CHAPTER II

PERFORMANCE REVIEWS RELATING TO GOVERNMENT COMPANIES

2.1 INFRASTRUCTURE DEVELOPMENT PROJECTS BY ANDHRA PRADESH INDUSTRIAL INFRASTRUCTURE CORPORATION LIMITED

2.2 MINING AND MARKETING ACTIVITIES OF ANDHRA PRADESH MINERAL DEVELOPMENT CORPORATION LIMITED

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2.1 Infrastructure Development Projects by Andhra Pradesh Industrial Infrastructure Corporation Limited

Highlights

The Andhra Pradesh Industrial Infrastructure Corporation Limited had foregone revenue of Rs.308.46 crore with corresponding undue benefit to allottees due to incorrect allotment of land to various industrial units at reduced rates, at rates prevailing on the date of application instead of on the date of allotment and at industrial rates in lieu of commercial rates.

(Paragraph 2.1.10)

The Company acquired land (182.41 acres) and developed (42.11 acres) at a total cost of Rs.5.89 crore at Food Processing Industrial Park, Kuppam. Out of developed land of 42.11 acres ten plots were carved out and eight plots were sold for Rs.52.82 lakh at a loss of Rs.3.25 crore.

(Paragraph 2.1.16)

The Company received Rs.6.45 crore from Union Ministry of Industries as grant for development of growth centre at Jedcherla. The Company deviated from the scheme and started developing Green Industrial Park at Jedcherla. In view of the deviation, utilization of GoI grant was not in order.

(Paragraph 2.1.19)

The Company took up establishment of Integrated Infrastructure Development Centres at an outlay of Rs.2.36 crore and Rs.4.05 crore at Nandyal and Tada respectively. Failure to provide common infrastructure facilities as envisaged in the scheme resulted in non-achievement of the objective of industrialization of the backward areas.

(Paragraph 2.1.22)

Common facilities constructed at growth centres at a cost of Rs.2.20 crore remained largely unutilized due to slow progress of development of growth centres.

(Paragraph 2.1.23)

Delay in selection of the developer and consequent allotment of plots to potential entrepreneurs in APSEZ, Visakhapatnam resulted in avoidable blocking up of funds of Rs.174.06 crore.

(Paragraph 2.1.25)

Introduction

2.1.1 Andhra Pradesh Industrial Infrastructure Corporation Limited (Company) was established (September 1973) as a wholly owned Government Company. The main objective of the Company is to create industrial infrastructure through development of industrial plots, and built-up industrial sheds with common facilities like internal roads, water, power, street lighting, etc., The Company takes up execution of industrial infrastructure projects on its own as well as those entrusted to it by the State Government and Government of India (GoI).

The management of the Company is vested in a Board of Directors (BoD) consisting of six Directors including the Chairman and Managing Director (C&MD). C&MD is the Chief Executive of the Company and is assisted by two Executive Directors, functional heads for Land acquisition, Engineering, Projects, Finance and Legal and Administration, and two Chief Engineers at Head Office and 16 Zonal Managers at field level.

During the years 2003-04 and 2004-05 the Company incurred a loss of Rs.50 lakh and Rs.35 lakh respectively, and during 2002-03 and 2005-06 the Company earned profit of Rs.1.80 crore and Rs.6.72 crore respectively.

Scope of Audit

2.1.2 The Performance review was conducted during September 2006 to May 2007 at Head Office and three field offices out of 16 field offices to evaluate the implementation of all the infrastructure development projects taken up by the Company during 2002-07.

Audit Objectives

2.1.3 The performance review of the implementation of infrastructure projects taken up by the Company was conducted with a view to ascertain whether:

- there was Long term/short term planning for fixing/achieving targets and monitoring with special reference to outcome rather than output;
- detailed survey/market study preceded the implementation of the scheme/projects;
- the Company executed the infrastructure projects efficiently, economically and effectively;
- the objectives with regard to creation of infrastructure were achieved as envisaged;
- implementation of the projects/schemes was completed with in time schedule;
- effective monitoring system was in place; and
- to what extent the stated objective of industrial development in the State was achieved.

Audit criteria

2.1.4 The following Audit criteria were adopted:

- Terms and conditions of the agreements with Government/financial institutions;
- Terms and conditions for allotment of land;
- Guidelines issued by State Government and GoI regarding schemes sponsored by them;
- Rules/regulations/guidelines/ law in force with regard to fixation of land prices;
- Time schedule prescribed/envisaged for establishment of infrastructure facilities;
- Targets of infrastructure development, land utilisation, establishment of units and revenue generation as per Detailed project reports (DPRs);

Audit methodology

2.1.5 The methodology adopted for attaining the audit objectives with reference to audit criteria were:

- scrutiny of records on development of infrastructure projects;
- review of implementation of projects/schemes; progress reports sent to State Government /GoI;
- review of utilisation of funds received from State Government and GoI ;
- review of Government directions, minutes of meeting of Board of Directors, price fixation committee, and related papers; agreements with consultants, and
- issue of audit observations and interaction with the management at various levels.

