CHAPTER-II

Performance reviews relating to Government companies

2.1 Internal Control System in Uttar Pradesh State Food and Essential Commodities Corporation Limited

Highlights

Internal Control System is an integral process by which an organisation governs its activities to effectively achieve its objectives. Such a system consists of methods and policies designed to prevent frauds, minimise errors, promote operating efficiency and achieve compliance with established policies and helps to protect resources against loss due to waste, abuse and mismanagement. An evaluation of the Internal Control System in Uttar Pradesh Food and essential Commodities Corporation Limited during the period 2001-06 revealed significant weaknesses in internal controls due to non-preparation of functional manuals, delayed preparation of budgets, poor operational functional control, ineffective internal audit and lack of proper monitoring and evaluation of activities.

The compliance of Management's decisions and orders by its officers/officials were not ensured resulting in shortage of food grains valuing Rs.1.02 crore.

(Paragraphs 2.1.13 and 2.1.14)

The preparation of accounts of the Company was in arrears for 16 years (1990-91 to 2005-06). As a result the actual financial health of the Company could not be ascertained and the possibility of misappropriation/fraud could not be ruled out.

(Paragraph 2.1.10)

Internal Audit was not adequate and effective. The annual Audit Plan for Internal Audit was not prepared during 2001-02 to 2005-06. Compliance to Internal Audit observations was not ensured; as a result the shortages/misappropriation of food grains valuing Rs.4.20 crore pointed out by Internal Audit remained unrecovered.

(Paragraphs 2.1.30 and 2.1.25)

Non-monitoring of implementation of the Minimum Support Price Scheme of the Government for procurement of food grains resulted in shortfall in achievement of targets of procurement during 2002-03 to 2005-06.

(Paragraph 2.1.18)

In violation of the provisions of the Minimum Support Price Scheme, food grains valued at Rs.0.57 crore were purchased from middlemen instead of from farmers.

(Paragraph 2.1.19)

Introduction

2.1.1 Internal control is a management tool used to provide reasonable assurance that management's objectives are being achieved in an efficient, effective and adequate manner. A good system of internal control should comprise, *inter- alia*, proper allocation of functional responsibilities within the organisation, compliance with applicable laws and statutes, proper operating and accounting procedures to ensure the accuracy and the reliability of accounting data, efficiency in operations and safeguarding of assets, quality of personnel commensurate with their responsibilities and duties and review of the work of one individual by another whereby possibility of fraud or error in the absence of collusion is minimised.

Internal control in the case of Uttar Pradesh State Food and Essential Commodities Corporation Limited (Company) assumes greater significance as it was formed (October 1974) to meet the needs of the people of the State for the essential commodities. Besides, it also acts as an agent of the Government for implementation of various schemes entrusted to the Company from time to time.

The Management of the Company is vested in a Board of Directors (BODs) consisting of 11 Directors including a Chairman and a Managing Director (MD) appointed by the State Government. The MD is the Chief Executive of the Company. He is assisted by a General Manager (GM) and a Finance Controller at the Headquarters. The activities of the Company are executed through 18 District Offices (24 District Offices up to March 2005) headed by District Managers (DM's) under the supervision of four Regional Managers (RM's).

A performance review on the working of the Company was included in the Report of Comptroller and Auditor General of India, Government of Uttar Pradesh (Commercial) for the year ended 31 March 1990 and subsequently a review on sale of liquor by the Company was included in the Report of Comptroller and Auditor General of India, Government of Uttar Pradesh (Commercial) for the year ended 31 March 1995. Both reports have been discussed by the Committee on Public Undertaking (COPU) in February 2005 and June 1998 to October 1999 respectively.

Scope of Audit

2.1.2 The present performance review conducted during the period December 2005 to April 2006 covers the evaluation of the internal control system in the Company during the last five years up to 2005-06.

Out of 24 District Offices having turnover of Rs.633.17 crore during 2004-05, the records of 15 districts[*] with turnover of Rs.437.76 crore (69.13 *per cent*) were test checked in audit. The basis for selection of district offices for audit was the turnover of the District Offices.

Audit Objectives

2.1.3 The audit objectives were to ascertain whether:

- the internal control tools namely Manuals, Corporate Plan and Budgets *etc.* were used efficiently, and accounts were prepared in time;
- compliance to directions of the BODs and Management was ensured;
- a reliable information and communication system was in vogue and operating as intended;
- the operational controls in the system reflect the policies, procedure and practices and are adequate to provide a reasonable assurance that the operations of the Company are carried out efficiently and effectively; and
- a proper and effective monitoring system was designed and followed in implementation of various schemes of the Government.

[*] Bahraich, Badaun,Gonda, Hardoi, Lakhimpur, Lucknow, Shahjahanpur, Shrawasti, Sitapur, Allahabad,Chitrakoot, Hamirpur, Mahoba, Jhansi and Varanasi.

Audit criteria

2.1.4 The audit criteria used for assessing the achievement of audit objectives were:

- *Sewa Niyamawali* of the Company*;*
- Instructions/guidelines issued by the Government from time to time;
- Guidelines of various food grains procurement schemes;
- Procedures prescribed by the Company for monitoring and evaluation; and
- Provisions of the Companies Act, 1956.

Audit Methodology

2.1.5 The following mix of audit methodologies were adopted for achieving the audit objectives of the performance review:

- Examination of Government schemes, agenda and minutes of BOD meetings, minutes of Audit Committee meetings, Company's Annual Reports, Management directives and circulars.
- Examination of Central/State Government guidelines/orders issued for procurement and delivery of grains under "Minimum Support Price Scheme"(MSPS) of the Central Government and implementation of Government schemes under "Targetted Public Distribution System"(TPDS).
- Scrutiny of records relating to reconciliation of food grains procured and handed over to Food Corporation of India (FCI)/State Pool, physical verification reports of stock kept in the godowns, system of transportation of food grains along with tenders/agreements for appointment of transport and handling contractors and monitoring and inspection reports.
- Issue of audit enquiries and interaction with the Management.

Audit Findings

2.1.6 Audit findings arising from the performance review were reported to the Management/Government in June 2006 and were discussed in the meeting of the Audit Review Committee for State Public Sector Enterprises (ARCPSE) held on 11 August 2006. The meeting was attended by the Special Secretary (Food), Government of Uttar Pradesh and Managing Director of the Company. Views expressed by the representatives of the Management/Government and detailed replies furnished by the Company in August 2006 have been taken into consideration while finalising the review.

The audit findings are discussed in the succeeding paragraphs:

Tools of Internal Control

Planning and Budgetary controls

Preparation of Corporate Plan

Corporate Plan has not been prepared.

2.1.7 According to the allocation of work made by the MD (May 2000), the General Manager of the Company is to ensure the preparation of a Corporate Plan incorporating the present activity and activities to be undertaken in view of the Government policy and directives, etc. The Corporate Plan has not been prepared so far despite this being pointed out by Audit earlier in the Report of the Comptroller and Auditor General of India, Government of Uttar Pradesh (Commercial) for the year ended 31 March 1990.

The Management stated (August 2006) that the action would be taken for preparation of a Corporate Plan within six months.

Budget

2.1.8 Budget is a quantitative financial expression of activities for a given period. The budget is drawn with a view to plan future operations and to make *ex-post facto* checks on the results obtained. Timely preparation of budget and analysis of variances noticed in the actual execution serves the purpose of internal control. The following deficiencies were observed in the use of the budget for internal control:

- The Company was required to prepare its annual budget well before the commencement of each year. The budgets for the year 2001-02 and 2004-05 were, however, prepared and submitted to the BOD after delay of six months (September 2001) and three months (June 2004) respectively.
- The table at **Annexure-11** indicates the budgeted and actual income and expenditure during last five years up to 2004-05. From the table it may be seen that there was shortfall in sales turnover *vis-à-vis* that budgeted in each year, and ranged between Rs.44.80 crore to Rs.324.30 crore. This indicates that the budgeted turnover was not realistic. The Company did not conduct any detailed analysis of the variances between the budgeted and the actuals for taking corrective action.

<u>Financial controls</u>

2.1.9 Fund management is an important tool of financial control through which the management exercises control over the utilisation of its resources in a cost effective manner to obtain maximum output. The main source of income of the Company was margin money earned in implementation of various Government schemes. The margin money was utilised for meeting administrative and trading expenses. It was noticed during audit that while on one hand the Company had to realise an amount of Rs.27.97 crore on account of margin money for the period 2001-02 to 2004-05 from the State Government, on the other hand there were outstanding Government loans of Rs.13.47 crore obtained for liquor trade activities during 1990-91 on which interest liability of Rs.14.40 crore had already accrued up to March 2006. Had the margin money been realised/recovered, the Company would have been in a position to repay the loans of Rs.13.47 crore. This indicated weakness in the internal control in the Company over expenditure and over recovery of dues, and resulted in huge accumulation of recovery of margin money from the Government on the one hand and repayment of loans and interest thereon on the other.

The Management stated (August 2006) that the loan of Rs.13.47 crore was provided by the State Government for liquor trade (Rs.12.59 crore) during 1990-91 and for purchase of a mobile van (Rs.0.88 crore) in 1999-2000. Due to un-expected loss in the liquor trade, the loan could not be repaid and a proposal in this regard was sent to the Government for conversion of the loan of Rs.12.59 crore into share capital which was pending with the State Government. The reply is not tenable because the Company could not realise/adjust the amount (Rs.27.97 crore) due to it from the Government which could have been utilised for repayment of the loans.

Accounting controls

Delay in preparation of Accounts

2.1.10 According to Section 210 of the Companies Act, 1956 at every Annual General Meeting (AGM) of a Company, the BODs shall lay the Balance Sheet and Profit and Loss Account of the Company. The above provisions of the Companies Act 1956 were not being complied with as the Accounts of the Company were in arrears for the last 16 years (1990-91 to 2005-06).

Finalisation of accounts was in arrear for the last 16 years.

The main reasons for arrears of Accounts, as apprised by the Management to the BOD in September 2003, were non-preparation of accounting manual, deployment of staff in Government schemes and in liquor business, missing records, excess time (3 years and 11 months) taken by the Statutory Auditors in finalisation of accounts for the year 1981-82 and 1982-83 and non-appointment of Chartered Accountants in the Company for control, supervision and preparation of accounts. The Company could not finalise its accounts despite this being pointed out by Audit earlier in the Report of the Comptroller and Auditor General of India, Government of Uttar Pradesh (Commercial) for the year ended 31 March 1990.

In this connection it was observed that:

- Though one Finance Controller and one Finance and Accounts Officer remained posted in the Company and there were sufficient number of accounts staff *viz*: Manager Accounts (5), Assistant Manager Accounts (58), and Accounts Clerks (89) in each year, the accounts were not prepared. The provisional accounts for the period 1990-91 to 2001-02 were got prepared (March 2006) from firms of Chartered Accountants, at a fee of Rs.70,000 per year for Headquarter office and consolidation of accounts, and at Rs.5000 per year's accounts for each District Office but these accounts have not been finalised so far.
- Due to non-finalisation of accounts for 16 years, the actual financial health of the Company could not be ascertained and the possibility of misappropriation/fraud can not be ruled out.

The Management stated (August 2006) that the provisional accounts up to 2004-05 had been got prepared through a firm of Chartered Accountants.

Administrative controls

2.1.11 During the period 2001-02 to 2005-06, the tenures of the Managing Director ranged between one to 28 months. Frequent changes of the Chief Executive of the Company adversely affected the activities of the Company.

Human Resource policies and procedures

2.1.12 Human resource policies and practices include hiring and staffing, orientation courses, training *etc.* of the personnel. Human resource management promotes an ethical environment by developing professionalism and enforcing transparency in daily practices.

In this connection it was observed (February 2006) in audit that the human resource policy and procedures were not effective as discussed below:

- The incumbency register of officers and staff was not maintained thereby denying the Management to know at a glance the duties and responsibilities assigned to various officers/staff from time to time.
- 126 men-in-position were in excess over the sanctioned strength in various posts of the Company, the regularisation of which was still awaited (September 2006).
- The post of one Marketing Assistant was created without sanction of the BOD as well as against the provisions of the *Sewa Niyamawali* of

the Company.

- As against 233 godowns in operation as on 31 March 2006, only 31 posts of Godown Assistants were sanctioned against which the actual strength of Godown Assistants was 25. Further, salesman and class IV employees of the Company were deployed in the remaining 208 godowns to look after the activities of the godowns in violation of the provisions in the *Sewa Niyamawali*.
- The State Government issued (July 1977) directives for speedy finalisation of disciplinary cases and fixed a time schedule of three months for finalisation. It was, however, noticed that as on 31 March 2006, 64 disciplinary cases against the officials and officers on account of irregularities committed by them in procurement, storage, distribution of the food grains *etc.* were pending for finalisation since 1995-96 to 2005-06. The main reasons for non/delay in finalisation of these cases was allotment of one to 30 cases for enquiry to one officer.

The Management accepted the audit comment and stated (August 2006) that action is being taken for preparation of an incumbency register. As regards, regularisation of excess staff, it was stated that the proposal for regularisation was submitted to the Government in 1992-93. The State Government directed the Company to intimate the permanent staff strength, however, the same is yet to be intimated. For finalisation of pending disciplinary cases it was stated that the action has been taken for speedy finalisation of disciplinary cases by re-allocating the cases among the officers.

Posting of class IV staff as godown-in-charge

2.1.13 In contravention of MD's orders (June 2000) that in no circumstances shall the charge of godown be given to any class IV staff, the District Managers (DMs) deployed (2004-05 and 2005-06) class IV staff as godown incharge at Pishwan and Wajirganj godowns in Sitapur and Gonda districts respectively. As a result, shortages of food grains valuing Rs.10.02 lakh took place in these godowns during 2004-05 and 2005-06. The Company had neither started the recovery process nor had any action against the defaulting officers/officials been taken.

The Management stated (August 2006) that due to non-availability of godown in-charge/sales man, the class IV staff were given the charge of godowns by some District Managers. It was further stated that at present no class IV staff is given the charge of godown. The reply is not tenable as neither the approval of the MD for deployment of class IV staff was taken by the District Managers nor was the possibility of deployment of excess class III staff as godowns in-charge ascertained before deployment of class IV staff. Further, no action against the concerned District Managers for non-compliance of MD's orders was taken and the recovery of the shortages was also not made from the concerned staff.

Dual charge of godowns

2.1.14 Orders of the MD were conveyed (June 2000) to all the field offices that charge of not more than one godown should be given to one godown in-charge as handling of more than one godown by one godown in-charge adversely affects the commercial activities of the Company and possibility of occurrence of financial irregularities persists. It was, however, noticed in audit that the District Managers of Allahabad, Banda, Sitapur and Hardoi assigned the charge of more than one godown to one godown in-charge. Non-compliance of the above orders of MD resulted in shortage of food grains valuing Rs.91.58 lakh during 2004-05.

The Management stated (August 2006) that the District Managers have been directed that despite shortages of staff, in no case should dual charge of godowns be given to one godown in-charge.

Preparation of Functional Manuals

Functional manuals for guidance of personnel were not prepared.

2.1.15 Functional Manuals provide guidance to the personnel in-charge of each wing/section for executing and monitoring the activities of the Company. Though the Company had been in existence for over three decades, no functional manuals (Administrative/Accounting) had been prepared so far (August 2006) and thus a vital tool of internal control was missing.

The Management stated (August 2006) that the action was being taken for preparation of Functional Manuals.

<u>Operational Controls</u>

2.1.16 The major activities of the Company involved implementation of Government schemes *viz.*:

- Minimum price support scheme;
- Targetted public distribution system and other schemes.

The lack of internal control and monitoring in implementation of these schemes are discussed below:

Minimum Support Price Scheme

2.1.17 Under the Minimum Support Price Scheme of the Government of India, the State Government has nominated the Company as one of the purchase agencies for procurement of wheat and paddy directly from the farmers of the State. The Company procures wheat and paddy from the farmers by opening purchase centres in each district identified by the State Government at the rate fixed by the Central Government. These activities are carried out according to the guidelines and directives issued by the State Government from time to time which provide that the food grains after procurement are delivered to Food Corporation of India (FCI)/State Pool and the claims for the cost of the grains and other incidental expenses (handling, transportation, stationeries and other misc. expenses) are preferred with FCI/Food Department of the State. For smooth and timely procurement of wheat and paddy the Company assigned the work to its District Managers.

In this connection the following deficiencies were noticed in audit:

Targets and Achievements

2.1.18 As per Clause 8.1 of the guidelines issued by the State Government under the scheme, the purchase agency shall ensure that no farmer returns without selling his food grains. Clause 24 of the guidelines further provides that the District Managers of the Company shall inspect the centres twice a week to ensure that purchase centres are opened in time, purchases are made from the farmers only and there is no exploitation of small farmers by middlemen. The table given at next page indicates the targets fixed for procurement of wheat and paddy under this scheme and the actual procurement made by the Company during the period 2001-02 to 2005-06:

(Quantity in Metric Tonnes)

	Wheat			Paddy		
Particulars	**Target**	**Actual**	**Shortfall (+)/(-)**	**Target**	**Actual**	**Shortfall (+)/(-)**
2001-02	1,00,000	1,36,604	36,604	--	--	--
2002-03	1,50,000	1,17,337	(-) 32,663	40,000	755	(-) 39,245
2003-04	1,50,000	1,01,928	(-) 48,072	40,000	16,321	(-) 23,679
2004-05	1,50,000	1,35,708	(-) 14,292	1,00,000	7,076	(-) 92,924
2005-06	1,50,000	35,373	(-) 1,14,627	1,00,000	22,704	(-) 77,296

From the above, it may be seen that during the period 2002-03 to 2005-06 the Company failed to achieve the target of procurement of food grains. The Company could not furnish records pertaining to compliance with the provisions of clause 8.1 and 24 of the guidelines. Thus, non-monitoring of implementation of procurement of food grains effectively under the scheme resulted in shortfall in achievement of targets of procurement during 2002-03 to 2005-06.

The Management stated (August 2006) that the main reason for non-achievement of targets was the low support price fixed by the Government compared to the prevailing market price. The reply is not tenable as no documentary evidence in support of the market price being higher was produced to Audit.

Procurement of food grains from middleman

Despite restrictions imposed by the Government, wheat valuing Rs.56.60 lakh was purchased from middlemen.

2.1.19 Clause 3 of the guidelines provides that food grains should be purchased directly from farmers and on the basis of their *JotBahi* and *Intakhabs* (ownership documents of the agriculture land). It was noticed in audit that during the period 2001-02 to 2005-06, 9136 quintals of wheat (Lucknow: 7390 quintals and Bareilly: 1746 quintals) valuing Rs.56.60 lakh was purchased from middle men instead of farmers. As a result, the benefit of the scheme could not be passed on to the farmers.

The Management stated (August 2006) that the quantity of food grains purchased from farmers was recorded on their *JotBahi* and *Kisanbahi* and enclosed the copy of the same. The reply is not tenable as the documents submitted by the Company were not related to the cases mentioned in the para.

Targetted Public Distribution System (TPDS) and other schemes of Government

2.1.20 Under TPDS, the Company lifted wheat, rice and sugar from the depots/godowns of the FCI/Regional Food Controller (RFC)/Pradeshiya Cooperative Federation (PCF) against the allotments made by the Government for each district. The Company kept these food grains in its godowns and delivered it the Government Fair Price Shops (FPS) against their quota fixed by the Government for distribution under different schemes of TPDS (such as Above Poverty Line (APL), Below Poverty Line (BPL), *Antyodaya*) and other schemes *viz. Annapurna*, Mid-day meal (MDM) and *Sampoorna Gramin Rojgar Yojna* (SGRY). For these activities the Company earns margin money per quintal on lifted food grains at the rates fixed by the State Government for each year for meeting the expenses pertaining to handling and transportation, godown rent *etc.*

It was noticed in audit that the implementation of these schemes by its District Offices was not properly monitored by the Company. As a result, short lifting of food grains against allotment, irregularities in transportation and handling of the food grains, margin money claims and shortages/misappropriation of grains occurred as discussed below:

Short lifting of food grains

2.1.21 As per allocation of work made by the MD (May 2000), the GMs of the Company were to ensure proper implementation of TPDS and other schemes of the Government as per provisions and guidelines of the schemes. It was noticed in audit that during the period 2002-03 to 2004-05, the GMs did not ensure *cent per cent* lifting of food grains (wheat and rice) by its District Offices in each month against the allotments. As a result against the allotment of 49.43 lakh MT only 24.87 lakh MT food grains were lifted by 18 to 22 District Offices resulting in short lifting of 24.56 lakh MT of food grains.

The Management stated (August 2006) that reasons for short lifting of food grains against allotment were non-delivery of food grains by FCI depots. The reply of the Management is not tenable as the Company could not show the copy of any release order (release order of food grains issued by the District Magistrate (DM)/District Authorities towards allocation of quantity of food grains) wherein the delivery of food grains was denied by any of the FCI depots. Thus due to short lifting of food grains and resultant non-distribution of the same under different schemes, the full benefit of the schemes could not be passed on to the beneficiaries.

Handling and transportation of food grains

2.1.22 As per the scheme guidelines and directives issued by the Government from time to time, the Company was to appoint handling and transport contractors for each godown of each district in each year by inviting bids from the registered contractors of the Company. All the formalities regarding appointment of contractors were to be completed well before commencement of the financial year under the supervision of the concerned District Managers.

In this connection, the following points were noticed:

- The Company could not produce the details of handling and transport contractors appointed during the period 2001-02 to 2004-05.
- The Company initiated action for appointment of contractors for 2005-06 in March 2005 for 18 District Offices and contracts in nine districts were finalised. In other nine districts the handling and transportation work was being got done by the godowns in-charge themselves through local petty transporters without execution of any agreement with them.

