

CHAPTER - II

Performance Audit relating to Government Companies

2.1 Performance Audit of State Industries Promotion Corporation of Tamil Nadu Limited

Executive Summary

Since 1971, the State Industries Promotion Corporation of Tamil Nadu Limited (Company) is engaged in creation/development and maintenance of Industrial Centres and Special Economic Zones (SEZ) in the State. To assess the role of the Company as a catalyst for the industrial development of the State, we took up a performance audit of the Company between February and August 2011 covering its activities for the last five years up to 2010-11.

Financial performance

The Company continuously earned Profit during the audit period 2006-07 to 2010-11 with a major contribution (33 to 74 per cent) from interest income on Term Deposits. In contrast to this, the share of income from the core activity viz., industrial development, continuously declined from 67 to 24 per cent during 2006-07 to 2010-11. This decline was attributable to the Company's failures in project management, fixation of plot cost, non-adoption of higher plot cost in respect of allotment to commercial users, etc.

Planning

The Company neither prepared long term/strategic plans nor short term plans for development of Industrial Centres. Further, it did not conduct feasibility studies and prepare Detailed Project Reports before embarking upon new Industrial Complexes. Consequently, the Company could market only 0 to 36 per cent of saleable plots in five out of eight SEZs formed during the period from 2006-07 to 2010-11.

Project management

The Company did not maintain an MIS indicating awarded and actual cost, scheduled/actual completion of works and the resultant time and cost overrun, thereby, it failed to have control over the project implementation. There were instances of avoidable/unproductive expenditure of ₹7.89 crore due to defective planning, lack of coordination with State Highways Department, etc.

Allotment of industrial plot and fixation of cost

The Company did not have robust system of fixing/revising plot cost taking into account enhanced compensation/interest payable to the erstwhile land owners, latest trend in the market rates, extent of saleable area, etc. Further, the Company did not charge commercial rates for allotment to non-industrial entrepreneurs as per its policy. These factors led to loss of

revenue of ₹251.76 crore in respect of test checked cases. The Company did not take back 2,124 acres of unutilised land from 195 entrepreneurs, thereby lost potential revenue of ₹421.56 crore even in respect of 65 per cent of 2,124 acres of land for which the data on originally allotted price and the current market price was available.

Change of management and sub-lease

There was no system to monitor change of management and subleasing by the original allottees. Consequently, the Company could not enforce recovery of ₹136.00 crore from seven allottees, who had subsequently handed over the management to the new promoters and sub-leased portion of the leasehold land.

Release of incentives under Structured Package of Assistance (SPA)

The Company acts as a nodal agency of State Government for release of SPA. However, its system to verify the committed investment and generation of employment before release of incentives was ineffective. Besides, there was no limitation of incentives to the investments in the eligible fixed assets qualifying for incentives. This led to release of incentives in excess of the eligibility amounting to ₹297.75 crore in two cases.

Internal control and monitoring

The internal control and monitoring mechanism was weak in the areas of reporting the performance of individual Industrial Centres, comprehensive data on allotment and vacancy of industrial plots, status report on various legal cases, etc.

Conclusion and recommendations

We conclude that the Company's performance was deficient in planning, in having a foolproof system to fix/revise plot cost, in enforcing repossession of unutilised land and recovery of differential cost at the time of change of management and sublease. We recommend formulating strategic/long term plans, conducting feasibility studies before setting up new Industrial Centres, installing an effective costing mechanism for plot cost and strengthening internal control system and internal audit procedures.

Introduction

2.1.1 The State Industries Promotion Corporation of Tamil Nadu Limited (Company) was established in March 1971 to promote industrial development by providing financial assistance, incentives and other ancillary services to medium scale industries besides developing Industrial Complexes in the State. In May 1999, the Government ordered that the Company concentrate only on creating industrial infrastructure facilities and the term lending activities be transferred to another Government Company viz., Tamil Nadu Industrial Investment Corporation Limited (TIIC). Since then, the Company has been concentrating only on development of infrastructure facilities, formed ten* Industrial Complexes, six♦ Industrial Parks and three∞ Industrial Growth Centres over an area of 26,926 acres of land throughout the State and had also formed eight Special Economic Zones (SEZs) within these Industrial Parks/Complexes and Growth Centres as of March 2011. The Company was also engaged in maintenance of industrial areas on behalf of allottees. The Company was also an agency for release of incentives sanctioned by the State Government to the industrial units within the State.

The management of the Company is vested with a Board of Directors (BOD) consisting of 10 Directors including the Chairman and Managing Director (CMD). The CMD, the Chief Executive of the Company, is assisted by functional heads for Land acquisition/Administration, Civil Wing, Development Wing, Special Projects, Finance and Legal Wings at Head Office and Project Managers at field level.

Scope and methodology of Audit

2.1.2 The activities of the company for the five years period up to 31 March 2002 were reviewed and included in the Report of the Comptroller and Auditor General of India (Commercial) for the year 2001-02. During the earlier audit, we had concluded that the Company incurred losses mainly because of development of industrial plots without considering the demand potential. A recommendation was made to have a system and policy for selection of proper location for industrial development. The Report is yet to be discussed (November 2011) by the Committee on Public Undertakings (COPU).

To evaluate the improvement in the system for selection and development of industrial plots over the years and performance of the Company as a catalyst for industrial development of the State, we conducted the performance audit

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- * Ranipet, Hosur, Manamadurai, Pudukottai, Cuddalore, Gummidipoondi, Thoothukudi, Bargur, Nilakottai and Cheyyar,
 - ♦ Gummidipoondi (EPIP), Irungattukottai, Sriperumbudur, Siruseri, Thervoykandigai and Mappedu.
 - ∞ Perundurai, Oragadam and Gangaikondan. The details of the area of land available for sale actual allotment and balance land available in respect of all the industrial centres are detailed in **Annexure-7**.
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during February and August 2011 on the activities of the Company for the five years ending March 2011. The present performance audit mainly focused on areas of project formulation, planning for development of new industrial projects, acquisition of Government and private land together with settlement of compensation, infrastructure development, fixation and recovery of plot cost from the allottees, maintenance of Industrial Centres, recovery of maintenance cost, release of incentives to industries on behalf of the State Government, internal control and internal audit.

The audit methodology involved scrutiny of records at Head Office and in eight out of 19 Industrial Centres selected based on their capital expenditure, area of sale and maintenance expenditure incurred, interaction with Company's officials and discussion of audit findings with the Senior Management.

Audit objectives

2.1.3 The objectives of performance audit were to assess whether:

Planning

- the long/short term plans were in place for formulation of schemes and fixation of targets.
- there were detailed surveys/market studies before identification of the schemes/projects.
- the Company had taken adequate/prompt action to acquire/alienate the identified land.

Financial management

- the funds management was in the best financial interests of the Company.

Project management

- the Company executed and managed the infrastructure projects efficiently, economically and effectively.

Allotment of industrial plots to entrepreneurs

- there was transparency in allotment of the developed plots and cost fixed for the plot covered the entire cost of the scheme.
- the Company has a system of ensuring effective utilisation of the plots by the allottees.
- the Company has a system of ensuring its financial interest in case of subleasing/change of management by the original allottees.

Maintenance of Industrial Centres

- the Company has a system of recovering the entire cost of maintenance from the allottees.

Extension of structured package of assistance to Memorandum of Understanding (MOU) cases

- the company has a system of assessing the eligibility criteria for availing the incentives.

Monitoring and evaluation

- there was effective internal control and the internal audit commensurate with size and activities of the Company.

Audit criteria

2.1.4 The following audit criteria were adopted:

- Policy Notes of the State Government regarding scheme formulations.
- Policies of the State Government for acquisition/alienation of lands and for payment of compensation.
- Directives and approvals of the BOD of the Company.
- Terms and conditions of the Memorandum of Undertakings (MOU) entered into with the State Government by major industrial undertakings.
- Terms and conditions of the lease agreement entered into with the allottees.
- Provisions of Land Acquisition Act.
- GOI instructions with regard to Special Economic Zones (SEZs).

Audit findings

2.1.5 We explained the audit objectives and audit criteria of the performance audit to the Company during an Entry Conference (February 2011). Our findings were reported to the Company and the State Government (August 2011). We discussed our findings in an Exit Conference (December 2011) which was attended by the Chairman and Managing Director. The Management's perspective during the Exit Conference has been considered while finalising the performance audit report. The reply of Management and Government to the performance audit report were awaited (November 2011).

Financial position and working results

2.1.6 The financial position and the working results of the Company for the five years up to 2010-11 have been given in **Annexure-8 and 9**.

The Company's Net Profit Before Tax registered a jump from ₹56.74 crore in 2006-07 to ₹123.70 crore in 2010-11. The major portion of the Profit came from interest earned on Term Deposits (₹309.44 crore), the proportion of which ranged from 32.52 *per cent* (2006-07) to a high of 86.07 *per cent* (2009-10) of the Profit Before Tax during the period. However, during the same period, the profit from industrial development activity declined from ₹53.86 crore (67 *per cent* of total Profit) in 2006-07 to ₹28.20 crore (24 *per cent* of total Profit) in 2010-11. We analysed the reasons for decline as (i) incorrect

fixation of plot cost at Oragadam Industrial Centre and Irungattukottai Expansion Schemes (ii) non-collection of commercial rates from non-industrial allottees and (iii) non-recovery of differential cost for change of management and sub-leases (as discussed in Paragraphs 2.1.15 to 2.1.18 and 2.1.21).

The other deficiencies which affected the working results of the Company are detailed below:

The Company lost the Tax holiday benefit of ₹7.23 crore in respect of two Industrial Centres due to seeking amendment to the effective date

- The Ministry of Commerce and Industry, Government of India (GOI) had approved (August 2006) the Company's Industrial Centres in Sriperumbudur, Siruseri and Oragadam, under Section 80 IA of Income Tax Act enabling it to avail a Tax holiday for a period of 10 years on the earnings of these Centres with effect from January 1998, January 1999 and August 2006 respectively. The Company, however, sought approval for amendments to effective dates of Tax holiday in respect of Siruseri and Sriperumbudur centres from March 2006 (being the date of Commencement of these Industrial Centres). However, these amendments were not approved by the GOI due to poor follow up of the issue by the Company. The required Gazette Notification to be issued by the Income Tax Authorities for availing the Tax holiday benefit was not obtained till date (November 2011). Thus, the Company lost the Tax holiday benefits of ₹7.23 crore on the earnings of Siruseri Centre up to 2009-10.
- The State Highways Department had taken over (2007-08) 35.61 acres of Company's land at Oragadam and Siruseri Industrial Centres valued at ₹12.39 crore. Considering the fact that the Company had refunded (2008-09) the above cost to the land owners from its own funds, the Company should have initiated immediate action for realisation of the amount from the Land Acquisition Officer (LAO). However, the Company neither ascertained the compensation fixed by the LAO nor demanded the same even after three years of land being taken over with consequent blocking up of funds.
- A scrutiny of Current Account balances held by the Company in five nationalised banks for the period 2006-07 to 2010-11 indicated huge accumulated funds of upto ₹228.95 crore. The Company failed to assess the actual requirement of funds for day-to-day operations so as to keep an optimal balance in the Current Accounts and invest the surplus funds in Term Deposits. Considering the optimal daily requirement of ₹3.50 crore (on the basis of the average outflow of funds from the current account during the years from 2006-07 to 2010-11) in Current Accounts, interest foregone worked out by audit amounted to ₹4.99 crore based on interest rate of eight[♦] *per cent per annum* applicable for flexi deposit schemes of Public Sector Banks..
- During 2007-08, the Company anticipated its Taxable Income as ₹53.74 crore after deducting ₹18.39 crore being the Tax holiday benefits of Oragadam Growth Centre. The Company, accordingly

♦ Being the average rate of interest allowed on flexible fixed deposits during 2006-11.

remitted (June 2007 to March 2008) ₹18.27 crore as Advance Tax. However, there was no Profit in the Oragadam growth centre due to commitments for enhanced compensation to the land owners and hence Taxable Income would be ₹72.13 crore as worked out by Audit. This fact was known to the Company even at the time of short remittance of Advance Tax. Incorrect estimation of Profit resulted in under estimation and short remittance of Advance Tax, which led to avoidable payment of interest (September 2008) amounting to ₹95 lakh under Section 234 (B) and 234(C) of the Income Tax Act.

- The Company, while fixing the price for plots, considers the cost of acquisition of land, the expenditure on creation of infrastructure facilities and the Profit margin of the Company. Due to MOUs entered into by the State Government with seven companies during the years from 2006-07 to 2010-11, the Company had to allot 596.09 acres of land in Sriperumpudur and Oragadam Industrial Centres at concessional prices. When the Company sought (October 2006) reimbursement of differential price (between the normal and concessional plot cost) of ₹56.27 crore in such cases, the Government gave partial reimbursement of ₹23.48 crore only. Consequently, the Company had to forego the differential price of ₹32.79 crore on these allotments.

Planning

Non-preparation of Corporate Plan

2.1.7 The Government in the New Industrial Policy 2003 and 2007 of the State aimed to position Tamil Nadu as the most attractive investment destination. To meet that end, efficient and dependable industrial infrastructure in the State was essential. The Company is the State Government Vehicle for creation of industrial infrastructure in the State and has to plan various activities like identifying locations for new Industrial Centres, working out action plans for developing infrastructure thereon and upgrading the existing facilities in conjunction with the State's Industrial Growth Plans and vision of balanced growth of all the regions of the State. For an efficient plan, a comprehensive survey should precede selection of locations to assess the demand potential from the prospective entrepreneurs. Further, the areas selected for Industrial Centres should be free from encumbrances to obviate the possibility of delays in development. We noticed that the Company neither prepared Long Term / Strategic Plans nor Annual Action Plans stipulating priorities of activities to develop and operate Industrial Centres. During the Exit Conference, the Management agreed to formulate the Corporate Plan for their future use.