Audit findings

2.1.6 The Audit findings were reported (10 July 2007) to the State Government/ Management and discussed (28 September 2007) at the meeting of the Audit Review Committee for Public Sector Enterprises (ARCPSE) where the Government / Management was represented by the Principal Secretary to Government and C&MD of the Company.

The review was finalised after considering views of the Government/ Management.

The audit findings are discussed in the succeeding paragraphs.

State Industrial policy

2.1.7 State Government announced the Industrial policy for the years 2002-2005 and 2005-2010, which provided for an overall approach towards development and up gradation of infrastructure to enable optimum utilisation of State's resources. Under the above policy State Government extended fiscal benefit to a) Small Scale Industries (SSI) /Tiny units, b) SC/ST Entrepreneurs, c) Women Entrepreneurs, d) Units other than SSI/Tiny (large and medium scale industries) and e) Mega projects.

The State industrial policy 2005-2010 envisaged the following strategy for infrastructure development.

- Development of quality infrastructure for industrial growth through private participation.
- Building industrial competency in women,
- Quality competitiveness, technology up gradation.
- In order to boost exports, state Government offered a special package of incentives to export oriented units.

It is noticed that the Company did not implement various components of the policy even though there was no other agency entrusted with the development of infrastructure. The Company also did not make any contribution towards building industrial competence amongst women by providing land in industrial parks, development of SSI/ Tiny units.

Short term and long term plans were not prepared.

And foremost the Company did not prepare a perspective plan defining both short-term and long-term plans for development of industrial infrastructure in the State in consonance with the Industrial policy of the State Government announced from time to time. The State Government also did not set a definite target or time frame for the Company for development of estates in line with its industrial policy. The State Government while admitting the fact stated (September 2007) during Audit Review Committee meeting that it prepares the plan of industrial development for small and medium scale industries and that there was no specific plan for mega-projects. The Company adopts the State Government's plan and follows the guidelines issued by them.

Execution of projects

2.1.8 The implementation of infrastructure projects involves acquisition of land and provision of common facilities like roads, drains, effluent treatment plants, avenue trees, recreation hubs, etc. During 2002-07 the Company had taken up implementation of twenty industrial infrastructure development projects against an outlay of Rs.2646.22 crore. These projects envisaged acquisition of 20670 acres of land. The details of projects taken up by the Company and their progress are given in **Annexure -9**.

Acquisition of land

2.1.9 The Company did not have any definite policy for selection of land for purchase/acquisition with reference to nature of industries and suitability for creation of infrastructure facilities. The Company acquired both patta (private) and Government lands for development of projects.

The table below indicates the targets fixed for acquisition of land, actual land acquired, land developed and allotted during the last five years (2002-07).

(in acres)

Year	Land acquired			Land developed	Percentage of land developed	Allotment of developed land	Percentage allotted
	Target	Achievement	Percentage				
2002-03	3987	1106	28	360	33	506*	72
2003-04	4458	1951	44	946	49	469	50
2004-05	7221	4549	63	1038	23	763	74
2005-06	19249	14493	75	4169	29	1897	46
2006-07	30448	6498	21	4236	65	5002	118
Total :	**65363**	**28597**		**10749**		**8637**	

***including 246 developed in previous years.**
Source : Data compiled from information furnished by the Company

Targets for land acquisition were not achieved.

From the above it will be observed that during 2002-07 in none of the years targets for land acquisition were achieved. The achievement ranged between 21 *per cent* to 75 *per cent*. There was shortage in land development which ranged between 35 *per cent* to 77 *per cent*. Similarly except in 2006-07 when the Company was able to allot more land than developed, during 2002-06 the shortage in allotment of land developed ranged between 26 *per cent* to 54 *per cent*. Thus against 28597 acres of land acquired at a cost of Rs.1607.05 crore only 10749 acres of land was developed for Rs.11158 crore and 8637 acres of land allotted for Rs.1722.26 crore. Thus to this extent the Company failed to provide industrial infrastructure through development of industrial plots.

