said four SSs out of five SSs test-checked, the voltages recorded ranged between 127 KV and 140 KV, which was within the permissible limits.

Lines

EHT lines

3.2.12.4 As per MTPC permissible line loading cannot normally be more than the Thermal Loading Limit (TLL). The TLL limits the temperature attained by the energised conductors and restricts sag and loss of tensile strength of the lines. The TLL limits the maximum power flow of the lines. As per MTPC the TLL of 132 KV line with ACSR[16] Panther 210 sq. mm. conductor was 366 amps. Scrutiny of the line loadings in 5 SSs out of 19 SSs test-checked on the 132 KV and 66 KV feeders revealed that the TLL was within the maximum limits.

Maintenance

Performance of Current transformers (CT)

3.2.12.5 Current transformers are one of the most important and cost-intensive components of electrical energy supply networks, thus it is of special interest to prolong their life duration while reducing their maintenance expenditure. In order to gather detailed information about the operation conditions of CTs, various kinds of oil analysis like the standard oil Dissolved Gas Analysis (DGA) tests are generally conducted. For CT insulation a combination of an insulating liquid and a solid insulation impregnated therewith are used. For an evaluation of the actual condition of this insulating system usually a DGA is used, as failures inside the CT lead to a degradation of the liquid

[16] Aluminium Conductor Steel Reinforced

insulation in such a way that the compound of the gases enables an identification of the failure cause.

It was, however, observed that the Company had not created any infrastructure for such tests. Review of records in 5 out of 19 SSs test-checked revealed that the details of failures of CTs were not entered in the Occurrence Registers/Log sheets on daily basis. Consolidated information of details of failure of CT on a monthly or annual basis was neither maintained by any SS nor the same was incorporated in the monthly progress reports submitted by the SSs to the Transmission Division. In the absence of these details, Audit could not assess the reasons and overall position of failure of CTs. This was indicative of non-existence of any kind of monitoring on the functioning and failure of CTs.

In the exit conference, the Chairman-cum-Managing Director (CMD) of the Company stated (March 2013) that CTs were generally inspected once in a year. The Additional Chief Secretary, Government of Tripura, however, emphasised that there was a need for maintaining history sheets indicating detailed records on maintenance and failure of CTs in the Sub-stations

Working of hot lines division/sub divisions

3.2.12.6 Regular and periodic maintenance of transmission system is of utmost importance for its un-interrupted operation. Apart from scheduled patrolling of lines following techniques are prescribed in the Report of the Committee for updating the Best practices of Transmission in the country for maintenance of lines:

- Hot Line Maintenance.
- Hot Line Washing.
- Hot line Puncture Detection of Insulators.
- Preventive Maintenance by using portable earthing hot line tools.
- Vibration Measurement of the line.
- Thermo-scanning.
- Pollution Measurement of the equipment.

The hot line technique (HLT) envisages attending to maintenance works like hot spots, tightening of nut and bolts, damages to the conductor, replacement of insulators etc. of SSs and lines without switching off. This includes thermo scanning of all the lines and SSs towards preventive maintenance. HLT was introduced in India in 1958.

It was, however, observed that the Company had not implemented the hot line techniques for maintenance of transmission lines (October 2012). In absence of hot line techniques, the Company had to shut down the system for carrying out the routine maintenance work causing frequent interruptions in power supply during the period of repairs.

Transmission losses

3.2.12.7 While energy is carried from the generating station to the consumers through the Transmission & Distribution (T&D) network, some energy is lost in the process which is termed as T&D loss. Transmission loss is the difference between energy received from the generating station/Grid and energy sent to the Distribution Sub-stations.

It was observed that the Company did not have any mechanism to work out segment wise actual losses *viz*., Transmission, Sub-transmission, Distribution and Commercial losses separately. As a result, the difference between the total energy put in the State Bus for sale and the net energy sold was treated as T & D loss by the Company. The Company had adopted a normative transmission loss of six *per cent* calculated on the energy put in the State Bus during the performance audit period. The Company was not able to determine the actual transmission loss data on account of several constraints like absence of energy audit system despite the direction of TERC, non-recording of details of energy received by transmission sub-stations on account of malfunctioning of energy meters in sub-stations, absence of Tri-vector meters in sub-stations, absence of metering system in distribution sub-stations etc.

In absence of the actual transmission loss data, the trend analysis of actual transmission losses with reference to the norms prescribed by the CEA (four *per cent*) could not be made on realistic basis and losses on this account in financial as well as physical terms could not be pointed out.

Due to non-availability/non-furnishing of monthly drawal/consumption Statements of all the Transmission Sub-stations, however, Audit could not compute the actual transmission loss during the above period to ensure the adequacy of the normative transmission loss at the rate of six *per cent* adopted by the Company.

In the exit conference, CMD of the Company accepted (March 2013) the observation.