Imbalance in the growth of Industrial Centres

2.1.8 Against its vision to have at least one Industrial Centre in each district, the Company could establish Industrial Centres only in 13 out of total 32 districts of the State as of November 2011. Further, two ♦ out of these 13

♦ Kancheepuram and Thiruvallur districts.

The Company neither prepared long term/strategic plan nor annual action plan stipulating priorities of activities to develop and operate Industrial Centres

districts which are closer to the State Capital had 42 *per cent* of the total Industrial Centres. Despite the present imbalance, there was no drive from the Government to have wider coverage of Industrial Centres throughout the State. In the absence of an action plan on hand to cover all the districts, the Company's vision was also restricted.

Non-fixation of target for land acquisition

2.1.9 In addition to non-preparation of Strategic/ Corporate plan, the Company did not prepare Annual Plans either which would have set targets of creation of Industrial Centres during that year and fixed milestones for building industrial infrastructure as per the Government's policy. Audit observed that the Company, with an aim to facilitate immediate allotment of developed plots to the entrepreneurs, proposed (2007) creation of Land Bank by acquiring land in various locations. Accordingly, the Company identified 16,399 acres of land in 13 locations in six districts and sought (February 2007 to February 2010) administrative sanction of the State Government, which was awaited (November 2011). The Company should vigorously pursue the issue with Government as a Land Bank for creation of Industrial Infrastructure was also emphasised by the Government in its new Industrial Policy, 2007.

Marketing of industrial plots

2.1.10 During the performance audit period 2006-07 to 2010-11, the Company had developed eight SEZs within the existing Industrial Centres. The details of availability of saleable land and the allotments made at various SEZ as of March 2011 are given in **Annexure-10**.

Five out of seven SEZs suffered due to poor marketability

We observed that out of 1770.23 acres of land developed in seven SEZs (excluding Bargur SEZ established in March 2010) during the period from December 2006 to April 2008, the Company could not market 763.41 acres representing 43 *per cent* of the area developed so far (March 2011). Except two SEZs (Sriperumbudur and Oragadam) which are closer to Chennai, the other SEZs suffered due to poor marketability. In four SEZs, the allotments made were insignificant ranging from nil (Cheyyar SEZ) to 35.59 *per cent* (Perundurai SEZ).

We are of the opinion that poor demand was mainly attributed to incorrect selection of location on account of the Company's failure to conduct detailed feasibility study before establishment of these SEZs to ensure the locational advantages and proximity to input/resources. This is borne out by the fact that the SEZs at Cheyyar, Ranipet, Bargur and Gangaikondan were not proved ideal locations for the respective industries *viz.*, auto ancillary, leather, granite and transport engineering. In the Auto Ancillary SEZ, Cheyyar, due to poor response from the entrepreneurs, the Company abandoned the SEZ. In respect of Ranipet SEZ, the Company changed the product line from leather to engineering. This indicated lack of clarity about the demand potentials before embarking on the SEZs. In SEZ, Gangaikondan, which was formed in May 2008, except an allotment (October 2007) of 115 acres of land to an MOU company (ATC Tires (P) Limited), the balance of 89 acres of land remained vacant till date (November 2011).

Consequently, the infrastructural facilities created at a cost of ₹15.38 crore for these SEZs remained largely unproductive and the objectives of formation of SEZ was not fulfilled. During the Exit Conference, the Management stated that the demand for these SEZs was picking up.

Area development activities

Land acquisition

2.1.11 The Company, which is engaged in development of Industrial Complexes, has been acquiring both Government Poramboke^Δ land and private land. While the Poramboke land is acquired by getting alienation orders of the State Government, the private land is acquired by invoking general/urgency provisions of Land Acquisition Act through Land Acquisition Officer (LAO) of the State Revenue Department. Out of the total area of 26,926 acres of land acquired and developed by the Company up to March 2011, 3,336 acres of land was acquired during the performance audit period, which included 1,633 acres of private land and 1,703 acres of Government Poramboke land. We noticed the following deficiencies in land acquisition process:

Non-compliance with the High Court orders

- The Company obtained (November 2008) alienation orders of the State Government for taking over the Government's Meikkal Poramboke* land (1,127 acres) at Thervoykandigai with a condition to identify alternative land of equivalent extent and value (₹6.48 lakh per acre) in the nearby area within three years or else pay 12 *per cent* interest *per annum* for three years along with the land cost. However, the Madras High Court, based on a petition of the local public, ordered (September 2009) the Company to compulsorily ensure provision of alternative land and ruled out the monetary compensation originally ordered by the State Government. In spite of this pre-requisite, the Company went ahead with the allotment of 543.06 acres of land between July and November 2010 without making arrangement for alternative land as per the directives of Madras High Court. The Company was facing the risk of purchasing patta^a land at higher cost (₹10 lakh per acre[♠]) to comply with the High Court's orders. It is pertinent to mention that this additional cost was not factored into the fixation of the plot cost for the scheme even though all the above allotments were made after the pronouncement of the Judgement. Consequently, the Company is exposed to a loss of ₹39.67 crore in the scheme.

During the Exit Conference, the Management stated that the LAO have identified the alternative land and the District Collector was seeking extension of time for one more year up to November 2012 to comply with the orders of the Madras High Court. Our verification revealed that the identification of

Δ Land used or reserved for public or Government purpose.

♣ Land earmarked for grazing of cattle.

a Land is privately owned and can be sold and purchased freely.

♠ Audit considered the applicable guideline value fixed by the Registration Department for the patta land in the nearby area.

The Company is exposed to loss of ₹39.67 crore due to non-identification of alternative land for grazing of cattle as per the orders of Madras High Court

land by the LAO was still at the preliminary stage without any concrete proposal to the Government for getting its Administrative Sanction for alienation of land.

Delay in settlement of compensation for land

- Against the compensation of ₹544.04 crore determined (April 2007 and July 2008) for Oragadam and Irungattukottai Expansion Schemes by the Government, the Company had disbursed ₹331.38 crore up to March 2011. The shortfall in disbursement was attributable to lack of coordination with LAO to have adequate personnel for expeditious settlement of compensation. For the balance compensation of ₹212.66 crore, the Company had become liable to pay interest of ₹59.09 crore up to March 2011 (at the rate of 9 *per cent per annum*). The additional interest burden to be borne by the Company would result in enhancement of the land cost by ₹3.12 lakh and ₹4.27 lakh per acre in respect of Oragadam and Irungattukottai scheme respectively.
- As per the orders of Madras High Court, the awarded amount of compensation should be disbursed within three months from the receipt of Judgement copies. However, the Company had not evolved a proper system to monitor the timely disbursement of compensation. This was evident from the fact that the Company had not settled 1,656 out of 1,791 cases for which Judgement of High Court of Madras were received between January and October 2010 due to non-completion of verification of the quantum of compensation. The delays in 63 out of 135 settled cases (June 2010 to January 2011) ranged from three to eight months. The records produced for one batch of 51 cases of settlement revealed that the Company incurred an avoidable interest burden of ₹5.31 lakh (at the rate of 15 *per cent per annum*) on account of delayed remittance of compensation by the Company. The avoidable interest burden on all 1,656 cases would concomitantly be much larger.

During the Exit Conference, the Management stated that the compensation amount was already deposited with the Court and hence the liability towards interest up to the date of actual payment to the land owners did not arise. The fact remained that the loss of interest pointed out was for the balance amount payable over and above the deposit amount with the Court. Further, the amount of interest commitment mentioned in the para was actually paid by the Company.

Overpayment of compensation

- In the Judgments on Appeals filed by the Company in High Court against enhanced compensation awarded in the lower courts, the High Court allowed interest on market value[♦] of the land. A test check of the working sheets for compensation for Irungattukottai Schemes indicated that interest had been calculated on the land cost^{*} instead of market value which was not in accordance with the orders (December 2009) of the High Court. The erroneous calculation resulted in excess remittance of ₹1.08 crore in respect of 77 Land Acquisition Operative Proceedings cases in three villages.

During the Exit Conference, the Management stated that they had addressed the LAO for refund of excess reimbursement.

Non transfer of title in favour of the Company

- In respect of the land acquired for the establishment of Industrial Complex at Cheyyar, the Company obtained title for only 477.39 acres of land even though it had taken over (1997) 510.97 acres of patta land indicating non-transfer of title in respect of 35.24 acres even after a lapse of more than 14 years.

Project management

Development of Industrial Complex

2.1.12 The Industrial Policy of the State Government emphasised the need for creation of efficient and dependable infrastructure in the Industrial Centres. Before allotting plots of Industrial Centres, the Company was required to provide basic facilities *viz.*, roads, water supply, sewerage and street lighting. We noticed following deficiencies relating to civil works:

- The Company did not maintain an Management Information System (MIS) to indicate the awarded and the actual cost, scheduled and actual date of completion of the works and resultant time and cost over run. This indicated weak financial control over the project implementation by the Management.
- The State Government ordered (October 2006) widening of the existing two lane road of State Highways to six lanes from Sriperumpudur to Oragadam. As per the existing procedure of the State Highways Department, laying permanent structures within a distance of 75 metres from median of the six lane high way road was not permitted. Even though the Company was aware of the proposed widening of the Highway, it went ahead (March 2007) with laying main pipeline for supply of water from Sriperumpudur to Oragadam for a length of 12 KMs along the existing two lane State Highway and completed the same in August 2008 at a cost of ₹4.94 crore. With the

Erection of pipeline within the prohibited area of six lane highway road led to infructuous expenditure of ₹4.94 crore

♦ This is determined based on the latest sale value of land in that area.
* The land cost includes basic land cost fixed by LAO, addition at 12 *per cent per annum* for time difference between the date of acquisition and fixation, Solatium at the rate of 30 *per cent*.

widening (2008-09) of the State Highway into the six lane road, the new pipeline was sub-merged within the prohibited area of six lane road rendering the entire expenditure infructuous.

During the Exit Conference, the Management stated that the pipelines were laid for immediate water requirement to the existing allottees and further stated that the State Highways Department had agreed to reimburse 50 *per cent* of the cost of pipelines. The point states that there was loss due to premature laying of pipelines in the prohibited area of six lane highway road and was avoidable irrespective of it being shared with the Government.

- As per the SEZ Act of 2005 and Rules thereunder, the executing agency should secure the SEZ for electronic hardware items with an eight foot compound wall with barbed wire fencing at the top for two feet. Against this provision, the Company provided only chain link fencing in two[♦] SEZs during 2007-08 at a total cost of ₹2.95 crore. It is pertinent to mention that even though the individual contract value of three out of five works was more than ₹1.00 crore, the decision to erect chain link fence was taken without the approval of BOD though required under the Delegation of Financial Powers. In April 2010, the Company decided to construct compound wall with pre-cast concrete slabs and also to replace the chain link fencing of all the SEZs. Thus, the non-compliance with SEZ Rules resulted in unproductive investment of ₹2.95 crore on chain link fencing.

Allotment of industrial plots and fixation of cost

System of allotment of industrial plots

2.1.13 The Company allots developed plots to entrepreneurs on a 99 years lease. Upto the year 2007, the Company followed a system of allotment after evaluation of the applications by an Allotment Committee headed by the CMD. This system was dispensed with and allotments were being made on case by case basis. There was inadequate MIS to indicate comprehensive data on total number of applications received, their disposal and review on the status of the pending applications on regular basis. We recommend a comprehensive data base to increase the transparency of processing applications.

Inconsistencies in the Lease Agreement

2.1.14 As per the terms of Lease Agreement, the plot cost payable by the allottee comprises (i) plot deposit being the cost of land (restricted to 20 *per cent* of the plot cost) which is refundable at the expiry of the period of lease and (ii) development charges for creating infrastructure. The inconsistent policies adopted in treating the plot cost as “refundable” and “non-refundable” are discussed below:

The policy to segregate a portion of plot cost into Refundable Plot Deposit came into effect from 1 April 1997. However, the Company changed the above policy from April 2002 and decided to treat the entire plot cost as its Income and hence the requirement to show the refundable portion in the Lease

♦ Sriperumpudur and Oragadam.

Agreement did not arise since then. The Company decided not to segregate the plot cost into plot deposit and development charges in respect of IT Park, Siruseri. Despite all these developments, the Company did not carry out the required modification in the Lease Agreements but continued to show the Refundable Plot Deposit in respect of all the Lease Agreements. This unwarranted commitment for Refund of Plot Deposit led to a liability of ₹101.65 crore in respect of the Lease Agreements entered into during the years 2006-07 to 2010-11.

Fixation of cost

2.1.15 The cost recoverable from the allottees of industrial plots should include (i) basic cost of acquisition of land, (ii) cost of infrastructure like road, water, sewerage, *etc.*, and (iii) service charges to cover administrative expenses of the Company. Moreover, as per the policy adopted by the Company, the cost of industrial plots should also reflect the market price of land prevailing in that area so as to reap the benefit of appreciation in the land value.

- Contrary to its financial interests, the Company had not reviewed the plot cost annually to ensure that it reflected the market value and the amount of compensation payable based on the latest awards of various courts. During the five years ending 31 March 2011, the Company had reviewed the plot cost only twice in March 2007 and September 2008. Though the market price is one of the main factors for fixation of plot cost, it was observed that the plot cost fixed in September 2008 was in the range of 7 to 50 *per cent* of prevailing market price in respect of seven out of 19 Industrial Centres. Consequently, the Company failed to reap the benefit of increased plot cost in tune with the market conditions.

Instances of fixation of lower plot cost leading to financial loss to the Company are discussed below:

Omission to include enhanced compensation/interest

Non-inclusion of known liability for enhanced compensation in the plot cost led to loss of ₹42.56 crore

- In respect of Oragadam SEZ with the saleable area of 325.68 acres, the plot allotment rate was fixed at ₹32 lakh per acre. However, we observed that the cost of developed plots would work out to ₹54.50 lakh per acre taking into account the enhanced compensation payable, which was known to the Company at the time of fixation of plot cost. The Company in the process suffered a loss of ₹42.56 crore for allotment of 189.17 acre between July 2007 and September 2008.