Allotment of land

2.1.10 The Company allotted the land to various Information Technology (IT) industries based on the recommendations of the Consultative Committee on IT Industries (CCITI) constituted by the State Government for administering and ensuring growth of Information Communication Technology (ICT) industries in the State as per the ICT policy 2002-05. The Company fixes the sale price of land on recommendation of Price Fixation Committee (PFC). The statement showing the details of allotment to various entrepreneurs are indicated in **Annexure -10.**

- It was noticed that in respect of 11 allottees **(Annexure -10)**, State Government directed the Company to allot the land at the rates agreed upon by it with the promoters. The allotment of land was made at lower rates in comparison to the rates fixed by the PFC. Thus charging of rates below the rates fixed by the PFC was irregular and clearly an undue favour to the allottees resulting in loss of Rs.304.52 crore.

- As may be seen in the **Annexure -10** in all four cases instead of charging rates applicable on the date of allotment/alternate allotment the rate prevailing on the date of application was charged resulting in loss of Rs.1.92 crore.
- In respect of Varun Motors Private Limited instead of applying commercial rates industrial rates were charged. As Varun Motors Private Limited had setup service centre/workshop for four wheeler vehicles it fell under commercial category. Thus non-adhering the terms and conditions envisaged in allotment of land under commercial category resulted in extending undue favour to a party Rs.2.02 crore.

Land allotted at reduced rates resulted in undue favour of Rs.308.46 crore to allottees.

The Government stated (October 2007) that in most of the cases the allotments were made as per the Memorandum of Understanding (MOU) entered into by it with the allottees and in the remaining cases allotments were made as per the Company's allotment regulations. Hence, the MOUs entered by the State Government with the allottees were detrimental to the financial interest of the Company. In respect of remaining cases reply is not tenable as it was noticed that the allotments made by the Company were not as per their allotment regulations.

Thus allotment of land at reduced rates in comparison to rates fixed by PFC resulted in undue favour to entrepreneurs of Rs.308.46 crore.

The illustrative cases noticed are discussed below:

2.1.11 As per directions of State Government, the Company handed over (July, 2005) 14.94 acres of land at I.T Park, Nanakramguda to the Tourism Department for establishment of Spa Hotel and Training center. A Special Purpose Vehicle (SPV) viz., IHHR Hospitality (Andhra) Pvt Ltd was formed (August 2005) for this purpose. The cost of land was fixed (August 2005) under industrial category at Rs.85 lakh per acre with interest @ 12 *per cent* per annum from the date of allotment (July 2005) till the date of payment. The land cost of Rs.12.70 crore was treated as 26 *per cent* of Government equity in the S P V.

Company lost Rs.6.35 crore due to charging of land rate of different category.

It was observed that as per clause 7.7(c) of allotment regulations, the construction of Hotel falls under commercial activity and as such the cost of land should have been charged at one and half times of the rate applicable to industrial category. Failure to comply with the above regulation of allotment resulted in loss of revenue of Rs.6.35 crore. Further the SPV had not made payment of interest, which resulted in loss of interest of Rs.2.67 crore[1] for the period from July 2005 to March 2007.

Prescribed rate for change of usage was not charged.

2.1.12 The Company allotted (December 2005) 1.35 acres (5463.26 sq m.) of land at IT Park Nanakramguda at Rs.3750 per sq m to Dakshin Infocom Projects Pvt. Ltd., for establishment of IT infrastructure for which land was allotted at concessional rate. The allottee requested (February 2006) for change of line of activity from IT Infrastructure to development of common facilities and also for allotment of land in favour of their subsidiary company viz., Dakshin Infrastructure Pvt. Ltd. It was observed, that, the allottee did not mention what common facilities were to be established. The Company also

[1] Rs.1269, 90,000*12 % per annum*21months = Rs.266, 67,900. Say Rs.2.67 crore.

did not elicit the details of common facilities to be established while giving the approval for change of line of activity. Thus it was amply clear that the allottee had taken up the land not for IT infrastructure development but for non-IT activity for which prevailing rate was Rs.5000 per sq m. Since the land was allotted at subsidized rates the allotment should have been cancelled and given to parties who would undertake IT activity. This was not done and the request of the party was acceded (March 2006) to without charging the rate prescribed for change of use, resulting in undue favour of Rs.68.29 lakh to the party.

The Government stated (October 2007) that as the allotment was made in December 2005, one and a half times the prevailing cost was levied as per Company's allotment regulations. The reply is not tenable as the revised allotment for non-IT activity was made by Company in March 2006 after revision of rates effective from February 2006. As per revised rates of February 2006 the Company needs to charge double the normal rate for non-IT activity. This resulted in undue favour to Dakshin Infrastructure Pvt. Ltd. and loss of Rs.68.29 lakh to the Company.