Grid Management

Maintenance of Grid and performance of SLDC

3.2.13 Transmission and Grid Management are essential functions for smooth evacuation of power from generating stations to the Company's distribution wing/consumers. Grid Management ensures moment-to-moment power balance in the interconnected power system to take care of reliability, security, economy and efficiency of the power system. Grid management in India is carried out in accordance with the standards/directions given in the Grid Code issued by CEA. National Grid consists of five regions *viz*., Northern, Eastern, Western, North Eastern and Southern Grids. Regional Grids was having a Regional Load Despatch Centre (RLDC), an apex body to ensure integrated operation of the power system in the concerned region. In Tripura, the State Load Despatch Centre (SLDC), a constituent of North-Eastern Regional Load Despatch Centre (NERLDC), Shillong, ensures integrated operation of power system in the State. The SLDC is functioning under the management of the Company.

Infrastructure for load monitoring

3.2.13.1 Remote Terminal Units/Sub-station Management Systems (RTUs/SMSs) are essential equipment for monitoring the efficiency of the transmission system and the loads during emergency in load dispatch centres as per the Grid norms for all SSs. It was observed that all the three generating stations of the Company *viz*., Rokhia, Baramura and Gumti are provided with RTUs for recording real time data for efficient Energy Management System. It was, however, observed that out of total 19 SSs of the Company as on 31 March 2012, all 11 nos. of 132 KV Sub-stations were provided with RTUs, while only 1 out of remaining 8 nos. of 66 KV SSs had the provision of RTUs for recording the real time data.

Grid discipline by frequency management

3.2.13.2 As per Grid Code, the transmission utilities are required to maintain Grid discipline for efficient functioning of the Grid. All the constituent members of the Grid are expected to maintain a system frequency between 49 and 50.5 Hertz (Hz) (49.2 and 50.3 Hz with effect from April 2009). Due to various reasons such as shortages in generating capacities, high demand, Grid indiscipline in maintaining load generation balance, inadequate load monitoring and management, however, Grid frequency goes below or above the permitted frequency levels. To enforce the Grid discipline, the RLDC issues three types of violation messages (A, B and C). Message A is issued when the frequency is less than 49.2 Hz and over-drawal is more than 50 MW or 10 *per cent* of schedule whichever is less. Violation B message is issued when frequency is less than 49.2 Hz and over-drawal is between 50 and 200 MWs for more than ten minutes or 200 MW for more than five minutes. Message C (serious nature) is issued 15 minutes after the issue of message B when frequency continues to be less than 49.2 Hz and over drawal is more than 100 MW or ten *per cent* of the schedule whichever is less. In addition, NERLDC also issued Message D for drawal in excess of restricted peak drawal stipulated by NERLDC in peak hours.

It was observed that SLDC functioning under the Company did not maintain separate records for the messages received from NERLDC during the period from 2007-08 to 2011-12 along with the details of compliance there against and no consolidated details/ summary of messages received were maintained by SLDC. Based on the test-check of records produced to Audit, the details of messages received by SLDC as could be worked out by Audit for the years 2009-10 and 2010-11 are as follows:-

Table No.3.2.7

	Message A	Message B	Message C	Message D	Total
2009-10	7	10	0	4	21
2010-11	13	11	0	11	35
Total:	**20**	**21**	**0**	**15**	**56**

It may be seen that while the receipt of messages (A, B and D type) from NERLDC increased from 21 to 35 (67 *per cent*), the Message D had increased significantly from 4 to 11 during two years indicating increase in violation of overdrawals beyond restricted peak drawal stipulated by NERLDC. No C type message was, however, received by SLDC during 2009-10 and 2010-11.

Thus, increase in the receipt of type A, B and D messages put a question mark on the Grid discipline.

The Management replied (April 2013) that sharp increase in the demand during preceding two years led to small number of overdrawal situation. It was further stated that utmost care and efforts are taken consistently to maintain the grid discipline in day to day system operation. Reply is not acceptable in view of the fact that despite the consistent efforts claimed to have taken by the Company for maintaining grid discipline, the number of violation messages had increased significantly during 2010-11. The Company needs to take appropriate remedial action for effectively maintaining the grid discipline.

Backing Down Instructions (BDI)

3.2.13.3 When the frequency exceeds the ideal limits *i.e.* situation where generation is more and drawal is less (at a frequency above 50 Hz), based on instructions from NERLDC, SLDC takes action by issuing Backing down instructions (BDIs) to the Generators to reduce the generation for ensuring the integrated Grid operations and for achieving maximum economy and efficiency in the operation of the power system in the State. Failure of the generators to follow the SLDC instructions would constitute violation of the Grid code and would entail penalties.