Incorrect fixation of the cost of patta land led to foregoing revenue of ₹11.35 crore

- The 304 acres of land allotted (December 2005) in Oragadam Growth Centre to NATRIP* comprised 162.17 acres of patta land and 141.83 acres of Poramboke land. The Company fixed (June 2010) the cost of patta land as ₹34 lakh per acre and collected the same between January

* National Automotive Testing and R&D Infrastructure Project, Ministry of Heavy Industries, GOI.

2006 and November 2010. Considering the annual interest of nine[♦] per cent for the period from 2007-08 to 2010-11 (up to November 2010), the cost of the patta land should have been fixed at ₹41.00 lakh per acre. This resulted in foregoing of revenue to the extent of ₹11.35 crore.

Unwarranted exclusion of service charges

- The Company had a policy of levying 20 per cent of the plot cost as the service charges. While fixing the plot cost at ₹19.50 lakh per acre for allotment (September 2007) of 100 acres of land to an allottee viz., 'Sanmina', the Company did not add any service charges, anticipating receipt of ASIDE[∞] grant of ₹10 crore for the project. The fact was that the ASIDE grant had already been set off against the total plot cost collected from allottees other than Sanmina and hence no balance of grant was available for apportionment against the plot cost in respect of Sanmina. This resulted in passing on of undue benefit of ₹4.62 crore to Sanmina.

Omission to include elements of cost

- The Company allotted (September 2008) 380 acres of land at Irungattukottai Expansion Scheme to Ashok Leyland and Nissan Consortium at ₹58 lakh per acre based on the land cost at ₹48 lakh per acre. However, we noticed that the above price did not include (i) interest liability at 9 per cent per annum under the Land Acquisition Act, (ii) cost of Open Space Reservation area (10 per cent) and (iii) another 10 per cent area for common infrastructure facilities. Due to these omissions the plot was under priced to the extent of ₹12.80 lakh per acre resulting in under recovery to the extent of ₹48.64 crore for 380 acres.

Incorrect assessment of saleable area

- We worked out the saleable area of Industrial Park at Thervoykandigai as 844 acres against 944 acres worked out by the Company due to reduction of 100 acres earmarked for fodder development as per the directives of the High Court of Madras in September 2009. Consequently, the correct plot cost would work out to ₹30 lakh per acre against ₹27.50 lakh per acre fixed by the Company. The erroneous fixation led to loss of ₹13.58 crore in allotment of 543.06 acres of land during the period from July 2010 to November 2010. The revision (December 2010) of plot cost for the balance portion of the land at ₹38.50 lakh per acre was also erroneous as the saleable area actually available was only 300.97 acres against which the Company reckoned 397.64 acres. This would result in potential loss of ₹9.36 crore.

In addition, there were 14 instances of incorrect fixation of plot cost by the

[♦] Rate of interest payable as per Tamil Nadu Acquisition of Land for Industrial Purposes Act, 1997.

[∞] Assistance to States for Development of Export Infrastructure.

Non-inclusion of interest liability, cost of open space reservation area and area earmarked for common infrastructure led to under recovery of ₹48.64 crore

Company, which had resulted in foregoing revenue to the extent of ₹15.42 crore as detailed in **Annexure-11 (A) and (B)**.

During the Exit Conference, the Management stated that the unrecovered portion of enhanced compensation would be recovered by way of additional claims from the existing allottees. They further added that the other short recovery mentioned above would also be recovered from the future allottees by re-fixation of the plot cost. The reply is not convincing because the Company had missed the opportunity to recover the appropriate plot cost at the right opportunity, thereby it postponed its revenue realisation. Further, passing on the burden of short recoveries from present allottees to the future allottees is against the principles of equity.

Non-adoption of commercial rate

2.1.16 As per the Company's policy, whenever industrial land is allotted for commercial purpose, 1.5 times the industrial rates was to be applied. However, this policy was not uniformly adopted with respect to all the commercial and trading organisations resulting in undue benefit to the allottees. We noticed that:

Allotment of land to Chennai Port Trust

2.1.17 Chennai Port Trust (CPT) was allotted (September 2010) 125 acres of land at Mappedu for setting up an Integrated Dry Port and Multi-Model Logistics Hub at ₹80 lakh per acre. However, the plot cost had actually worked out to ₹99 lakh per acre considering the interest payable for three years up to August 2010. CPT remitted the plot cost (₹100.07 crore) in September 2010.

CPT was charged for the land at industrial rate instead of at commercial rate (1.5 times of the industrial rate). Had the Company charged the commercial rate of ₹148.50 lakh per acre (1.5 times of ₹99 lakh per acre), it could have earned an additional revenue of ₹85.74 crore.

Allotment of land to Container Corporation of India Limited

2.1.18 Container Corporation of India Limited (CONCOR), a Central Public Sector Undertaking, requested (June 2010) allotment of 50 acres of land in Sriperumpudur SEZ for setting up a Logistic Park with rail facility near Singaperumalkoil Railway station. The Company issued (September 2010) an in-principle Allotment Letter at the prevailing rate of ₹60 lakh per acre. After collecting (February 2011) the entire plot cost of ₹30 crore from CONCOR, the land was handed over in March 2011. We observed that services offered by CONCOR were warehousing facilities including providing sophisticated freezers, cooler, non-operational zone for office premises, packing, consolidation, repairs, etc. Therefore, the Company should have allotted the plot at commercial rate instead of the industrial rates. Failure to charge the commercial rate had resulted in foregoing revenue of ₹15 crore.

We noticed that in six more allotments, the Company did not charge commercial rates even though the allotments were for commercial purposes. Consequently, the Company deprived itself of the opportunity to earn additional revenue of ₹5.49 crore (*vide Annexure-12*), besides loss of revenue due to reduced stamp duty to the State Government which has been worked

Failure to adopt commercial rate to a non-industrial allottee led to loss of revenue of ₹85.74 crore

out by us to the extent of ₹19 lakh.

During the Exit Conference, the Management defended their action stating that the commercial rates were not applied to these allottees as the warehousing and logistics were classified as part of industrial activities in the Industrial Policy, 2007. The fact, however, remained that the said classification was applicable for the limited purpose of granting incentives by the Government and not for adoption by the Company.

Delay in realisation of plot cost

2.1.19 As per the terms of Allotment Orders, the allottees should remit the entire amount of plot cost within 90 days of issue of Allotment Order. Whenever the Company condones the delays beyond 90 days, it has been claiming interest at the rate of 15.5 *per cent per annum* for the belated remittance of plot cost. But this practice was not followed in respect of:

- Tamil Nadu Electricity Board, which delayed remittance of plot cost of ₹13.14 crore (for allotment of 62.19 acres of land) from July 2006 and March 2011.
- A private allottee³ because of an ambiguous provision in the agreement with regard to reckoning of interest on annual balance of principal payable (₹7.64 crore) instead of on the total outstanding of principal amount (₹22.93 crore).

Consequently, the Company had to suffer loss of interest of ₹4.35 crore in the above cases.

Failure to repossess the unused land

2.1.20 As per the terms of the allotment, the allottee should commence commercial production within 30 months from the date of allotment of land. In respect of allotment based on MOUs of State Government, the commercial production should commence within three to five years. Non-compliance of this provision would result in cancellation of allotment.

On a review of utilisation of the plots by the allottees, we observed that as much as 195 allottees holding 2,123.67 acres of land, did not use the entire land even after completion of the gestation period of three to five years. The period of non-utilisation of land in respect of these allotments ranged between one to 22 years. However, the Company had not invoked the provisions of the Lease Agreement for repossessing the land not utilised.

The current value of the portion of unutilised land (1,370.62* acres) was ₹722.37 crore, against which the Company had realised only ₹300.85 crore at the time of original allotment. If only the Company had reallocated the unutilised land, it would have fetched additional revenue of ₹421.52 crore to the Company and ensured usage of land by the needy entrepreneurs.

2,124 acres of land kept idle by 195 allottees up to 22 years after the gestation period was not repossessed as per the provisions of Lease Agreement

3 Moser Baer Infrastructure and Developers Limited.

* Out of total area of 2,123.67 acres of land mentioned in the paragraph, Audit could work out both the originally allotted price and the current market price in respect of 1,370.62 acres only.

It is interesting to note that:

- The allotment of 4.90 acres of land (December 2004) at Siruseri IT Park to one such allottee, Tamil Nadu Road Development Company Limited (TNRDC) for a lease amount of ₹1.18 crore was cancelled by the Company in February 2007 due to the non-implementation of Amenity Centre as envisaged in the Lease Agreement. However, the cancellation was revoked (May 2007) based on a fresh promise from TNRDC to implement the project. In September 2007, the Company permitted TNRDC to sub-lease the land for construction of a five star hotel instead of an Amenity Centre. Our independent verification of the records of TNRDC revealed that this permission was to benefit TNRDC by ₹50.27 crore without any benefits accruing to the Company.
- The Company allotted (November 2006) 30 acres of land at SEZ, Sriperumbudur to Samsung India Private Limited (Samsung) at a concessional rate of ₹10.50 lakh per acre (against the prevailing rate of ₹40 lakh per acre) in terms of MOU with the State Government. Even though, the State Government withdrew (February 2011) the benefits offered to SEZ project due to non-implementation of the project within five years, the Company did not demand the differential plot cost of ₹8.85 crore from Samsung.

The above instances illustrated the failure of the Company in taking action against non-performing allottees. During the Exit Conference, the management stated that action was being initiated to repossess the unused land.

Change in management and sub-lease

2.1.21 As per the existing policy, in case of change of management of the allottee company and the sub-leases with the prior approval of the Company, difference between the present and the original plot cost would be recovered. A test check of cases of change of management and sub-lease indicated that the Company had not evolved a system for reporting of all such cases so as to ensure the recovery of differential cost. A few illustrative cases of Company's failure in these cases are given below:

- Xansa India Limited – Change of management and consequent non-recovery of differential plot cost of ₹99.25 crore.
- South India Mills Association – Non-recovery of differential plot cost of ₹14.27 crore for change of management as per the directions (June 2010) of BOD.
- JCBL Limited – Non-recovery of differential plot cost of ₹2.52 crore at the time of sub-lease to second Joint Venture Company.
- Excelcom Technologies Private Limited – Non-recovery of differential plot cost of ₹6 crore during change of management.

Additional cost to be levied for change of management and sub-lease was not levied in respect of seven allottees which led to loss of revenue of ₹135.90 crore

There was no system to verify the sub-leasing of industrial plots by the original allottees. A test check in three cases (**Annexure-13**) indicated that the Company was kept in dark about sub-leasing in respect of Apollo Infrastructure Projects Finance Company Private Limited, while in other two cases the Company permitted sub-leasing without collection of appropriate sub-lease charges, which resulted in loss of revenue of ₹13.86 crore.

During the Exit Conference, the Management stated that they would create the data base of change of management and sub-leasing of allotted lands and the differential cost would be recovered, wherever necessary.

Maintenance of Industrial Centres

2.1.22 The Company undertakes maintenance of the Industrial Centres through the Project Offices. The cost of maintenance is recovered on *pro-rata* basis of area of allotment from the allottees.

Maintenance charges

2.1.23 A review of system of fixation of maintenance charges and its recovery indicated that:

- while the administrative cost at the Project Office (₹5.36 crore in 2009-10) is considered for fixation of maintenance charges, the administrative cost in respect of Corporate Office (₹13.06 crore in 2009-10) is not considered for fixation.
- Though the Company had incurred ₹1.44 crore towards maintenance expenditure during the years 2006-07 to 2010-11 for Bargur, Cheyyar, Gangaikondan and Nillakottai Industrial Centres, the same was not recovered due to insignificant allotment of industrial plots in these centres.
- The Company took up (2007-08) works relating to soil stabilisation, formation of road, retaining wall, *etc.*, in IT Park, Siruseri at a total cost of ₹61.19 crore and completed the work in 2010-11. After adjusting ASIDE grant of ₹40 crore and its own contribution of ₹10.82 crore, the Company proposed to recover the balance amount of ₹10.37 crore from the allottees. However, it could recover only ₹5.47 crore due to delay of one-and-half years up to May 2009 in raising claim and subsequent delays in recovering the amount due to ineffective follow-up. Consequently, an amount of ₹4.90 crore remained unrecovered till date (November 2011).

Water charges

2.1.24 The amount spent by the Company on water supply schemes and other revenue expenses like payment to TWAD Board, royalty to PWD, *etc.*, are recovered from the allottees by way of water charges. A review of system of recovery of water charges indicated that in the absence of water meter at the Industrial Centres, the Company did not reconcile the quantity of actual water pumped from the main source of water and the quantity received at the Industrial Centre. Against the actual transit loss up to 48 *per cent* in respect of Irungattukottai and Sriperumbudur Industrial Centres, the transit loss

theoretically worked out by the Company was up to 23 *per cent* during 2007-08. In respect of Ranipet Industrial Centre, the excess transit loss of water over and above the wastage norm fixed by TWAD Board worked out to ₹76.74 lakh during the performance audit period.

Release of incentive under Structured Package of Assistance

System of release of incentives

2.1.25 The Company is an agency for the release of Investment Promotion Subsidy such as refund of Value Added Tax (VAT)/Central Sales Tax (CST), *etc.*, and soft loans under Structured Package of Assistance (SPA) sanctioned by the State Government to the new industrial units. As per the terms and conditions of SPA, the beneficiary company would get refund of VAT on its products provided it invested the required amount in the Eligible Fixed Assets (EFA) required for manufacture of the products and generate the specified employment opportunities within the specified investment period. A scrutiny of records relating to release of SPA amounting to ₹1,085.34 crore (in 10 cases) during the performance audit period revealed that:

- Generation of specified numbers of direct and indirect employment is one of the pre-requisites for release of SPA as per the MOU. However, Company released SPA without verification of creation of employment opportunities.
- As noted (September 2008) by the Company they did not have verification mechanism for VAT paid by the industrial units on their manufactured products, traded products and capital goods, thereby, the Company could not restrict refund of VAT only on manufactured items.