Assessment of Demand

Demand was not assessed before establishing projects

2.1.13. The Company was appointed as nodal agency to implement the projects/schemes for development of growth centres, Integrated Infrastructure Development Centre (IIDC), Food processing industrial parks (FPIP), Apparel export parks (AEP) and Textile parks approved by GoI and State Government.

The details of the projects/schemes entrusted by GoI/State Government together with number of plots developed, number of plots allotted, number of units established on plots allotted, details of grants/subsidies receivable from GOI/State Government and actual subsidies received and actual expenditure incurred there against as on 31 March 2007 are indicated below:

(Rupees in crore)

Sl. No	Project	No. of plots deve-loped	No. of plots allotted	Percen-tage of plots allotted	No. of plots utilised/ occupied	Sanction of grant		Actual grant received		Actual expenditure incurred on acquisition/ development
						GoI	SG	GoI	SG	
1.	Growth centre Ongole	615	292	47	232	10.00	5.00	5.85	2.45	17.01
2.	Growth centre Bobbili	388	195	50	10	10.00	5.00	5.76	4.22	10.62
3.	Growth centre Hindupur	228	179	79	166	10.00	5.00	2.50	1.45	3.80
4.	Growth centre Jedcherla	--	--	--	--	10.00	5.00	6.45	0.45	7.21
5.	Integrated Infrastructure Development Center, Tada, Nellore	181	180	99	87	1.62	-	0.94	-	2.36
6.	Integrated Infrastructure Development Center, Nandyal, Kurnool	95	95	100	14	0.94	-	0.66	-	2.12

7.	Food Processing Industrial Park, Kuppam, Chittoor	10	8	80	8	4.00	4.58	2.00	4.29	5.89
8.	Apparel Export Park, Gundlapochampalli	125	124	99	38	-	-	10.48	2.17	10.32
9.	Apparel Export Park, Vizag	72	66	92	1	17.00	6.05	-	3.95	4.89
10.	Textile Park, Pashamylaram	107	33	31	--	9.03	4.34	3.77	3.72	4.23
	TOTAL	**1821**	**1172**		**556**	**72.59**	**34.97**	**38.41**	**22.70**	**68.45**

Source : Compiled from physical & financial progress reports prepared by the Company.

The Company did not assess the demand before establishing growth centres, IIDCs, FPIP AEP and TP. Against 1821 plots developed by the Company, only 1172 plots (64 *per cent*) were allotted and 556 plots (31 *per cent*) were occupied. In the growth centres established at Ongole, Bobbili and Hindupur and the Apparel Export Park at Vizag and Textile Park, Pashamylaram the Company succeeded in allotting only 47 *per cent*, 50 *per cent*, 79 *per cent*, 92 *per cent* and 31 *per cent* plots. The fact that utilisation of plots stood at 31 *per cent* showed that either the facilities created by the Company were not upto the mark or allotments were made to people not interested in development of industry in the State. The observations are discussed in detail in paragraphs 2.1.14 to 2.1.23 of the Audit Report. Thus funds of Rs.68.45 crore invested on these projects remained largely unutilised.

A review of the above projects revealed the following deficiencies.

Growth Centers

Failure to allot developed plots resulted in rendering expenditure of Rs.14.43 crore unfruitful.

2.1.14 The Company acquired (1988 to 2003) 3279.59 acres of land for establishment of Growth Centers at Ongole, Bobbili, and Hindupur at total cost of Rs.31.43 crore (land cost Rs.22.41 crore and development cost Rs.9.02 crore). As per funding pattern, the Company has to receive Rs.30 crore from GoI towards central assistance and Rs.15 crore from State Government for all the above three growth centers. As against this the Company received assistance/subsidy of Rs.14.11 crore from GoI and Rs.8.12 crore from State Government. The Company also spent Rs.9.20 crore from its own funds. As of March 2007 the Company developed 1231 plots in three growth centers and allotted 666 plots (54 *per cent*). In 408 plots (33 *per cent*) units were established by allottees. Due to non-utilisation of 67 *per cent* developed plots, the investment (Rs.14.43 crore) remained largely unfruitful.

Government stated (October 2007) that out of the total net usable area of 2928 acres, 2078 acres stood allotted. The reply is not tenable as not only all the developed plots were not sold but units were also not established in all the allotted plots. Thus the objective of establishment of growth centres could not be achieved due to utilisation of only 33 *per cent* of the developed plots.

Integrated Infrastructure Development Centers (IIDCs)

Non-allotment of developed plots led to non achievement of objectives.