The Management stated (August 2006) that due to non-receipt of sufficient number of tenders from the bidders, the agreement in nine districts could not be executed.

An advance of Rs.72.85 lakh to godowns in-charges remain unadjusted.

- In Gonda district during the period 2003-04 to 2005-06, an amount of Rs.72.85 lakh was given as advance to godowns in-charge, chaukidars and drivers for handling and transport expenses without adjustment of previous advances. These advances were lying unadjusted/ un-recovered so far (August 2006).

The Management stated (August 2006) that action was being taken to get the advances recovered/adjusted from the concerned officials.

Transfer of food grains from one scheme to other scheme

2.1.23 The MD issued directives (February 2004) to all RMs, DMs and Accounts in-charge that the transfer of food grains from one scheme to another shall not be permitted so as to avoid losses on account of differential cost of food grains under the schemes.

In contravention of MD's directions, transportation of food grains from one scheme to other resulted in loss of Rs.9.86 lakh.

It was noticed in audit (February 2006) that, in-contravention of the above orders, 17 District Offices (out of 24 District Offices) made frequent transfer of food grains from one scheme to another ranging between 30 to 68992 quintals during 2004-05 under various schemes as detailed in **Annexure-12.**

The Company, however, did not work out the scheme-wise transfer of food grains to ascertain the actual loss. Test check of records (April 2006) of Allahabad district revealed that during the year 2004-05, 3855.60 quintals of food grains were transferred from one scheme to another scheme resulting in loss of Rs.9.86 lakh (worked out by Audit on the basis of the differential cost of food grains under the schemes).

No investigation has been conducted by the Management for ascertaining the reasons for these transfers so as to fix responsibility of the defaulting officers.

The Management stated (August 2006) that strict directions had been issued to RMs/DMs to ensure the non-transfer of food grains from one scheme to other schemes. In respect of loss of Rs.9.86 lakh in Allahabad district office, it was stated that an amount of Rs.0.47 lakh has since been recovered. However, the reasons for transfer of food grains from one scheme to the other had not been investigated nor had the loss on account of transfer been worked out to take action against defaulting officers/officials.

Unrealised Margin Money

2.1.24 The guidelines of the scheme provide that the Company shall prefer the claims for margin money fixed by the Government under each scheme on a monthly basis with the concerned departments of the State for meeting the handling and transportation expenses and godown rent *etc.* Under Mid Day Meal (MDM) scheme the claims for margin money were lodged by the Company's Headquarters and in other schemes by its District Offices with the concerned departments. The claims under the MDM scheme were, however, not lodged by the Headquarters regularly. In the year 2001-02 the claims were lodged yearly and during the period 2002-03 to 2005-06 the claims were lodged half yearly and quarterly.

In this connection, the following further points were observed in audit:

- Scheme-wise control registers indicating the margin money due, claims preferred, amount received, claims rejected were not maintained by the Headquarters/District Offices. As a result the actual position of claims preferred and shown outstanding could not be ascertained in audit.

The Management stated (August 2006) that information was being called for from the District Offices and after receipt of the same the scheme-wise control register would be maintained.

Claims valuing Rs.14.20 lakh was rejected due to non-submission of claims in time.

- In Sitapur district, under *Sampoorna Gramin Rojgar Yojna* (SGRY) scheme, claims of margin money were not preferred on monthly basis. As a result, an amount of Rs.14.20 lakh was not paid by the District Rural Development Agency (DRDA) on the grounds that the claims were not submitted in time. No follow up action has been taken by the District Offices for recovery of the amount.

- The Gonda district office did not prefer the claims of margin money for Rs.49.90 lakh in respect of *Antyoday* scheme for the year 2003-04 and

2004-05 with the Food Department. The claims of Rs.37.54 lakh under SGRY and Rs.2.21 lakh under *Annapurna* scheme for the year 2004-05 were also not preferred, for which no reasons were available on record.

The Management stated (August 2006) that in case of claims of Rs.14.20 lakh in Sitapur district, DRDA has stopped the payment due to irregularities in the adjacent district (Lakhimpur). The reply is not acceptable as no documents were furnished to Audit in this regard. In respect of claims in Gonda district, the Management did not furnish any reply.

Shortages of food grains in TPDS

2.1.25 According to the directives of the MD (September 2001, February 2002 and February 2004), all RMs/DMs/Accounts in-charge were required to inspect and undertake physical verification of godowns frequently for ensuring proper accountal of food grains lifted and delivered under various Government schemes, maintenance and updation of prescribed registers. It was, however, noticed in audit that due to non-inspection and supervision of godowns by RMs/DMs/Accounts in-charge, there were heavy shortages of food grains. Further, the MD had issued (February 2002) directives to all RMs/DMs/Accounts in-charge for taking effective steps for recovery of shortages/misappropriation reported by Internal Audit/ Management. However, no effective steps were taken to recover the shortages, and the shortages increased from Rs.12.21 lakh in the year 2003-04 to Rs.2.62 crore in the year 2005-06 (accumulated shortages Rs.5.55 crore) as detailed below:

(Rs. in lakh)

Particulars	2002-03	2003-04	2004-05	2005-06 (up to December 2005)
Opening Balance of shortages recoverable at the beginning of the year	176.83	190.63	185.85	314.20
Addition during the year	46.97	12.21	153.06	261.65
Total	**223.80**	**202.84**	**338.91**	**575.85**
Recovery made during the year	33.17	16.99	24.71	20.81
Balance at the end of the year	**190.63**	**185.85**	**314.20**	**555.04**
Percentages of recovery to the total shortages	14.82	8.38	7.29	3.61

In this connection, the following points were observed in audit:

- Under TPDS, the food grains are delivered by the godown in-charge to Fair Price Shops (FPS) after obtaining bankers cheques/drafts in advance against the cost of food grains, so that chances of cash shortages are not there. As such, the entire shortage of Rs.5.55 crore is related to the shortage of food grains only.
- The Company did not compile figures of scheme-wise shortages in each year.
- The percentage of recovery during 2002-03 to 2005-06 was very poor and ranged between 3.61 to 14.82. The reasons for poor recovery were delay in finalisation of recovery proceedings by the Management and delay in effecting the recovery by the DMs/Accounts Incharge against the concerned godowns in-charge. Reasons for the increasing shortages, as analysed by Audit, were mainly the absence of inspections of godowns at regular intervals, surprise checks of godowns by the competent authority and lack of monitoring.

The Management stated (August 2006) that against the shortages of

To avoid recovery of food grains shortages at double the normal rates, food grains storages of Rs.71.89 lakh was shown as cash shortages.

Rs.5.55 crore, Rs.1.35 crore had been recovered from the officials/officers. Had recovery action been initiated immediately after the occurrence of the shortages and frequent inspections of godowns been carried out by the District Managers/Accounts in-charge, these shortages/ misappropriation could have been avoided/reduced.

- According to instructions issued (January 1998) by the Managing Director to all Regional Managers, District Managers/District in-charge, if any shortage of food grains took place in a godown, the cost of food grains would be recovered at double the cost of food grains applicable for Above Poverty Line (APL) Scheme at that time. The food grains are required to be delivered to FPS by the godown in-charge after obtaining banker's cheque/draft towards the cost of food grains. In no case were the food grains to be delivered without obtaining the banker cheque/draft. It was, however, noticed in audit that some district offices, in order to regularise the shortages of food grains in their stock, were actually not delivering the food grains but showing the same as delivered without obtaining the banker's cheque/draft. Such type of shortages of food grains valuing Rs.71.89 lakh were shown as cash shortages by the district offices of Varanasi, Gonda, Bahraich, Shrawasti, Sitapur, Shahjahanpur, Chitrakoot and Hardoi during 2001-02 to 2004-05 only to avoid the recovery of shortage of food grains at double the cost of food grains. No investigation, however, was made to fix responsibility and to take remedial measures to avoid such shortages in future.

Irregular issue of food grains in MDM scheme

2.1.26 Under MDM scheme the food grains (wheat and rice) are to be delivered to FPS for free distribution among the children enrolled in primary classes (I to V) in Government/Government aided, local body schools during the academic session July to April in each year. The MD issued (September 2001 and February 2004) directions to each District Manager and Accounts in-charge to inspect each godown frequently and ensure compliance with the guidelines of the scheme in lifting and delivery of food grains.

It was noticed (April 2006) in audit that no inspection of godowns was carried out by the District Managers/Account in-charge of Sitapur, Balrampur, Bahraich and Lucknow. As a result food grains were issued by godowns in-charge without allotment as detailed below:

- Sitapur, Balrampur and Baharich godowns in-charge issued 2368.92 quintals of food grains (wheat and rice) valued at Rs.13.48 lakh in the month of May and June 2005 whereas no food grains were to be issued in these months. No responsibility was fixed for irregular issue of food grains.

- Similarly, 1173.59 quintals of food grains (wheat and rice) valued at Rs.6.66 lakh were issued in excess over the allotments to FPS during 2001-02, 2004-05 and 2005-06 by the godown-in-charges of Lucknow (Sarojini Nagar, Buxi Ka Talab), Baharaich (Huzurpur) and Balrampur (Balrampur) districts. No action, however, has been taken against the defaulting officers/officials so far (August 2006).

The Management stated (August 2006) that the distribution of food grains in the month of May and June under MDM scheme in Sitapur, Bahraich and Balrampur godowns was made as per directions of the concerned District

Magistrates. Further, it was stated that the delivery to fair price shops was made as per allotment made by the *Zila Basic Siksha Adhikari*/District Supply Officers. The reply is not acceptable as no documents were provided by the Management to show that orders were issued by the District Magistrates concerned.

Monitoring and evaluation

Compliance with Board of Directors decisions

2.1.27 The Company had not put in place any system of obtaining feed back to ensure compliance with the BOD's decisions. As an illustrative case, it was seen during audit that the BODs decision (June 2002) that cloth available in the local market of the State (Tanda, Akbarpur, Mauranipur and Pariyawan) may be purchased and sold through its Janata Stores was not complied with. The fact of not taking up the activity was also not reported to the BOD.

The Management stated (August 2006) that due to closure of Janta Stores, these activities could not be taken up and it was further stated that the Board would be apprised in its next meeting. The reply is not tenable as the decision was taken by the Board in June 2002 when the Janta Stores were in operation.

The absence of a mechanism to ensure compliance with its decisions was a major internal control failure.

Information and Communication system

2.1.28 In order to have effective internal control and achieve its objective information relating to activities of the organisation is needed at all levels of the Company. Effective communication should flow down throughout all sections/wings of the Company. There should be clear and direct communication between staff and Management for maintenance of its business process. It was noticed in audit (March 2006) that the information and communication system in the Company was not effective as discussed below:

- Monthly and Quarterly reports were submitted by District Offices after delays of one to four months.
- There was no system for examination and evaluation of reports submitted by District Offices.
- The Company did not maintain a guard file of orders/directives/circulars issued by the Government and by the Managing Director from time to time during 2001-02 to 2005-06. As a result, flow of directions at the implementation level could not be ensured by the Management and compliance of these orders could not be verified in audit.
- In order to improve the administrative system and services as well as to effect transparency in working through computerisation, the State Government under its information and technology policy formulated (August 2002) a scheme for purchase and application of software in all Public Sector Undertakings. Accordingly, the BOD decided (June 2004) to create an Information Technology environment in the Company. Computers valuing Rs.12.02 lakh were purchased (February 2005) for the Headquarters of the Company but the same could not be operated due to non-installation of server. Further, the District Offices were not provided with any hardware/software for smooth and speedy

transmission of information.

The Management stated (August 2006) that instructions have been issued to the field offices to submit the monthly reports in time and evaluation of these reports would be ensured at Headquarters. Further, the server has been installed and action has been taken to get all the required modules prepared for effective information and communication system.

Monitoring

2.1.29 Monitoring of important activities is a vital tool of an internal control system aimed at ensuring that control is being carried out as intended and appropriately modifications are being made for changes in conditions. The Company, however, failed to monitor its activities efficiently as neither was compliance to directives issued by the Company ensured nor was implementation of different schemes of the Government by its District Offices effectively monitored by the Management. The compliance to internal audit observations was also not ensured by the District Offices. Further, the monthly reports submitted by District Offices were also not evaluated at the Headquarters of the Company.

Internal Audit

Internal Audit System

2.1.30 Internal Audit is an appraisal activity established within an entity, which aims at examining, evaluating and monitoring the adequacy and effectiveness of accounting and internal control system. The Internal Audit Wing in the Company was inoperative from 1983-84 to August 2001 due to deployment of the internal audit staff in the implementation of Government schemes. It was again established in September 2001 with a staff strength of three Managers (Audit) and 20 Sr. Auditors/Auditors under the control of the Finance Controller. The internal audit system in the Company was, however, not effective in view of the following:

- There was no Internal Audit Manual indicating the scope and coverage of internal audit.

Internal audit findings were not complied with.

- No Annual Audit Plan for regular internal audit indicating period and duration of audit, supervision, *etc.* was drawn up during 2001-02 to 2005-06.
- Audit reports of all District Offices (except Balrampur) were generally not prepared in the format prescribed by the Management (May 2002 and July 2005).
- During 2001-02 to 2005-06, internal audit was conducted only in 190 to 260 godowns, out of 233 to 273 godowns.
- Proper records/registers were not maintained to oversee the progress of the Internal Audit.
- The Company did not take corrective measures to rectify the irregularities pointed out in the internal audit reports. Instances of shortages of food grains valuing Rs.1.89 crore as pointed out by Internal Audit Wing in their reports are tabulated in **Annexure-13.** No action had, however, been taken against the defaulting officers/officials.

The Management accepted the audit comment and stated (August 2006) that an Internal Audit Manual would be prepared and an annual audit plan would be formulated.

Audit Committee meetings

2.1.31 Section 292A of the Companies Act, 1956 provides that every Public Company having paid-up capital of not less than rupees five crore is required to constitute a Committee of Board known as Audit Committee (AC). The committee should have discussions with the Auditors periodically about the internal control system, scope of audit including audit observations of the Auditors and review the half yearly and annual financial statements before submission to the BOD and also ensure compliance to internal control system.

In this connection, it was observed by Audit that although ten meetings of the AC were held during September 2001 to December 2005, the internal control system prevailing in the Company, its adequacy or compliance was never discussed. Further, though the progress of preparation of Annual Accounts (pending since 1990-91 onwards) was discussed in each meeting, no action plan for early preparation of accounts was formulated.

The Management agreed and stated (August 2006) that the provisional accounts up to 2004-05 had been got prepared through firms of Chartered Accountants. The Management further stated that an action plan had been drawn up to finalise all the accounts by August 2009. The Management, however, did not give any reply regarding deficiencies in the working of the Audit Committee.

Acknowledgement

2.1.32 Audit acknowledges the co-operation and assistance extended by different levels of officers of the Company/Government at various stages of conducting the performance audit.

Conclusion

The internal control system in the Company was deficient. Budgetary control was ineffective as neither was the budget prepared in time nor were variances analysed. Financial management was unsatisfactory as the Company failed to recover its margin money from different Government Departments. The accounts of the Company were in arrears for 16 years since 1990-91 and compliance with the BOD's decisions and Management directives was not ensured. The Corporate Plan and Functional Manuals (Administrative, Accounting and Audit) were not prepared resulting in poor monitoring of the various activities of the Company. Compliance with the provisions of Government schemes during implementation was not ensured resulting in various irregularities *viz.* non-achievement of target of procurement of food grains, short lifting of food grains from FCI depots and irregular issue of food grains under MDM scheme *etc.* Besides, no concerted efforts were made by the Company to ensure recovery of shortages/ misappropriation from the defaulting officers/officials. The role of the Audit committee was not effective and the internal audit reports were not used as a tool of internal control due to lack of effective monitoring and follow up action on internal audit observations.

Recommendations

- **The Company should prepare Functional Manuals (Administration, Accounting and Audit Manual) for regulating various operations of the Company and strengthening the Internal Control mechanism.**

- **During implementation of Government schemes, compliance with schemes guidelines and directives/orders of the top Management should be ensured for achieving the objectives of the schemes.**
- **Monitoring at each level in the Company needs to be strengthened so as to ensure that the control over important activities is being carried out as intended.**
- **A sound Management Information System should be put in place.**

2.2 Efficiency in billing and collection of revenue in Kanpur Electricity Supply Company Limited

Highlights

The Company could not recover even the cost of energy from the consumers due to huge distribution losses ranging from 32.27 to 43.30 per cent and value of such losses in excess of norms aggregated to Rs.384.34 crore during the last five years up to 31 March 2005.

(Paragraph 2.2.8)

The Company suffered loss of revenue due to non-levy of additional demand charges, late payment surcharge and shunt capacitor surcharge aggregating Rs.3.23 crore.

(Paragraphs 2.2.14, 2.2.21and 2.2.23)

The Company failed to issue bills to Kanpur Development Authority for 3800 street light points resulting in undercharge of revenue aggregating Rs.3.47 crore.

(Paragraph 2.2.22)

Failure of the Company in timely issue of electricity bills to the consumers resulted in loss of interest aggregating Rs.1.32 crore.

(Paragraph 2.2.15)

Failure of the Company in periodical checking of meters of the consumers resulted in loss of revenue aggregating Rs.1.06 crore.

(Paragraphs 2.2.11, 2.2.12 and 2.2.13)

The Company failed to realise revenue arrears from the consumers. This resulted in increase in revenue arrears from Rs.1074.20 crore in the year 2001 to Rs.1515.50 crore at the end of March 2006.

(Paragraph 2.2.25)

Introduction

2.2.1 The Kanpur Electricity Supply Company Limited (erstwhile Kanpur Electricity Supply Administration-KESA of Uttar Pradesh State Electricity Board) was incorporated (July 1999) as a subsidiary company of Uttar Pradesh Power Corporation Limited (UPPCL) with the main objective of distribution of power in the urban areas of Kanpur city. The Company started operations with effect from 14 January 2000.

The Management of the Company is vested in a Board of Directors consisting of maximum twelve Directors including a Chairman and a Managing Director (MD). There were six Directors on the Board as on 31 March 2006. The MD is the Chief Executive of the Company responsible for day-to-day working of the Company. He is assisted by a Deputy Chief Accounts Officer, one General Manager and six Assistant General Managers (AGM) at the Headquarters and three General Managers and 20 AGMs in the field offices. The Company in violation of Section 383-A of the Companies Act, 1956 has been working without a Company Secretary since its incorporation.

The last review on overall performance of the erstwhile Kanpur Electricity Supply Administration- KESA was featured in the Report of the Comptroller and Auditor General of India (Commercial) Government of Uttar Pradesh, for the year ended 31 March 1991 which has not been discussed by the

Committee on Public Undertakings so far (September 2006).

Scope of Audit

2.2.2 The present performance review conducted during November 2005 to April 2006 covers examination of the overall efficiency of the Company in billing of all categories of consumers for energy sold, collection of revenue and its accountal during 2001-02 to 2005-06.

2.2.3 The table given below indicates category-wise number of consumers, connected load and revenue assessed. The sample selected in audit is based on connected load and selected consumers and assessment of revenue thereagainst under various categories as on 31 March 2005, which represented more than 25 *per cent* of total revenue assessed:

Sl. No.	Category of consumers	No. of consumers	Connected load (in KW)	Assessment of revenue during the year 2004-05 (Rs. in crore)	Connected load of selected consumer's (In KW)	Assessment of revenue of selected consumers' (Rs. in crore)	Percentage of revenue assessed of selected consumers to total revenue assessed (7/5 x 100)
1	**2**	**3**	**4**	**5**	**6**	**7**	**8**
1.	Domestic	343871	585785	258.16	7630	3.36	1.30
2.	Commercial	71850	188670	114.71	14316	8.71	7.59
3.	Public lighting	33	7193	7.95	7193	7.95	100.00
4.	Public and Private Institutions	784	34816	35.27	23645	23.95	67.91
5.	Small & Medium power	6199	111334	58.99	2173	1.18	2.00
6.	Public Water Works	147	14697	17.26	10919	12.82	74.28
7.	Large & Heavy Power	370	91368	112.81	88649	109.45	97.02
	Total	**423254**	**1033863**	**605.15**	**154525**	**167.42**	

Apart from the above, the over all performance in respect of all categories of consumers with reference to outstanding arrears, non-disconnection of supply of defaulting consumers, delay in finalisation of permanent disconnection and inoperative consumers billing was also examined.

Audit objectives

2.2.4 The Audit objectives were to ascertain whether:

- billing operations were carried out efficiently;
- the collection of revenue was efficient and prompt;
- accountal of revenue collected was accurate and was remitted into the bank promptly;
- effective efforts were made to realise/reduce the revenue arrears;
- the internal control system was efficient and effective.

Audit criteria

2.2.5 The audit criteria adopted for assessing the achievement of audit objectives were:

- billing schedule, tariff, distribution code and commercial/

revenue manuals issued by UPERC and UPPCL.

- directives, rules and regulations framed by the UPPCL for billing of all categories of consumers.
- guidelines of the UPERC/UPPCL/Company regarding collection of revenue.
- Government/UPERC/UPPCL directives, rules/regulations for taking action against the defaulting consumers.

Audit Methodology

2.2.6 The following mix of audit methodologies were adopted for achieving the audit objectives of the performance review:

- Study of Regulation/Orders/Distribution Codes issued by UPERC and Commercial & Revenue Manual/Orders of UPPCL as adopted by the Company.
- Examination of annual reports, agenda and minutes of the Board's meetings, performance reports of the Company.
- Scrutiny of agreements executed with consumers, meter readings, sealing certificates, billing files, correspondence files along with ledger, revenue collection system and other reports.
- Analysis of targets and achievements of the revenue and effectiveness in realisation of revenue.
- Issue of audit enquiries and Interaction with the Management.