Incentives on ineligible fixed assets

- As per the guidelines (July 2000) specifying the eligible assets for incentives, the cost of the road was to be excluded. However, in respect of Dell India Limited, the cost of road (₹13.95 crore) was considered by the Company for incentive. Similarly, in case of Dalmia Cements, the Captive Power Plant was excluded from the eligible assets but the cost* of accessories of captive power plant was included in the eligible assets which also should have been excluded.
- The MOU (March 2006) between the Government and Foxconn provided for payment of 30 *per cent* training subsidy (₹74.66 lakh) against Foxconn's commitment to spend ₹2.49 crore for training of 600 persons at China. Even though Foxconn imparted training only for 189 persons, the Company released (October 2009) entire subsidy which resulted in excess release of ₹51.14 lakh.

* Value could not be quantified in the absence of details.

Release of incentives exceeding eligible assets

- The SPA envisaged limitation of VAT to the investments in the eligible assets. But the refund of VAT (₹341.17 crore) had actually exceeded the amount of eligible assets (₹120.65 crore) in the case of Dell India Limited.
- The Company found (August 2010) that TVS Motor Company Limited had not fulfilled their investment obligation to the extent of ₹309 crore as the investments (₹100.06 crore) in tools, moulds, jigs and fixtures were not the eligible assets as per the Industrial Policy, 2003. However, based on the directions (February 2011) of the Government, the Company had released incentive of ₹77.23 crore to TVS even when TVS was not eligible for any amount under the scheme.

Internal control and monitoring mechanism

Internal control

2.1.26 The internal control and monitoring mechanism that existed in the Company were inadequate:

- There was no system in place to prepare Industrial Centre-wise profit statements and report the performance of individual Industrial Centres to the top management
- There was no centralised database with regard to allotment of plots, approvals accorded for sub-leasing and change of management in various Industrial Centres. In the absence of such centralised data, the Company could not exercise effective control over unauthorised subleasing, change of management, *etc.*
- As per Bureau of Public Enterprises directives (July 2008), a report on the quarterly performance of the Company should be placed before the BOD for their review and guidance on a regular basis, which was not done so far (November 2011).
- The Company did not maintain an MIS to indicate the awarded and the actual cost, scheduled and actual date of completion of the works and resultant time and cost over run. This indicated total lack of financial control over the project implementation by the Management.
- The status report on various legal cases filed against/by the Company on a quarterly basis along with a brief resume of important cases has not been placed in the Board meetings for information and guidance as directed (July 2008) by BOD.

During the Exit Conference, the Management agreed to strengthen the internal control mechanism.

Internal audit

2.1.27 The internal audit system requires to be strengthened/streamlined considering the fact that the Statutory Auditors, while reporting on the Annual Accounts of the Company for the year 2009-10 had highlighted that internal

audit system in operation was not adequate. During the performance audit, we noticed that:

- The internal control system including internal audit has not been subjected to review by the Audit Committee of the Company on a regular basis and there was no reporting of important observations made in the course of conduct of internal audit, to the Audit Committee for their review and further guidance.
- One of the major financial activities viz., release of concessions under SPA amounting to ₹1,085.34 crore during the years from 2006-07 to 2010-11 was not subjected to internal audit.

Acknowledgement

We acknowledge the co-operation and assistance extended by the staff and the management of the Company in conducting this performance audit.

Conclusion

- **The performance of the Company with regard to setting up of Industrial Centres was deficient as it did not evolve a strategic/long term and detailed annual plan in line with the Industrial Policy of the State Government. The creation of Land Bank as envisaged by the State is yet to be implemented by the Company**
- **The Company did not fix any target for acquisition of land and delayed settlement of compensation fixed by the Government and various Courts increased its liability towards additional interest.**
- **The Company did not conduct feasibility study before embarking on process of setting up new SEZs.**
- **The Company did not install proper mechanism to fix/revise plot cost taking into account enhanced compensation/interest, latest trend in the market rates, extent of saleable area, etc.**
- **The Company did not charge the commercial rates for allotment of land to non-industrial entrepreneurs as per its Policy.**
- **The Company did not take back the land from non-performing entrepreneurs.**
- **The Company did not have database and Management Information System for monitoring the collection of additional revenue that would be due in the event of change of management and sublease made by the original allottee companies.**
- **There was no effective system to verify the committed investment before release of incentives.**
- **Internal control and monitoring system were weak.**

Recommendations

The Company should:

- **Formulate strategic/long term plan and fix time frame for creation of Industrial Centres.**
- **Conduct feasibility studies before setting up new SEZs.**
- **Revise the costing mechanism to include all elements of cost and fix the correct plot cost so as to avoid loss of revenue.**
- **Repossess the land from the non-performing allottees.**
- **Verify change of management and subleasing of land and collect the differential cost.**
- **Improve the internal control system and internal audit procedures for efficient operation of the Company.**

2.2 Performance Audit on Power Distribution Activities of Tamil Nadu Generation and Distribution Corporation Limited

Executive Summary

National Electricity Policy (NEP) aims to bring out reforms in the Power Distribution sector with focus on system up-gradation, controlling and reduction of T&D losses and power thefts and making the sector commercially viable. It further aimed to bring out conservation strategy to optimise utilisation of electricity with focus on demand and load management. In view of the above, a performance audit on the working of the Tamil Nadu Generation and Distribution Corporation Limited (Company) and the erstwhile Tamil Nadu Electricity Board for the years 2006-11 was taken up to ascertain whether they were able to adhere to the aims and objectives stated in the NEP.

Distribution network planning

The available transformer capacity was only 26,592 MVA against the requirement of 66,450 MVA in March 2011. The Company planned addition of 335 Sub Stations (SS) during 2006-07 to 2010-11 but had actually added 235 SS. The shortfall was attributable to lack of proper planning, co-ordination between the executing agencies within the Company, besides delays in executing the work by its field offices, etc.

Implementation of Centrally Sponsored Schemes

Restructured Accelerated Power Development and Reform Programme had been showing very slow progress due to diversion of Central funds towards working capital and delay in identification of project areas.

Sub-transmission and distribution losses

The failure percentage of distribution transformers was up to 8.23 against the norm of 6 resulting in extra expenditure of ₹38.20 crore for repairs of these transformers. The predominant causes of excess failure were overloading and inadequate maintenance by the Company.

Billing and collection efficiency

There were instances of under assessment of revenue of ₹601.58 crore due to incorrect billing during 2006-07 to 2010-11 of which ₹112.53 crore was collected by the Company.

Subsidy support and cross subsidisation

While the Company was selling nearly 20 per cent of energy free of cost as per the Government's policy, the subsidy realised from the Government for such free

supply was only up to 10 per cent. The shortfall of ₹11,020.42 crore was due to claiming subsidy based on the connected load of service connections instead of actual consumption of energy by these consumers. Against the National tariff policy to have the tariff of all categories of consumers within the range of ± 20 percent of average cost of supply by 2010-11, the recovery from agricultural and domestic consumers was low at 4.31 and 40.48 per cent of cost of supply of power.

Consumer satisfaction

The Company's MIS showed that 10.73 lakh complaints received in the selected circles were rectified without back-up records. There were 291 instances of delays in effecting HT services due to avoidable reasons like repeated changes in estimates and delays in preparation of feasibility report, want of line materials, etc.

Conclusion and recommendations

The Company's revenue gap of ₹1,218.94 crore in 2006-07 had increased to ₹12,950.56 crore in 2010-11. This was mainly due to not filing the Annual Aggregate Revenue Requirement from 2002-03 to 2009-10, absence of control over T&D losses, purchase of costlier power predominantly from independent power producers, high debt servicing burden, not claiming accurate subsidy in respect of agricultural service connection, etc. If only Company reduces the T&D losses by improving the transformation capacity, complete the construction of sub-stations within the time schedule, expeditiously implement Centrally sponsored programme, maintain the failure of distribution transformers within the norms and accurately work out the consumption charges to avoid short collections, etc., the revenue gap could be reduced. This report contains six recommendations. Create adequate transformer capacity to avoid overloading of transformers, complete construction of sub-station as per plan to achieve savings in line loss, control the failure of the distribution transformers within the norms, accurately work out the subsidy on agricultural service connection are some of these recommendations.

Introduction

2.2.1 The distribution system of the power sector constitutes the final link between the power sector and the consumer. The efficiency of the power sector is judged by the consumers on the basis of performance of this segment. As it constitutes the weakest part of the power sector and incurs huge losses, reforms in the power sector should focus more on efficient management of the distribution system. The National Electricity Policy (NEP) emphasises on the adequate transition from financial support to restructuring of distribution utilities, efficiency improvements and recovery of cost of services to make power sector self sustainable.

As part of power sector reforms, the State Government ordered (October 2008) unbundling of Tamil Nadu Electricity Board into a holding Company viz., TNEB Limited. Under the holding Company, there were two subsidiary companies viz. Tamil Nadu Transmission Corporation Limited (TANTRANSCO) and Tamil Nadu Generation and Distribution Corporation Limited (TANGEDCO). TANTRANSCO was formed in June 2009, TNEB Limited and TANGEDCO were formed in December 2009. The holding company is vested with the assets, interest in property, rights and liabilities of the erstwhile Tamil Nadu Electricity Board. TANGEDCO, which commenced the business operation on 16 March 2010, carries out distribution of power in the State and is under the administrative control of the Energy Department of the State Government. The management of TANGEDCO is vested with a Board of Directors comprising Chairman-cum-Managing Director (CMD), four full time Directors, a part time Director and three ex-officio Directors from the State Government. The day-to-day operations of TANGEDCO are carried out by the CMD with the assistance of Director (Generation), Director (Distribution), Director (Projects) and Director (Finance).

During 2006-07, 50,159 Million Units (MU) of energy were sold by the Company[♦] which increased to 59,658 MU in 2010-11, i.e., an increase of 18.94 per cent during 2006-11. As on 31 March 2011, the Company had a distribution network of 7.33 lakh circuit kilometres (CKM) of Extra High Tension (EHT), High Tension (HT) and Low Tension (LT) lines, 1,255 substations (SS) and 2,03,794 transformers of various categories for supply of power to 2.23 crore consumers. The turnover of the Company during 2010-11 was ₹20,929.33 crore (provisional) and was equal to 37.92 per cent and 3.82 per cent of the turnover of all the PSUs of the State (₹55,193.68 crore) and State Gross Domestic Product (₹5,47,267 crore), respectively. The Company had 81,582 employees as on 31 March 2011.

NEP aims to bring out reforms in the Power Distribution sector with focus on system up-gradation, controlling and reduction of Transmission and Distribution (T&D) losses, power thefts and making the sector commercially

♦ Throughout this Performance audit Report, the term “Company” refers to Tamil Nadu Electricity Board up to 15 March 2010 and TANGEDCO with effect from 16 March 2010.

viable. It further aims to bring out conservation strategy to optimise utilisation of electricity with focus on demand side management and load management. In view of the above, a performance audit on the working of the Company for the period 2006-07 to 2010-11 was taken up to ascertain whether the Company was able to fulfill the aims and objectives of NEP.

We had conducted a performance audit on (i) Implementation of Accelerated Power Development and Reforms Programme (APDRP) and (ii) Information Technology (IT) audit on LT Revenue Billing and included our findings in the Report of the Comptroller and Auditor General of India (CAG) (Commercial) - Government of Tamil Nadu for the year ended 31 March 2007. The performance audit report was discussed by Committee on Public Undertakings (COPU) in April 2010 and its recommendations are awaited (November 2011). The IT audit report on audit of LT Revenue Billing was yet to be discussed by COPU (November 2011).

Scope and methodology of Audit

2.2.2 The present performance audit conducted during February to June 2011 covered the distribution activities of the Company from 2006-07 to 2010-11. It mainly dealt with network planning and execution, implementation of Central schemes, operational efficiency, billing and collection efficiency, financial management, consumer satisfaction and monitoring. The audit examination involved scrutiny of records at the Head Office and at seven[∂] out of 39 distribution circles of the Company. The circles were selected on the basis of their capital expenditure and geographical coverage.

The audit methodology consisted of discussion of audit objectives with the top Management, scrutiny of records at head office and selected units, interaction with the auditees personnel, analysis of data with reference to audit criteria and raising of audit queries, issue of draft performance audit report to the Management for comments and discussions of audit findings with management at the Exit Conference.

Audit objectives

2.2.3 The objectives of the performance audit were to assess:

- whether aims and objectives of NEP/Plans were adhered to and distribution reforms achieved;
- adequacy and effectiveness of network planning and its execution;
- efficiency and effectiveness in implementation of the central schemes viz., Restructured Accelerated Power Development & Reform Programme (R-APDRP) and Rajiv Gandhi Grameen Vidyutikaran Yojna (RGGVY);

[∂] Chennai (S), Coimbatore (S), Dharmapuri, Erode, Tirunelveli, Tiruchi and Villupuram.

- operational efficiency in meeting the power demand of the consumers in the state;
- billing and collection efficiency of revenue from consumers;
- whether a system was in place to assess consumer satisfaction and redressal of grievances; and
- whether a monitoring system was in place and the same was utilised in review of overall working of the Company.

Audit criteria

2.2.4 The audit criteria adopted were:

- Provisions of Electricity Act, 2003;
- NEP, plans and norms concerning distribution network of the Company and norms, guidelines/instructions and Planning criteria fixed by the Tamil Nadu Electricity Regulatory Commission (TNERC);
- Terms and Conditions of Central schemes;
- norms prescribed by various agencies with regard to operational activities; and
- norms of technical and non-technical losses.

Financial position and working results

Financial position

2.2.5 The financial position of the Company as on 31 March for the five years ending 2010-11 is given in **Annexure-14**.