2.1.15 The Company acquired 206.62 acres of land for establishment of two IIDCs at Tada and Nandyal at total cost of Rs.3.70 crore (land cost Rs.79 lakh and development cost Rs.2.91 crore). The Company was to receive Rs.2.56 crore from GoI towards grant against which it received Rs.1.60 crore only. The Company developed 276 plots and allotted 275 plots. Out of 275 plots allotted, only in 101 plots (37 *per cent*) units were established by the allottees. Thus the objective of the scheme to promote cluster of small-scale units and tiny units in rural/backward areas was not achieved.

The Government stated (October 2007) that out of 235.30 acres developed, 180.53 acres stand allotted in respect of two IIDCs.

Fact remains that actual utilisation of the plots was far less than the allotments and Government's reply is silent about the actual utilisation of the plots. Thus the objective of establishment of IIDCs was not achieved due to establishment of units only on 37 *per cent* of plots developed.

Food Processing Industrial Park

Low fixation of land rates resulted in loss of Rs.3.25 crore.

2.1.16 The Company acquired (March 1999 and February 2001) 182.41 acres of land for establishing FPIP Kuppam at a total cost of Rs.1.98 crore. Out of this, land measuring 42.11 acres (23 *per cent*) was developed (during May 2003 to December 2006) at a cost of Rs.4.37 crore (land cost Rs.45.71 lakh and development cost Rs.3.91 crore) and the balance 140.30 acres remained undeveloped (March 2007). The Company developed 10 plots in an area of 23.837 acres out of 42.11 acres acquired and sold eight plots (20.623 acres) at a cost of Rs.52.82 lakh. This resulted in loss of Rs.3.25 crore[♣] in sale of eight plots. It was observed that failure to undertake proper demand assessment resulted in the Company not being successful in allotting the plots at the initially fixed rate of Rs.350/- per Sq.mt. (October 2002). To attract more number of entrepreneurs and investment, the price was reduced (December 2003) to Rs.100/- per sq.mt. and subsequently on the suggestion of the District Collector Chittoor further reduced (June 2004) to Rs.70/- per Sq.mt. Despite drastic reduction of the rate there was no significant improvement in utilisation of the developed plots. Further, the Company sold (June 2006 and September 2006) undeveloped land of 60.16 acres and realised Rs.1.43 crore leaving a balance of 80.14 acres lying unutilised/unallotted. Thus the Company could realise only Rs.1.96 crore against the total expenditure of Rs.5.89 crore.

The main reasons for poor response from entrepreneurs for setting up industrial units was delay/non-availability of basic infrastructure facilities like supply of water, construction of roads, drainage, street lighting etc. These facilities were created during May 2003 to December 2006. The Company spent (June 2004) Rs.1.65 crore out of Rupees two crore grant received from GoI for providing water supply to FPIP Kuppam from an adjacent tank by closing the sluice. Thus due to failure to estimate the source of water supply, the activities at FPIP

[♣] Cost of eight plots (20.623 acres) = Rs.3.78 crore less Rs.52.82 lakh realised = Rs.3.25 crore.

were adversely affected and the infrastructure provided at a cost of Rs.1.65 crore remained unfruitful. Thus delay in providing basic infrastructure facilities resulted in failure of the Company to attract entrepreneurs. Consequently the Company suffered loss of Rs.3.25 crore in sale of eight plots and funds of Rs.96 lakh remained blocked in 80.14 acre of developed land.

Due to in-adequate availability of water further developments at FPIP were frozen.

The Government stated (October 2007) that the Park was developed in three phases and in the first phase six allotments were given and three units were already working and other three units are under implementation. As there were no enquiries pending for food processing industries**,** undeveloped land was allotted to textile units. Regarding reducing the rate, the Government stated that the District Collector suggested (April 2004) for reduction in rate from Rs100 per Sq.mt to Rs.70 per Sq.mt to improve the occupancy. The reply confirms lack of demand for the plots as reduction in rate did not improve the occupancy. Management also stated (May 2007) that due to inadequate availability of water further developments at FPIP were frozen.

Apparel Export Park

2.1.17 The State Government decided setting up necessary processing facilities and infrastructure for production of finished goods to promote exports in textile industry and the Company was entrusted (November 1995 and September 2001) the work of development of AEP, Gundlapochampalli and AEP, Visakhapatnam. The Company acquired 167.27 acres and 145.60 acres of land at a cost of Rs.3.35 crore and Rs.85.17 lakh at Gundlapochampalli and Visakhapatnam respectively. The Company developed plots at both the AEPs by incurring an expenditure of Rs.16.53 crore (March 2007) against receipt of Rs.16.60 crore towards grants/assistance from GoI/State Government.

Allotment of unutilised plots not cancelled as required.