Review of records at SLDC revealed that the BDIs issued by SLDC to the generating stations based on instructions received from NERLDC were properly recorded in the Daily Occurrence Register. The compliance to the BDIs so issued by the Generating Stations and the quantum of decrease in generation due to BDIs was, however, not found on record. Hence, in absence of complete records, the status of compliance of BDIs by the generating stations could not be verified in Audit.

The Management accepted the facts and stated (April 2013) that the status of compliance could not be produced to Audit as no such information was received from generating stations. The Management, however, assured for collection of compliance report from generating stations in future.

Non-compliance with Grid Code Regulations issued by TERC

3.2.13.4 Tripura Electricity Grid Code Regulations, 2010 was notified by TERC *vide* No.F.25/TERC/2009 dated 29 April 2010. It was observed that SLDC had not complied with the requirements of the Regulations as detailed below:

(a) Non-submission of returns

As per Para No.4.5.1, SLDC was required to submit a weekly report to TERC containing the Frequency profile, Maximum and Minimum frequency recorded daily on 15 minutes time block basis, Voltage profile of SSs, Transmission outages, constraints, Monthly load curve etc. Further, as per Para No.4.5.2, SLDC was also required to submit a quarterly report to TERC, bringing out the system constraints and other reasons for not meeting the requirements.

It was, however, observed that SLDC had not been furnishing any of the above returns to TERC. No records were, however, available regarding the details of action, if any, taken by TERC against the SLDC for non-submission of the said mandatory returns. The Management stated (April 2013) that submission of the said reports to TERC had since been started.

(b) Non-maintenance of Internal Operating Procedures

As per Para No.4.1.5, a set of detailed Internal Operating Procedures for the State Grid shall be developed and maintained by the SLDC in consultation with the entities. The SLDC was, however, not maintaining any such Internal Operating procedures.

(c) Absence of Demand Estimation for Operational Purposes

As per Para No. 4.3, the SLDC shall develop methodologies/mechanisms for periodical demand estimation (MW, MVAR and MWh) on daily/weekly/monthly/yearly basis mainly based on the data furnished by the Distribution Licensees for operational purposes. The SLDC was also required to devise appropriate mechanism to facilitate an on-line estimation of demand for daily operational use.

It was observed that the required facilities had so far not been developed by SLDC so as to facilitate on-line demand estimation for daily operational use.

In reply, Management accepted the facts and stated (April 2013) that SLDC would carry out the online demand estimation.

(d) Non-preparation of list of elements of State Grid

As per Para No. 4.3, a list of elements of State grid covered under these Regulations shall be prepared and be available with the SLDC within 30 June 2010. However, SLDC has so far (October 2012) not prepared the list of elements as required.

Planning for power procurement

3.2.13.5 The Company assesses the requirement of power based on the past consumption trends, present requirement, load growth trends and T & D losses and its trend. In

addition to its own generation, the Company purchases power from the Central Power Generating Stations based on allocation to the State in accordance with the Memorandum of Understandings (MOUs) entered into with the constituent States. It also draws day ahead plan for assessing its day to day power requirement. The details of total requirement of the State, total power supplied and shortage of power for the five years 2007-08 to 2011-12 are given below:

Table No.3.2.8

(Figures in MUs)

Sl. No.	Details	2007-08	2008-09	2009-10	2010-11	2011-12
1	Total power requirement[17]	891	966	1046	1134	1229
2	Total power put in State Bus	622	693	735	818	888
3	Power short supplied	269	273	311	316	341
4	Percentage of shortage	30.19	28.26	29.73	27.86	27.75

It could be seen from the above that the percentage of shortage of power during 2007-12 was showing decreasing trend (except during 2009-10). It decreased from 30.19 *per cent* in 2007-08 to 27.75 *per cent* during 2011-12.

The gap in demand supply position also leads to variation between actual generation or actual drawal and scheduled generation or scheduled drawal which is accounted through Unscheduled Interchange (UI) charges, worked out by SLDC for each 15 minutes time block. UI charges are levied for the supply and consumption of energy in variation from the pre-committed daily schedule. This charge varies inversely with the system frequency prevailing at the time of supply/consumption. Hence, it reflects the marginal value of energy at the time of supply. The levying of UI charges acts as a commercial deterrent to curb over drawls from the Regional Grid during low frequency conditions.