It may be seen from the Annexure that:

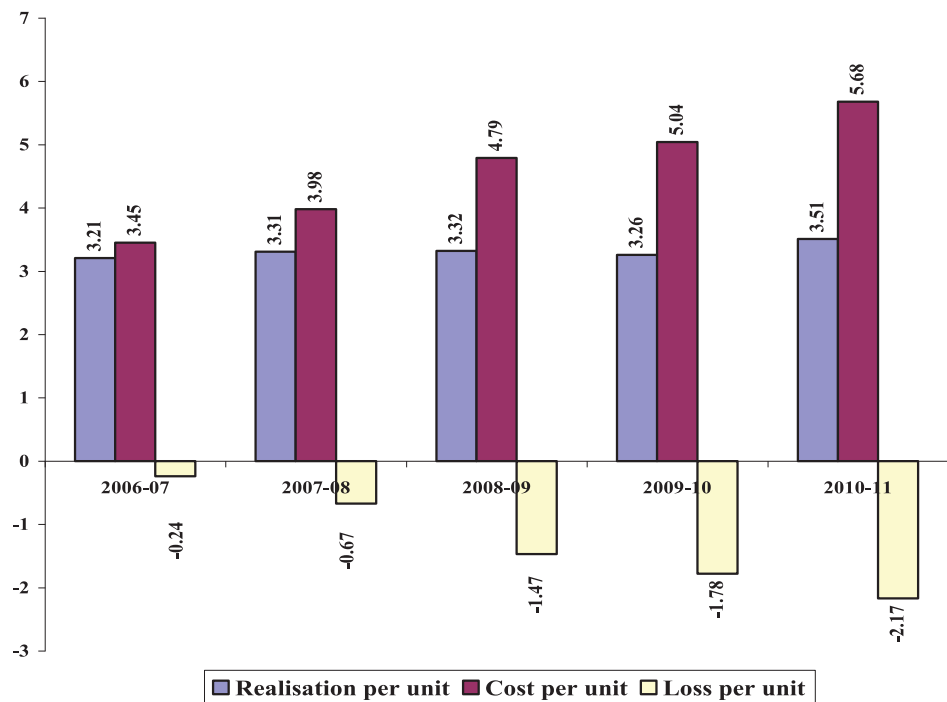
- The Accumulated Losses of the Company increased by 454.31 *per cent* from ₹6,130.45 crore in 2006-07 to ₹33,981.77 crore as on 31 October 2010 (provisional) and completely eroded the Paid up Capital.
- The Working Capital remained negative throughout the audit period from 2006-07 to 2010-11.
- The Debt-Equity ratio marginally decreased from 16.34:1 in 2006-07 to 15.40:1 in 2010-11 due to infusion of additional Equity Capital by the State Government.
- The Company had resorted to huge borrowings to meet the Revenue gap and for repayment of earlier Loans. The Long Term Loans had increased from ₹11,600.29 crore in 2006-07 to ₹39,586.71 crore in 2010-11.
- The Net Worth* turned negative from 2007-08 onwards due to increase in Accumulated Losses.

* Net worth is equivalent to paid-up capital plus free reserves minus accumulated loss.

Working results

2.2.6 The working results, the overall and per unit Fixed and Variable Cost of generation of electricity, *vis-a-vis* revenue realisation thereon are given in **Annexure-15**. Analysis of working results revealed that:

- The average realisation was always lower than the Cost per unit throughout the period of performance audit due to higher cost of power purchase, high debt servicing burden, steep increase in employees cost, non-revision of tariff by TNERC due to delay by the Company in filing Aggregate Revenue Return (ARR), *etc.*
- Though the Cost per unit of self generation (ranging from ₹1.37 to ₹2.20) was much lower than the cost of power purchased (ranging from ₹3.08 to ₹3.87) from other sources, the Company did not augment its generating capacity. On the other hand, its own generation declined from 3,092 MW to 2,646 MW against the increasing average demand from 6,988 MW to 8,544 MW during the years from 2006-07 to 2010-11. This resulted in the Company being forced to purchase costlier power. The per unit cost of operation increased from ₹3.45 in 2006-07 to ₹5.68 in 2010-11. The Loss per unit incurred increased from ₹0.24 to ₹2.17 per unit in the same period as shown below in the bar chart:



It may be seen from **Annexure-15** that the revenue gap of ₹1,218.94 crore in 2006-07 (after considering Revenue Subsidies and Grants) rose to a whopping ₹12,950.56 crore in 2010-11. Our analysis revealed that the revenue gap was mainly due to:

- progressively increased dependence of upto 68 *per cent* of the total power requirement on costlier power from independent power producers.
- increase in Employees' Cost (from ₹2,160.57 crore in 2006-07 to ₹4,055.76 crore in 2010-11).
- steep increase in Interest and Finance charges (from ₹1,204.23 crore in 2006-07 to ₹5,112.45 crore in 2010-11) as a result of borrowings.

The Company in its reply (November 2011) endorsed our reasoning for increase in revenue gap during 2006-11 and added that the additional borrowings were made in the recent years to have capacity additions, strengthening transmission and distribution lines and substations.

Audit findings

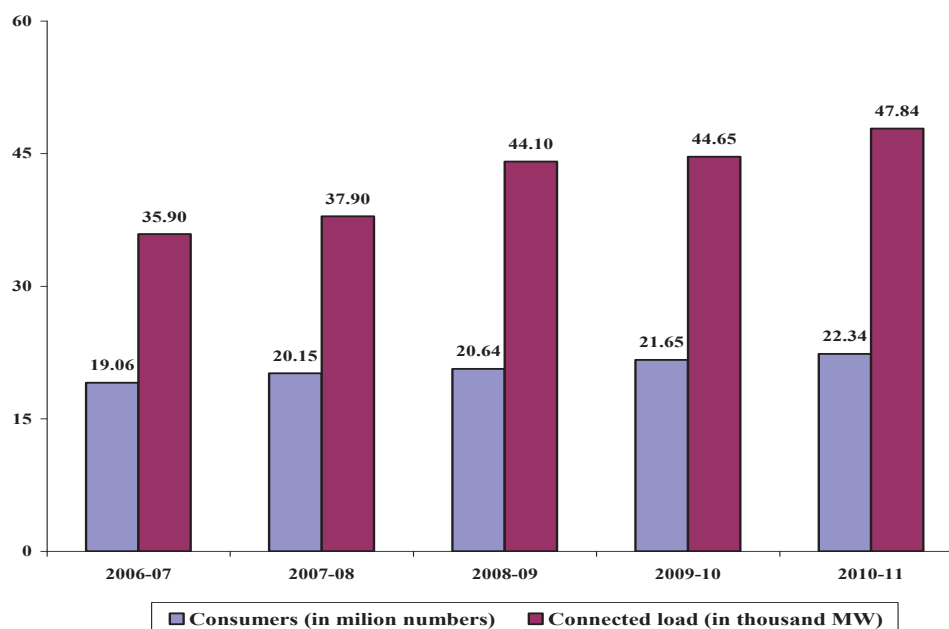
2.2.7 We explained our objectives to the Company during an Entry Conference (February 2011). Subsequently, our findings were reported to the Company and the State Government (August 2011) and discussed in an Exit Conference (October 2011), attended by Managing Director, Director (Distribution), Director (Finance) and Director (Transmission) of the Company. While the Company furnished its reply (November 2011), the Government's reply was awaited (November 2011). The Company's views were considered while finalising this performance audit report. The audit findings are discussed in the subsequent paragraphs.

Distribution network planning

2.2.8 The Company is required to prepare long term/annual plan for creation of infrastructural facilities for efficient distribution of electricity. Besides, the upkeep of the existing network, additions in distribution network are required to be planned considering the demand/connected load, anticipated new connections and growth in demand based on Electric Power Survey. Considering physical parameters, the Company submits annually its Capital Investment Plans to the State Government. The major components of the outlay include normal development and system improvement besides rural electrification.

Load growth

2.2.9 The particulars of consumers and their connected load during the years from 2006-07 to 2010-11 are given in bar chart.



The number of consumers increased from 19.06 million in 2006-07 to 22.34 million in 2010-11 with corresponding increase in connected load from 35,904 MW (39,893 MVA) to 47,844 MW (53,160 MVA). The particulars of distribution network viz., number of Sub Stations (SS), distribution lines and Distribution Transformers (DTs) planned *vis-a-vis* achievement there against in the State as a whole is depicted in **Annexure-16**.

Inadequate transformation capacity

2.2.10 The table below indicates the details of transformation[€] capacity at 110/11 KV, 66/11 KV and 33/11 KV SS and connected load of the consumers in the State during the period from 2006-11.

(In MVA)

Year	Transformation Capacity	Connected load	Gap in Transformation capacity	Ratio of Transformation capacity to connected load
2006-07	24,028	39,893	15,865	0.60:1
2007-08	26,739	42,106	15,367	0.64:1
2008-09	29,623	48,998	19,375	0.60:1
2009-10	31,646	49,606	17,960	0.64:1
2010-11	33,275	53,160	19,885	0.63:1

(Source: Administrative Report 2006-07, Statistics at a glance 2007-09, Accounts Statistics-2009 and the information from the Company).

€ The capacity of the power transformers in the SS which feeds power from SS to the consumers through the feeders and DTs.

Against the ideal ratio of 1:1 between the connected load and transformation capacity, the actual ratio was ranging from 0.60:1 to 0.64:1 during the years from 2006-07 to 2010-11 indicating wide gap in transformation capacity

We are of the opinion that the ratio between the transformation capacity and the connected load could ideally be 1:1 enabling the consumers to draw the energy upto the level of connected load. However, the actual ratio was ranging from 0.60:1 to 0.64:1 indicating wide gap of transformation capacity. This huge gap in transformation capacity led to overloading of the system resulting in frequent tripping and adverse voltage regulation with consequential higher quantum of energy losses.

Transformer capacity

2.2.11 We noticed that as compared to the growth of 11,940 MW (13,267 MVA) in the connected load during 2006-07 to 2010-11, the increase in transformer capacity was only 4,847 MW (equivalent to 5,385 MVA) as depicted in **Annexure-16**. Such a shortfall was mainly due to absence of annual plan for augmentation of DTs. Consequently, the distribution capacity did not match the growth in consumer demand. Further, taking into account the connected load of 47,844 MW at the end of March 2011, the existing transformer capacity should be 66,450 MVA (with the spin reserve of 20 *per cent*). As such the transformer capacity in all the years was inadequate denying uninterrupted power supply to the consumers. To augment transformer capacity of 39,858 MVA, an estimated addition of 2,73,018 DTs of various capacities[♦] would be required. However, the Company had no plan either in the short term or long term to procure DTs on this large scale to reach the required level of transformation capacity.

The Company in its reply (November 2011) stated that in an electrical network, even though it was theoretically feasible that power could be drawn equivalent to the level of connected load, in practice it rarely occurs.

The Company should have assessed a ratio of connected load and transformer capacity suitable to it and endeavoured to achieve it in a systematic manner. Further, the higher failure rate of DTs due to overloading (Paragraph 2.2.18) is indicative of insufficient transformer capacity existing at present.

Delay in establishment of Sub Stations

2.2.12 With a view to meeting the growing demand, to improve voltage regulation at the tail end and to reduce line loss, the Company prepares annual T&D Plan indicating the addition of new SS. Establishment of SS involves acquisition of land, levelling of the site, civil works, procurement and erection of transformers and other materials besides energising the transmission lines. As such, timely commissioning of the SS requires proper planning and synchronisation of all the activities. We noticed, during the period of performance audit, that the Company had planned addition of 335 SS, but had actually added only 235 SS (**Annexure-16**). An analysis of the reasons for shortfall in additions in respect of seven selected circles is given in **Annexure-17**. There were delays ranging from 8 to 53 months in establishment of SS which led to non achievement of the envisaged savings in line loss of 34.98 MUs valued at ₹12.28 crore (**Annexure-17**). From the

The Company planned 335 SS but actually added only 235 SS. The delay ranging from 8 to 53 months in completion of SS was attributed to delay in selection and handing over of land, procurement of power transformers, etc.

♦ Estimated by us in the same proportion of the DTs of various capacities existing at present in the Distribution Network.

annexure it could be seen that the delays in establishment of SS were mainly due to:

- delay in procurement /replacement of Power Transformers (two SS).
- selection of inadequate land area (one SS).
- delay in handing over of site to General Construction Circles after acquisition of land (three SS).
- change in route profile and indecision on methodology of execution (three SS).

We noticed instances of avoidable delays in transfer of own land for construction of SS, delay in synchronisation of various activities, *etc.* This indicated that the Company had not streamlined the system for ensuring timely completion of SS.

The Company in its reply (November 2011) while confirming the audit observations stated that the works during the subsequent period were taken up after taking into account the availability of funds and the priority of the scheme.

Implementation of Centrally Sponsored Schemes

Rural electrification

2.2.13 The NEP states that the key objective of development of the power sector is to supply electricity to all areas including rural areas. The Government of India (GOI) and the State Governments were to jointly endeavour to achieve this objective. RGGVY launched in April 2005 aimed at providing access to electricity to all households in five years. Ninety *per cent* of the project cost of RGGVY was to be provided by the GOI as capital subsidy through Rural Electrification Corporation (REC) and 10 *per cent* as loan by REC to the State Government.

Besides, the GOI notified the Rural Electrification Policy (REP) in August 2006. The REP, *inter alia*, aims at providing access to electricity for all households by 2009 and minimum lifeline consumption of one unit per household per day as a merit good by the year 2012. As per REP, the village would be classified as electrified, only if electricity was provided to public places like schools, health centres, *etc.*, and number of households electrified was at least 10 *per cent* of the total number of households in the village.

As on 31 March 2006, out of 16,317 villages in the State (as per 2001 Census), 15,400 villages were meeting the criteria fixed by REP for electrification of the village and the balance 917 villages were uninhabited. Thus, the Company had already completed and met the criteria stipulated in REP 2006.

Implementation of RGGVY

2.2.14 The RGGVY envisaged erection of DTs along with the lines at village/habitations and provide access to electricity to all rural households and providing service connections to Below Poverty Line (BPL) families free of cost. RGGVY scheme was to be executed on turnkey basis through outside agencies and the management of the power distribution in the project areas was to be through franchise arrangement.