Audit Findings

2.2.7 Audit findings, arising from the performance review of Efficiency in Billing and Collection of Revenue in Kanpur Electricity Supply Company Limited were issued to the Management/Government in June 2006 and were discussed in the meeting of the Audit Review Committee for State Public Sector Enterprises (ARCPSE) held on 11 August 2006. The Managing Director of the Company attended the meeting. The views expressed by the Management during the meeting have been taken into consideration while finalising the review.

The results of the performance audit involving financial impact of Rs.19.70 crore are discussed in the succeeding paragraphs:

Billing Operations

2.2.8 As per procedure prescribed in the Commercial and Revenue Manual, the Company is required to take energy consumption reading of each consumer at the end of the notified billing cycle. After obtaining meter readings, the Company issues bills to the consumers for consumption of energy recorded in the meters installed at their premises. Billing of domestic, commercial and small & medium power consumers was computerised while in case of other category of consumers[*], billing was done manually at the Headquarters of the Company. Domestic consumers were being billed bi-monthly while other consumers were billed monthly.

[*] Large & heavy power, public and private institutions, public lamps and public water works.

The table given below indicates the position of energy required, energy received by the Company, sale of energy and loss of energy during the last five years up to 31 March 2005.

Sl. No.	Particulars	2000-01	2001-02	2002-03	2003-04	2004-05
						(Provisional)
1	Requirement of energy (MU)	2348.00	2395.00	2084.00	2320.00	2366.00
2	Energy purchased (MU)	2348.188	2577.020	2208.606	2346.666	2308.812
3	Energy purchased (Rs in crore)	509.24	494.58	425.68	448.48	439.78
4	Total cost of the energy purchased* (Rs in crore)	651.65	655.67	582.15	600.51	600.24
5	Cost of energy purchased per KWh (Rupees) (4/2)	2.78	2.54	2.64	2.56	2.60
6	Energy sold (MU)	1590.366	1709.603	1252.338	1353.030	1405.190
7	Loss of energy (2–6) (MU)	757.822	867.417	956.268	993.636	903.622
8	Sales of energy** (Rs in crore)	577.43	568.18	450.78	463.76	454.04
9	Cost of sales of energy per KWh (Rupees) (8/6)	3.63	3.32	3.60	3.43	3.23
10	Value of loss of energy (Rs. in crore) (9X7)	275.09	287.98	344.26	340.82	291.87
11	Percentage of distribution loss (7/2X100)	32.27	33.66	43.30	42.34	39.14
12	Percentage of distribution loss fixed by UPERC	25.00	31.28	35.77	26.10	24.20
13	Maximum loss of energy allowed by UPERC (MU) (2X12)	587.047	806.092	790.018	612.480	558.732
14	Loss of energy in excess of norms (7-13) (MU)	170.775	61.325	166.250	381.156	344.890
15	Value of energy lost above the norms (14X9) (Rs in crore)	61.99	20.36	59.85	130.74	111.40

High distribution losses over the prescribed norms of UPERC resulted in potential loss of revenue aggregating Rs.384.34 crore.

It would be seen from the above details that the Company purchased energy in excess of requirements during 2001-02 to 2003-04. The UPERC had fixed target of distribution losses ranging between 24.20 to 35.77 *per cent* in the tariff orders for the years 2000-01 to 2004-05. These targets were fixed by UPERC in consultation with the Company and were based on the past performance. As against these targets, the Company suffered distribution losses between 32.27 and 43.30 *per cent* during the above period. The Company thus suffered distribution losses in excess of the targets fixed by UPERC. As a result, the Company could not sell 1124.396 MU of energy valued at Rs.384.34 crore during five years up to 31 March 2005. It was noticed in audit that the Company despite heavy distribution losses, failed to analyse feeder-wise distribution losses.

The deficiencies noticed in billing operations are discussed in the succeeding paragraphs:

Ad-hoc billing

2.2.9 As per provisions of distribution code, billing of each consumer should be done in time, based on meter readings and no consumer should be left un-billed. It was observed in audit that there was a significant number of un-billed consumers (21 *per cent*) at the end of 31 March 2005. Despite this having been pointed out in the Report of the Comptroller and Auditor General of India (Commercial), Government of Uttar Pradesh for the year 31 March

* Includes purchase of power, establishment expenses, repair & maintenance cost, other financial expenses, administrative expenses and depreciation.

** Sales of energy minus electricity duty.

1991, a large number of metered consumers were still being billed on ad-hoc basis (50 *per cent*) either for minimum charges or for fixed units on the grounds of no access (NA), no reading (NR), reading defective (RDF), informed defective (IDF) and appears defective (ADF). The position of such consumers at the end of March 2005 was as under:

<table>
<tr><th rowspan="3">Category of consumers</th><th rowspan="3">Number of consumers</th><th rowspan="3">Numbers of billed consumers</th><th rowspan="3">Number of un-billed consumers</th><th colspan="5">Details of ad-hoc billing in respect of billed consumers</th></tr>
<tr><th colspan="2">NA/NR</th><th colspan="2">RDF/IDF/ADF</th><th rowspan="2">Percentage (5) + (7) / (3) x 100</th></tr>
<tr><th>No.</th><th>Percentage to total billed consumers</th><th>No.</th><th>Percentage to total billed consumers</th></tr>
<tr><th>(1)</th><th>(2)</th><th>(3)</th><th>(4)</th><th>(5)</th><th>(6)</th><th>(7)</th><th>(8)</th><th>(9)</th></tr>
<tr><td>Domestic light & fan</td><td>3,43,871</td><td>2,81,657</td><td>62,214
(18.09)*</td><td>64,534</td><td>22.91</td><td>83,244</td><td>29.56</td><td>52.47</td></tr>
<tr><td>Commercial</td><td>71,850</td><td>47,207</td><td>24,643
(34.30)*</td><td>6,350</td><td>13.45</td><td>11,851</td><td>25.10</td><td>38.55</td></tr>
<tr><td>Small & medium industries</td><td>6,199</td><td>3,602</td><td>2,597
(41.89)*</td><td>841</td><td>23.35</td><td>268</td><td>7.44</td><td>30.79</td></tr>
<tr><td>**Total**</td><td>**4,21,920**</td><td>**3,32,466**</td><td>**89,454
(21.20)***</td><td>**71,725**</td><td></td><td>**95,363**</td><td></td><td>**50.26**</td></tr>
</table>

This indicates that the Company, whose jurisdiction falls in the urban area only, failed to ensure billing in all cases and proper assessment in case of metered consumers.

The Management stated (October 2006) that the audit observation regarding ad-hoc billing of 50 *per cent* in respect of defective meters is not correct. The reply of the Management is not tenable since the Audit observation is based on the records (meter exception reports) of the Company.

Failure in checking of meters periodically

2.2.10 In terms of Para 5.1 of the Commercial & Revenue Manual, the Company is required to examine the accuracy of meters, test & regulate all meters and maximum demand indicators (MDI) before their first installation as well as at least once in a period of five years, two years and one year in case of consumers having contracted load up to 6 KVA, above 6 KVA and up to 100 KVA and above 100 KVA respectively. Records available with the Company, however, did not reflect the extent of such periodical checking of meters.

Due to ineffective periodical checking/testing of meters, the Company suffered loss of revenue of Rs.1.06 crore.

Due to ineffective periodical checking/testing of meters installed at the premises of the consumers, the Company suffered loss of revenue to the extent of Rs.1.06 crore due to non-assessment of energy against the erratic behaviour of energy meters in the following cases:

2.2.11 According to clause 5.26 of Uttar Pradesh Electricity Supply Code 2002 (Distribution Code), if at any time a meter becomes defective, the energy consumed by the consumer during the period, shall be determined on the basis of average consumption of the preceding three or consecutive three months from the date when the meter became defective.

It was noticed in audit that in case of Cawnpore Woolen Mills Ltd. having contracted load of 1,000 KVA at 11 KV line, two numbers electro-mechanical meters (L&G make) installed at the premises of the consumer for measurement of energy, were replaced (17 June 2002) by an electronic meter (Secure make). The 'Secure' meter recorded correct consumption up to October 2002 and thereafter recorded less consumption. The 'Secure' meter

* Figures in brackets indicate percentage of un-billed consumers to total consumers.

was also replaced by Duke Arnics make meter in March 2003 which also recorded less consumption up to August 2003 and was replaced in September 2003. The Company neither ascertained the extent of accuracy of the meters (Secure and Duke make) nor revised the bills on the basis of previous three months average consumption (during August 2002 to October 2002) when it was functioning properly. This resulted in under assessment of 18,90,210 KVAh of energy valuing Rs.70.88 lakh* during November 2002 to August 2003. Since the Company, in terms of the provisions of Distribution Code cannot raise bills relating to periods which are more than two years old, it suffered loss of revenue to that extent.

The Management stated (October 2006) that the consumption of the consumer was monitored and in case of low consumption the consumer was billed for Rs.9.63 lakh for the period December 2002 to February 2003 which was realised in March 2003. In this connection it is pertinent to mention that the billing done by the Company was short by Rs.13.21 lakh and an amount of Rs.61.25 lakh (Rs.13.21 lakh under assessed and Rs.48.04 lakh un-assessed for the period from March 2003 to August 2003) still (October 2006) remained unrealised resulting in loss to that extent.

2.2.12 Ganges Club Ltd. Kanpur having contracted load of 120 KW (SC.no.4/8245) getting supply at 400 volts under LMV-2, started receiving supply at 11 KV from 25 September 1999 with changed meter of appropriate rating with the condition to maintain power factor at 0.85. It was noticed in audit that after installation of the new meter the power factor of the meter ranged between 0.27 and 0.80 during October 1999 to November 2005. The consumption recorded by the new meter was erratic and this was required to be assessed on the basis of power factor of 0.85. The Company failed to assess the energy consumption at 0.85 power factor which resulted in undercharge (difference of billable energy and energy actually billed) of energy consumption of Rs.27.75 lakh during October 1999 to November 2005. The Company, thus, suffered loss of revenue to the extent of Rs.27.75 lakh.

2.2.13 Similarly, in case of Director, Indian Institute of Pulse Research billed under LMV-4 the power factor of the meter installed at the consumer's premises ranged between 0.66 to 0.83 during October 2001 to November 2005, but the Company did not check the accuracy of the meter, which resulted in non-assessment of energy charges aggregating Rs.7.81 lakh due to non-accountal of 2, 29,123 units (difference of billable energy and energy actually billed).

The Management stated (October 2006) that the billing of the above consumers was done as per tariff provisions. The reply of the Management is not tenable as it failed to ascertain the accuracy of the meters.

Demand and additional demand charges not recovered

2.2.14 As per rate schedule, the consumers are required to restrict their demand within contracted loads. In any month, if the maximum demand of any consumer having TVM/MDI** exceeds the contracted load, such excess demand shall be charged at twice the normal rate in addition to demand charges for actual demand. Audit scrutiny of 146 consumers (other than large & heavy and small medium power consumers) revealed that in 18 cases neither

* Average consumption during November 2002 to August 2003 = 140745 KVAh per month, preceding three months average consumption = 329766 KVAh per month, Under charge per month = 329766 - 140745 KVAh = 189021 KVAh, Total under charge = 189021 KVAh X 10 months = 1890210 KVAh, Value of under charge = 1890210 X Rs.3.75 per KVAh = Rs.70,88,287.00

** Tri-vector meter (TVM), Maximum demand Indicator (MDI) normal demand charges for excess over contracted demand were charged nor additional charges for excess over demand were charged during April 2003 to August 2005, which resulted in under charge of revenue of Rs.16.16 lakh (normal demand charges: Rs.10.95 lakh and additional demand charges: Rs.5.21 lakh).

The Management stated (October 2006) that there was no provision for levy of additional demand charges in respect of consumers billed under LMV-4 prior to September 2003 and in respect of LMV-7 consumers prior to December 2004. It further stated that it has since levied demand and additional demand charges amounting to Rs.12.75 lakh in respect of 11 consumers out of which Rs.5.48 lakh has been recovered from seven consumers. The reply of the Management is not tenable as Audit has calculated additional charges in respect of LMV-4(A) and LMV-7 consumers from September 2003 and December 2004 respectively. The fact, however, remains that the bills (for Rs.12.75 lakh) were raised by the Company only after this was pointed out by Audit. The bills raised were still short by Rs.3.41 lakh and recovery of the balance Rs.7.27 lakh was awaited (October 2006).

Delay in issue of bills and allowing extra period for payment of dues

2.2.15 Para 6.8 of Commercial and Revenue Manual stipulates that meter reading of consumers should be completed during last three days of the month and bills issued by 3rd of the next month. According to Para 19 (VII) of Electricity Supply (Consumer) Regulation 1984, seven days are allowed for payment of energy bills. Further, Para 6.5 of Distribution Code 2002 (effective form July 2002) allows 15 days for payment of electricity bills from the date of issue of bills.

From the above, it is clear that due date of payment was not to go beyond 10th of next month (up to June 2002) and 18th of the next month after June 2002.

Test check of billing records of all the 37 large and heavy power consumers having annual assessed value of more than Rs.20 lakh revealed that in case of three consumers there were significant delays up to 10 days in preparation of bills from the date of meter readings and a period of 20 days was allowed for payment of bills from the date of issue of bills during the period April 2001 to October 2005. Considering a normal period of 3 days for preparation of bills and 7 to 15 days for their payment, there was delay in issue of energy bills and excessive period was allowed to the consumers for making payment of their bills, reasons for which were not available on record. This, resulted in extending undue benefit to these consumers as well as loss of interest to the extent of Rs.1.32 crore at the rate of 18 *per cent* applicable for late payment surcharge as given below:

Sl. No.	Name of consumers	Service Connection number	Period	Amount of bills (Rs in lakh)	Delay in days	Loss of interest (Rs. in lakh)
1.	IIT, Kanpur	3/3177	4/2001 to 10/2005	27.96 to 108.68	1 to 15	9.86
2.	IEL Ltd.	16/701	4/2001 to 6/2002, 8/2005 to 10/2005	350.26 to 1812.35	14 to 15	120.86
3.	LML Ltd.	16/2088	2/2002 to 10/2005	38.97 to 103.13	1 to 7	1.56
					Total	**132.28**

The Management stated (October 2006) that considering the large number of consumers and scattered area of Kanpur City it was not practically possible to complete the reading during the last three days of the month and issue the bills by third of the next month. The reply of the Management is not tenable as the Company was required to adhere to the provisions of the Distribution Code for timely issue of bills.

Short assessment of electricity duty

2.2.16 In January 1997, the State Government notified rates of Electricity Duty (ED) at the rate of Rs.0.03 per unit sold to Government Departments or used by the State Government and at the rate of Rs.0.09 per unit for energy sold to other metered consumers. It was further notified that ED at the rate of 20 *per cent* was leviable in case of un-metered supply on rate of charge (fixed charges and monthly fixed energy charges). The Company, however, undercharged the electricity duty aggregating Rs.22.13 lakh from the consumers and departmental employees as discussed below:

2.2.17 It was noticed in audit that the Company charged ED at the rate of Rs.0.03 per unit in place of Rs.0.09 per unit from Chandra Shekhar Azad Agriculture (CSA) University, Kanpur University and HBTI, Kanpur although these are not Government departments. This resulted in short realisation of ED amounting to Rs.14.75 lakh during 2000-01 to 2005-06.

2.2.18 As per provisions of the tariff LMV-10, applicable to departmental employees and pensioners, electricity charges and ED was required to be deducted from the salary/pension of the concerned employees/pensioners regularly/monthly at the rate applicable to them. Employees/pensioners of the Company were getting unmetered electric supply at the rate of charge applicable (fixed charges and fixed monthly energy charges) for each category of employees/pensioners. Accordingly, ED at the rate of 20 *per cent* was leviable on the rate of charge applicable to them. The Company, however, deducted ED at the rate of 20 *per cent* on fixed monthly energy charges only which resulted in under charge of ED on fixed charges to the extent of Rs.7.38 lakh from the employees of the Company during October 2001 to March 2006. The Company did not furnish records relating to ED charged from the pensioners of the Company.

The Management stated (October 2006) that it had issued the supplementary bills for Rs.15.88 lakh to the consumers (HBTI and CSA University) towards short levy of electricity duty. As regards, short levy of electricity duty on departmental employees/pensioners, the Management stated that as per the order (September 2001) of Director (Commercial), UPPCL the ED was not leviable on the 'fixed charge'. The reply of the Management is not tenable as the tariff order issued by UPERC read with the order of the State Government provides for levy of electricity duty on fixed charges also.

Non-levy of additional security deposit

2.2.19 Para 4.54.2 of Distribution Code 2002, provides that an additional security to cover the estimated power consumption for two months was to be determined and the same was to be reviewed every year. Accordingly, the Company was to give notice to the consumer for additional deposit if the security deposit fell short of the estimated power consumption bills for two months based on the average monthly consumption of the preceding financial year. The additional security deposit was to be paid by the consumer within 15 days of the notice. In case the consumer fails to deposit the additional security, the supply of the defaulting consumer was to be disconnected.

Test check of the records by Audit for the year 2005-06 revealed that the Company did not review the position of additional security amount to be levied during 2005-06. As a result in case of 215 consumers under various categories*, having contracted load of 18 KW to 2465 KW, additional security deposits aggregating Rs.7.09 crore were not realised by the Company during 2005-06. This resulted in extending undue benefit to the consumers.

The Management stated (October 2006) that after closing of the financial year 2005-06, additional security bills amounting to Rs.7.12 crore have now been issued (June 2006) to 219 consumers out of which Rs.9.73 lakh has since been realised (September 2006). Recovery of the balance amount of Rs.7.02 crore is still awaited (October 2006).

Revision of bills

2.2.20 As per Para 4.36 of distribution code-2002 supply should be disconnected temporarily if payment of energy bill was not made by the consumer concerned within seven days from the due date of payment. Further, if consumer fails to pay the energy bills continuously for six months, the supply was to be disconnected permanently and bills finalised accordingly.

For finalisation of permanent disconnection (PD) the date of temporary disconnection was a key factor and, if not available, was to be decided by a committee comprising Assistant Engineer (AE)/Junior Engineer (JE) of the area in case of LMV-1, LMV-2 and LMV-5 consumers and a committee of Executive Engineer (EE)/AE in case of LMV-6 and their decision would be final as per provision of Para 1.5 of the above Code. The above para further provides that the committee should obtain information from the neighbours to decide the date of temporary disconnection. For finalisation of PD, test report of meter lab showing status of meter, date of removal of cable and taking into the stock account of JE concerned was required to be mentioned in each case. Approval of EE concerned was also required to be obtained on each PD case.

Revision of PD bills without the approval of competent authority resulted in irregular adjustment of arrear of Rs.54.12 lakh.

Test check of the records of five divisions (EUDD, Kalyanpur, Dada Nagar Ratanpur, Nawabganj and Gumti) of the Company by Audit revealed that Rs.68.51 lakh on account of energy bills was outstanding for recovery against 92 consumers of different categories. The Company while finalising PD during 2004-05, however, revised these bills to Rs.14.39 lakh after waiving off Rs.54.12 lakh on the presumption that either the connections were disconnected earlier or the premises were left by the owners long back or the connections were not released. It was further observed that the dates of receiving back of cable/meter of consumers has not been mentioned in the PD report and in most of the PD cases approval of EE concerned was also not obtained. Thus, revision of PD bills without completion of the necessary formalities and approval of the competent authority (EE) was irregular and caused a loss of Rs.54.12 lakh to the Company.

The Management stated (October 2006) that PD has been finalised as per norms framed by UPPCL. The reply of the Management is not tenable as waiver of arrears was done on the presumption of non-availability of owner/disconnection of premises much earlier.

Non-levy of late payment surcharge

2.2.21 Rate Schedules of the tariff effective from 1 September 2003 subsequently revised from 1 December 2004 applicable to various categories of consumers (including LMV-3 and LMV-7) stipulates levy of surcharge/penalty for delayed payment of energy bills. Accordingly, if a bill is

* LMV-1: 12 nos, LMV-2: 23 nos, LMV-4: 40 nos, LMV-7 : 18 nos and HV-2: 122 nos.

not paid by the due date specified therein, a late payment surcharge per month for the number of days delayed beyond the due date is to be charged proportionately at the rates notified by the UPERC from time to time. It is levied on the unpaid amount of the bills excluding surcharge. It was noticed in audit that 40 consumers of LMV-7 category and two consumers of LMV-3 category, did not make payment of their energy bills for the period April 2004 to December 2005 and April to December 2005 respectively within the due dates specified therein but the Company did not levy late payment surcharge for the delayed period amounting to Rs.2.46 crore (LMV-7: Rs.2.20 crore and LMV-3: Rs.0.26 crore).

The Management stated (October 2006) that it is not possible to levy Late Payment Surcharge (LPS) on these Government consumers since the payment is made by the Government departments centrally to UPPCL after verification of the bills and there is difficulty in ascertainment of the actual dates of payment. The reply of the Management is not tenable as the LPS has to be levied in terms of provisions of the rate schedule for delay in payment and the Company's failure to ascertain the actual date of payment shows deficiency in the billing mechanism.

Non-billing of street light points

Non-billing of consumers resulted in under charge of revenue to the extent of Rs.3.47 crore.