The details of UI Pool account of the Company for the period from 2007-08 to 2011-12 are given below:-

Table No.3.2.9

Year	Details of UI payable		Details of UI receivable		Net receivable		
	Units (in MU)	Amount (₹ in crore)	Units (in MU)	Amount (₹ in crore)	Unit (in MU)	Amount (₹ in crore)	Average rate received per unit (in ₹)
2007-08	1.348	3.81	58.220	26.91	56.872	23.10	4.06
2008-09	3.581	0.92	44.084	24.66	40.503	23.74	5.86
2009-10	2.290	1.49	60.765	22.85	58.475	21.36	3.65

[17] As per 17th Electric Power Survey of India conducted by CEA

2010-11	2.214	0.36	58.568	16.87	56.354	16.51	2.92
2011-12	3.282	1.96	43.941	9.55	40.659	7.59	1.87
Total:	**12.715**	**8.54**	**265.578**	**100.84**	**252.863**	**92.30**	

It would be seen that though the Company had paid total amount of ₹ 8.54 crore to NERLDC for overdrawal of power, it had simultaneously received an amount of ₹ 100.84 crore for unscheduled sale of power due to less drawal against the allocation. Thus, there were net savings of ₹ 92.30 crore to the Company during 2007-12 under the UI Pool Account.

Disaster Management

3.2.13.6 Disaster Management (DM) aims at mitigating the impact of a major break down on the system and restoring it in the shortest possible time. As per the Best Practices, DM should be set up by all power utilities for immediate restoration of transmission system in the event of a major failure. It is carried out by deploying Emergency Restoration System, DG sets, vehicles, firefighting equipment, skilled and specialised manpower. Disaster Management Centre, National Load Dispatch Centre, New Delhi will act as a Central Control Room in case of disasters. The DG sets and Synchroscopes[18] form an important part of DM facilities at Extra High Tension Sub-stations (EHT SSs) connecting major generating stations.

It was, however, observed that the Company had not established any DM programme so far for quick restoration of transmission system in case of major breakdown of system. In absence of an effective DM system, the transmission system of the Company was exposed against the risk of blackout situation for longer duration in case of major transmission system failure.

The Management replied (April 2013) that the State Grid had already established faster recovery of blackouts during national grid failure in July 2012 itself and the entire system could be restored within 20 minutes. The reply is not acceptable as the system established addresses the emergent situation at the State generating stations only and there was no disaster management system at the level of Sub-stations, EHT lines, etc. for recovery in case of blackouts.

Energy Accounting and Audit

3.2.14 Energy accounting and audit is necessary to assess and reduce the transmission losses. The transmission losses are calculated from the Meter Reading Instrument (MRI) readings obtained from Generation to Transmission (GT) and Transmission to Distribution (TD) Boundary metering points.

[18] In an AC electrical power system, it is a device that indicates the degree to which two systems generators or power networks are synchronised with each other.

As per the time bound action plan prescribed by TERC, the technical and commercial losses should be segregated through energy audit by March 2007. TERC also made it mandatory to conduct the energy audit with effect from March 2007. The Company, however, had not conducted the energy audit of its transmission and distribution system so far (December 2012).

The Company also did not maintain the details of the interface Boundary metering points between GT and TD, type of meters provided etc. Hence, in absence of required details, the data relating to the percentage of losses in feeders, actual status of functioning of meters, suitability of meters and their compatibility to Current Transformers (CTs) and Power Transformers (PTs) could not be analysed.

In reply, the Management accepted the facts and stated (April 2013) that a Centrally Sponsored Scheme is under preparation for augmentation and replacement of entire metering system at all incoming and outgoing feeders.

Material Management

3.2.15 Absence of internal control mechanism

The key functions in material management are laying down inventory control policy, procurement of materials and disposal of obsolete inventory. The Company had not formulated any procurement policy and inventory control mechanism for economical procurement and efficient control over inventory. As such, the Company had no system for effectively planning for procurement of material based on a scientific assessment of future requirements including material budgeting. The material required for construction of transmission SS and lines such as Power Transformer (PTs), Current Transformers (CTs), Galvanized steel Towers, conductors, galvanized stranded wires, etc., were not procured but the contracts for construction and commissioning of the transmission projects were being awarded by the Company on 'turnkey basis', which included all the associated civil, erection and commissioning works.

A review of inventory control mechanism in place revealed the following deficiencies:-

- The Company does not have any designated Central Stores Division for storage of Transmission related equipment/materials and the materials are scattered across different transmission sub-stations.
- The Company does not have Repairs & Maintenance division. Major repairs and maintenance were executed through contracts.
- The quantitative details of materials/equipment etc. were maintained by the Sub-stations through Material at Site Account. The individual as well as consolidated position of materials and equipment lying in various Transmission Sub-stations was, however, not available with the Company and the same were also not included in the Financial Statements. As a result, the value and adequacy of

opening stock, purchases, consumption and closing stock of materials could not be ascertained in Audit.

- The Company had neither conducted ABC analysis nor fixed the stock levels such as minimum, maximum and re-order levels.
- The details of non-moving, surplus, obsolete, unserviceable and scrap materials were not available.
- No periodical physical verification reports of materials were available on record.
- The surplus materials, if any, lying with executing Sub-divisions after completion of works were being transferred to the other Sub-stations based on verbal instructions from the Transmission Divisions. The Sub-stations had also issued different store materials to other Sub-stations on verbal requisitions and the documents relating to receipt of indents for requirement of materials, Store issue vouchers, acknowledgement of receipt of materials etc. were not available on record except entries in the Material at Site Account.