For implementation of the RGGVY, a tripartite agreement was executed (October 2005) between REC, State Government and the Company. The Company submitted (January/February 2006) Detailed Project Reports (DPRs) in respect of 29 districts to REC. Ministry of Power (MOP), GOI gave an 'In-Principle' approval (June 2006) to these DPRs. REC sanctioned (March 2008) the project at an estimated cost of ₹447.41 crore in respect of DPRs of 26 districts for providing service connections to 5.46 lakh BPL households.

The Company provided (December 2010), electrification to 2.60 lakh BPL households by utilising ₹319.98 crore as envisaged in the scheme as detailed below:

Sl. No.	Year	Planned for the year includes shortfall of previous year	Actually electrified during the year	Cumulative shortage
1.	2008-09	54,000	27,069	26,931
2.	2009-10	2,95,469	1,90,128	1,05,341
3.	2010-11	1,05,341	42,768	62,573
	TOTAL		2,59,965	

We observed that:

- As against the sanction of 5.46 lakh BPL households, the Company could avail subsidy under RGGVY only for 2.60 lakh BPL households. The shortfall was due to not covering 0.63 lakh BPL households up to March 2011 and extension of service connection to 2.23 lakh BPL households at its own cost (₹148.79 crore) during 2006-08, prior to getting sanction of REC to the scheme. The delay of two years in getting sanction of REC was due to Company's repeated but futile attempts to seek exemption from the conditions of engaging turnkey contractor for implementation and franchise arrangement for project management. Finally, the Company engaged (June 2008) a turnkey contractor for project implementation. It was yet to formalise a franchise arrangement for project management. As a result, the Company had to forego the subsidy of ₹133.91 crore (being 90 per cent of above) till date (November 2011).
- Contrary to the guidelines to have franchise arrangement for spot billing, revenue collection, etc., to make the system revenue sustainable, the Company proposed (October 2010) for deployment of its retired staff for revenue collection, which was yet to be approved (November 2011) by REC.
- As envisaged in the RGGVY scheme, energy meters were to be provided at DTs and consumers' end for energy accounting. Accordingly, 10,125 meters at DTs and 2.60 lakh meters at the BPL households were installed. However, readings taken from these DT meters and at the consumers' end were not put to use for energy accounting purpose. Hence, any commercial loss or unauthorised use by the consumers could not be ascertained by the Company. This

Subsidy of ₹133.91 crore was not realised due to delay of two years (upto March 2008) in getting sanction for the scheme which was attributable to Company's repeated correspondence to seek exemption from the agreed conditions

resulted in defeating the purpose of energy accounting apart from idle investment of ₹15.62 crore in the cost of meters and their installation.

The Company replied (November 2011) that (i) it did not agree for franchisee arrangement because of its own collection efficiency was more than 98 *per cent* and the BPL household connections are coming under free tariff and (ii) the readings from meters in the DTs and at consumer end are taken and kept at sub-division office. The fact, however, remained that the Company attempted to seek exemption from REC for the conditions already agreed to by it, which delayed execution of the project by two years and resulted in non-realisation of the subsidy of ₹133.91 crore till date for the service connections extended before getting REC's sanction and the said meter readings kept in sub-division office have not been put to any use so far (November 2011).

Restructured Accelerated Power Development Reforms Programme

2.2.15 GOI, in continuation of its earlier Accelerated Power Development Reforms Programme (APDRP) launched during 2001-02 had also launched (July 2008) the Restructured APDRP (R-APDRP), as a Central sector scheme for XI plan. The R-APDRP comprised two parts – Part-A was dedicated to establishment of Information Technology (IT) enabled system for meter reading, billing, collection, energy accounting and auditing, to be completed within three years of sanction of scheme by GOI.

Part-B of the project involved renovation, modernisation and strengthening of 11 KV SS and transformers to be completed in two years after completion of Part-A.

Financial Performance

2.2.16 GOI approved Part-A and B of R-APDRP in February 2009 at a total scheme cost of ₹1,419.08 crore. The details of the funds released by GOI for the scheme, utilisation there against and balances are depicted below:

(₹ in crore)

Year	Parts of Scheme	Funds released by		Funds available	Funds utilised	Balance	Percentage of balance to funds available
		GOI	Others				
2009-10	Part-A	125.10	NIL	125.10	42.71	82.39	65.86
	Part-B	15.59	NIL	15.59	---	15.59	100.00
2010-11	Part-A	54.65	NIL	137.04	---	137.04	100.00
	Part-B	471.58	NIL	487.17	---	487.17	100.00
Balance funds available – Part A and B = ₹624.21 crore							

The Company completed ring fencing in 103 towns out of 110 towns identified and spent only ₹42.71 crore[♥] under Part-A of the scheme till date (November 2011).

We observed:

- The poor progress of R-APDRP, despite availability of funds, was attributable to delay in identification (December 2010 to March 2011) of project areas in 110 villages. Further, the Company was yet to arrange for verification of project areas by a third party (Power Finance Corporation Limited) which was mandatory for implementation of the Scheme. In addition, the Company did not arrange for facilities/materials required for the Scheme. Consequently, the Part-A of the Scheme which was to be completed by February 2012 had not even taken off (November 2011).
- We had reported in the Report of CAG (Commercial) – Government of Tamil Nadu for the year 2006-07 that the Company had diverted the scheme funds of APDRP towards its working capital needs. The Company continued the diversion of funds (₹624.21 crore) of the present scheme to meet its working capital requirement by delaying implementation of the scheme. Consequently, it could not implement the Scheme as envisaged and gain the benefit of reduced T&D losses.
- As per the terms of R-APDRP, the cost of Part-A initially sanctioned as loan along with interest was convertible into grant provided it was completed within three years of sanction and its success was verified by an independent agency appointed by the Ministry of Power. However, the Company did not complete even the preliminary works (November 2011). With the current slow pace of implementation, there are remote chances of completing Part-A by February 2012. Therefore, the Company may not get any benefits of grant available under the Scheme.

The Company diverted ₹624.21 crore of the project funds towards its working capital which led to poor progress of R-APDRP

The Company in its reply (November 2011) admitted the delays but stated that both Part-A and B of R-APDRP would be completed by February 2014 being the time limit for overall completion of the project.

Aggregate Technical & Commercial Losses

2.2.17 One of the prime objectives of R-APDRP was to strengthen the distribution system with the focus on reduction of 'Aggregate Technical & Commercial' Losses (AT&C losses) on a sustainable basis. TNERC had fixed a separate target for AT&C losses at 19.7 *per cent* in 2007-08 and progressively reduced it to 18.5 *per cent* in 2010-11. However, the Company had worked out only T&D losses at 18 *per cent* (as explained in Paragraph 2.2.18) and did not fix any target for AT&C losses nor assessed it till date (November 2011). Thus, the Company failed to comply with the directives of TNERC. In the absence of data on AT&C losses, we computed the AT&C

♥ (i) Ring Fencing-₹12.75 crore, (ii) Consultancy Charges-₹0.27 crore, (iii) Establishment of Data Centre-₹25.72 crore (advance payment) and (iv) cost of feeder meter - ₹3.97 crore.

losses taking into account the actual quantum of energy sent out for consumption, energy billed and agricultural consumption as worked out by the Company and found that the AT&C losses were always more than the norm of TNERC. Such excess percentage was ranging between 1.34 and 2.11 as detailed below:

Year	Energy Sent out (in MU)	Energy Billed (in MU)	AT&C losses Norms as per TNERC (%)	Actual AT&C losses worked out by audit based on 3% sample Agricultural metering (%)	AT&C losses excess over norms	AT&C losses (in MUs)	AT&C losses (₹ in crore)*
(1)	(2)	(3)	(4)	(5)	(6) (5)-(4)	(7)	(8)
2006-07	61,170	50,159	NA	Data not available			
2007-08	64,430	52,833	19.7	21.04	1.34	863.36	285.77
2008-09	64,715	53,065	19.3	20.50	1.20	776.58	257.82
2009-10	70,458	57,776	18.9	21.01	2.11	1,479.62	482.36
2010-11	72,388	59,658	18.5	18.11	NIL	NIL	NIL

The Company failed to comply with directives of TNERC to assess AT&C losses. Our independent estimation of AT&C losses indicated that the same was more than TNERC norm upto 2.11 per cent resulting in an estimated loss of ₹1,025.95 crore

From the table, it could be seen that the AT&C losses was more than the norm of TNERC up to 2009-10 resulting in estimated loss of ₹1,025.95 crore.

The Company in its reply (November 2011) stated that the AT &C losses could be arrived at only on completion of 100 *per cent* metering in all DTs and all services for which the R-APDRP was under way. The fact remained that pending completion of 100 *per cent* metering of DTs and service connections, the Company never attempted an alternative method to work out AT&C losses even on sample basis and denied itself an opportunity to control the AT&C losses to the sustainable level.

Sub-transmission and distribution losses

2.2.18 For efficient functioning of the distribution system, there should be minimal losses in sub-transmission and distribution of power. The losses at 33 KV stage are termed as sub-transmission losses while those at 11 KV and below are termed as distribution losses. The losses occur mainly on two counts, *i.e.*, technical and commercial. Technical losses occur due to inherent character of equipment used for distributing power and resistance in conductors whereas commercial losses occur due to theft of energy, defective meters and drawal of unmetered supply, *etc.*

* Based on the average realisation rates prevailed during the respective years.

The table below indicates the energy losses for the Company for the last five years up to 2010-11.

(In Million Units)

Sl. No.	Particulars	2006-07	2007-08	2008-09	2009-10	2010-11
1.	Energy purchased (+) own generation	61,170	64,430	64,715	70,458	72,388
2.	Energy sold	50,159	52,833	53,065	57,776	59,658
3.	Energy losses (1 – 2)	11,011	11,597	11,650	12,682	12,730
4.	Percentage of energy losses (<i>per cent</i>) {(3 / 1) X 100}	18.00	18.00	18.00	18.00	17.58
5.	Percentage of losses committed to be reduced as per MOU between MOP and Department of Energy, Government of Tamil Nadu	15	15	15	15	15
6.	Excess losses (in MUs)	1,835.10	1,932.90	1,941.45	2,113.74	1,867.58
7.	Average realisation rate per unit (in ₹)	3.21	3.31	3.32	3.26	3.51
8.	Value of excess losses (₹ in crore) (6X7)	589.07	639.79	644.56	689.08	655.52

TNERC had observed (March 2003 and July 2010) that the Company had not furnished the accurate figures of T&D losses and was “fudging” the figures of T&D losses so as to keep it constant. Therefore, it directed (March 2003/July 2010) the Company to conduct an Independent Energy Audit at HT/LT loads and submit a report. Instead, the Company had neither changed its methodology of working out T&D losses nor conducted any energy audit for accurately reporting the T&D losses as directed by TNERC so far (November 2011). However, the Company had been consistently estimating T&D losses at 18 *per cent* up to 2009-10 and 17.58 *per cent* in 2010-11 without any scientific study. This was also commented in the Audit Reports (Commercial) of CAG for the years 2006-07 and 2009-10 of Government of Tamil Nadu. The importance of reducing losses can be gauged from the fact that every one *per cent* decrease in losses could reduce the deficit to the extent of ₹254.08 crore.

The main reasons for such high energy losses were failure of DTs over and above the norms, inadequacy of capacitor banks leading to low power factor, heavy quantum of unmetered consumers and theft of electricity *etc.*, as discussed in the succeeding paragraphs.

Performance of Distribution Transformer

2.2.19 TNERC had fixed (2003) a norm of six *per cent* for failure of DTs. As against this norm, actual DTs failed and the expenditure incurred on their repairs is depicted in the table below:

Sl. No.	Particulars	2006-07	2007-08	2008-09	2009-10	2010-11
1.	Existing DTs at the close of the year (In numbers)	1,73,053	80,763	1,86,638	1,92,632	2,03,794
2.	DT failures (In numbers)	14,239	13,647	15,069	14,806	16,395
3.	Percentage of failures	8.23	7.55	8.07	7.69	8.04
4.	Norm allowed by SERC (In <i>per cent</i>)	6	6	6	6	6
5.	Excess failure percentage over norms	2.23	1.55	2.07	1.69	2.04
6.	Expenditure on repair of failed DTs in excess of norms (₹ in crore)	8.22	5.97	8.23	6.93	8.85

(Source: MIS of Data Cell).

It may be seen from the above table that the percentage of failure of DTs had been in excess over the norms in all the years ranging from 1.55 to 2.23 *per cent* resulting in an extra expenditure of ₹38.20 crore.

Failure of DTs due to controllable causes led to avoidable expenditure of ₹72.49 crore

Analysis of the overall failure of DTs indicated that these failures were predominantly due to (i) overloading of DTs (18.12 to 21.42 *per cent*), (ii) inadequate maintenance (12.04 to 19.69 *per cent*) and (iii) other causes, such as oil leak, low oil level, poor earthing, *etc.*, which were controllable. Thus, the failure of DTs due to these controllable causes which was in the range of 53.54 *per cent* (2007-08) and 69.90 *per cent* (2009-10) led to avoidable expenditure of ₹72.49[▲] crore on repairs of these DTs during the period of performance audit.

We observed that despite occurrence of the above loss, the required review by the Management of the Company on failure of DTs for the years 2007-08 and 2008-09 were conducted after delays of 16 and 15 months respectively. Even after belated review, the Company did not obtain any feedback from the field on preventive maintenance of DTs and did not take any follow-up action, indicating deficient monitoring of the failures of DTs.

The Company in its reply (November 2011), while confirming the percentage of failures of DTs stated that action was being taken to conduct periodical maintenance of DTs to contain the DT failure rate within the reasonable limits.

Delay in repair of Distribution Transformers

Repair of transformers within the guarantee period

2.2.20 As per the conditions of purchase of DTs, the suppliers should rectify DTs failing within the guarantee period within two months from the date of intimation. During our test check of seven circles, we noticed that out of the 435 DTs which failed within the guarantee period only 84 DTs (19 *per cent*)

▲ The average repair cost incurred at ₹21,295 per DT for 34,042 DTs failed due to (i) Inadequate maintenance, (ii) Overloading and (iii) other causes for the four years ending 31 March 2010.

were rectified within two months and the balance 351 DTs were rectified with delays up to 906 days as detailed below:

Period of delay in repair of DTs	Number of DTs
1-100 days	137
101-200 days	114
201-300 days	31
Over 300 days	69
Total	351

The above delays were complemented by the Company itself as it delayed intimation of the repair in respect of 71 DTs mentioned above upto 246 days. Further, the Company had not taken any penal action against suppliers who had delayed repairs.