2.2.22 It was noticed in audit that Assistant General Manager (AGM), EUDD Barra intimated (October 2004) that 3800 nos. street light points were connected with total load of 2000 KW to the newly developed area of Kanpur Development Authority (KDA) at the time of developing the area and requested the AGM (Bulk) for issuance of bills. AGM (Bulk), however, failed to issue any bill to KDA with the result that it remained unbilled (March 2006) causing undercharge of revenue to the extent of Rs.3.47 crore.

The Management stated (October 2006) that prior to creation of Barra division (2003-04) the area of Barra was under the jurisdiction of AGM Naubasta and total load of street light points was incorporated and billing was done accordingly. The reply of the Management is not tenable as despite intimation by AGM Barra (October 2004), billing for 3800 street light points was not done by AGM (Bulk).

Non-levy of shunt capacitor surcharge

Non-levy of shunt capacitor surcharge resulted in under charge of revenue to the extent of Rs.60.51 lakh.

2.2.23 Clause 4 (i) and (ii) of the Rate schedule LMV-3 applicable for Public lamps provides that all consumers are required to maintain an average power factor of more than 0.85. In case of consumer without static Trivector Meters (TVMs) if capacitors of appropriate rating are found missing or in-operational, a surcharge of 10 *per cent* on the amount of the bill shall be levied.

It was noticed in audit that four consumers of Kanpur City area under Public Lamps category were getting supply without static TVMs for street light and no shunt capacitors were installed at the consumer's end but the Company did not levy any shunt capacitor surcharge as provided in the tariff during December 2004 to December 2005. This resulted in under charge of revenue to the extent of Rs.60.51 lakh.

The Management stated (October 2006) that power factor of the above consumers could not be checked due to unmetered supply to these consumers. It further stated that test division never intimated that shunt capacitors were not installed. The reply of the Management is not tenable as shunt capacitor surcharge was leviable in terms of the provisions of the respective rate schedule and it was Management's failure that test divisions of the Company did not intimate about the non-installation of shunt capacitors.

Power supply to consumers at 6.6 KV

2.2.24 UPERC fixes tariff for each category of consumers on the basis of Annual Revenue Requirement (ARR) submitted by the Company. The tariff order is divided in two parts *viz.* for low and medium voltage (LMV) and for high voltage (HV) consumers. The rates chargeable to LMV consumers are based on supply at 400 volts and for HV consumers are based on supply at 11 KV. According to rate schedule HV-2, applicable to large and heavy power consumers, if the supply was made at 400 volts, the consumer was liable to pay extra charge at the rate of 10 *per cent* and 15 *per cent* of the amount calculated as per rate of charge during August 2000 to August 2003 and from September 2003 to date (October 2006) respectively. But no surcharge for consumers getting supply at 6.6 KV (lower than 11 KV) was notified by the UPERC (till date).

It was noticed in audit that a large number of consumers getting supply at 6.6 KV, were required to pay extra charge for lower supply voltage than 11 KV. The Company neither sought similar provision for 6.6 KV consumers while submitting ARR to UPERC nor realised extra charges from the consumers. On this being pointed out by Audit, UPERC asked (May 2006) the Company to furnish details of such consumers for consideration in the next revision of tariff. The decision of the UPERC on the above point is, however, awaited (October 2006). Thus, in the absence of any provision of surcharge of 6.6 KV consumers in the tariff, the Company could not levy/realise surcharge.

The Management stated (October 2006) that there was no specific order for levying surcharge on the consumers getting supply at 6.6 KV. It further stated that the decision of UPERC in this regard is awaited. The fact, however, remains that the Company did not intimate the UPERC in its ARRs about supply of power at 6.6 KV line.

Collection of revenue

2.2.25 As the Company's main source of income is revenue from sale of power, prompt collection of revenue assumes great importance. According to the procedure laid down in Distribution Code 2002, the consumer, may make payment of energy bills by cash (up to Rs.20,000), cheque drawn at a bank located at Headquarters of the Company and demand draft. The Company has 41 revenue collection counters at different locations in the city. The table below indicates balances outstanding at the beginning of the year, revenue assessed *vis-à-vis* revenue collected and amount waived off during the last five years up to 2005-06:

(Rupees in crore)

Sl. No.	Particulars	2001-02	2002-03	2003-04	2004-05	2005-06
1	**2**	**3**	**4**	**5**	**6**	**7**
1	Balances outstanding at the beginning of the year	837.48	1074.20	1167.98	1346.17	1346.06
2	Revenue assessed during year	691.20	593.23	572.69	598.85	648.75
3	Total amount due for realisation	1528.68	1667.43	1740.67	1945.02	1994.81
4	Amount realised during the year	446.59	361.29	394.50	411.88	479.31
5	Amount waived off during the year	7.89	138.16	---	187.08	---
6	Balance outstanding at the end of the year	1074.20	1167.98	1346.17	1346.06	1515.50
7	Percentage of amount realised to total dues (4/3)	29.21	21.67	22.66	21.18	24.03

1	2	3	4	5	6	7
8	Balance in terms of months' assessment (month)	19	24	28	27	28
9	Realisation target	468.00	468.00	456.00	420.00	525.00
10	Percentage of realisation target with reference to revenue assessed during the year	67.71	78.89	79.62	70.13	80.92
11	Realisation target as percentage of arrears (9/3 x 100)	30.61	28.07	26.20	21.59	26.32

It was noticed in audit that the Company fixed realisation targets keeping in view revenue assessed during the respective years and not in terms of total arrears outstanding at the end of previous years. It was further observed that realisation targets with reference to total arrears ranged between 30.61 *per cent* and 21.59 *per cent* during the five years up to 31 March 2006 which indicates poor recovery of old arrears. The Company could not even achieve its current realisation target with reference to revenue assessed during the year, with realisations ranging from 67.71 *per cent* in 2001-02 to 80.92 *per cent* in 2005-06 despite this having been pointed out in the Report of the Comptroller and Auditor General of India (Commercial), Government of Uttar Pradesh for the year ended 31 March 1991.

It was further noticed in audit that the reasons for low collection of revenue and huge arrears were mainly fixing of low targets of realisation, ineffective collection mechanism, non-finalisation of inoperative accounts, pending court cases, non-recovery under OTS scheme *etc.* The factors responsible for the ineffective system of collection of revenue are discussed in the succeeding paragraphs:

Recovery of dues

2.2.26 Clause 6.15 of the Distribution Code - 2005 read with Section 56 of the Electricity Act, 2003 provides that if the payment of electricity bill is not made within due date, the supply of the consumer may be disconnected and a notice under Section-3 of Uttar Pradesh Electrical Undertakings (Dues Recovery) Act, 1958 shall be issued allowing 45 days for payment. In case of default, the supply shall be disconnected permanently and Recovery Certificate (RC) under Section-5 of the Act, *ibid*, is required to be sent to the District Magistrate for recovery of dues as arrears of land revenue.

The position of issue of Recovery Certificates and realisation made there against during 2002-03 to 2004-05 is indicated in the table given below:

(Rupees in lakh)

Sl. No	Particulars	2002-03		2003-04		2004-05	
		No. of RCs	Amount	No. of RCs	Amount	No. of RCs	Amount
1	2	3	4	5	6	7	8
1	Opening balance at the beginning of the year	309	171.81	530	272.37	1105	638.83
2.	**Add** RCs issued	429	230.03	2110	1449.06	1563	1117.04
3.	**Less** RCs returned by the district authorities	136	99.01	1181	968.96	484	574.70
4.	**Net** realisable (1 + 2 - 3)	602	302.83	1459	752.47	2184	1181.17
5.	Realisations	72	30.46	354	113.64	219	44.39
6.	Balance (4 - 5)	530	272.37	1105	638.83	1965	1136.78
7.	Percentage of realisation to amount of RC (5/4 x 100)		10.06		15.10		3.76
8.	Dues from inoperative account		12100.00		14600.00		79794.00
9.	Percentage of RC issued to dues against inoperative account (4/8 x 100)		2.50		5.15		1.48
10.	Percentage of realisation to inoperative account (5/8 x 100)		0.25		0.78		0.06

The above indicates that the action taken by the Company for recovery of revenue arrears was not effective in view of the following:

- The Company did not maintain systematic consumer-wise details of issue of RCs, return of RCs and realisation made there against.
- The Company issued RCs for Rs.11.37 crore against the arrears of inoperative consumer accounts aggregating Rs.797.94 crore at the end of 31 March 2005.
- Realisation of revenue arrears during five years up to 31 March 2005 against RCs issued was very poor ranging from 3.76 to 15.10 *per cent*. This was due to the fact that the district authorities returned most of the RCs due to incomplete/wrong names and addresses of consumers and non-availability of the consumers.

The Management stated (October 2006) that efforts are being made to disconnect the supply of consumers defaulting in payment and issue of notices for recovery of dues.

Performance of raid teams

Despite heavy distribution losses, checking of consumers' premises by the raid teams was negligible.

2.2.27 In order to minimise the cases of pilferage/loss of energy and to save the Company from sustaining heavy financial losses on this account, Section 163 of Electricity Act 2003 specifies the power for a licensee to enter into the premises of a consumer and to inspect and test the apparatus. Accordingly, the Company constituted four raid teams which were accompanied by 21 police officials. These raid teams were supervised by AGM and other departmental officers. The AGM was to prepare a work plan by identifying such consumers/areas where large scale theft was suspected.

Electrical Research and Development Association (ERDA), Vadodra's study identified (November 2003) 96 nos. 11 KV feeders where distribution losses were more than 50 *per cent.* Out of these in 35 feeders distribution losses were more than 70 *per cent*. In view of the identification of loss prone feeders by ERDA in November 2003, the Company should have conducted raids/checking of consumers' premises regularly/periodically to reduce revenue arrears and prevent theft of energy, but this was not done. The position of checks exercised by the raid teams over consumer's premises along with assessment proposed and realisations made there against during 2001-02 to 2005-06 is given in the table below:

Sl. No.	Particulars	2001-02	2002-03	2003-04	2004-05	2005-06
1.	Distribution losses (in percentage)	33.66	43.30	42.34	39.14	34.25
2.	Total consumers (in lakh)	3.73	3.95	4.15	4.23	4.37
3.	Number of consumer's premises checked by Raid teams	4361	11805	8958	1902	1675
4.	Percentage of consumers premises checked	1.17	2.99	2.16	0.45	0.38
5.	Assessment proposed (Rs in lakh)	640.38	2060.39	1249.97	2186.50	1471.35
6.	Amount realised on spot (Rs in lakh)	301.06	1479.95	340.22	238.02	297.14
7.	Percentage of amount realised to assessment proposed (6/5 X 100)	47.01	71.83	27.22	10.89	20.19

It is evident from the above table that system was deficient to the extent that:

- though distribution losses increased from 33.66 *per cent* in 2001-02 to 34.25 *per cent* in 2005-06, the numbers of consumer's premises checked came down to 0.38 *per cent* in 2005-06 from 2.99 *per cent* in the year 2002-03.
- Realisation against such assessment was in the range of 10.89 to 71.83 *per cent* during 2001-02 to 2005-06.

The lack of concerted efforts on the part of the Management to reduce the distribution losses and realise the amount assessed contributed towards the losses of the Company.

Consumers with duplicate billing

2.2.28 ERDA appointed by UPERC, in its study identified (January 2005), 259 cases of duplicate billing of LT consumers having arrears of Rs.3.21 crore, and suggested that the Company carry out physical verification of consumers particularly those whose bills were in arrears for more than two years and the amount in arrears was more than Rs.10,000 so that duplicate billing could be minimised and all non-existing consumers could be removed from the data base. The Company, however, failed to identify the cases of duplicate billing. It could also not physically verify the ERDA identified cases of duplicate billing of 259 LT consumers for taking suitable action.

The Management stated (October 2006) that cases of duplicate billing pointed by ERDA are being examined for taking corrective action.

Finalisation of inoperative accounts

2.2.29 Arrears against consumers, whose supplies remained disconnected temporarily for more than six consecutive months, were required (vide erstwhile UPSEB order of October 1976) to be transferred to inoperative accounts of the consumers after adjustment of securities and treating the connection as permanently disconnected (PD) and recovery of balance dues to be separately pursued.

Non-finalisation of PD cases resulted in accumulation of revenue arrears to the extent of Rs.797.94 crore.

As per ARR prepared by the Company for financial years (FY) 2003, 2004 and 2005, the revenue arrears amounting to Rs.121 crore, Rs.146 crore and Rs.797.94 crore respectively were outstanding against the inoperative consumers. The Company did not finalise PD and realise the arrears from the defaulting consumers. This resulted in increase of arrears against inoperative consumers from Rs.121 crore in 2002-03 to Rs.797.94 crore in 2004-05.

Test check of records of eight divisions of the Company revealed that arrears of Rs.13.79 crore had been lying against 592 consumers for periods ranging from 10 to more than 50 months. Connections of these inoperative consumers had been disconnected and billing was stopped long back, however, no action was taken to finalise PD and recover dues immediately after expiry of period of six months from the date of temporary disconnection of supply.

In the ARCPSE meeting, the MD agreed (August 2006) with the audit observations. It was further stated (October 2006) that all AGMs have been instructed to finalise the permanent disconnection in cases where supply has been disconnected for more than six months and to issue notices to liquidate the arrears.

One Time Settlement Scheme for recovery of arrears

2.2.30 To mitigate revenue arrears outstanding for a long period, the Company introduced a one time settlement scheme (OTS) in two phases *viz.* in May 2003 and in November 2004. Under the above OTS schemes, the

Company registered 6,319 consumers under various categories having arrear of Rs.37.72 crore. It was noticed in audit that the Company could realise Rs.8.66 crore only from 4,706 consumers leaving a balance amount of Rs.29.06 crore unrealised so far (September 2006) as the consumers either did not honour the OTS scheme or defaulted in making further payments after a few instalments.

The Management stated (October 2006) that the connection of those consumers who have not deposited dues under the OTS scheme, have been disconnected and RCs issued for recovery of dues.

Non-recovery of dues from Eastern Leather Export

2.2.31 In the month of April 2004 premises of Eastern Leather Export Jaajmau was raided and a case of theft of energy was registered and an assessment of Rs.72.05 lakh was made against the firm. In May 2004 a recovery certificate (RC) amounting to Rs.72.05 lakh was issued but the firm obtained a stay from the Hon'ble High Court, Allahabad. In September/October 2005 the Advocate of the Company informed that stay had been vacated and recovery could be made from the consumer. The Company, however, did not take any action to recover the amount so far (September 2006).

The Management stated (October 2006) that the District Authorities have been intimated (May 2006) about the vacation of stay by the Court and requested for the recovery of dues. The recovery was , however, awaited (October 2006).

Non-leasing LT poles to cable TV operators

2.2.32 In order to explore new areas for increasing revenue, UPPCL asked (August 2001) the Company to lease out its LT poles for laying of cable for TV network on the pattern of Delhi Vidyut Board (DVB). TV cable operators were using LT poles. The Company neither conducted any survey to identify the number of poles being used by them nor did it take any initiative to negotiate for leasing out these poles. It was noticed in audit that the Company had 197 Km overhead lines with 13,790 nos. of LT poles in the city. Had these poles been leased out for cable TV network, the Company could have generated additional revenue of Rs.2.76 crore (calculated at the rate of Rs.500 per pole as approved by DVB) during the four years ending March 2006. For leasing out the LT poles, no extra expenditure was involved.

The Management stated (October 2006) that efforts were being made to lease out LT poles to cable TV operators but none had turned up so far. The reply of the Management is not tenable as the Company did not take any action to stop the cable operators from using the poles without obtaining lease.

Accountal of revenue

2.2.33 Accountal of revenue realised is of utmost importance as it ensures that revenue realised is correctly accounted for in the Company's Books and in Bank Accounts.

For proper control on collection of revenue and its accountal and reconciliation of remittances with the bank, the Company had prescribed day to day collection of revenue and its deposit into banks on the following working day. Test check of records of the Company revealed delays ranging from two to four days in remitting cash to the bank during the month of

November 2004.

The factor mainly responsible for inefficient accountal of revenue was non-reconciliation of balances with banks as discussed below:

Preparation of Bank Reconciliation Statements

2.2.34 Para 741 to 743 of FHB Vol. VI and Para 474 of Accounting Rules and Procedure of UPPCL provide that at the close of the month, the balance of cash book should be reconciled with the Banks in respect of transactions for deposits and cheques presented for payment in to the Bank.

It was noticed in audit that the Company had three Accounts *viz.* Deposit, Expenditure, and Receipt with the State Bank of India (SBI), Kanpur. The entire revenue collected was remitted to the Receipt Account and money was transferred from this Account to the Expenditure Account to meet the day-to-day expenditure along with pay & allowance of the employees and to refund security deposits of the consumers. Despite this being pointed out in the Report of the Comptroller and Auditor General of India (Commercial), Government of Uttar Pradesh for the year ended 31 March 1991, it was observed during audit that the bank transactions were not reconciled with the bank statement during KESA[*] period (prior to 14 January 2000). This resulted in cheques/transactions of Rs.10.10 crore remaining unrealised/un-reconciled so far (September 2006).

The Management stated (October 2006) that during the period of erstwhile KESA there were certain shortcomings relating to reconciliation due to which an amount of Rs.10.10 crore is lying unreconciled.

Internal Control and Internal Audit System

Internal Control

2.2.35 Internal control is a process designed for providing reasonable assurance for efficiency of operation, reliability of financial reporting and compliance with applicable laws and statutes. A built in internal control system and strict adherence to the statute, codes and manuals minimises the risk of errors and irregularities. An evaluation of the system in vogue in the Company revealed the following weaknesses:

- The Company failed to arrest distribution losses due to non-formulation of any control system to prevent these losses and to carryout periodical checking of meters, timely issue of bills and realising additional security deposits as per Tariff Orders approved by the UPERC from time to time.
- The Company could not evolve system for timely recovery of its dues to reduce its arrears.
- Age-wise/consumer-wise analysis of dues was not done to identify high risk areas.
- Bank transactions are not being reconciled with Bank Statements,
- Audit analysis of internal control procedures/mechanisms revealed that the internal control mechanism was ineffective as the Company had 169 court cases of revenue disputes filed during 1992 to 2005 which were pending finalisation (March 2006) due to improper pursuance.

[*] Kanpur Electricity Supply Administration.

Internal Audit

2.2.36 Internal Audit is a system designed to ensure proper functioning as well as effectiveness of the internal control system and detection of errors and frauds. It should, as an independent entity, examine and evaluates the level of compliance to the financial rules and procedures. It was noticed in audit that:

- The Company had no Internal Audit wing. The Company entrusted (March 2002) the work of internal audit for the year 2001-02 and 2002-03 to a private firm of Chartered Accountants (firm) on contract basis of all its 15 divisions and Headquarters. The firm started the work but did not complete (March 2006) the audit for the year 2002-03. The firm submitted (May 2004) the report for the year 2001-02 relating to audit of divisions to the Company which was sent to divisions but no reply had been submitted by the divisions (March 2006).
- No assignment for internal audit was given for the year 2003-04. The Company appointed (August 2005) another Chartered Accountant as Internal Auditor for the year 2004-05, who submitted (June 2006) its report to the Company.
- The Internal Auditors did not conduct audit of the head office of the Company, due to this a balance of Rs.1.23 crore appearing in the works Cash Book in the cash column since April 1998 could not be noticed. This amount could not be adjusted/reconciled till date (October 2006). Thus, the objectives of internal audit were not fulfilled.

The Management stated (October 2006) that an enquiry committee has been constituted to reconcile the balance of Rs.1.23 crore.

Acknowledgement

2.2.37 Audit acknowledges the co-operation and assistance extended by different levels of officers of the Company at various stages of conducting the performance audit.

The above matters were reported to the Government in June 2006; the reply is awaited (October 2006).

Conclusion

The performance review indicates that the billing and collection procedures and surveillance were deficient as the Company could not reduce the distribution losses due to ad-hoc billing, ineffective checking of meters, non-levy of demand charges, late payment of surcharge, delay in issuing electricity bills, and failure of the Company to check theft of energy. The collection of revenue was not effective and prompt as the Company fixed low targets of revenue realisation as a result of which realisation of revenue was very poor. The Company failed to carry out bank reconciliation in time.

Recommendations

- **The Company should take effective steps to minimise distribution losses.**
- **Provisions of checking of meters of all categories of consumers at regular intervals should be ensured.**

- **Short levy of electricity duty was an illustrative example; the Company should review other cases and revise the bills accordingly.**
- **The Company should improve its collection mechanism for prompt realisation of its dues.**
- **The Internal Control System should be strengthened.**

2.3 Purchase and Sale of Energy by Uttar Pradesh Power Corporation Limited and its subsidiary Companies (Discoms)

Highlights

Substantial difference of 5,208.022 MU valuing Rs.874.13 crore existed between energy purchased for which payment was made and that recorded as per meters at delivery points of the transmission system, during the five years up to 2005-06.

(Paragraph 2.3.9)

UPPCL did not follow grid discipline and had to pay avoidable unscheduled inter change charges and reactive energy charges aggregating Rs.713.23 crore during the five years up to 2005-06.

(Paragraphs 2.3.10 and 2.3.11)

UPPCL/Discoms suffered loss aggregating Rs.16178.06 crore on account of average sale price being less than the average cost of sales during the five years up to 2005-06.

(Paragraph 2.3.8)

Delayed submission/non-submission of Annual Revenue Requirement to Uttar Pradesh Electricity Regulatory Commission (UPERC) resulted in delayed/non-revision of tariff. Loss of potential revenue to Discoms due to this amounted to Rs.1485.75 crore during the period April 2002 to September 2006.