Thus, there was complete absence of any internal control mechanism for upkeep/ maintenance and control of the inventory lying in Sub-stations of the Company.

While confirming the facts in the exit conference, the CMD stated (March 2013) that as execution of all new works and maintenance would be done through contracts, the Company had not maintained any central transmission store division. The Additional Chief Secretary, Government of Tripura, however, emphasised the need for maintenance of detailed records.

Non-disposal of scrap materials resulted in loss of ₹ 51.53 lakh

3.2.15.1 After the renovation works in 132 KV SS, Kumarghat (length 70 CKM), total 120 KM of dismantled Panther conductor were lying as scrap with total quantity of 1.17 lakh kg. Since there was no scope in the Company to store such huge quantity of scrap materials, it was proposed (September 2007) to dispose of the scrap to the contractor involved in the above renovation work. The contractor had also agreed (February 2007) to purchase the said scrap at the rate of ₹ 44 per kg as against the estimated disposal value of ₹ 46.16 per kg. The Board of Directors (Board), however, decided (September 2007) to refer back the issue to the Standing Tender Committee (STC-1) for their consideration and appropriate decision. No further progress on disposal of scrap was available on record.

It was observed that no records were available to indicate the existence and details of these scrap materials *viz*., present stock position, actual utilization, condition of materials etc. Thus, considering the absence of proper storage facilities, the Company should have disposed of the scrap at a total value of ₹ 51.53 lakh. Thus, due to indecisive approach of

the Board, the Company lost the opportunity to earn an income of ₹ 51.53 lakh besides easing the space constraints for storage.

Monitoring and Control

3.2.16 The Company plays an important role in the State economy. Monitoring by top Management is essential to succeed in operating economically, efficiently and effectively and a sound Management Information System (MIS) is to be in place. It was observed that:

i) The Register of Returns along with the nature and periodicity was not maintained. Hence the efficacy of the MIS in place was not verifiable.

ii) The operational and financial performance of the Company was not reviewed periodically either by the Board of Directors or the top Management.

iii) Delay in execution and consequent cost overrun was placed to the top management and the Board of directors only after actual completion of works for approval thereby indicating the absence of proper internal control by the Management.

iv) The details on division wise performance, weaknesses and corrective measures, if any, taken by the Management was not periodically reported to the Board of Directors.

v) The basis of fixation of plan targets was not available on record. Annual plans were drawn up indicating budgeted and revised estimates for some operational and financial parameters. There was, however, nothing on record to indicate regular assessment of actual performance *vis-a-vis* the targets fixed in the annual plans and budgets.

vi) No systematic segment wise Annual Budget (*viz*., Generation, Transmission and Distribution) was prepared for Generation, Transmission and Distribution activities of the company.

vii) Comprehensive Management Reporting system was not developed.

viii) Year-wise cumulative performance of the SSs and lines were neither being maintained nor consolidated for evaluation of annual performance of the SSs and lines by top Management and the Board of Directors. There was data inconsistency across various reports/returns and hence the best fit data approach was adopted by audit.

ix) Verification of MIS reports of TL&SS, revealed that details regarding programmed overhauls of equipment like CBs[19], due dates of batteries next oil change OLTC[20] operations, dates of maintenance works, performance of SS, performance of relays, cause-wise analysis of feeder breakdowns were not available.

Non-Review of the envisaged benefits of Transmission Schemes

[19] Circuit Breaker.
[20] On Load Tap Changer.

3.2.16.1 The Company executed and commissioned two 132 KV SSs and erected a total length of 47.87 CKM of 132 KV lines during the period from 2007-08 to 2011-12 covered under the performance audit. It was observed that T&D schemes were approved mainly on the ground of supply of reliable power and strengthening of transmission network without taking into account the benefits in quantifiable terms such as reduction in line losses, improvement in voltage levels and the load growth to be achieved by the new schemes. Further, after execution of the Schemes, there was no system put in place by the Company to assess and review the actual achievements against the intended objectives. Consequently, Audit could not assess the benefits derived by execution of these Schemes.

Internal Controls and Internal Audit

3.2.16.2 Internal control is a process designed for providing reasonable assurance for efficiency of operations, reliability of financial reporting and compliance with applicable laws and statutes. Internal Audit, on the other hand, is designed to ensure proper functioning as well as effectiveness of the internal control system and detection of errors and frauds. There was no Internal Audit Wing in the Company. The Internal Audit of the Company was not conducted since its inception. The internal control of the Company was also weak as also discussed under Para **3.2.15** *supra*.