Repair of DTs beyond the guarantee period

2.2.21 The Company undertakes repair of DTs failing beyond the guarantee period through outside agencies. As per the terms of the agreement, the agencies should lift the failed transformers within seven days from the date of receipt of intimation and should repair them within 30 days. We observed, from the test check of selected circles, that out of 536 DTs that were sent for repair, only 58 DTs (11 *per cent*) were repaired and received back in time. In respect of balance 478 DTs the delays in repair were as detailed below:

Period of delay in repair of DTs	Number of DTs
1-100 days	290
101-200 days	101
201-300 days	38
Over 300 days	49
Total	478

We noticed that the delays were inclusive of the delay on the part of the Company in intimating the contractors about failure in respect of 60 DTs which ranged between 30 and 730 days. Abnormal delay in repair and return of DTs by the suppliers and the contractors is detrimental to the financial interest of the Company as these DTs remained out of use for long periods.

The Company in its reply (November 2011), attributed the delay in repair of transformers to the delay in payment of the bills raised by the contractors. It added that it was initiating action against the firms who have not returned the DTs.

Capacitor banks

2.2.22 Capacitor banks help to improve the power factor by regulating the current flow and voltage, thereby reducing loss of energy. However, we noticed that the Company had not assessed the requirement of capacitor banks upto 2007-08 nor had the details of savings in the line loss due to usage of capacitor banks in the SS for the Company as a whole. We further noticed:

Under performance of the capacitor banks resulted in line loss of 65 MUs valued at ₹20.76 crore in two out of seven selected circles

- During 2008-09 to 2010-11, the Company had estimated the requirement of capacitor banks at 175.4 MVAR. However, it did not procure the same till 2010-11 and had issued purchase orders only in July 2011 for procurement of 168 MVAR capacitor banks for a value of ₹18.41 crore.
- A test check in respect of seven circles in which the capacitor banks were installed in 42 SS out of 77 SS, the capacitor banks were either not functioning at all or were not functioning to the required level.
- The non-functioning/deficient functioning led to lower levels of power factors ranging from 0.40 to 0.85 against the required level of 0.99 lag in 12 SS and also resulted in measurable line loss of 65.080 MU valued at ₹20.76 crore in respect of two[♥] out of seven selected circles.

Commercial losses

2.2.23 The majority of commercial losses arise out of defective metering besides pilferage of energy. Our analysis of these commercial losses is given below:

Consumer metering

2.2.24 For accurate energy accounting and audit, 100 *per cent* consumer meter is a pre-requisite under NEP 2005, which had set a target of two years for 100 *per cent* metering by power distribution companies.

The total number of consumers without meters/with defective meters during the last three years up to 2010-11 is as follows:

Sl. No.	Year*	Total number of consumers	Without meters	Defective meters	Total (Col.4+Col.5)	Percentage of Col. 6 to Col.3
(1)	(2)	(3)	(4)	(5)	(6)	(7)
1.	2008-09	2,06,37,641	1,79,102	15,23,979	17,03,081	8.25
2.	2009-10	2,15,57,497	1,76,494	18,71,386	20,47,880	9.55
3.	2010-11	2,23,43,822	2,93,679	22,13,522	25,07,201	11.22

- The percentage of service connections without meters and defective meters with reference to total service connections had increased from 8.25 *per cent* in 2008-09 to 11.22 *per cent* in 2010-11. Thus, there is an increasing risk of pilferage/theft of power in respect of the service connections without meter.
- As per the tariff regulations of TNERC (2003), the Company should have installed 100 *per cent* metering of all consumers by 2003 itself. However, the Company sought periodical extensions of time, the latest up to September 2012. Thus, the directives of both NEP and TNERC are yet to be complied with (November 2011).

[♥] 1. Villupuram EDC and 2. Coimbatore (South) EDC.

* Details for 2006-07 and 2007-08 are not available.

The Company in its reply (November 2011), stated that it has been assessing the consumption of services with defective meters and without meters as per the provisions of Supply Code of TNERC and hence their computations were in order.

The fact remained that the Company though complied with the provisions of TNERC's regulations for billing, it did not act on the TNERC's regulations for providing meters to all the consumers as committed by it.

Implementation of LT less system

2.2.25 High Voltage Distribution System is an effective method of reducing technical losses, prevention of theft, improved voltage profile and better consumer service. The GOI had also stressed (February 2001) the need to adopt LT less system of distribution by replacing existing LT lines with HT lines to reduce the distribution losses. TNERC directed (July 2004) the Company to take measures to reduce the length of LT conductors by keeping the HT/LT ratio at 1:1.5. Against this, the average HT-LT ratio during the performance audit period was 1:3.69, which was much above the ideal ratio. This was mainly due to Company's defective planning to lay LT lines at three times of HT lines every year. This indicated the Company's laxity in maintaining the ideal HT-LT ratio as directed by TNERC.

We further observed that:

- the Company, to reduce the line loss and to improve the HT to LT ratio took a policy decision (January 2008) to introduce LT less system with smaller capacity DTs of 16, 25, 40 KVA and use 'Aerial bunched cables' with effect from 1 April 2008. However, the Company did not purchase the smaller capacity DTs and the 'Aerial bunched cables' on large scale till date (November 2011), the reasons for which were not on record.

The Company in its reply (November 2011), stated that to reduce AT&C losses and overloading of DTs, it had proposed to implement High Voltage Distribution System (HVDS) on trial basis in Villupuram Region and extend to all other regions in due course.

We observed that the decision to implement HVDS which was proposed in April 2008 itself had not shown much progress. Further the Annual plan for laying of HT and LT line in the year 2010-11 indicates the HT:LT ratio was 1:3.63. As such the Company continued to be lethargic in implementing the HVDS system, which would reduce the AT&C losses.

Inspection of theft of energy

2.2.26 Substantial commercial losses are caused due to theft of energy by tampering of meters by the consumers and unauthorised tapping/hooks by the non-consumers. As per Section 135 of Electricity Act 2003, theft of energy is an offence punishable under the Act. Section 163 of Electricity Act 2003, empowers the licensee to inspect and test the apparatus of the consumers at their premises for detecting the theft cases and conducting mass raids.

The Company had formed Inspection Teams at the distribution circle level and

formed a Vigilance Enforcement Wing consisting of four divisions with 17 squads headed by Executive Engineers located at various places under the direct supervision of Superintending Engineer (Enforcement / Chennai). The targets for number of checking by the Inspection Wing and the Mass Raid Teams, the performance of these teams, assessed amount and amount realised there against are given in **Annexure-18**.

We observed that:

- The targets were not achieved by the inspection wings and raid teams in full in any of the years during the performance audit period. The achievement by the inspection wing was in the range of 60 to 89 *per cent* of targets, whereas the achievement by the raid team was only 12.5 *per cent*.
- The percentage of realisation of penalty imposed by the inspection wing was ranging between 6 and 60. However, the age-wise details of outstanding realisable amount were not available for effective follow-up of recovery. Consequently, the unrealised amount had accumulated to ₹89.50 crore as on March 2011. Similarly, the percentage of realisation of the penalty imposed by the raid teams which went up to 90 in 2008-09 came down to 60 and 70 in 2009-10 and 2010-11 respectively. Consequently, a balance amount of ₹41.42 crore was pending realisation as on March 2011.

The Company in its reply (November 2011), stated that the entire assessment of theft of energy could not be realised as most of the cases involving high value of provisional assessment were pending in the Courts.

Billing and collection efficiency

Billing efficiency

2.2.27 The Company adopted a system of monthly assessment and collection of electricity charges for all HT consumers and LTCT consumers with sanctioned demand up to 112 KW. In respect of other LT consumers, the assessment and collection would be made on bi-monthly basis.

We noticed that the energy billed during performance audit period ranged between 80.54 *per cent* (2010-11) and 77.45 *per cent* (2009-10) of the total energy available for sale and free supply was in the range of 22.55 *per cent* (2009-10) and 19.46 *per cent* (2010-11). The deficiencies noticed in billing procedure and claiming of compensation for free supply of energy to agricultural consumers are detailed below:

Under assessment of revenue

2.2.28 According to the provisions of Electricity Supply Code, the consumer shall be billed for the meter defective period on the basis of average consumption of preceding four months from the date of meter becoming defective, provided the conditions prevailed were same as that of the period in question.

Out of ₹601.58 crore of under assessment of revenue pointed out by us, the Company had so far recovered ₹112.53 crore

During the years from 2006-07 to 2010-11, we pointed out under assessment of revenue to the extent of ₹601.58 crore on account of defective meter services, services without meters, non-levy of power factor penalty and consumption of excess demand over and above the quantum fixed during restriction and control period. Of this, Company effected recovery to the tune of ₹112.53 crore only.

Incorrect computation of agricultural consumption

2.2.29 Energy sold included the computed consumption of energy by agriculture and hut services which were unmetered and sold free of cost. TNERC in its Tariff Regulations (2003) stipulated that the Company should install 100 *per cent* metering of all the agricultural consumers for claiming the correct quantum of subsidy from the State Government[#]. The Company, however, sought periodical extensions, the latest one up to September 2012.

Based on the computed consumption of the agricultural services for the four years ending 31 March 2011 worked out by the Company, we worked out the quantum of free electricity supplied to agricultural services during the said four years as in the table below:

Particulars	2007-08	2008-09	2009-10	2010-11	Total
Connected Load (MW)	7,440.144	7,582.672	8,371.784	8,823.211	
Connected Load (HP)	99,73,383	1,01,64,440	1,12,22,231	1,18,27,362	
Rate per H.P (in ₹)	250	250	250	250	
Computed consumption based on 3 <i>per cent</i> sample metering (in MU)	9,150	9,772	10,635	10,885	40,442
Average revenue realisation per unit (in ₹)	2.97	2.91	2.90	3.14	
Subsidy receivable based on computed consumption at average revenue realisation (₹ in crore)	2,717.55	2,843.65	3,084.15	3,417.89	12,063.24
Subsidy received (₹ in crore)	248.34	254.80	263.00	276.68	1,042.82
Difference (₹ in crore)	2,469.21	2,588.85	2,821.15	3,141.21	11,020.42

Thus, had the Company provided meters to 100 *per cent* of the agricultural services, it could have preferred a claim for the difference in tariff between average cost of realisation and the specified tariff applicable to agricultural consumers, as subsidy by filing Aggregate Revenue Requirement annually.

The Company in its reply (November 2011) stated that it had proposed to segregate agricultural feeders and provide meters on every feeder to compute the agriculture consumption accurately.

[#] Presently, the subsidy given by the State Government for loss on supply to agricultural services was equivalent to ₹250 per horse power.

Collection efficiency

2.2.30 As per the instructions of the Company, Current Consumption (CC) charges could be paid by the consumers by cash/cheque/demand draft including through online facilities. Further, the CC charges were to be paid by HT consumers within seven days and LT consumers within 20 days from the date of billing, failing which the consumers were liable for payment of additional charges at 1.5 per cent of the amount of bills.

The table below indicates the opening and closing balance of revenue collection together with revenue assessed and collected during the last five years ending 2010-11.

(₹ in crore)

Sl. No.	Particulars	2006-07	2007-08	2008-09	2009-10	2010-11 (upto October 2010) (provisional)
1.	Total amount due for realisation including opening balance	17,906.91	19,441.48	19,437.82	20,663.38	16,074.50
2.	Amount realised during the year	14,627.04	15,888.91	16,024.50	16,546.87	11,295.31
3.	Balance outstanding at the end of the year	3,279.87	3,552.57	3,413.32	4,116.51	4,779.19
4.	Percentage of amount realised to total dues (2/1)	81.68	81.73	82.44	80.08	70.27
5.	Arrears in terms of Number of months assessment	2.63	2.64	2.58	2.86	2.80

We observed that:

- the percentage of collection to total dues was ranging between 70.27 to 82.44 during the years 2006-11.
- There were 81 cases pending in various courts and the amount recoverable from these cases was ₹56.10 crore.
- Similarly, ₹795.95 crore pending recovery from Madras Aluminium Company Limited, Mettur (₹400.49 crore) and the Government of Union Territory of Puducherry (₹395.46 crore) were under dispute since May 1996 and December 2001 respectively.
- In Dharmapuri Electricity Distribution Circle (DEDC), a sum of ₹10.94 crore was receivable from Karnataka Power Trading Corporation Limited, Bengaluru from 1998 onwards for which no pursuance was being made either by the circle office or by the Head Office.
- Group-wise analysis of debts outstanding as on 31 October 2010 revealed that an amount of ₹22.99 crore was due from disconnected services.

- The Company neither made any review nor carried out any age-wise analysis of outstanding dues to take effective action for recovery of dues.

The Company in its reply (November 2011), stated that the age-wise analysis for the outstanding dues would be made available through LT billing, collection and accounting software at the earliest.

Failure to disconnect service connections with heavy arrears

2.2.31 As per Tamil Nadu Electricity Supply Code, service connection of any defaulting consumer could be disconnected temporarily. We noticed that Local body authorities and Government Departments were not prompt in paying the monthly dues, which accumulated to ₹201.53 crore in March 2011. We observed that majority of the dues were from Village Panchayat (₹67.63 crore), Municipalities (₹66.19 crore) and Corporations (₹55.10 crore). This included a minimum accumulation of ₹157.15 crore throughout the audit period. However, their supply was not disconnected till date (May 2011) as per the Government's directions.

The Company replied (November 2011) that since these services were essential, the disconnection was not resorted to. The fact states that the Company was also an essential service, which cannot sustain its operations without collection of the sales revenue.

Subsidy support and cross subsidisation

2.2.32 Power distribution companies are required to ensure recovery of cost of service from consumers to be self sustaining. The State Government provides subsidy to the Company to compensate the loss on account of supply of power to specific categories of consumers at concessional rates of tariff.