(Paragraphs 2.3.13, 2.3.14 and 2.3.15)

UPPCL/Discoms suffered loss of Rs.2979.62 crore due to excessive transmission and distribution losses over the targets fixed by UPERC during the five years up to 2005-06.

(Paragraph 2.3.18)

UPPCL/Discoms suffered loss of Rs.48.54 crore due to waste of 194.92 MU of energy in the system on account of defective capacitor banks at 132/33/11 KV system. Further, PuVNL suffered loss of Rs.2.59 crore on account of its failure to bill the consumers as per the tariff for non-installation of capacitor banks or for power factor below the prescribed limit.

(Paragraphs 2.3.19 and 2.3.20)

PuVNL suffered loss of Rs.1.42 crore on account of its failure to bill for excessive demand and waiver of arrears of existing consumers considering them as non-existent with fictitious arrears.

(Paragraphs 2.3.29 and 2.3.30)

Introduction

2.3.1 The Government of Uttar Pradesh (GoUP) trifurcated (January 2000) the activities of the erstwhile Uttar Pradesh State Electricity Board into three Government Companies. While it assigned the function of power generation to two Government Companies *viz.*, thermal power generation to Uttar Pradesh Rajya Vidyut Utpadan Nigam Limited (UPRVUNL) and hydro-electric power generation to Uttar Pradesh Jal Vidyut Nigam Limited (UPJVNL), it assigned transmission and distribution functions to Uttar Pradesh Power Corporation Limited (UPPCL). The GoUP reallocated the functions of UPPCL and assigned (12

August 2003) the distribution function to four newly formed subsidiary distribution Companies (Discoms) of UPPCL *viz.* Purvanchal Vidyut Vitaran Nigam Limited, Varanasi (PuVNL), Pashchimanchal Vidyut Vitaran Nigam Limited, Meerut (PaVNL), Madhyanchal Vidyut Vitaran Nigam Limited, Lucknow (MaVNL) and Dakhinanchal Vidyut Vitaran Nigam Limited, Agra (DaVNL). The activity of purchase of energy and its distribution to the four Discoms and two bulk licensees (KESCO[1] and NPCL[2]) remained with UPPCL. Discoms managed the sale of energy to the consumers of the State from August 2003.

As of March 2006, UPPCL's Board comprised a Chairman, one full time Managing Director (both drawn from the Government) and four other Directors one each for Finance, Technical, Commercial and Personnel Management functions. Discom's Board comprised one full time Managing Director and two other Directors one for Finance and one for Technical functions. The activity of purchase and distribution[3] of energy by UPPCL/Discoms was divided into Zones, Circles, Divisions headed by Chief General Managers, Deputy General Managers and Executive Engineers respectively under the over all control of Director (Commercial) and that of sale of energy to consumers of the State in Discoms fell within the ambit of Director (Technical).

Scope of Audit

2.3.2 The present performance review, conducted during August/September 2006, covers purchase and sale of energy by UPPCL/Discoms for a period of five years up to 31 March 2006. A test check of records of headquarters office of UPPCL, where basic records and data bank for all the Discoms are available, and records of one Discom (PuVNL) and its four distribution divisions (2 at Varanasi[4] and 2 at Gorakhpur[5]) out of 61 distribution divisions was carried out.

Audit Objectives

2.3.3 The performance review of purchase and sale of energy was conducted with a view to ascertaining whether:

- energy was purchased economically and efficiently with reference to assessment of demand and the terms and conditions of agreements *i.e.* rates, grid standards[6] *etc.* with the generating companies of the State and Central Government;
- energy was sold to consumers as per the UPERC guidelines and tariff rates; and
- the internal control mechanism was efficient and effective.

Audit Criteria

2.3.4 Audit criteria considered for assessing the achievement of audit objectives was to check the extent of adherence to:

- procedures and guidelines laid down by the Government and UPERC;

1 Kanpur Electricity Supply Company Limited, Kanpur (a subsidiary of Uttar Pradesh Power Corporation Limited) distributing energy to Kanpur urban area.
2 Noida Power Company Limited, Greater Noida (a private Company) distributing energy to a part of Greater Noida area.
3 Including sale of energy to KESCO and NPCL.
4 EUDDI, Varanasi and EDDI, Varanasi
5 EDDI, Gorakhpur and EDD-1I, Gorakhpur.
6 Grid standards (requirements in maintaining safe practices with cross boundary operations between users of transmission system) specified by Central Electricity Authority under section 73 of Electricity Act, 2003 and Indian Electrical Grid Code as amended in April 2006 by Central Electricity Regulatory Commission in the light of Electricity Act 2003.

- provisions of the Electricity Act, 2003, Indian Electricity Grid Code and Uttar Pradesh Electricity Supply Code 2002/2005
- Tariff orders issued by UPERC, Rate schedules of UPPCL and provisions of UPERC (Conduct of Business) Regulations 2000/2004.

Audit methodology

2.3.5 The following mix of audit methodologies was adopted for attaining the audit objectives:

- Examination of guidelines/directions issued by UPERC and Annual Revenue Requirement (ARR) prepared and submitted by UPPCL and Discoms to UPERC;
- Study of Agenda and Minutes of Board Meetings;
- Scrutiny of implementation of tariff, grid code, supply code, Memorandum of Understanding between Government of India and Government of Uttar Pradesh;
- Examination of category-wise sale of energy and billing thereof and scrutiny of segment-wise energy loss and control mechanism for prevention of loss;
- Issue of audit enquiries and interaction with the Management.

Audit Findings

2.3.6 In relation to purchase of energy, the UPPCL/Discoms failed to assess demand properly, contain the cost of purchase with reference to the rate of sale of energy, minimise T&D losses, provide capacitor banks in the system and at consumer's installations and strengthen the internal control mechanism to prevent leakage of revenue. These points are discussed in detail in the succeeding paragraphs:

Assessment of demand

2.3.7 The UPPCL assesses demand projections based on past consumption of energy, load growth, projected transmission and distribution losses and availability of power from various sources. The demand of energy as submitted by UPPCL through the ARR is approved by the UPERC while approving the Tariff Orders. The table below indicates the projected demand for purchase of energy, purchases made, excess/shortage against the projected demand, percentage of T & D losses, excess quantity of energy sold to Private Tube Wells (PTW) and domestic consumers against projections approved by UPERC for the period of five years up to 2005-06:

Year	Projected demand (MU) for purchase of energy	Purchase (MU)	Excess/ shortage (MU)	Percentage of excess/ shortage	Excessive T & D losses over targets of UPERC (MU)	Excess quantity sold against UPERC's projections (MU)		Excessive energy drawn from regional grid (MU)
						PTW	Domestic	
2001-02	39940	41833	1893	4.74	1575.599	NA	NA	NA
2002-03	39869	37912	(-)1957	(-)4.91	532.128	228.740	NA	NA
2003-04	37975	41397	3422	9.01	2100.657	523.810	1005.440	955.450
2004-05	38816	42783	3967	10.22	3076.493	714.700	525.730	1214.660
2005-06	NA	45850	NA	NA	4810.378	1104.490	1237.610	1859.630

It was noticed (September 2006) during audit that UPPCL purchased more energy than the projected demand in the ARR during the four years up to 2004-05 (except in 2002-03). This can be attributed to the following factors:

- Failure to contain T&D losses within the targets fixed by UPERC (Paragraph 2.3.18);
- Failure to restrict energy sale to private tubewells (PTW) and domestic consumers to the quantum and rates approved by UPERC (Paragraphs, 2.3.22 and 2.3.24);
- Failure to maintain grid standards by way of drawal of unscheduled energy to the extent of 4,029.74 MU (*i.e.* extra energy than the approved schedule). (Paragraph 2.3.10); and
- Short drawal of energy during 2002-03 due to poor cash position and operational inefficiencies of the UPPCL.

This indicates that due to operational inefficiencies, UPPCL could not restrict purchase of energy to the level of the projected demand.

Purchase of Energy

2.3.8 UPPCL purchases energy from generating companies of the State[1] and the Central Government[2], small private generating units (called independent power producers or IPPs[3]) and generating companies of other adjoining States as detailed in **Annexure-14**. Central Electricity Regularity Commission (CERC) fixes the rates for purchase of energy from Central sector Companies with varying fixed and variable cost component for each of their power stations in terms of clause 5 of the Power Purchase Agreements (PPA) with them. UPERC, through the composite Tariff Order for each year, fixes the same for generating stations of the State. UPERC also fixes rates in respect of IPPs through the PPAs approved by it for each IPP. The PPAs entered into between UPPCL and State Sector power generating companies were not furnished to UPERC for approval in terms of the UPERC (Conduct of Business) Regulations 2000 (modified by Regulation of 2004). The Indian Electrical Grid Code (IEGC) of CERC provided for maintaining grid discipline to avoid penalty for unscheduled drawal of energy and reactive energy charges for not maintaining power factor at the required level.

UPPCL purchased 209774.541 MU of energy valuing Rs.36918.74 crore during a period of five years up to 2005-06. Cost of sales *vis-à-vis* sale price per unit and loss sustained during the period of five years up to 31 March 2006 are detailed below:

Sl. No.	Attributes	2001-02	2002-03	2003-04	2004-05 (Provisional)	2005-06 (Provisional)	Total
i	Purchase of energy (MU)	41833.042	37912.370	41396.629	42782.960	45849.540	209774.541
ii	Sale of energy (MU)	25030.216	24717.510	26711.397	27983.936	30081.122	134524.181
iii	Purchase cost (Rs. in crore)	6753.62	5984.86	6193.96	8297.47	9688.83	36918.74
iv	Other (Indirect) cost (Rs in crore)[4]	2541.05	2314.30	1365.69	2719.91	3176.00	12116.95
v	Total cost (iii+iv)	9294.67	8299.16	7559.65	11017.38	12864.83	49035.69

[1] Uttar Pradesh Rajya Vidyut Utpadan Nigam Limited and Uttar Pradesh Jal Vidyut Nigam Limited.

[2] National Thermal Power Corporation Limited, National Hydro Electric Power Corporation Limited, Nuclear Power Corporation of India Limited.

[3] Fourteen units as on 31 March 2006. Agreement executed with 34 units for procurement from future years when the units start production of energy.

[4] Indirect cost represents expenditure as booked in Profit and Loss Account except cost of power purchase. Since accounts of PCL and Discoms are not finalised for 2004-05 and 2005-06, the same has been loaded on the basis of average of preceding three years (37.63 *per cent* +26.74 *per cent* +33.99 *per cent*)/3=32.78 *per cent*. Figures of cost of purchase (direct cost) has been taken as furnished by Import & Export Department of UPPCL for these years.

Sl. No.	Attributes	2001-02	2002-03	2003-04	2004-05 (Provisional)	2005-06 (Provisional)	Total
vi	Average purchase cost[1] (Rs per unit) iii/I x10	1.61	1.58	1.50	1.94	2.11	--
vii	Value of energy sold (Rs. in crore	5770.75	5972.36	6639.01	6975.40	7492.24	32849.76
viii	Average cost of sales[2] (Rs. per unit) (v / ii) X 10	3.71	3.36	2.83	3.94	4.28	--
ix	Average sale price[3] (vii/ii X 10) (Rs per unit)	2.31	2.42	2.49	2.49	2.49	--
x	Loss (Rs. per unit)	1.40	0.94	0.34	1.45	1.79	--
xi	Total loss (Rs in crore) x X ii	3504.23	2323.45	908.19	4057.67	5384.52	16178.06

Due to high T&D losses, delayed/non-revision of tariff, low tariff of PTW consumers and incorrect assessment *etc.*, loss aggregated to Rs.16178.06 crore.

It was noticed during audit that UPPCL/Discoms could not realise the average cost of sale of energy ranging between Rs.2.83 and Rs.4.28 per unit which was higher than the average sale price of energy ranging between Rs.2.31 and Rs.2.49 per unit leading to loss on sale of energy aggregating Rs.16178.06 crore during the five years up to 31 March 2006. The factors responsible for the losses were high T&D losses, delayed/non-revision of tariff, low tariff of PTW consumers, incorrect assessment and 'non-ledgerisation' of new connections, *etc*.

Cases showing discrepancies in quantities of energy purchased, avoidable payment of unscheduled interchanges and reactive energy charges are discussed below:

Non-reconciliation of figures of purchase

2.3.9 Energy received from Central Power Companies through the regional grid to the UPPCL's connection point is measured through special energy meters installed at inter connections between the regional constituents and other identified points for recording of actual net MWh interchanges and MVArh[4] drawals are billed automatically.

It was noticed (September 2006) during audit that substantial difference of 5208.022 MU (representing 2.48 *per cent*) valuing Rs.874.13 crore existed between the purchase of energy for which payment has been made and energy received at the delivery points of the transmission system during the five years up to 31 March 2006 as detailed below:

Sl. No.	Attributes	2001-02	2002-03	2003-04	2004-05	2005-06	Total
1	Purchase of energy (MU)	41833.042	37912.370	41396.629	42782.960	45849.540	209774.541
2	Average purchase price (Rs. per unit)	1.61	1.58	1.50	1.94	2.11	
3	Figures of energy received at the delivery points of transmission system (MU)	39872.454	36458.970	40741.314	42210.197	45283.584	204566.519
4	Difference (1 *minus* 3) (MU)	1960.588	1453.40	655.315	572.763	565.956	5208.022
5	Difference (*Per cent*)	4.69	3.83	1.58	1.34	1.23	
6	Value of loss (4 x2) (Rs. in crore)	315.65	229.64	98.30	111.12	119.42	874.13

It was also noticed (September 2006) in audit that special energy meters had been provided by the Central Power Companies on the electrical periphery of each regional constituent to determine the actual net energy interchange with the regional grid. As per the provisions in the Indian Electrical Grid Code (IEGC), each inter connection should also have one main meter. In addition, stand-by/check-meters should also be provided so that correct computation of net interchange of a constituent is possible even when a main meter, a current transformer (CT) or a voltage transformer (VT) has a problem. Despite these

[1] Average purchase cost has been arrived at by dividing purchase cost with the quantity of purchase of energy.
[2] Average cost of sales has been arrived at by dividing total cost {purchase cost *plus* other (indirect) cost} with the quantity of sale of energy.
[3] Average sale price has been worked out by dividing value of energy sold with the quantity of sale of energy.
[4] Mega Volt Ampere Reactive Hours.

provisions, UPPCL has not been able to evolve a procedure to identify reasons for the substantial difference between the figures of energy purchased (for which payments were made) and energy as per meters installed at the delivery points of the Transmission System.

Avoidable payment of Unscheduled Interchange (UI) charges

2.3.10 Energy is transmitted through the regional grid[1] up to the connection points[2] of UPPCL. For regulating the grid and to save it from damage or fault and to allow other States to draw energy to the extent of their schedules, UPPCL is required to follow the grid discipline as per IEGC of the Central Electricity Regulatory Commission and UP Electricity Grid Code 2000 of UPERC.

Excessive drawal of energy from Regional Grid resulted in payment of unscheduled interchange charges aggregating Rs.699.27 crore.

UPPCL is also required to maintain grid standards (like voltage profile, drawal[3] of energy as per schedule *etc.*) fixed by the Central Electricity Authority to maintain grid security and avoid payment of penalty to the Northern Region Electricity Board (NREB), an agency to bill the UPPCL for energy purchased from the central sector power companies. A schedule of quantum per month (called scheduled energy) is fixed. UPPCL is required to restrict their day-to-day net drawal of energy from the regional grid within this schedule. Any excessive drawal invites payment for the unscheduled interchange or UI charges at higher rates as fixed by the CERC from time to time.

It was noticed (September 2006) during audit that UPPCL had violated the provisions of the Grid Code and had drawn 4029.74 MU of unscheduled energy, with the result that it had to pay at rates ranging between Rs.2.18 and Rs..4.11 per unit against the normal rates ranging between Rs.1.50 and Rs.2.11 per unit. This resulted in payment of excessive cost of energy aggregating Rs.699.27 crore during the three years up to 31 March 2006 as detailed below:

Year	Quantity of UI units (MU)	UI Charges paid (Rs. in crore)	Rate (Rs. per unit)	Average rate of purchase (Rs. per unit)	Excess amount paid (Rs. in crore)
2003-04	955.450	208.23	2.18	1.50	64.97
2004-05	1214.660	498.61	4.10	1.94	262.37
2005-06	1859.630	764.22	4.11	2.11	371.93
Total	**4029.740**	**1471.06**			**699.27**

Further, as per the CERC's directives, the feeder of the beneficiary is required to be physically isolated if it did not follow grid discipline as security of grid was of paramount importance.

Failure to maintain required power factor resulted in payment of penalty aggregating Rs.13.96 crore.

Avoidable payment of Reactive Energy charges

2.3.11 Similarly, as per the IEGC, the beneficiary State has to provide Reactive Power Compensation locally so that it does not draw reactive power from the regional grid particularly under low-voltage conditions. UPPCL has to maintain a power factor that should not fall below 97 *per cent*. This is possible when the shortfall of reactive power throughout the transmission and distribution

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1 This comprises of the area of operation of State Electricity Boards, utilities and, CPPs/IPPs of Uttar Pradesh, Haryana, Punjab, Chandigarh (UT), Rajsthan, Himanchal Pradesh, Delhi, J & K, NTPC, NHPC, BBMB, PGCIL for the integrated operation of electricity system.

2 A point at which, an agency's plants, and/or apparatus connects to the inter-state transmission system.

3 The import from or export to Northern Regional Grid of Electrical Energy.

network is compensated through installation of capacitor* banks. In case of shortfall, UPPCL has to pay penalty to the extent of shortfall at prescribed rates.

It was noticed (September 2006) in audit that UPPCL failed to maintain the required power factor of 97 *per cent* in respect of drawal of reactive energy due to inadequate capacitor banks and had to pay penalty in the shape of reactive energy charges to the extent of Rs.13.96 crore during 2001-02 to 2005-06.

Further, as informed** to UPERC, metering at interface points with Special Energy Meters of the required accuracy, class and associated information technology tools for aggregating such readings to generate demand and energy readings were still in progress. Due to this, accurate measurements of flow of active and reactive energy in the system could not be taken by UPPCL.

Sale of Energy

2.3.12 UPPCL sold energy to the consumers of the State directly up to 11 August 2003 and through Discoms from 12 August 2003 onwards. It also supplied energy to KESCO (a subsidiary of UPPCL selling energy to Kanpur urban area) and NPCL (a private company selling energy to the consumers of Greater Noida area). The rates of sale of energy to various categories of consumers are decided by UPERC.

The deficiencies noticed during audit relating to tariff mechanism, transmission and distribution (T&D) losses, short assessment of energy *etc.* are discussed in the succeeding paragraphs.

Tariff mechanism

2.3.13 Section 64 (i) of Electricity Act, 2003 read with UPERC (Conduct of Business) Regulations 2000 (modified by Regulation of 2004) stipulates that every licensee has to submit full details of calculations of expected aggregate revenue (called Annual Revenue Requirement or ARR), to UPERC for the ensuing year, that it expects to recover through tariff rates. UPERC has fixed the period between 15 and 31 December (modified to 30 November of the previous year by Regulation of 2004) for submission of the ARR to UPERC. After receipt of the ARR, UPERC finalises the tariff order for the ensuing year within 100 days (modified to 120 days) from the date of receipt of the ARR. The finalised tariff order takes effect from 1 April of the ensuing year.

UPERC issued five tariff orders starting from 2000-01. The latest tariff order was issued in November 2004 effective from 1 December 2004.

Delay/non-filing of ARR resulted in non-realisation of potential revenue to the extent of Rs.1485.75 crore.

In this connection, it was noticed (September 2006) during audit that UPPCL failed to submit ARR to UPERC within the stipulated time frame. As a result, the implementation of tariff orders was either delayed or not implemented at all. Consequently, UPPCL/Discoms could not realise potential revenue to the extent of Rs.1485.75 crore from the consumers as discussed below:

Delayed filing of ARR

2.3.14 UPPCL delayed filing of ARR in complete form. This delayed the finalisation of tariff orders with consequent delay in their implementation. The tariff rates that were to be implemented from April of 2002-03 to 2004-05 could be implemented between September and December of these years *i.e.*

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* An electrical facility provided for generation of reactive power.

** Page 170 of Tariff Order 2004-05.

after delays of five to eight months. This resulted in non-realisation of potential additional revenue of Rs.585.75 crore due to delayed implementation of new tariff rates as detailed below:

Year	Scheduled date of submission	Date of submission	Date of issue of tariff orders	Date of applicability of tariff	Months' delay from April	Increase in rates due to revision of tariff (*Per cent*)	Energy charge as per previous tariff order (Rs. in crore)	Additional revenue not realised (Rs. in crore)-(8X% of 7X6)/12
1	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**
2002-03	31 December 01	23 July 02	22 October 02	1 Nov ember 02	7	7	5972.36	243.87
2003-04	31 December 02	12 March 03	10 June 03	1 September 03	5	1.6	6639.01	44.26
2004-05	30 November 03	30 June 04	10 November 04	1 December 04	8	6.4	6975.40	297.62
						Total	**19586.77**	**585.75**

Non-implementation of temporary hike in tariff rates

2.3.15 In April 2005, UPPCL filed a petition with UPERC seeking increase in tariff on account of fuel cost adjustment necessitated on account of hike in cost of fuel by UPRVUNL (State owned thermal power generating company). As per the estimates of UPPCL, the proposed hike was to fetch additional revenue of Rs.432 crore. UPERC, after considering the proposal, allowed an interim hike of 9 paise per unit against all categories of consumers (including proportionate hike in case of unmetered consumers). The interim hike allowed would have resulted in additional revenue of Rs.271.26 crore for the year 2005-06. UPERC also directed UPPCL/Discoms to submit their tariff proposals for 2005-06 immediately.