Audit Committee

3.2.16.3 The Company is to constitute an Audit Committee (AC) as required under Section 292A of the Companies Act, 1956 (Act). It was, however, observed that the Company had not so far constituted the AC in violation of the provisions of the Act.

Conclusion

The Company did not prepare any State Electricity Plan for development of transmission infrastructure in the State based on the National Electricity Plan. The Company prepared 11th Five Year Plan for 2007-12 for capacity addition of transmission infrastructure. The annual plans prepared by the Company on the basis of 11th Five Year Plan did not set targets in physical terms. The overall shortfall in achievement of physical targets set under 11th Five Year Plan (2007-12) for capacity addition of transmission lines and substations (132 KV and 66 KV) ranged from 33 to 94 *per cent.*

The execution of transmission projects by Company suffered with several deficiencies mainly relating to delays in completing the preparatory/pre-work award activities and deficiencies in realistic assessment of route length of lines. As a result, the execution of project suffered considerably on account of post award revisions in line lengths causing significant time and cost overrun.

The Company did not have any mechanism to ascertain segment-wise energy losses. Alternatively, combined transmission and distribution (T&D) loss data were being

derived as a difference between the total energy put in the State Bus for sale and the net energy sold. A fixed percentage (six *per cent)* of the energy put in the State Bus was adopted by the Company as a normative transmission loss. As such, the actual transmission loss data could not be determined and analysed with reference to the norms fixed by the Central Electricity Authority.

The Grid Management system of Company was not satisfactory in absence of adequate facilities for recording real time data in seven out of eight 66 KV substations. The functioning of the State Load Dispatch Centre (SLDC) was also not satisfactory in absence of proper maintenance of records and non-compliance with the mandatory provision of Grid Code Regulations issued by Tripura Electricity Regulatory Commission (TERC).

No Disaster Management programme was in place at the level of Sub-Stations, Extra High Tension Lines etc. thereby exposing the system against the risk of black out situations in case of major break down.

The Energy accounting and audit system was non-existent in the Company. The Company did not maintain the details of the interface Boundary metering points and the type of meters provided thereon in absence of which feeder-wise percentage of energy loss could not be analysed.

No scientific system was in place for management of inventory. Monitoring mechanism of the Company was weak due to non-maintenance of necessary records on performance of the transmission system.

Recommendations

- Capacity additions should be planned and executed in tandem with the National Electricity Plan duly taking into account the future load growth and probable increase in demand.
- The Company should overcome the deficiencies in completing the preparatory and other pre-award activities by adhering to the recommendations of the Task Force for speedy completion of works.
- The Company needed to devise an appropriate system for determining the energy loss data separately for transmission and distribution segments. The Company should also identify the factors responsible for high transmission losses through proper metering and effecting energy accounting and take necessary corrective action to restrict the losses within CEA norms.
- Adequate facilities should be provided in the system for recording real time data so as to maintain effective Grid discipline. The functioning of SLDC also needed to be improved by ensuring proper maintenance of records and complying with the mandatory provision of Grid Code Regulations.

- An effective Disaster Management System should be established at the level of Sub-stations, EHT lines, etc. for restoration of the transmission system in least possible time in case of major break down.
- A scientific system of Inventory Management needs to be put in place for proper accounting and upkeep of stores. Specific instructions should be issued to field offices for maintenance of complete records on performance of transmission system and regular submission of MIS reports to higher authorities for prompt remedial action on the discrepancies noticed.

The audit findings were reported to the Government (November 2012); replies had not been received (March 2013).

FOREST DEPARTMENT
(Tripura Forest Development and Plantation Corporation Limited)

3.3 Loss due to non-realisation of cost of packaging

The Company suffered a loss of ₹ 1.30 crore due to unjustified absorption of cost of packaging against supply of its product contrary to the product price criteria published by the Rubber Board.

The Tripura Forest Development and Plantation Corporation Limited (Company) had been selling its product namely Cenex[1] through tender/negotiation basis. Considering the fact that the rate of rubber quoted by the trader was always less than the rate published by the Rubber Board, Ministry of Commerce and Industry, Government of India in their website, the Company decided (December 2005) to sell its rubber products at the rate as published by the Rubber Board. Accordingly, the Company started selling Cenex based on the rates published every day in the website of the Rubber Board with effect from January 2006.

Scrutiny of records (March 2012) of the Company revealed that Cenex was being sold by the Company to the buyers directly from its Takmacherra Latex Centrifuging & Crepe Mill by filling the same in barrels. The Company had been procuring the barrels from time to time and utilising the same for packaging the Cenex for sale. It was noticed that although the freight charges relating to the Cenex sold were being borne by the buyers, the cost of the barrels procured and used by the Company in the packaging of Cenex was not being charged to the buyers.