Subsidy support

2.2.33 We noticed that the Company was giving more than 20 per cent of the saleable energy free of cost to agricultural and hut services as per the State Government's policy, the subsidy for loss of revenue realised from the State Government during the performance audit period ranged from 8.81 per cent to 10.25 per cent (vide **Annexure- 15**) resulting in a direct loss of around 10 per cent. The shortfall of ₹11,020.42 crore was due to claiming subsidy based on the connected load of service connections instead of actual consumption of energy by these consumers (as explained *vide* Paragraph 2.2.29). This is a matter of concern as the Company was making losses continuously from 2006-07 to 2010-11. During this period, the Government had paid the entire subsidy claim of ₹7,943.49 crore except an amount of ₹2.93 crore as at the end of 31 October 2010. The financial position of the Company was grave, despite the subsidy support from the Government.

The Company in its reply (November 2011), stated that efforts would be taken to get more subsidy for free supply to agriculture and hut services.

Cross subsidisation

2.2.34 Section 61 of Electricity Act 2003 stipulates that the tariff should progressively reflect the average cost of supply (ACOS) of electricity and also reduce cross subsidy in a phased manner as specified by TNERC. National

Tariff Policy envisaged that the tariff of all categories of consumers should range within ± 20 per cent of the ACOS by the year 2010- 2011. The position as regards cross-subsidies in various major sectors is depicted in the table below:

Particulars	2006-07		2007-08		2008-09		2009-10		2010-11 (Provisional)	
Average cost of supply (ACOS) (Paise/unit)	345		398		479		504		568	
Average Revenue from LT										
	Paise per unit	Percentage of ACOS	Paise per unit	Percentage of ACOS	Paise per unit	Percentage of ACOS	Paise per unit	Percentage of ACOS	Paise per unit	Percentage of ACOS
Domestic	234.60	68.00	242.07	60.82	254.62	53.16	255.18	50.63	229.95	40.48
Commercial	587.02	170.15	590.00	148.24	594.27	124.06	556.00	110.32	616.84	108.60
Industrial	459.16	133.09	459.88	115.55	428.74	89.51	442.28	87.75	441.21	77.68
Agricultural	22.98	6.66	22.36	5.62	22.37	4.67	20.63	4.09	24.48	4.31
Average Revenue from HT										
	Paise per unit	Percentage of ACOS	Paise per unit	Percentage of ACOS	Paise per unit	Percentage of ACOS	Paise per unit	Percentage of ACOS	Paise per unit	Percentage of ACOS
Commercial	617.44	178.97	648.69	162.99	668.71	139.60	670.53	133.04	700.75	123.37
Industrial	437.57	126.83	442.95	111.29	444.20	92.73	468.41	92.94	489.45	86.17
Agricultural	48.49	14.05	54.47	13.68	50.71	10.58	53.61	10.64	56.42	9.93

- The Company was not able to comply with the requirement of TNERC in respect of all the other category of consumers except commercial and industrial HT consumers. The recovery from LT agricultural consumers at 4.31 per cent and domestic consumers at 40.48 per cent of ACOS was the lowest during the year 2010-11.
- TNERC had already opined (July 2010) that cross subsidy should not be continued for a long time. Thus, there is an urgent need to remove this imbalance by progressively and gradually reducing the existing cross subsidies levels.

The Company in its reply (November 2011), stated that all efforts would be made to file the tariff petition in such a way that the tariff rates reflects +/- 20 per cent of Average Cost of Supply as per tariff policy and to reduce the cross subsidy in a phased manner.

Tariff fixation

2.2.35 The financial viability of the distribution Company depends upon fixation of tariff based on normative cost of operations. As per the TNERC's Regulations, the Company is required to file the application with TNERC for tariff revision 90 days before the commencement of the respective year. However, the Company did not file this application annually but filed the Aggregate Revenue Requirement (ARR)^Σ along with tariff revision petition

^Σ Which will explain the details of operating cost of the Company.

only in February 2010 after a lapse of more than seven years from the date of filing (September 2002) of the previous tariff petition. Based on the application, the TNERC had revised the tariff with effect from 1 August 2010. The delay in filing ARR was already commented in the Reports of the Comptroller and Auditor General of India for the year ended 2005-06 and 2009-10 (Commercial), Government of Tamil Nadu.

Detailed analysis revealed that the extent of tariff was lower than breakeven levels (in percentage terms) of revenue from sale of power at the present level of operations and efficiency for the last four years ending 31 March 2011 as shown in the table below:

(₹ in crore)

Year	Sales (excluding subsidy)	Variable costs	Fixed costs	Contribution (5) = (2) – (3)	Deficit in recovery of fixed costs (6) = (5) – (4)	Deficit as percentage of sales (7) = {(6)/(2)} X 100
(1)	(2)	(3)	(4)	(5)	(6)	(7)
2006-07	14,455.23	14,150.69	3,173.14	304.54	2,868.60	19.84
2007-08	15,672.85	16,491.62	4,528.88	(-)818.77	5,347.65	34.12
2008-09	15,425.60	19,835.55	5,579.69	(-)4,409.95	9,989.64	64.76
2009-10	16,760.87	22,061.18	7,077.50	(-)5,300.31	12,377.81	73.85
2010-11*	18,761.11	25,226.38	8,653.51	(-)6,465.27	15,118.78	80.59

It could be seen from the above table that the Company could not recover the total cost in all the years and was able to recover the variable cost in 2006-07 only. However, control of AT&C losses, conversion of LT lines to HT lines, metering of un-metered connections/defective meters, improving billing and collection efficiency, *etc.*, which have been discussed in the earlier paragraphs would have helped improve the contribution of the Company.

The Company in its reply (November 2011), stated that all efforts would be made to file Tariff Revision Petition every year to recover the Average Cost of Supply per unit from the consumer.

Consumer satisfaction

2.2.36 The distribution Company was required to introduce consumer friendly actions like computerised billing, online bill payment, establishment of customer care centres, *etc.*, to enhance satisfaction of consumers and reduce the advent of grievances among them. The billing issues have already been discussed in preceding paragraphs. The redressal of grievances is discussed below:

* Provisional.

Redressal of grievances

2.2.37 TNERC specified (July 2004) the mode and time frame for redressal of grievance and payment of compensation in the event of delays. The Company has its computer based power failure redressal centres in eight[♥] circle offices. In other places complaints were registered at the local section offices.

A review of the monthly compilation of complaints maintained in these circle offices indicated 10.73 lakh complaints received during 2006-2009 were shown as redressed within the prescribed time schedule except those complaints which involved rectification through system improvement works. We analysed and observed that records maintained at section/division office did not indicate the time of receipt of complaint and its disposal leaving no trail to confirm the satisfactory disposal of complaints within the stipulated time.

The Company in its reply (November 2011), stated that the computerised billing, online payment system, computerised call centers for receiving complaints and grievance redressal meetings with voluntary consumer organisation were aimed at improving consumer satisfaction.

In addition to the above, the Company needs to maintain records at field/section offices to ensure satisfactory disposal of the complaints.

Besides the above, delays in effecting HT services and higher incidence of tripping in SS noticed by us are discussed *infra*.

Delays in effecting HT services

2.2.38 TNERC Regulations 2004 had stipulated that the Company should effect new supply within 30 days of application by the consumer and if the service connection for HT/EHT required extension of any distribution lines, commissioning of SS, *etc.*, then the supply should be effected within 60 to 270 days depending on the work involved.

On a test check of selected circles, we noticed that apart from the delays of up to 254 days even in registering 422 applications, there were subsequent delays in effecting 291 out of 409 service connections (71 *per cent*) due to avoidable reasons like repeated changes in the estimates, delays in preparation of feasibility report, want of line materials, *etc.*, as detailed below:

Sl. No.	Name of the Electricity Distribution Circle	Number of cases in which delays noticed	Range of delay (in days)
1	Chennai (South)	86	17 to 547
2	Coimbatore (South)	64	15 to 886
3	Dharmapuri	21	29 to 323
4	Tirunelveli	3	140 to 336
5	Villupuram	30	7 to 207
6	Erode	87	5 to 236
	TOTAL	291	

- Trichy (Metro) Electricity Distribution Circle –data not available.

♥ Chennai, Coimbatore, Madurai, Trichy, Erode, Tirunelveli, Nagercoil, and Salem.

The Company in its reply (November 2011) attributed delays to the consumers who failed to (i) provide metering points, (ii) produce certificate from Pollution Control Board and approved plans for building, (iii) public protest for erection of new feeders, *etc.*

The reply was not convincing because the delays in the above cases were mainly due to reasons mentioned and not due to the reasons stated by the Company.

Poor performance of sub-station – Avoidable tripping of feeders

2.2.39 One of the key elements of the Power Sector Reforms was to protect the interest of the consumers and to ensure better quality of service. The consumers often face problems like power failure due to frequent tripping of lines. The loss of energy due to trippings in a particular SS is measured as a percentage of total energy fed into the feeders. The Company had fixed (December 2007) a limit of one *per cent* in case of SS having a capacity of 110 KV and half *per cent* for 33/11 KV SS.

During the test check in selected circles, the loss of energy due to tripping in six* circles was up to 15.40 *per cent* of the energy fed into the feeders in respect of 72 numbers of 110 KV SS. Similarly, it was upto 0.91 *per cent* in 42 numbers of 33 KV SS as against the norm of one and 0.5 *per cent* respectively. The resultant energy loss due to excess tripping as per SS records was 8,321.561 MW valued at ₹2.76 crore. In Trichy (Metro) circle, the tripping index was found to be within norms.

The Company in its reply (November 2011) stated that during such feeders tripping, back feeding wherever possible would be arranged to reduce the number of faulty tripping of feeders in the SS.

The fact, however, remained that even after the remedial measures, the number of feeders tripping were in excess of prescribed norms adding to the woes of the consumers.

Monitoring by top management

2.2.40 There should be a management information system (MIS) to report on the achievement of targets and norms of distribution activity. The compliance and achievements need to be reviewed to address deficiencies and to fix the revised targets for subsequent years. For this purpose, Data Cell of the Company receives MIS on operation performance of the Company. Based on the review of these MIS, the required further actions are communicated to the functional wings. Apart from the review of MIS, Review Meetings are conducted to deliberate issues relating to distribution activities and for assessing physical and financial progress of circle office of the Company.

* The data was furnished for 9 SS of Tirunelveli, 2 SS of Coimbatore (South), 30 SS of Villupuram, 24 SS of Dharmapuri, 15 SS of Erode and 34 SS of Chennai (South).

Our analysis of the existing system of monitoring and reporting mechanism revealed the following deficiencies:

- The reviews submitted by the Data Cell were mere compilation of facts as received from the field and the analysis were statistical without specific suggestions for improvement.
- The Company did not have comprehensive data at corporate level on the actual T&D losses but was adopting 18 *per cent* as uniform rate of T&D losses in the absence of data from the field.
- The Company did not have data on the requirement of capacitor banks at SS and DTs leading to poor voltage regulations and the resultant line losses.
- The Company did not have a data base of capacitors installed by the LT consumers as required under the provisions of TNERC Supply Code. As a result, it could not recover compensation from the specified category of LT consumers, who failed to install capacitors.
- The Company did not have control over delay in extension of HT/LT service connections as it did not consider the date of application of the consumer for reckoning the time taken for effecting supply.
- The Company did not have age-wise analysis of the Debtors.

The Company in its reply (November 2011) stated that a road map for IT implementation in the distribution areas had been drawn out and on completion more accurate and validated information would be available for Management Distribution Support System.

Acknowledgement

We acknowledge the co-operation and assistance extended by the staff and the management of the Company in conducting this Performance Review.

Conclusion

- **The Company's revenue gap of ₹1,218.94 crore in 2006-07 had increased to ₹12,950.56 crore by 2010-11. Absence of control over the T&D losses, purchase of costlier power predominantly from independent power producers, high debt servicing burden and non-revision of tariff by TNERC due to non-filing of ARR during 2002-03 to 2009-10 by the Company, not claiming accurate subsidy in respect of agricultural service connections, etc., contributed to the huge revenue gap.**
- **The requirement for transformation capacity was 66,450 MVA against the existing capacity of 26,592 MVA in March 2011, a standing deficit of 39,858 MVA.**
- **The Company planned addition of 335 SS during 2006-07 to 2010-11 but had actually added 235 SS only. The shortfall was attributable to lack of proper planning, poor co-ordination between the executing agencies within the Company, besides delays in executing the work by its field offices, etc.**

- The Centrally Sponsored Scheme *viz.*, R-APDRP had been showing very slow progress due to delay in identification of project areas, not identifying the requirement of facilities/materials for implementation of the scheme. Scheme funds were diverted towards working capital requirements, resulting in the Company not realising the benefits like reduction in T&D losses.
- The failure percentage of DTs was up to 8.23 against the norm of six resulting in extra expenditure of ₹38.20 crore during the performance audit period for repairs of these transformers. The predominant causes of excess failure were overloading and inadequate maintenance by the Company.
- While the Company was selling nearly 20 *per cent* of energy free of cost, as per the Government's policy, to the agricultural consumers, the subsidy realised from the Government for such free supply based on the connected load instead of actual consumption of energy by these consumers was only up to 10 *per cent*.
- There were instances of under assessment of revenue of ₹601.58 crore due to incorrect billing during 2006-07 to 2010-11 of which ₹112.53 crore was eventually collected by the Company.

Recommendations

The Company should:

- Provide for adequate transformer capacity to avoid overloading of transformers.
- Avoid pre-construction and execution delays and complete the construction of SS to achieve the envisaged savings in line loss.
- Expediently implement Centrally Sponsored Schemes to ensure 100 *per cent* electrification of rural areas and reduce T&D losses.
- Contain the failure of DTs to within the norms.
- Install adequate number of capacitor banks at SS to regulate voltage and save energy.
- Accurately work out subsidy on agricultural service connections by installation of meters as per the directions of TNERC.