It was noticed (September 2006) in audit that the Company failed to implement the interim hike of 9 paisa per unit during the year 2005-06 for want of clearance from the State Government. The State Government constituted (March 2006) a Committee to take a decision in the matter but the Committee has still not submitted its report (September 2006). The Company could not submit the revised tariff proposal for ensuing years also and as a result, UPPCL/Discoms could not recover the additional revenue of Rs.406.89 crore during the period from April 2005 to September 2006 from the consumers.

It was further noticed (September 2006) in audit that UPPCL or Discoms could not file ARRs for the years 2005-06 and 2006-07 (as of September 2006) which resulted in non-finalisation of subsequent tariff order by UPERC and non-recovery of increase in cost of energy. UPPCL had itself worked out the loss of potential revenue due to non-revision of tariff at Rs.900 crore (including the loss of revenue of Rs.406.89 crore due to non-implementation of interim hike of 9 paise per unit during the period of 18 months from April 2005 to September 2006).

Loss due to non-inclusion of the provisions of the Tariff Order in the Rate Schedule

2.3.16 It was noticed (September 2006) during audit that UPPCL, while incorporating the provisions of the tariff order of 2004-05 in its rate schedule omitted incorporation of the provisions of paragraph 9 (iii) of the tariff order effective from 1 December 2004 in the rate schedule LMV-4 category of consumers which provides for levy of low power factor surcharge for consumers of static TVMs (5 *per cent* on monthly bill where average power factor falls below 0.85 and 10 *per cent* where it falls below 0.80). The preamble of the rate schedule of UPPCL states that in case of any discrepancy, the provisions contained in the UPERC's tariff order shall prevail. The consumers are, however, continued to be billed as per UPPCL rate schedule by the divisions of the Discoms and accordingly revenue is realised. Even now, in order to include the omitted provisions in the rate schedule, UPPCL is required to issue a fresh notification for billing the concerned consumers accordingly.

As of September 2006, the indicative figure of loss for the five divisions of UPPCL works out to Rs.12.20 lakh. The overall loss in the State would be much higher, which UPPCL may review for appropriate action.

Cross subsidisation

2.3.17 Section 61 (g) of the Electricity Act, 2003 provides that the tariff mechanism should reduce and eliminate cross subsidies within a period as specified by UPERC. The details of cross subsidisation *i.e.* positive (+) or negative (-) contribution in the share of assessment as compared to the share in energy consumption by various categories of consumers for a period of five years up to 2005-06 are given in **Annexure-15**. As can be seen from the Annexure, the domestic and PTW consumers are largely benefitted from cross subsidisation at the cost of commercial, small and medium, large and heavy and railway traction consumers. In its tariff order of 2004-05* UPERC stated that it would gradually strive for reduction of cross subsidy.

It was noticed (September 2006) during audit that the cross subsidisation continues even now as is evident from the details in **Annexure-15** and the objective to reduce cross subsidisation could not be achieved due to delayed/non-submission of ARR for 2005-06 and 2006-07 for tariff rationalisation.

Transmission and distribution losses

2.3.18 In the process of transmission and distribution, considerable energy is lost. Transmission loss is the technical loss due to inherent characteristics of transformers, cables and conductors, *etc.* Distribution loss occurs due to inherent characteristics of distribution system and a part of it is lost due to leakage of energy on account of theft, defective meters, meter readings not taken, *etc.* (commercial losses). Large part of energy is also dissipated in the system due to inadequate provision of system compensation through installation of capacitor banks at load end and in the premises of the consumers.

The details of energy received, sold to consumers, targets of T&D losses fixed by UPERC and excess losses as worked out by Audit are given below:

(In MU)

Sl. No.	Attributes	2001-02	2002-03	2003-04	2004-05	2005-06	Total
1	Purchase of energy	41833.042	37912.370	41396.629	42782.960	45849.540	209774.541
2	Energy transmitted to Discoms and bulk consumers	38080.601	34644.427	38616.875	40332.634	42985.835	194660.372
3	Energy sold to consumers	25030.216	24717.510	26711.397	27983.936	30081.122	134524.181
4	Transmission loss (1 minus 2)	3752.441	3267.943	2779.754	2450.326	2863.705	15114.169
5	Percentage of transmission loss	8.97	8.62	6.71	5.73	6.25	--
6	T&D loss (1-3)	16802.826	13194.860	14685.232	14799.024	15768.418	75250.360
7	Percentage of T&D loss (6/1)	40.17	34.80	35.47	34.59	34.39	--
8	Target of T&D loss *per cent* approved by UPERC	36.40	33.40	30.40	27.40	23.90	--
9	Loss as per target fixed by UPERC (MU)	15227.227	12662.732	12584.575	11722.531	10958.040	63155.105
10	Excess T&D loss over target (6-9)	1575.599	532.128	2100.657	3076.493	4810.378	12095.255
11	Average sale price (Rs.)	2.31	2.42	2.49	2.49	2.49	--
12	Value of excess T&D loss over target (Rs in crore)	363.96	128.77	523.06	766.05	1197.78	2979.62

* Page 14 of tariff order 2004-05.

From the above table, it can be seen that:

Excessive T&D losses over the prescribed norms of UPERC aggregated to Rs.2979.62 crore.

- UPERC fixed a target of T&D loss of 36.40 *per cent* for 2001-02 which was gradually brought down to 23.90 *per cent* in 2005-06 in the tariff order. This target was based on the Commission's expectation that UPPCL/Discoms would bring efficiency in their working to gradually reduce the losses in the system. It was noticed (September 2006) in audit that these Companies failed to improve their efficiency and the actual losses were higher than the targets fixed by UPERC. During these years the actual T&D losses ranged between 34.39 and 40.17 *per cent*. Value of excess T&D losses over the target fixed worked out to Rs.2979.62 crore during the five years up to 31 March 2006.
- The actual transmission losses were considerably higher and ranged between 5.73 and 8.97 *per cent* as compared with the transmission loss of 5 *per cent* considered by the UPERC in its tariff order (2004-05). The Commission directed UPPCL to undertake a detailed study for estimation of transmission losses. No study has, however, been carried out to redress the reasons of this controllable cause. The loss on this account could be curtailed considerably by improving the power factor of the system. Overall losses, apart from losses in the system, were on account of malpractices such as theft, *katia*[*] connections, defective meters, unmetered connections or not taking meter readings in case of metered category.
- As a part of the reform programme, UPPCL metered outgoing panels of all its 11 KV feeders through World Bank Loans. In PuVNL, 938 feeders out of 2059 feeders were identified as high loss feeders with losses above 30 *per cent* and up to 60 *per cent* as of 31 March 2006 but no mechanism was evolved (*i.e.* checking of all meters on the feeders for accuracy, replacing defective meters, providing meters to unmetered consumers, checking of installation by the vigilance wing *etc.*) to combat losses on these high loss feeders. The Energy Accounting Directorate of UPPCL had not taken any action and had only circulated the figures of losses at 11 KV feeders to its Discoms for identifying reasons and taking remedial action.

Inadequate reactive compensation in the transmission and distribution network

2.3.19 As per Indian Electrical Grid Code (IEGC), the agency engaged in sub-transmission and distribution of energy is to estimate and provide the required reactive compensation in its transmission and distribution network to meet full reactive power requirement.

Electrical appliances used by the consumers draw both active and reactive energy from the system. While active energy is used for operation of appliances, reactive energy is needed to keep them magnetised. Ideally, the ratio of active and reactive energy (called power factor) should be one, but due to distance from generating stations, the output of reactive energy at load end gets reduced. Low power factor not only causes waste of energy in the system but also results in low voltage profile and low load carrying capacity of the electrical appliances (like transformers, conductors or cables, *etc.*). In order to compensate the shortfall of reactive energy in the system, capacitor banks of required ratings are installed at the load end.

It was noticed (September 2006) in audit that UPPCL failed to install sufficient capacitor banks and repair the defective capacitor banks. Consequently, it

[*] Drawl of energy unauthorisedly directly from the distribution line.

failed to take advantage of energy saving, improved voltage profile and saving in cost on additional capacity of transformers, conductors or cables. The details of capacitors installed, working capacity and capacity of damaged capacitors and loss of energy are indicated below:

(in MVAr)

As on 31 March	Capacity of capacitors installed	Working capacity	Damaged capacity	Loss of energy at 0.04958 MU per MVAr	Average sale rate (Rs per unit)	Value (Rs. in crore)
	132/33/11 KV	132/33/11 KV	132/33/11 KV			
2004	4493.37	3299.70	1193.67	59.18	2.49	14.74
2005	4502.67	3230.72	1271.95	63.06	2.49	15.70
2006	4592.67	3126.80	1465.87	72.68	2.49	18.10
			Total	**194.92**		**48.54**

Due to defective capacitor banks energy losses aggregated to Rs.48.54 crore.

It may be seen from the above that defective capacitor banks of 1193.67 MVAr at the close of March 2004 rose to 1465.87 MVAr capacity (27 to 32 *per cent*) at the close of March 2006. This indicates that efforts to rectify or repair the damaged capacitor banks were lacking. Energy loss on this capacity worked out to Rs.48.54 crore for loss of 194.92 MU of energy. This was equivalent to the cost of 1382.91 MVAr of capacitor banks (calculated at the rate of Rs.3.51 lakh per MVAr).

Failure in management of capacitor banks at the consumer end

Failure to impose penalty for shortfall in power factor resulted in short assessment of revenue aggregating Rs.2.59 crore.

2.3.20 For encouraging maintenance of power factor to a reasonable level (0.85-0.95), the tariff provides for rebate for maintaining the average power factor* above 0.95. The tariff makes it obligatory on the consumers to maintain an average power factor of more than 0.85. In the case of consumers without static trivector meters (TVM) if capacitors of appropriate ratings are found missing or not operational, a surcharge of 10 *per cent* of the amount of the bill is to be levied. A surcharge of 5 *per cent* is leviable if the power factor is below 0.85 and at the rate of 10 *per cent* if the same is below 0.80. For consumers having power factor below 0.70, the supply is to be disconnected (except in case of domestic and commercial loads up to 25 KW).

UPPCL has not evolved any system to capture data for capacitor banks (installed or not installed and working or not working) either in the case of computerised billing or in the case of manual billing. Even in the case of large and heavy power consumers, the meter reading slips or sealing certificates do not contain information relating to installation of capacitor banks. In many cases, where the power factor was found below 0.85 or below 0.80, no penalty was imposed.

Cases of shortfall in maintaining power factor by the consumers noticed (September 2006) during test check of the records of PuVNL are discussed below:

- Eight distribution divisions** supplied energy to 26138 existing and 742 new consumers of private tubewells (PTWs) having total connected load of 1.17 lakh BHP without ensuring installation of trivector meters and capacitors of appropriate ratings. The tariff applicable from 1 December 2004 provides that if capacitors are found missing or inoperational, a capacitor surcharge of 10 *per cent* was to be levied. Considering the

* The ratio of kWh to the kVAh consumed during the billing period.

** Chandauli, Khalilabad, Deoria, I Basti, Pratapgarh, I and II Gorakhpur, I Varanasi.

overall dismal power factor in the network, PuVNL suffered loss of Rs.1.48 crore due to non-levy of low power factor surcharge of 10 *per cent* during the period from December 2004 to April 2006.

- It was also noticed (September 2006) in audit that PuVNL did not levy capacitor surcharge at the rates prescribed in the tariff applicable from time to time (*i.e.* from 1 September 2003 and 1 December 2004) where the power factor in other categories of consumers was below the prescribed limit as detailed below:

Name of the division	Name of the consumer	Load	Range of power factor	Period	Tariff	Short assessment (Rs. in lakh)	Reasons
EUDD-I, Varanasi	Jal Sansthan, Varanasi	945 KW	0.47-0.82	1/04 to 3/06	LMV-7	14.68	No surcharge levied, not disconnected
EUDD-I, Varanasi	Jal Sansthan, Varanasi	448 KW	0.23-0.84	09/03 to 3/06	LMV-7	13.73	No surcharge levied, not disconnected
EUDD-I, Varanasi	Nagar Nigam, Varanasi	2240 KW	TVM not installed	12/04 to 3/06	LMV-3	30.46	Surcharge at 10 *per cent* not levied
EDD-I, Varanasi	World Bank Tubewells	2017.50 BHP	TVM not installed	8/05-4/06	LMV-8	4.54	5 *per cent* charged against 10 *per cent*
EDD-I, Varanasi	State Tubewells	3555 BHP	TVM not installed	12/04-4/06	LMV-8	15.11	5 *per cent* charged against 10 *per cent*
EDD-I, Gorakhpur	State Tube wells	5425 BHP	TVM not installed	12/04-6/06	LMV-8	25.77	5 *per cent* charged against 10 *per cent*
EDD-I, Gorakhpur	Jaisawal Rubber Industries, Gorakhpur	350 KVA	0.32-0.83	12/04-8/06	HV-2	3.55	No surcharge levied, not disconnected
EDD-I, Gorakhpur	Vishwanath Cold Storage, Gorakhpur	370 KVA,	0.67-0.83	12/04-7/06	HV-2	2.51	No surcharge levied, not disconnected
EDD-I, Gorakhpur	Bajra Shakti Cement, Kusmhi	180 KVA	0.42-0.83	12/04-8/06	HV-2	0.89	No surcharge levied, not disconnected
Total						**111.24**	

This resulted in short assessment of revenue to the extent of Rs.1.11 crore in case of nine consumers of three distribution divisions of PuVNL during the period September 2003 to August 2006.

Sale of energy to agriculture sector and domestic consumers

2.3.21 Clause 5.1 and 5.2 of the Uttar Pradesh Electricity Supply Code-2002/2005 provide that no new connection should be released without meter and all existing unmetered consumers including Private tubewells(PTW), State Tubewells (STW) and domestic consumers were to be metered within three years from the date of issue (June 2002) of Code-2002. It was noticed (September 2006) in audit that UPPCL and Discoms did not install meters in the premises of the existing unmetered consumers. It also continued to release unmetered supply to PTW consumers. This resulted in loss of revenue to UPPCL/Discoms as discussed below:

Sale to Private Tubewells (PTW) consumers

2.3.22 UPPCL and Discoms bill for energy sold to PTW consumers at the fixed rates provided in LMV-5 tariff (unmetered supply). This sale is recorded in the commercial statements and submitted to UPPCL for inter-unit comparison of performance and Management decisions. Computation of energy sold as shown in the commercial statements, through rates at which tariff for PTW consumers were decided by the UPERC, actual through rates obtained and avoidable deficit during four years up to 31 March 2006 are detailed below:

Sl	Attributes	2002-03	2003-04	2004-05	2005-06	Total
1	Energy sold (MU)	3541.740	3885.810	4242.700	4632.490	16302.74
2	Assessment (Rs. in crore)	243.13	266.54	276.08	323.13	1108.88
3	Overall average through rate approved by Commission (Rs. per unit)	3.02	2. 84	2.65	2.65	
4	Value at through rate (Rs. in crore) (1x3)/10	1069.61	1103.57	1124.32	1227.61	4525.11
5	Deficit of energy charges at through rate (Rs. in crore) (4-2)	826.48	837.03	848.24	904.48	3416.23
6	Commission's projected sale (MU)	3313.000	3362.000	3528.000	3528.000*	13731.000
7	Excess quantity sold against projections (MU) (1-6)	228.740	523.810	714.700	1104.490	2571.740
8	Value of excess energy sold over projection (Rs. in crore) (7X3)/10	69.08	148.76	189.40	292.69	699.93
9	Percentage of share of PTW consumers in total sale as per UPERC	13.09	12.72	12.52	12.52	
10	Percentage of actual sales to PTW consumers	14.33	14.55	15.16	15.40	
11	Rate of sale projected by UPERC (Rs per unit)	0.95	0.98	1.14	1.14*	
12	Rate achieved (Rs per unit)	0.69	0.69	0.65	0.70	
13	Avoidable deficit (Rs in crore) (12-11X1)	92.09	112.69	207.89	203.83	616.50

In this connection, the following points were noticed in audit:

The deficit due to actual rates of sale being lower than the rates approved by UPERC worked out to Rs.616.50 crore.

- As is evident from the above table, UPPCL/Discoms suffered deficit of energy charges at through rates aggregating Rs.3416.23 crore during the four years ended 2005-06. The deficit due to lower rates than those approved by UPERC worked out to Rs.616.50 crore during these years;
- The Companies sold energy (14.33 to 15.40 *per cent*) in excess of the quantity approved, by UPERC (12.52 to 13.09 *per cent*). The value of this 'excess energy' that does not qualify for subsidy works out to Rs.699.93 crore. The Companies could have minimised the loss by restricting sales to the approved quantity;

Inaccuracies in commercial statements

The Company did not reconcile huge variations between the energy sold as per statement with the actual assessable quantity.

2.3.23 UPPCL and Discoms bill for energy sold to State tubewells, World Bank aided tubewells and Pump canal (up to 100 BHP) consumers at the rates provided in LMV-8 tariff. This sale is recorded in the commercial statements and submitted to UPPCL for inter-unit comparison of performance, computation of T&D losses and Management decisions. Audit scrutiny of commercial statements for the year 2005-06 revealed that against the revenue assessed for Rs.283.83 crore (excluding fixed charges), sale of energy of 1599.470 MU had been shown in the statements. On the basis of the revenue assessment shown in the commercial statements, the energy sold worked out to 1135.360 MU only as per the tariff applicable. The huge variation of 464.110 MU of energy (valued at Rs.115.56 crore) between the quantity of energy sold (as per the statement) and the quantity of sale of energy worked out as detailed below remained unreconciled:

Category	Load in KW	Load in BHP	Fixed charges (Rs. in crore)	Energy charges (Rs. in crore)	Energy sold (MU)	Worked out quantity of sale of energy (MU) (@ Rs.2.50 per unit)	Difference non-accountal of energy (MU)
STW	347622	463496	31.15	207.92	1203.080	831.680	371.400
WB	71760	95680	6.43	42.93	262.490	171.720	90.770
PC (up to 100 BHP)	35212	46949	3.15	32.99	133.900	131.960	1.940
Total	**454594**	**606125**	**40.73**	**283.84**	**1599.470**	**1135.360**	**464.110**

* As the ARR for 2005-06 has not been approved, figures of 2004-05 has been adopted.

2.3.24 Similarly, PuVNL bill for energy sold to the domestic (urban), commercial, small and medium power consumers at the rates provided in LMV-1, LMV-2 and LMV-6 tariff, respectively. This sale is also recorded in the commercial statements and submitted to UPPCL for inter-unit comparison, computation of T&D losses and Management decisions. Test check (September 2006) of commercial statements of 12 Urban Distribution Divisions* revealed that against the revenue assessment of Rs.271.29 crore, sale of 1306.730 MU of energy had been shown in the statements during 2005-06 to domestic, commercial and small and medium power consumers (metered) of urban area. On the basis of revenue assessment shown in the commercial statements, the energy sold under different categories worked out to 933.551 MU only as per the rates of tariff applicable. The huge variation of 373.179 MU of energy (valued at Rs.92.92 crore) details in the table below between the quantity of energy sold (as per the statement) and the quantity of energy sold as worked out remained unreconciled:

Category	No. of consumers	Load (KW)	Energy charges (Rs. in crore)	Sale of energy as per statement (MU)	Worked out quantity of sale of energy (MU)	Difference non-accountal of energy (MU)
1	2	3	4	5	6	7
Domestic (urban)	384877	649563	155.53	874.300	636.964 (Rs.1.90/Rs.3.0 per unit)	237.336
Commercial	92214	220308	96.39	347.990	246.920 (Rs.3.90 per unit)	101.070
Small and medium power	4248	37475	19.37	84.440	49.667 (Rs.3.90 per unit)	34.773
Total	**481339**	**907346**	**271.29**	**1306.730**	**933.551**	**373.179**

Note: *Figures in brackets indicate rate per unit as per applicable tariff.*

Loss due to sale of excess energy to domestic (LMV-1) consumers

Short recovery of energy charges in domestic category of consumers due to adoption of lower sale rate than the approved sale rate of UPERC worked out to Rs.1382.04 crore.

2.3.25 As in the case of agricultural consumers, domestic consumers were also getting more energy than their contribution to the assessment. It was noticed (September 2006) in audit that average rate of actual sale was lower than the rate approved by UPERC. This resulted in short recovery of energy charges to the extent of Rs.1382.04 crore during the period of three years up to 2005-06 as detailed below:

Sl. No.	Attributes	2003-04	2004-05	2005-06	Total
1	Energy sold (MU)	10276.440	10868.730	11580.610	32725.780
2	Assessment (Rs in crore)	1580.07	1670.90	1797.01	5047.98
3	Overall average through rate considered by the Commission (Rs per unit)	2.84	2.65**	2.65	
4	Value at through rate (Rs. in crore)1X3/10	2918.51	2880.21	3068.86	8867.58
5	Deficit of energy charges (Rs in crore) 4-2	1338.44	1209.31	1271.85	3819.60
6	Commission's approved sale (MU)	9271.000	10343.000	10343.000**	29957.000
7	Excess quantity sold against projections (MU)1-6	1005.440	525.730	1237.610	2768.780
8	Value of excess quantity sold against projections (Rs in crore)7X3/10	285.54	139.32	327.97	752.83
9	Percentage of share of domestic consumers in total sales as per UPERC	35.08	36.70	36.70	
10	Percentage of actual sales to domestic consumers	38.47	38.84	38.50	
11	Rate of sale approved by Commission (Rs. per unit)	2.35	1.79	1.79**	
12	Rate actually realised (Rs. per unit)	1.54	1.54	1.55	
13	**Loss (Rs. in crore) 12-11X1**	**832.39**	**271.72**	**277.93**	**1382.04**

* I, II, III, IV, V and VI Varanasi, I, II and III Gorakhpur, Rambagh, Mayo Hall, Kalyani Devi (Allahabad).