2.1.18 It was observed that in respect of AEP Gundlapochampalli, the State Government directed (March 1998) the Company that as a substantial subsidy (Rs.12.48 crore) from GOI/State Government was involved, the Company should incorporate a clause in the allotment letters issued to the allottees of AEP, Gundlapochampalli to the effect that the entrepreneurs to whom the land is allotted should offer back the land to the Company in case of not establishing/closure of the unit. It was noticed that this clause was not incorporated in the letters of allotment issued to all the allottees. It was further noticed that out of 124 plots allotted, units were established only in 38 plots. Similarly, in AEP Visakhapatnam only one unit was set up in one plot out of 72 plots allotted. The Company did not cancel the allotment despite abnormal delay in commencement of production by the allottees.

The Government stated (October 2007) that in respect of AEP, Gundlapochampally out of 147 acres developed the net usable area of 93 acres stood allotted fully. Similarly in respect of AEP, Visakhapatnam, out of 146 acres developed, the net usable area was 73 acres out of which 63 acres were allotted. The Government further stated that the terms of allotment / agreement would be monitored regularly. The reply is not tenable as although plots in both the AEPs were allotted but entrepreneurs failed (March 2007) to establish the units i.e. 69 *per cent* in AEP Gundlapochampalli and 99 *per cent* in AEP Vishakapatnam.

Thus due to inordinate delay in implementation of the projects, the objective of industrial development and export performance as well as employment generation could not be achieved and the investment of Rs.16.53 crore was rendered unproductive.

Non-compliance of GoI guidelines

Deviation from GOI guidelines needs regularization / refund of grant.

2.1.19 Union Ministry of Industries sanctioned (September, 2003) a growth center at Jedcherla, Mahaboob Nagar District for Rs.30.05 crore. The Company acquired (June 2003 to January 2006) 954.22 acres of land at a cost of Rs.7.11 crore against receipt of Rs.6.45 crore from GoI, Rs.45 lakh from State Government and Rs.21 lakh was spent from the Company's own funds. The Company instead of establishing the growth center started (July 2005) development of Green Industrial Park (GIP) comprising of various Special Economic Zones (SEZs) by marking 835.24 out of 954.22 acres acquired for establishment of growth center. The balance land of 118.98 acres valuing Rs.88.66 lakh was lying idle. It was observed that the Company did not have any plans for utilisation of this land.

Out of the 835.24 acres earmarked for GIP the Company got approval (October, 2006) for setting up of Formulation SEZ from Union Ministry of Commerce, in an area of 250 acres. Out of 250 acres under Formulation SEZ, the Company allotted (November 2006) 75 acres each to Aurobindo Pharma Ltd and Hetro Drugs Pvt Ltd on lease basis with upfront lease premium of Rupees seven lakh per acre and lease rentals at one *per cent* of lease premium per acre per year for 25 years. It was observed that, the establishment of GIP in lieu of growth center was a deviation from GoI guidelines since the GoI grants were meant for growth center but not for setting up various SEZs. In view of this deviation, utilisation of the grant for establishment of GIP was not in order. The grant of Rs.6.45 crore received from GoI thus requires to be regularized/refunded.

Government stated (October 2007) that there is no deviation from the guidelines of GoI in development of growth centre and this is in accordance of the guidelines only. The reply is not correct as the growth centre is meant for promotion of industrialisation in backward areas by allotting land to small and medium scale units. GoI also provides subsidy or grant to establish growth centers whereas SEZs is a specially delineated enclave treated as foreign territory for the purpose of industrial service and trade operations.

Irregular allotment of land for other than the intended purpose.

2.1.20 GoI sanctioned (March 1992) a growth center at Hindupur at an estimated project cost of Rs 27.28 crore. The Company acquired (1985-86) 385.92 acres of land for establishing Industrial Development area, and the same was converted into growth center. Further the Company also acquired additional land to the extent of 347.34 acres. Thus the total land acquired was 733.26 acres, out of which 146.25 acres is Government land and 587.01 acres is patta land acquired at a cost of Rs.1.42 crore. The cost payable for Government land was not assessed and not taken into account.

GoI guidelines (September, 1990) for establishment of growth centers in back ward areas envisage promotion of small and medium scale units. The Company allotted (November 2006) 350 acres of undeveloped land at growth center,

Hindupur to Neogen Properties Pvt. Ltd., Mumbai for Rs.8.50 crore for establishment of "Infrastructure and Knowledge Hub" which is to be set up over a period of 15 years from the date of taking possession of land. This was neither a small nor a medium scale unit. It was observed that the usage of land was changed (May 2006) to Apparel Park SEZ by the allottee without approval from the Company. The allottee obtained (October 2006) approval from GoI, before the sanction (May 2007) of the Company for change of line of activity. Thus, allotment of land was irregular and not for the purpose envisaged in the GoI guidelines.