It was seen that the prices published by the Rubber Board in its website were on Free On Board (FOB) basis up to 23 July 2007. The prices published on website were, however, made exclusive of VAT and other incidental expenses towards packing, transportation, warehousing, etc., by the Rubber Board with effect from 24 July 2007 by incorporating a footnote in the website. Audit observed that while the VAT/CST was being realised extra from the buyers over and above the price indicated in the website of Rubber Board with effect from 24 July 2007, the cost of packaging of Cenex *i.e.* cost of empty barrels was not being realised separately from the buyers.

During the period from August 2007 to March 2012, the Company sold 2,346.90 MT of Cenex by packing them in 12,352 nos. of barrels[2] and incurred a cost of ₹ 1.30 crore towards procurement of empty barrels (**Appendix 3.7**). As per the modified criteria of the Cenex price as published by the Rubber Board on website, the Company should have

[1] Cenex is Centrifuged latex of 60 *per cent* dry rubber content. The processing of natural rubber latex into high quality latex concentrate of 60 *per cent* dry rubber content is done through centrifugation. Cenex is used for foam products, adhesives, elastic threads, household and industrial gloves, balloons, rubber bands etc.

[2] One barrel contains 190 kg.

recovered the said packaging cost from the buyers. After being pointed out by Audit, however, the Company started realising the packaging cost from the buyers with effect from April 2012.

Thus, non-realisation of cost of barrels from the buyers has resulted in unjustified absorption of cost of ₹ 1.30 crore, which was a loss to the Company.

The Management stated (August 2012) that the change of the price format made in the Rubber Board website was not noticed due to oversight and that the additional cost of barrels might not have been agreed to by the buyers. The Government while endorsing (August 2012) the reply of the Management stated that the matter would be placed in the next meeting of the Board of Directors and further progress informed.

The reply is not tenable in view of the fact that even after the Company started (April 2012) realising the cost of barrels from buyers, the sale of Cenex had improved to 159.60 MT during April 2012 to September 2012 against the sale of 152.76 MT during corresponding period of 2011-12. This confirmed that the additional cost of barrels was agreed to by the buyers and, therefore, there was a possibility that the same could have been recovered from the buyers during the earlier period also.

The Management should put an appropriate control mechanism in place to realise the price from the buyers in accordance with the terms of price indicated in the Rubber Board website.

POWER DEPARTMENT
(Tripura State Electricity Corporation Limited)

3.4 Deficient planning in construction of buildings

Failure to take a firm decision by the Company at planning stage whether to go for construction of buildings in phases or in one go and subsequent delay in communicating the decision for discontinuance of the project to EPIL resulted in blocking of investment of ₹ one crore.

The Board of Directors (BOD) of the Tripura State Electricity Corporation Limited (Company) decided (December 2008) to engage M/s Engineering Projects (India) Limited (EPIL)[3] for construction of four buildings[4] on turnkey basis at Agartala. Accordingly, an MOU was signed (January 2009) between the Company and EPIL and after signing of MOU, an interest free advance of ₹ 1 crore was paid (March 2009) to EPIL as per the terms of MOU. The estimates submitted by EPIL for ₹ 22.71 crore was considered (June 2009) by the BOD to be high. Based on independent soil investigation reports, the estimates were revised to ₹ 17.90 crore (January 2010) including EPIL's Agency charges at the rate of 10 *per cent.*

Scrutiny of records (December 2011 - January 2012) revealed that while intimating the revised estimated cost, the Company requested (February 2010) EPIL to commence the tendering process as early as possible and emphasised to complete the project within 24 months from the date of signing of MOU. After 15 months of signing the MOU, however, the BOD desired (May 2010) that the CMD of the Company should review the construction work of four buildings and see if it may be done in a manner keeping in view the reserves of the Company. It was observed that though the decision of the BOD could have adverse effect on execution of the buildings work, this decision was not communicated to EPIL ignoring the fact that the Company had earlier requested EPIL for completing the work within 24 months of signing the MOU *viz*., by January 2011.

EPIL informed (November 2010) about the award (October 2010) of work contract for ₹ 13.59 crore and requested the Company to issue permission letter for starting the execution of work as the manpower and machinery had already been mobilised for the project. At that stage, the Company requested (December 2010) EPIL to submit building-wise price component for further review and appraisal of BOD. EPIL expressed (March 2011) its inability to provide such break-up as the tender was invited by it as a composite work after combining the Bill of Quantities of all the four buildings.

[3] A Government of India Enterprise

[4] (1) Multi-storied Office Building at Corporate Office Complex, (2) Multi-storied Office Building at 33/11 KV Sub-Station Complex, (3) Inspection Bungalow at Banamalipur, and (4) Multi-storied Office Building at IGM Sub-Division Complex

Based on the decision (August 2011) of the BOD, the Company requested (October 2011) EPIL to discontinue the works and refund the advance of ₹ 1 crore. In response, EPIL stated (October 2011) that it would revert back with the details of substantial expenditure it had already incurred on completing various project activities such as topographical survey, soil investigation, planning, designing, preparation of DPR, drawing, Bill of Quantities, tendering for finalisation of contractor, placement of work order to the contractor etc. No further developments in the matter were noticed (September 2012) except issuing (February 2012) of a reminder by the Company to EPIL.