** As the ARR for 2005-06 has not been approved, figures of 2004-05 has been adopted.

In this connection, it was noticed (September 2006) that the value of excess energy sold over projections worked out to Rs.752.83 crore during these years, which does not qualify for subsidy.

Metered/unmetered consumers

2.3.26 According to the Memorandum of Understanding reached between GOI and GoUP (February 2000), *cent per cent* metering was to be ensured by 31 December 2001. Chapter V of Uttar Pradesh Electricity Supply Code 2002 (Code) of UPERC stipulates that no new connection shall be given without a meter and Miniature Circuit Breaker (MCB) or Circuit Breaker (CB) of appropriate specification. Further, no supply shall remain unmetered after the expiry of three years from the date of issue (June 2002) of this Code. Supply Code 2005 provides that the licensees shall meter all unmetered connections including PTW and street light. PTW consumers were, however, given an option to opt for metered/unmetered supply. Despite these provisions, it was noticed (September 2006) during audit that in case of domestic, commercial and small and medium power consumers of PuVNL, only 38.15 and 30.33 *per cent* consumers were metered at the close of March 2005 and March 2006 respectively. Of the metered consumers, meter readings in respect of 8 to 43 *per cent* consumers could not be taken due to 'no access (NA)' and 'no reading (NR)'. Similarly, 8 to 36 *per cent* meters were 'informed defective' (IDF), 'appears defective' (ADF) and 'reading defective (RDF) '.

Thus, PuVNL was far behind in providing metered supply as per UPERC's directives and substantial part of energy supplied was being measured for accurate billing.

Short/incorrect assessments

2.3.27 Test check of the records of four distribution divisions of PuVNL revealed cases of short assessment/ lack of periodical analysis of consumption pattern to check theft of energy. These are discussed below:

Loss due to default in analysis of consumption pattern of cold storages

2.3.28 The Chief Engineer (Distribution), Meerut area, Meerut of the erstwhile Uttar Pradesh State Electricity Board had issued (December 1996) instructions for analysis of the consumption pattern of the cold storages and had fixed a consumption norm of 9 units per quintal per season (March to October) for diffuser type cold storages and 12 units per quintal for bunker type cold storages. Apart from this, in view of irregularities noticed in Current Transformer/Potential Transformer (CT/PT) of cold storages and ice factories, UPPCL, issued instructions in April 2005 to take the following steps to control loss of energy:

- ascertain storage capacity;
- check meter and transformers and the sealing of meters;
- take random and weekly reading during May, June and July of each season;
- download data from electronic meters through meter reading instrument on regular basis; and
- check the consumption pattern by installing check meter in suspected cases.

It was noticed (September 2006) in audit that in respect of two cold storages in EDD-I, Varanasi, the steps mentioned above were not taken. Due to non-checking of consumption pattern thereof as per the prescribed procedure, pilferage of energy, if any, could not be ascertained in audit. Compared to the norms of consumption of 9 units, suspected pilferage of energy during two seasons (2004-05 and 2005-06) worked out to Rs.16.10 lakh.

Short levy of demand and energy charges

Incorrect billing of consumers resulted in undercharge of revenue to the extent of Rs.1.18 crore.

2.3.29 The Tariff provisions applicable to certain categories of consumers provide that the demand charges shall be levied at the actual maximum recorded demand during the billing month or contracted load which ever is higher at normal rate and additional charges for demand in excess of contracted load at twice the normal rate. Further, as per the rate schedule LMV-8, the rate of charges for unmetered category of consumers was increased from Rs.400 per BHP to Rs.500 per BHP per month from 1 December 2004.

It was noticed (September 2006) in audit that PuVNL, Varanasi failed to bill for excess demand charges in three cases and failed to apply the correct rate of charge in five cases resulting in short assessment of Rs.1.18 crore as detailed below:

Name of the division	Name of the consumer	Load (KW)	Excess drawal of load (KW)	Period	Tariff	Nature	Short assessment (Rs. in lakh)
1	2	3	4	5	6	7	8
EUDD-I, Varanasi	Jal Sansthan, Varanasi	945	22728	1/04 to 3/06	LMV-7	Non-levy of additional demand charges	31.50
EUDD-I, Varanasi	Jal Sansthan, Varanasi	448	6622	6/05 to 10/05	LMV-7	Non-levy of demand and additional demand charges	14.90
EDD-I, Varanasi	World Bank Tubewells	1513 (2017.50 BHP)	TVM not installed	12/04	LMV-8	Rates not correctly applied	2.02
EDD-I, Varanasi	State Tube wells	2652 (3555 BHP)	TVM not installed	12/04	LMV-8	Rates not correctly applied	3.56
EDD-I, Gorakhpur	State Tube wells	5425 BHP	TVM not installed	12/04 to 2/05	LMV-8	Rates not correctly applied	16.28
EDD-I, Gorakhpur	Sugar Corporation	127 KVA	361	12/02 to 10/05	LMV-4(A)	Non-levy of demand and additional demand charges	0.54
EDD-II, Gorakhpur	State Tubewells	2872 (3829.5 BHP)	TVM not installed	12/04 to September 2005	LMV-8	Rates not correctly applied	38.30
EDD-II, Gorakhpur	Indo-Dutch Tube wells	786 (1047.5 BHP)	TVM not installed	12/04 to September 2005	LMV-8	Rates not correctly applied	10.48
						Total	**117.58**

Incorrect waiver of assessment in PD cases

2.3.30 The PuVNL outsourced (November 2004) the billing activities of six urban Distribution Divisions of Varanasi to KLG Systel Limited, Gurgaon at a cost of Rs.4.10 crore. The activity included door-to-door survey of each and every electricity consumer feeder-wise/transformer-wise, pole-wise and allotment of unique identification number to them. The firm that surveyed the consumers provided the list of such consumers to the Division on a Compact Disk (CD).

It was noticed (September 2006) in audit that EUDD-I, Varanasi finalised cases of permanent disconnection (PD) and waived recovery of arrears of

Rs.1.88 crore during 2005-06. A comparison of PD cases with the list of consumers that were surveyed in March 2006 revealed that four consumers were listed by KLG at serial nos. 25550, 28633, 25794 and 31578 as existing consumers. The division, however, waived (July 2006) their arrears aggregating Rs.23.74 lakh stating that these consumers did not exist after April 1993, July 1995, March 2002 and April 2005 respectively.

Thus, waiver of arrears in respect of the existing consumers with retrospective effect, resulted in loss of Rs.23.74 lakh. The consumers were still drawing energy as indicated in the survey report of KLG.

Discrepancies in data bank

2.3.31 In EUDD-I, Varanasi of PuVNL except for large and heavy power and street light consumers, billing was done by Integrated Software Systems Private Limited, B57-Mandir Marg, Lucknow (ISS) up to February 2006 with payment dates in March 2006. It was transferred to KLG System Limited, Gurgaon from March 2006. Analysis of data bank of ISS/KLG revealed the following deficiencies:

- Out of 43827 records, in the data bank of ISS, only 42240 records were taken in the data bank of KLG.
- Out of 43827 records, bills in respect of 2209 consumers were not issued by ISS.
- Out of 42240 records, data of 5464 consumers was found "NULL" indicating discrepancies in the data bank leading to non-issue of bills.
- In 1145 cases, sequence number was zero indicating that these consumers were not surveyed by KLG.
- Meter number of consumers should be unique. Test check of data of EUDD-I, Varanasi, however, revealed 9840 cases of duplicate meters and 3712 cases of duplicate service numbers in the data bank of ISS.
- Out of 43827 records in the data bank of ISS, 1682 records did not contain name of the Zone, division and no bills were issued resulting in heavy arrears;
- In 1988 records name of the sub-divisions and feeders were not mentioned and no bills were issued resulting in heavy arrears;
- In 1886 records, house number was not shown;
- In 7303 records, Name of *Mohalla* was blank;
- In 1682 records, meter number was not shown; and
- In 1682 records, billing status was not shown.

Thus, due to lack of proper validation of data and defective software and in the absence of in-house skilled staff, the division/circle/zone/MD office are not able to exercise any control on survey and billing data.

The computerised billing in respect of Allahabad and Gorakhpur divisions is done by SAI Computers, Lucknow and KLG, Gurgaon. The agreements with these firms and billing files of consumers dealt by these agencies were not made available to Audit for examination.

Non-ledgerisation of consumers

2.3.32 Immediately after release of connections, the details of consumers' name, father's name, address of the consumers, service connection number, load, book number, meter number, date of connection, opening reading, applicable tariff *etc.* have to be brought in the ledger to start billing of the consumers. It was noticed (September 2006) in audit that in the case of EDD-II, Gorakhpur, 460 Kutir Jyoti connections (out of 1190) released during the period June 2003 to September 2003 were not ledgerised as of September 2006. This resulted in non-assessment of sale of energy to the extent of Rs.21.36 lakh (including ED).

Internal Control mechanism

2.3.33 Internal control is a management tool used to provide reasonable assurance that management objectives are being achieved in an efficient, effective and orderly manner. This is possible when the database captured for management information system (MIS) manually or through computer is accurate and credible. In this connection, it was noticed (September 2006) during audit that the internal control mechanism in UPPCL and the Discoms was inadequate, for the reasons mentioned below :

- There was no system to reconcile energy received at the transmission end with that of the energy purchased for which payments were made resulting in heavy discrepancies in the two figures;
- Computers available in the divisions/circles/zones and Discom, Varanasi were not used for analysis of data input. Technical and accounting staff did not have exposure to use of computers for checking of computerised bills. CDs of outsourced computerised billing were not available with the billing divisions to enable their checking either by Internal or External Audit. Instead of developing computer skills of its own staff, daily rated workers were deployed for using computer facilities. UPERC felt* the need for having a comprehensive and robust MIS with standardised formats to enable aggregation and comparison of data with respect to critical performance parameters;
- In respect of PuVNL, bank reconciliation of revenue cash book was not up-to-date. EUDD-I, Varanasi, EDD-I, Varanasi and EDD-II Gorakhpur had reconciled cash book with bank balances up to December 2005, March 2004 and December 2005 respectively. At the time of last reconciliation these units had unreconciled balances of Rs.5.48 crore, Rs.40.34 lakh and Rs.61.63 lakh respectively. This facilitated three embezzlements between July 2002 and March 2005 aggregating to Rs.4.11 lakh in case of EUDD-I, Varanasi.
- Checking of computerised bills by the Divisional Accountant (Revenue)/Assistant/Executive Engineer (Revenue) and other staff as per the prescribed quantum and internal audit with the help of computerised tools was not conducted. Even agreements with the outsourced agencies and billing data in a CD were not obtained for the purpose of security, safety and risk coverage;

* Page 46 of Tariff Order 2004-05.

- CDs for Master Data and billing ledgers were not being obtained by the billing divisions to check them and to preserve them to cover risk of crash of outsourced agency's system;
- Internal audit is a part of internal control mechanism that is used to detect irregularities, frauds, manipulations and embezzlements *etc.* and to see whether rules and instructions issued from time to time are being followed. UPERC had desired UPPCL's internal audit to check (i) incorrect application of tariff, (ii) under assessment of minimum consumption charges, (iii) non-issue of first bill and (iv) disconnection order *etc.* The Commission stated that response to this from UPPCL was evasive. It further directed the Discoms to utilise internal audit for weeding out infirmities in the revenue side data base. The revenue side data base continues to depict a distorted picture as indicated in the foregoing paragraphs on the basis of test check of data base.

Acknowledgement

2.3.34 Audit acknowledges the co-operation and assistance extended by different levels of officers of the Company at various stages of conducting the performance audit.

The above findings were reported to the Management/Government in October 2006; their replies are awaited (October 2006).

Conclusion

UPPCL's performance was deficient as it could not reconcile figures of energy purchased and energy recorded as per meters at delivery points of the transmission system. UPPCL/Discoms suffered heavy losses due to their failure to follow grid discipline, non-realisation of potential revenue due to delayed/non-submission of ARR within the stipulated time frame, excessive T & D losses over the norms fixed by UPERC, non-installation of capacitor banks in the transmission and distribution system and at the consumers end, large number of cases of unmetered consumers, non-ledgerisation of consumers for long periods and short assessment of energy charges. PuVNL failed to devise a mechanism for analysis of data bank and billing ledgers that had large number of cases of duplicate meters and service connection numbers.

Due to the above inefficiencies, the average cost of sale of energy per unit (Rs.2.83 to Rs.4.28) was higher than the average sale price per unit (Rs.2.31 to Rs.2.49). Thus, trading of energy by UPPCL/Discoms is not commercially viable.

Recommendations

- **Figures of energy purchased for which payments were made and those as per meters at delivery points of the transmission system should be reconciled periodically;**
- **Power purchase agreements entered into with power generating companies duly approved by CERC/UPERC should be implemented effectively;**
- **Grid discipline should be maintained by installing capacitor banks in the transmission and distribution system and the benefits of capacitor banks at the consumers installations should be made**

known to the consumers through awareness promotion campaign etc.;

- **The Internal control mechanism should be strengthened so as to avoid/minimise leakage of revenue, errors in tariff, incorrect application of tariff or rates, non-ledgerisation of consumers, cases of short assessment and incorrect booking of energy sold in the commercial statements; and**
- **Raids should be conducted on all categories of consumers of high loss feeders by the Vigilance wing of the Company so as to prevent pilferage/theft of energy.**

2.4 IT review on Recovery and Billing System in The Pradeshiya Industrial and Investment Corporation of Uttar Pradesh Limited

Highlights

The Company undertook partial computerisation of the recovery and billing system without formulating an overall and coordinated IT Policy or strategy. General and application controls were not effective, user requirements were not defined or documented and physical and logical controls essential to prevent misuse of the system or unauthorised manipulation of data stored were absent.

(Paragraphs 2.4.6 to 2.4.8 and 2.4.12 to 2.4.15)

The software had design deficiencies of controls that facilitated vital fields like names of guarantors, promoters, repayment schedule etc. remaining blank and disbursements exceeding the sanctioned amount.

(Paragraphs 2.4.9 and 2.4.10)

Large differences existed in the data relating to one time settlement (OTS) cases due to non-integration of Recover 2000 with the stand alone data base used for maintaining OTS details. Every body was allowed to change the data as login and passwords had not been provided to different users.

(Paragraphs 2.4.16 and 2.4.21)

Data was unreliable and did not give adequate assurance to integrity and did not have written authorisations and safeguards against theft, damage, protection of programmes/data files etc. It also did not have disaster recovery and business continuity plans.

(Paragraphs 2.4.23 and 2.4.26)

Introduction

2.4.1 The Pradeshiya Industrial and Investment Corporation of Uttar Pradesh Limited (Company) was incorporated in March 1972 as a wholly owned Government Company with the main objective of promoting and developing industries by providing financial assistance to medium and large scale industries already setup or proposed to be set up in the State.

The main objectives of the Company are (i) to carry on the business of an investment Company for providing finance to new/existing industrial enterprises in the State; (ii) to buy, underwrite, invest, acquire and hold shares, stock, debentures, bonds, obligation and securities by original subscription, participation in syndicates, *etc.*; (iii) to carry on the business of Merchant Banking in all its aspects and to act as managers to issues and offers; and (iv) to provide financial assistance on lease and to carry on the business of providing investment and financial services in all their aspects.

The present activities of the Company are mainly confined to recovery of financial assistance provided to industrial concerns through term loans, short-term loans, working capital term loans, Fully Convertible Debenture (FCD)/Non- Convertible Debenture (NCD) and lease assistance.

As on 30 June 2006, the Management of the Company was vested in a Board of Directors consisting of a part time Chairman, a Managing Director and seven other Directors. The Managing Director is the executive head of the Company and is assisted by two General Managers (Finance and Technical) and a Company Secretary in managing the day-to-day affairs of the Company at the corporate office and a Senior Regional Manager at its NOIDA regional office.

The Information Technology (IT) wing of the Company is headed by a Senior Manager (Technical), assisted by a Data Base Administrator/Manager (Computer), an Assistant Manager (Hardware and Software) and five other staff.

Scope of audit

2.4.2 The scope of IT audit included a review of planning, implementation and monitoring of the computerisation of the recovery and billing system and an examination of controls in the IT application.

Audit objectives

2.4.3 The IT audit of computerisation of the recovery and billing system of the Company was conducted to assess whether:

- there existed an IT strategy and the software was designed/developed as per a properly understood/analysed URS in line with the long term objectives of the Company;
- the implementation of the system was preceded by systematic planning and an adequate assessment of operational requirements and needs and the Company followed a structured approach for System Development;
- the system documentation is adequate and updated to ensure efficient and continuous operation of the system;
- data generated is complete, reliable and follows the business rules of the Company and the users are able to obtain requisite information in the right form and at the right time;
- the physical and logical access controls are sufficient to guard against unauthorised access and to ensure data security and integrity.

Audit criteria

2.4.4 The following audit criteria were used to ascertain whether the objectives stated above were being achieved:

- Approved IT strategy;
- User Requirement Specifications (URS), System Requirement Specification (SRS), System Design Document (SDD) and other manuals;
- Guidelines issued by the Government and rules and regulations of the Company; and
- Security policy & periodicity of security drills prescribed.

Audit methodology

2.4.5 Evidence was gathered through examination of records for existence of an IT policy/strategy, system design analysis, SDLC, BCP *etc.* The data relating to billing and recoveries available upto June 2006 was analysed using a computer assisted auditing tool *viz.* IDEA[*] for examining the completeness, availability and integrity of the data. Besides examining the data, the existence and adequacy of general IT controls in the organisation was also assessed.

Audit findings

System Development & Implementation

The development and implementation stage of software lacked systematic and planned approach as is evident from the following:

Lack of IT strategy & absence of a structured development approach

2.4.6 The Company switched over from manual working to semi computerisation based on HCL's Horizon mini computers in 1985-86. During the last 20 years (up to 2005-06) it incurred an expenditure of Rs.2.10 crore on computerisation of its activities but has not adopted a documented IT strategy for setting up both the long term and short term directives for IT systems with the organisation and means required to be adopted to achieve the stated objectives.

The Management stated (July 2006) that the main activity of the Company, *i.e.* term lending is presently stopped, and will be decided after finalisation of a plan for the Company in the near future. The reply does not explain why the Company failed to develop any IT strategy during the past 20 years of computerization. Regarding other issues, the Company furnished no reply.

An organisation undertaking computerisation should follow a structured approach that divides an information system development project into distinct stages that follow sequentially and contain key decision points and sign-offs. This permits an ordered evaluation of the problem to be solved, an ordered design and development process and an ordered implementation of the solution. During the developmental process of recovery and billing system, the Company did not follow a structured methodology as discussed below:

- The Company awarded (December 1999) the work of development of recovery and billing application software to Prosix at a cost of Rs.1.50 lakh. Before award of work, however, no feasibility study was carried out. As a result, the Company failed to incorporate user requirements specifications (URS) clearly while placing the order and specifications continued to evolve during the entire developmental stage. (Consequently, Prosix charged an additional fee of Rs.0.80 lakh for certain items of work terming the same as 'extra items'). The Company further failed to place a consolidated order on Prosix. After completion of 'RECOVER 2000', the Company placed (April 2001) a further order on the same firm for development of a stand alone software package for computing break up of simple, penal and compound interest components of interest over dues (part of billing and recovery system) at a cost of Rs.0.95 lakh.

The Management stated (July 2006) that since the software was to be developed within a very short time to combat Y2K problem, no feasibility study was carried out and that orders for development of various software

[*] Interactive Data Extraction and Analysis.

were placed as and when necessity arose. The reply is not tenable, as the Company was aware about Y2K problem well in advance. The placement of work orders in piecemeal also shows an unorganised approach.

- System Requirement Specification was also not prepared. As a result, certain items of work (print file of demand bills for two regions simultaneously and taking backup of data from menu) could not be completed by Prosix since the system software (Oracle version 7.0) available with the Company at that time was not supporting the same.

The Management stated (July 2006) that the said items were not needed. The reply confirms the contention of Audit that the Company failed to specify its needs clearly.

- No document signifying completion of acceptance testing was available on record. On actual use, a number of problems in the software were noticed; some of them are still unresolved.

The Management stated (July 2006) that some of the reports developed by Prosix required data since inception that was not available with the Company. Hence, these reports could not be generated in Oracle. The desired reports are being generated on stand-alone system using Dbase. Reply confirms the contention of Audit.

Development of a non integrated system

2.4.7 Billing activity consists of issuing demand bills to the borrowers financed under various schemes *viz.* Term Loan/Equipment Finance Scheme/Equipment Refinance Scheme/Equipment Credit Scheme, Short Term Loan, Working Capital Term Loan, lease assistance and FCD/NCD. During scrutiny of the IT system of the Company, it was noticed that:

- The Company got billing and recovery application software 'RECOVER 2000' developed using Oracle/Developer 2000. In addition, the Company was using 'in-house' developed software 'Payroll' in 'COBOL' (Payroll, recently developed in Oracle is under implementation testing) and 'tally' for accounting purposes.
- The application software 'RECOVER 2000' deals with the billing of term lending only. There was no software for raising demand bills relating to Lease Assistance Scheme and FCD/NCD and billing of cases under these schemes are being done manually.
- The application software ‘Recover 2000’ failed to yield desired results due to non-feeding of required data input to generate reports/MIRs.