The Management stated (April 2007) that no formal approval is required from GoI as there is no change in growth center status. The Government stated (October 2007) that it is not correct to infer that the scheme is meant for small and medium industries and any activity which promotes industrial growth of the area is allowed under this. The growth center scheme was formulated much before the recent policy of Special Economic Zone which was announced by GoI and it was not correct to infer that SEZ cannot be taken up in growth center. The reply is not tenable since the GoI scheme for establishment of growth centers clearly indicates that the scheme is to develop small and medium industries in backward areas and for this purpose alone GoI sanctions subsidy to growth centers where as for establishing SEZ no such grant is available from GoI, even though SEZ is established in growth center. Thus utilisation of grant in deviation of GoI guidelines for establishment of GIP was not in order.

Company developed bigger size plots in violation of GOI guidelines resulting in non-achievement of the objectives.

2.1.21 As per GoI guidelines the land for development in Integrated Infrastructure Development Centres (IIDCs) should be 50 acres and the formation of plots should be of the size of 200 sq mt/300 sq mt. The objective of the scheme is to promote cluster of small and tiny units with a view to creating employment opportunities. In deviation of GoI guidelines, at IIDC, Tada the Company developed (September 1996 to March 2006) 181 plots of sizes ranging from 1239 sq. mt to 69150 sq mt in 137.40 acres of land at a total cost of Rs.2.36 crore (Cost of land Rs.41.40 lakh, and Development cost Rs.1.95 crore). Similarly at IIDC, Nandyal, the Company developed (December 1995 to February 2007) 92 plots of sizes ranging from 868 sq mt to 3345 sq mt in 68.55 acres of land at a cost of Rs.2 .12 crore (cost of land Rs.37.12 lakh and Development cost Rs.1.75 crore).

The Government stated (October 2007) that as there was no big industry near by to support the tiny and small industries, lands were allotted to three big units. The reply is not tenable as Company did not develop any smaller size plots of 200/300 sq.mt. to accommodate small and tiny units. Thus its action is contrary to GoI guidelines.

Creation of infrastructure facilities

Failure to provide common facilities resulted in non-achievement of the objective of industrialisation in backward areas.

2.1.22 The Company took up establishment of Integrated Infrastructure Development Centres (IIDCs) at an outlay of Rs.2.36 crore and Rs.4.05 crore at Nandyal (July, 1994) and Tada (November 1998) respectively. As against this, the actual expenditure incurred up to 2006-07 was Rs.1.75 crore and Rs.1.94 crore respectively. The main reason for the low expenditure on the

schemes was non-development of complete infrastructure facilities. As per GoI guidelines for establishment of IIDCs, 40 *per cent* of the project cost was to be spent on creation of basic facilities like telecommunication, effluent treatment plant, raw material storage facility, marketing outlets, etc. It was noticed that the actual expenditure incurred at IIDC, Tada and IIDC, Nandyal for completion of above basic facilities was only 9.3 *per cent* (Rs.37.52 lakh) and 15.8 *per cent* (Rs.37.28 lakh) of the envisaged outlay. Failure to provide common facilities as envisaged in the scheme resulted in non-achievement of the objective of industrialisation of the backward areas.

The Government accepted (October 2007) that as per GoI guidelines, project cost was to be spent on the specific facilities like telecommunications, effluent treatment plant etc., and the works are being taken up on need basis.

2.1.23 Common facilities centres viz., post office, bank building, administrative building, canteen etc. constructed during 1998-99 at growth centres, Ongole (Rs.77.67 lakh), Bobbili (Rs.76.40 lakh), Hindupur (Rs.55.75 lakh) at a cost of Rs.2.10 crore remained largely un-utilised (March 2007) due to slow development of growth centres.

The Government stated (October 2007) that due to slow pick up in demand for industrial plots, these buildings could not be put to use. Reply confirms that the common facilities centers were constructed much in advance before allotment and utilisation of developed plots.

Other Projects

A review of the other projects viz., Pharma City (India) Limited, Visakhapatnam and APSEZ, Visakhapatnam implemented by the Company revealed the following deficiencies:

2.1.24 The Company invited (October 2002) Expression of Interest (EoI) for development and operation of Pharma City. In response to EoI, 11 parties responded (January 2003) and ten firms were short-listed. Only three bidders submitted detailed proposals (April 2003). Out of the three bidders, two bidders submitted incomplete proposals and hence were not considered and the proposal submitted by the lone bidder was evaluated (May 2003) and finally as the bidder failed to comply with the Request for proposal (RFP) terms, this was also not considered. The Company informed (August 2003) Infrastructure Authority♣ that the lone bidder failed to submit the proposals in line with RFP and no bidder was considered. It also informed that Ramky Group, one of the pre-qualified bidders had submitted (July 2003) a proposal evincing interest for development of Pharma City and requested Infrastructure Authority to take up direct negotiations with Ramky Group. After evaluating the proposal of Ramky Group (August 2003), the Infrastructure Authority approved the proposal of the Company to undertake direct negotiations with Ramky Group, and thus Ramky Group was selected as the promoter and developer.