Thus, failure in taking a firm decision at the planning stage for construction of buildings in phases or in one go and subsequent delay in communicating the decision for discontinuance of the project to EPIL resulted in blocking of investment of ₹ one crore. Recovery of the blocked funds was doubtful since the scope of work was unilaterally altered by the Company and the same was also belatedly communicated to EPIL when the latter had already incurred substantial amount on completing various project related activities.

The Company in the reply endorsed by the Government stated (September 2012) that though the detailed item wise estimate (BOQ) was to be submitted before commencement of tendering process, EPIL had taken unilateral action of going ahead with tendering process without the approval of the Company. It was stated that due to increase of gas price from 1 June 2010, the cash reserve of the Company had depleted considerably and, therefore, it was decided to go for phase wise construction. It was further stated that the decision taken by the BOD was for implementation by the Company and not for communicating to EPIL.

The reply is not tenable as, the Company while accepting (February 2010) the estimate had requested EPIL to go ahead with the tendering process and award of the work without asking for the building wise cost estimates. Further, the EPIL, being the implementing agency, should have been apprised of the decision of the BOD immediately instead of treating the same as an internal matter. The plea of the Company regarding depletion in the cash reserve is also not acceptable in view of the fact that the Company had huge surplus funds of ₹ 474.92 crore in fixed deposits as on 31 March 2010, which stood at ₹ 456.88 crore as on 31 March 2011. Further, to compensate for the increase in gas price, the power tariff was also correspondingly hiked with effect from 1 September 2010 through levy of Fuel and Power Purchase Cost Adjustment.

The Company should undertake the building construction projects only after assessment of actual requirement with proper planning at the initial stage of the project itself so as to avoid mid-term revisions, abandonment etc.

3.5 Loss of interest

The Company incurred interest loss of ₹ 42.15 lakh on investment of surplus funds due to lack of coordination and control over the investments made by its Corporate Finance and Commercial & System Operation Wings.

The Tripura State Electricity Corporation Limited (Company) receives funds from time to time from the Government of Tripura as well as the Government of India against various schemes/projects. The project funds not immediately required to meet the expenditure along with the surplus funds generated from the internal operations were being invested by the Corporate Finance Wing of the Company by way of fixed deposits (FDs) with various banks. Besides, the Commercial and System Operation (CSO) Wing of the Company also invests the surplus funds generated from the purchase and trading of power in FDs.

Scrutiny (December 2011- January 2012) of records revealed that the Company did not devise any investment policy/rules/regulations for governing the investment of surplus funds in a prudent manner. There was no system in the Company for preparing the cash budget and detailed instructions were not issued to its Finance Wing and CSO Wing to facilitate investment of its surplus funds in a coordinated and prudent manner so as to maximise the returns. It was noticed that the registers for investment/re-investment in FDs were not properly maintained and updated. Further, no records were available in the Company regarding the basis of investment decisions, determination of surplus funds available for investment and the copies of bank quotations for investment, approval of competent authority for investment/re-investment, FD receipts etc.

A review of the investments made by the Company in bank FDs during the period from 2005-06 to 2010-11[5] revealed that FDs were made by the Corporate Finance Wing and CSO Wing with various banks independently without cross-verifying the higher rates of interest availed by the other Wing on a particular date. Besides, the variances were noticed in the interest rates of investments made by these wings themselves in different banks on a particular date, the Company thereby forgoing the opportunity to maximise the returns by making FDs with the banks offering higher interest rates. This was indicative of non-existence of adequate control and monitoring over investments.

It was observed that in respect of 19 such cases pertaining to the period from 2005-06 to 2010-11, the investments were made in FDs on the same date(s) at varied rates of interest thereby causing an interest loss of ₹ 42.15 lakh as detailed in **Appendix 3.8**.

[5] Due to non-compilation of accounts, the details of Fixed Deposits made during the year 2011-12 are not available to Audit

The Management stated (June 2012) that FDs are accounted for and kept on record by Corporate Accounts Wing and CSO Wing separately but it is coordinated regularly from the Corporate Finance Wing for which instructions were issued (December 2010 and April 2011) by the CMD. It was further stated that during the years 2010-11 and 2011-12 such a loss of interest could be avoided altogether by keeping close watch on variation of interest rate.

The reply is not acceptable as the incidence of imprudent investment was persisting even after issue of instructions by the CMD as 6 out of 19 cases pointed out in the para pertained to the investments made during February/March 2011.

The matter was reported (October 2012) to the Government; their replies had not been received (February 2013).