The Management stated (July 2006) that keeping in view the limited number of cases, recovery and billing activity of Lease Assistance schemes was not computerised. In case of NCD/FCD, no reply was furnished.

Absence of system documentation policies and change control procedures

2.4.8 For ensuring efficient and continuous operation, adequate system documentation policy is necessary. However, a number of deficiencies as detailed below were noticed during audit:

- No documentation policies were in existence in the Company, consequently, no documents relating to development, testing, implementation and review of the ‘RECOVER 2000’ package was available with the Company.
- Though user manual for RECOVER 2000 was available with the Company, subsequent changes made to the software since its implementation (November 2000) was not incorporated in the said manual.

- The Company neither followed nor devised any formal change control procedures to ensure that the modifications in the programme were authorised, tested to the satisfaction of the users, approved and documented.

The Management stated (July 2006) that since no requirement for change in the system had arisen, no policy in this regard has been made. The reply is not based on facts as frequent changes have been made in the software without following change control procedure.

System Design

Audit noticed design deficiencies in the software as detailed below:

Essential fields lying blank

2.4.9 Some of the fields that were essential for maintaining database were required to be made mandatory in the software. In large number of cases, credit of cheques totaling Rs.4,72,36,065.84 has been given to the loanee's account without filling up the necessary information indicating Y (yes) or N (No) in the column depicting bounced cheques. Due to non-provision of mandatory fields, these essential fields were lying blank.

The Management stated (July 2006) that these are either repaid cases or cases that are not in use in the system. The reply is not acceptable as no relevant records were furnished to Audit.

More cases of blank mandatory fields remaining blank have been discussed in paragraph 2.4.12.

Lack of validation checks

2.4.10 Various fields of the software were found to be lacking proper validation as discussed below:

- There was no validation check for rejecting invalid dates. While analysing the table containing details of receipts from borrowers, it was found that in five cases, the software had accepted invalid dates.
- Similarly, while analysing the table containing master data in respect of applications received, it was found that in nine cases software accepted invalid dates in the field 'Sanction date'
- Further, due to absence of validation checks, cases like excess credits given to borrowers account prior to the date of deposits of the cheque, excess disbursement against sanctioned amount, *etc.* discussed in subsequent paragraph 2.4.12 could not be detected by the application software.

The Management stated (July 2006) that the dates have since been rectified. In case of excess disbursement/excess credits, the Management has furnished no reply.

Business rule regarding charging of interest rate not incorporated in the software

2.4.11 Billing through application software was being done in case of term lending (STL/TL/WCTL/EFS/ECS/ERS) only. The Revenue Auditor (RA) in its reports for the quarter ending April 2002, July 2002, September 2002 and January 2003 pointed out that the old (prior to implementation of 'RECOVER 2000') software package of billing prevalent in the recovery cell up to the quarter ending July 1999 was not having the provision of charging two interest rates on overdue interest. Hence, only single rate of interest, that too at the lower one of the two document rates applicable, was being charged on overdue interest (after implementation of the new software package of billing effective from the quarter ending 31 December 1999, the system of charging of two interest rates on overdue interest as per document rates was started). The RA cited many such cases and to facilitate the Management, it calculated loss of revenue in case of 'VP Rolling and Siddhartha Spinfab Ltd.' for the period November 1999 to January 2003 amounting to Rs.17.05 lakh and also suspected loss of revenue of crores of rupees in the several other cases. The Company, however, recalculated interest (February 2004) in the case of 'Siddhartha Spinfab' and against the overdue amount of Rs.5.26 crore (calculated by old software) corrected the actual overdue to Rs.5.82 crore. A sum of Rs.56.49 lakh was undercharged. The other case files were not put up to audit for review.

The Management stated (July 2006) that the case cited by RA has been recast. However, the case file was not submitted to Audit for review.

Application Controls

Input control

2.4.12 Input controls provide assurance about data integrity. Scrutiny of records and data tables of recovery and billing software 'RECOVER 2000', however, revealed that there was lack of input control as detailed below:

- 48 cases of loan amounting to Rs.93.93 crore were not having the names of any guarantor and the necessary fields in the table were lying blank.
- Similarly, 139 cases of loan were not having the names of the promoters and the concerned fields were lying blank.

The Management stated (July 2006) that in the new application software, the data was ported from Horizon and, therefore, some of the data relating to old/repaid cases might not have been completed at the time of initial stage of computerisation. The reply of the Management is not acceptable as substantial invalid data was found at the time of porting exercise and it was agreed with Prosix that Billing Section would correct/complete the data.

- 11 cases were showing excess disbursements made against the sanctioned amount ranging between Rs.0.01 and Rs.56.00 lakh aggregating to Rs.1.18 crore.

The Management stated (July 2006) that these cases pertain to foreign currency loan released through IDBI and in turn, repayment was made to IDBI by PICUP in Indian currency. As the repayments made to IDBI were of much higher amount as compared to the rupee value of foreign currency released at the time of disbursement (due to devaluation of foreign currency) the disbursed amount was also got altered manually in the records to match the outstanding loan. Other discrepancies were due to distortion of data during the porting exercise from Unix to Oracle (five cases), feeding errors (two cases) and due to rounding off of rupees in lakh (one case).

- Out of 2145 cases of loan disbursed by the Company, repayment schedule in 362 cases (total disbursed amount Rs.70.79 crore) was not available in the system.

No reply was furnished by the Management.

- In 15 cases, amounts credited to loanee's accounts were higher than the amount deposited ranging between Rs.0.23 lakh to Rs.4.43 crore. The total excess deposit, worked out to Rs.5.82 crore.

- In 23 cases, credits of cheques received from the borrowers totaling Rs.1.29 crore have been given to their respective accounts prior to the dates of their deposit ranging between 1 day to 2,955 days (in one of these cases, date of credit was not mentioned).

The Management stated (July 2006) that the table 'amount deposited' was not relevant in Oracle. Regarding credits given to borrowers' accounts with retrospective effect, the Management stated that the dates of deposit have been modified in the database. However, no impact on outstandings against borrowers were shown to Audit.

Process controls

2.4.13 Controls over the manual and automated processes which generate the output using the input data is essential to generate relevant and reliable information. Audit observed deficiencies which are detailed below:

Lack of control on manual ledger/records

2.4.14 As per existing practice, the computer bills are posted in the manual ledger and after recording the receipts during the month/quarter, the balance overdue amount of interest is worked out. The said balance is fed in the computer manually. Thus, the entire billing is based on manual ledger.

- In few cases (Sunil Solvex India Ltd., Linak Microelectronics Ltd. - billing quarter: April and July 2002), it was found that the amount of interest posted in the manual ledger was short. Accordingly, the system generated incorrect/short amount of interest for the subsequent month also.
- Scrutiny of records further revealed that ledger and ledger histories maintained in 'RECOVER 2000' were not updated on regular basis. It was found that latest entries in the ledger history of cases settled under OTS during 2005-06 pertain to March 2003. Similarly, bills are being prepared and cases are being settled under OTS on the basis of manual calculations since ledgers of number of cases settled under OTS were not found updated up to the completed quarter prior to the month of OTS.

The Management stated (July 2006) that the short posted amount of interest had since been rectified. No reply regarding updation of ledger and ledger histories was furnished to audit.

Incorrect calculation of interest on loans

2.4.15 As per guidelines issued by the Company, recovery from a loanee is adjusted against its dues starting from the loan having lowest rate of interest (The interest is further subdivided into simple, penal and compound proportionately) and moving towards higher rate of interest. Test check in audit revealed six cases in which the output derived, deviated from the desired results as narrated below:

- Scrutiny of records revealed that in certain cases, the priorities of bifurcation, as fixed by the Management, were not adhered to. In case of other loans (other than working capital term loan) of few borrowers (Kanpur Strips: July 2002, Eggro Fibres: April 2002, Coir Cushions, Charu Papers: January 2003)), it was noticed that instead of making adjustment against loan having the lower rate of interest, the Company adjusted the same against loan having higher rate of interest causing revenue loss to the Company.

- In large number of cases, two different rates of interest have been sanctioned by the Company in case of same loan account (especially in case of additional loan *etc.*). Thus, there were two or more documented rates of interest in the same loan account. In audit of revenue leakage, it was noticed that in two cases (Om Beverages and Elite Appliances: Billing Quarter April 2002 and July 2002) rate of interest lower than the approved/documented rate was charged from the borrowers. This resulted in revenue loss of Rs.3.69 lakh.

- As per the business rules of the organisation, the closing balance of outstanding loan against each borrower appearing in the ledger should be calculated as opening balance (+) debit transaction (–) credit transaction. However, a review of the ledger table in the system revealed that out of a total number of 44,274 records, in 5953 cases this formula was not followed. In 1982 cases, the closing balance shown as per the ledger was more by Rs.1059.29 crore than as per the formula computed value and in 3971 cases, the computed amount was more than the ledger balance (Rs.951.93 crore). This discrepancy needs to be investigated to rule out any unauthorised modifications to the database.

In case of adjustment of receipts contrary to the priorities fixed by the Company and charging of lower rate of interest, the Management stated that irregularities have since been rectified. Regarding difference in Opening and Closing Balance without any transaction, no reply was furnished by the Management.

Inconsistencies in data relating to One Time Settlement (OTS) cases

2.4.16 In order to improve recoveries from chronic defaulters who obtain stay orders from the Hon'ble High Court against notice issued under Section 29 of SFC Act, 1951 and also to reduce Non-Performing Assets (NPA), the Company allows OTS of the outstanding dues as per guidelines of the scheme applicable from time to time. The amount of OTS is normally recovered in one installment or within 12-18 months in monthly/quarterly/half yearly installments.

It was observed that though the option for maintaining OTS details was available in the application software 'Recover 2000', the same was not being used by the Billing Section. The details were being maintained in a stand-alone database on d-base. This has resulted in development of a non-integrated system of application software.

Since the details relating to OTS is being maintained in a stand alone software, there was mismatch between OTS details as per data of 'Recover 2000' and the data available in the stand alone software as detailed below:

(Rupees in lakh)

Sl. No.	Month of OTS	Name of the Company	Amount outstanding as per OTS statement on d-base		Amount outstanding as per ledger maintained in 'Recover 2000'		Remarks
			Principal	Interest	Principal	Interest	
1.	March 2006	Gupta Paper Mills	82.75	74.04	82.75	2213.86	Heavy difference of Rs.2179.82 lakh in interest
2.	Dec. 2005	Orphic Resorts Ltd.	595.24	1945.21	595.24	1813.24	No entries in the electronic ledger after record date 31.07.05. Difference of interest Rs.131.97 lakh
3.	May 2005	Perfect Latex	104.18	702.40	104.18	670.91	No entry in the electronic ledger after record date 31.1.05. difference of interest Rs.31.49

(Rupees in lakh)

Sl. No.	Month of OTS	Name of the Company	Amount outstanding as per OTS statement on d-base		Amount outstanding as per ledger maintained in 'Recover 2000'		Remarks
			Principal	Interest	Principal	Interest	
4.	May 2005	Propene Products	35.69	54.86	35.69	50.65	No entry in the electronic ledger after record date 31.1.05. difference Rs.4 lakh
5.	Sept. 2005	Pacquick Industries Ltd.	165.50	214.75	197.12	214.75	Difference of Rs.31.62 lakh
6.	Dec. 2005	Vee Aar Polymers	75.58	667.77	75.58	787.31	Difference of Rs.19.24 lakh

The case-wise replies furnished by the Management were as under:

Gupta Paper Mills:

- All the dues, except principal and interest amounting to Rs.28.75 lakh and Rs.74.04 respectively, have been written off;

Orphic Resorts Ltd. & Perfect Latex:

- The OTS has been finalised on the basis of manual ledger. The ledger maintained in the application software will be updated accordingly;

Propene Products:

- Rs.4 lakh received in October 2000 adjusted against interest dues was subsequently adjusted against principal dues of the Company as per decision of the settlement committee;

Pacquick Industries Ltd.

- Earlier, simple interest of Rs.31.62 lakh was funded but at the request of the borrower, the case was settled under OTS by nullifying the funding and recalculating the simple interest from the beginning;

Vee Aar Polymers

- After settlement of case under OTS, the borrower again approached the Company for reconsideration of its payments made during 1996-97 against dues of current OTS. Accordingly, the account of the borrower was recasted by deleting earlier recoveries for adjustment of the same against current OTS. This inflated the current dues of the borrower. The Board, however, did not approve the said recasting.

The replies in themselves are ample indicators of actual state of affairs in settlement of dues under OTS.

- It was also observed that despite finalisation of OTS in certain cases (*viz.*, G.S. Rubbers Limited, Nutech Packagings Limited, Vee Aar Polymers Limited–OTS finalised in March 2006, December 2005 and December 2005 respectively), the billing was continuing. Incidentally, all the three borrowers have been shown as regular in paying their dues.

The Management stated (July 2006) that billing in case of G.S. Rubber Limited is continuing since the OTS was not approved by the Settlement Committee. In respect of other cases no reply was furnished.

Use of System as a tool for MIS

2.4.17 Audit found that data available in the System was not effectively used as input for MIS. Details are given below:

Non-maintenance of data-base relating to relief allowed to assisted units

2.4.18 As per policy of the Company, some relief is provided to the borrowers by deferring the principal or/and funding the interest. Further, the Company also allows reschedulement of loan and gives other concessions and relief under its rehabilitation scheme to the borrowers facing problems in repayment of their dues.

- Scrutiny of data maintained in 'Recover 2000', however revealed that the Company did not have any data-base relating to cases of reschedulement of principal.
- 'Recover 2000' has the provision of generating statement showing deferred/written off principal and funding/ waiver/write off/abandonment of interest for the last 2 years (MIR 7) but monthly information report was not available on the system.

No reply was furnished by the Management.

Non-availability of data-base relating to recovery proceedings

2.4.19 For clearance of defaults, the Company issues follow up letters and arranges meeting with the borrower. In case of failure, the Company issues Demand Show Cause Notices (DSCN) to the borrower/guarantor and thereafter issues Recovery Certificate/notice under Section 29 of SFC Act, 1951 demanding therein payment of dues within a specific period. In case of non-adherence, next step for attachment of the financed unit and deployment of security guards is taken. Thereafter proceeding for sale is started. The amount realised on sale is first adjusted against the principal and then against the interest dues.

It was, however, noticed that:

- Recovery proceedings, like DSCN, notice under Section 29 of S.F.C. Act, 1951 and Recovery Certificates issued by the Company was not made integral part of the application software to have a direct, clear and transparent status of any loan. No provision was made in the software to produce these details.
- Similarly, no database relating to units attached/expenditure incurred on deployment of security guards and units sold alongwith realisation made *etc.* adjusted against various dues and balance recoverable amount. is available in the application software.

No reply was furnished by the Management.

General Controls

2.4.20 The controls which govern the environment in which IT operations are run, called as General Controls, are vital to ensure confidentiality, integrity and reliability of the information processed and stored in the system. Audit observed a number of deficiencies which are detailed below:

Absence of user privileges and data security

2.4.21 Prosix Softron (P) Ltd., vide its letter dated 2 September 2000, observed that the data security in Recovery and Billing system was not proper as everybody was allowed to change the data in the main ledger and further added that changes in the record made by an officer without knowledge of the concerned officer has caused inconsistency in the data and suggested identification of officers who can select, insert and modify the data and to provide separate log in and password to these users.

However, the problem is still persisting in the Billing Section as no separate login and password has been provided to different users and one Assistant Manager of the Billing Section, looking after the billing of one region can select, insert and modify the data of other Assistant Manager (looking after other region) also.

The Management stated (July 2006) that only officers of Billing Section have the right to access the database. The reply does not address the point raised by Audit.

2.4.22 Scrutiny of recovery and billing proceedings on 'RECOVER 2000' revealed that there was no output control. Select/Add/Modify facility was not only available to all the end users of Billing section but it was also available to the system installed in computer section without any access control. Availability of add/modify facility to all the officers/staff of billing/computer section with non- frozen data, shows lack of control as the bills/ledgers/reports with any kind of modifications can be generated without leaving trace of modifications in the absence of any audit trail.

The Management stated (July 2006) that Add/Modify facility is available to the team of Billing section only without which the section cannot run smoothly. Reply is evasive as the online facility of the same is available in the computer section also. Further, integrity of data cannot be ensured in the absence of any kind of out put control.

Unreliable database due to deficient change management process

2.4.23 The Study conducted by Audit revealed that the system does not give reasonable assurance for integrity of data that is evident from the following facts:

- The software does not freeze any data. Any kind of changes can be made in any data table on any subsequent date;
- The source code is not protected. Some cases of changes made in the logic of the software, are discussed in paragraph 2.4.15 *supra*.
- With non-frozen data tables and add/modify facility available to every end users, any type of bills/ledgers/reports can be generated with suitable modifications as has been discussed in paragraph 2.4.24 *infra*.

2.4.24 During review of General Controls it was noticed that:

- In the Computer Centre, no records relating to written approvals for providing access to the staff were available.
- In Billing Section, general authorisations have been given to the employees without making proper analysis of minimum access requirement to discharge their duties.
- Report and Query rights associated with the module were provided generally to all the users working in the Billing Section, without making analysis of need to know/need to work.
- The Company had not assessed the exact requirement of software

licenses and had not procured the required software wherever necessary.

The Management stated (July 2006) that (i) since the Computer center is service and support department, written approvals for providing access to its staff is not needed; (ii) only team officers are authorised to have access to the billing software;(iii) since they are the officers of billing section, they have all the rights to generate any report and queries relating to recovery and billing; and (iv) valid software licenses will be purchased on restart of the activities of the Company.

The reply is not tenable as these controls are necessary for reliability of data.

Deficiencies in physical and logical access controls

2.4.25 Physical access controls aim at safeguarding the computer equipment from unauthorised access, theft and damage due to accidents/deliberate actions *etc.* while logical access controls protect the programmes and data files from unauthorised access, modification, copying and deletion. Such access controls were absent in the computer systems implemented by the Company. It was also observed that:

- the Company lacked a formal IT security policy and no security drills had either been framed or conducted. Access to computer rooms was not regulated or restricted. Physical security of the main server has not been ensured since it was easily accessible to visitors and staff of other departments;

- firewall to protect the system from outside access through internet was not available

- the Company lacked a well-defined and documented password policy. Passwords were not being changed periodically. Though features of user-id and password were available in the software, the safeguards were inadequate as (i) the date and time of last access and number of unsuccessful attempts after last successful login attempt were not displayed on the screens of authorised users at the time of login; (ii) there was no validation check to reject creation of password of very short length (iii) alpha-numeric passwords were not enforced by the system; (iv) passwords were not case sensitive; and (v) both the user-id and password were the same.

No reply was furnished to audit.

Lack of adequate disaster recovery and business continuity planning

2.4.26 The Company did not have a formal disaster recovery and business continuity plan to provide reasonable assurance that the data processing operations could be regained effectively and in a timely manner, should a disaster render the automated systems non-operational. The key configuration items (hardware, software, personnel and data assets), which were indispensable for continuity of the IT activities had not been identified through a proper risk analysis and counter measures were not outlined.

It was further observed that:

- The fire fighting equipment installed in the corporate office during the year 1991 at a cost of Rs.40.90 lakh that covers the Computer Section also (where main server is also installed) was not in operation (June

2006).

- Fireproof almirah for keeping the back up and other electronic devices was not available with the Computer Section.
- Log of daily/weekly back ups being taken by the Computer Section are not being maintained.

In the absence of a ‘business continuity and disaster recovery plan’, a significant disaster impacting the Company’s servers and other computing systems runs the risk of paralyzing the computerised system of the Company that would seriously hamper its recovery efforts.

The Management stated (July 2006) that all the precautions like taking backup and keeping the same in separate almirah as well as dissimulation of data in three hard disks, are being taken. Further purchase of firewall is under consideration. The reply is not tenable as the measures being taken are insufficient.

Discrepancies in hardware and software inventory controls

2.4.27 Audit scrutiny revealed that the IT wing of the Company did not maintain any record of its IT related inventories. The entries in the registers of the stores section of the Company did not indicate name/type of hardware, its cost, source of purchase, invoice details along with dates. The current stock register shows ‘Computer/PC-AT/484 System/PC XT/Pentium: 146 Nos’ ‘Printer: 100 Nos.’ Entries relating to software purchased from time to time could not be traced in the stock registers. There was no evidence that annual physical verification of inventory has ever been carried out, or that items listed in the stock register were being periodically reconciled to the physical inventory.

No reply was furnished by the Management.

Acknowledgement

2.4.28 Audit acknowledges the co-operation and assistance extended by different levels of officers of the Company/Government at various stages of conducting the performance audit.

The above findings were reported to the Government in October 2006; the reply is awaited (October 2006).

Conclusion

The Company undertook computerisation of its activities without formulating an overall and coordinated IT Policy or strategy. General and application controls were not effective, user requirements were not defined or documented and physical and logical controls, essential to prevent misuse of the system or unauthorised manipulation of data stored, were absent. The software designed for recovery and billing of dues ‘Recover 2000’ is not being utilised in full and lacked effective validation checks, which resulted in revenue loss to the Company.

Recommendations

- **The Company should formulate a coherent IT strategy defining *inter-alia* the goals and objectives of the intended computerisation and benefits that would accrue from it. It is essential that an integrated software package be developed which can take care of the entire business operation of the Company especially functional**

areas of recovery and billing.

- **The Company should ensure documentation of all stages of the system development and the changes carried out to the system at a later date to ensure its smooth and error free functioning.**
- **The Company should ensure adequate physical and logical access controls so that the safety and security of data is not compromised. Besides, adequate input controls including validation checks should be embedded in the software to avoid data manipulation or erroneous data entry.**