♣ Infrastructure authority is a Government constituted body for overseeing the development of infrastructure projects taken up by the State Government.

The Company issued (November 2003) Letter of Intent to Ramky Infrastructure Limited. In accordance with the terms of Detailed Proposal submitted by Ramky Infrastructure, a SPV Ramky Pharma City India Limited (RPCIL) was incorporated (March 2004) for implementing the project and the Company allotted (December 2004) 2255.93 acres of land, purchased at a cost of Rs.105.47 crore (including development cost). Out of this the Company leased out 690 acres of common area land to RPCIL at a lease rent of 2.5 *per cent* of land value on perpetuity, with effect from 1 December 2004. The cost of land including pre operative cost worked out to Rs.4.67 lakh per acre. The Company subscribed (November 2006) to 11 *per cent* of equity capital in the SPV in the form of land (Rs.1.98 crore). The Company also entered (12 March 2004) into a Concession Agreement (CA) with RPCIL. As per the Concession Agreement, Concessionaire (RPCIL) shall have the right to fix the sale price, lease rentals, lease deposit and such other charges for sale/lease of land to the user industries and to other private developers for setting up utilities and amenities.

The following observations are made:

Allotment of land at lower rates resulted in loss of Rs.10.49 crore.

(a) Land measuring 1565.93 acre was allotted to the party at Rs.4 lakh per/acre as against Rs.4.67 lakh/acre resulting in undue favour of Rs.10.49 crore to the SPV and loss to Company.

The Government stated (October 2007) that the cost price of the land per acre was never arrived at Rs.4.67 lakh. The reply is not tenable since the land cost worked out to Rs.4.67 lakh per acre and same was communicated (January 2003) to the consultant for inclusion in the RFP.

(b) The Company also allotted (March 2004) 95 acres of land costing Rs.4.44 crore on lease basis to RPCIL for setting up common effluent treatment plant where as RPCIL occupied (June 2005) 113.50 acres of land. The Company claimed (February 2006) Rs.1.85 crore towards the cost of excess land occupied but did not pursue the same and the amount is yet to be realised (September 2007).

The Government confirmed that (October 2007) a demand was raised by the Company for additional land at Rs.10.00 lakh per acre and the amount is yet to be realised.

Un-authorized reduction of PDF resulted in loss of Rs.50 lakh

(c) Although the Project Development Fee (PDF) payable by RPCIL was fixed (November 2003) at Rs.1.50 crore by the Infrastructure Authority (IA), the Company reduced the PDF (November 2003) to Rs. one crore without the approval of IA resulting in short realisation by Rs.50 lakh.

The Government stated (October 2007) that the PDF was reduced from Rs.1.50 crore to Rupees one crore at the time of discussions (November 2003) with the bidder. The fact remains that there was no mention about the approval from IA. Hence, the reduction of PDF with out the approval of competent authority was detrimental to the financial interests of the Company.

Undue favour of Rs.93.49 lakh to the developer, due to change of date of lease.

(d) The Company changed the date of commencement of lease of 690 acres of common area land allotted to RPCIL from 1 December 2004 to 1 April 2006, without recording any reasons, resulting in loss of Rs.93.49 lakh.

The Government stated (October 2007) that as per the request of RPCIL, the effective date for charging lease rentals was changed to 1 April 2006. The reply is not tenable as the land was leased to the party in December 2004 and changing the date was not justified.

Loss of Rs.37.83 crore due to charging lower rate for allotment of land.

(e) The Company informed (February 2007) the RPCIL its decision to charge a rate of Rs.8 lakh per acre in respect of allotments made with effect from 1 January 2007. However it was noticed that the Company sold 384.16 acres (balance under sale agreement) and 611.37 acres of land (originally contemplated on lease) @ Rs.4.20 lakh per acre (March 2007) resulting in further loss of Rs.37.83 crore.

Reduction in rate for allotment of land for township resulted in loss of Rs.1.48 crore

(f) The Company also allotted (November 2006) undeveloped land of 29.61 acres (Rs.5.92 crore) to RPCIL, for development of township at Rs.15 lakh per acre as against the rate of Rs.20 lakh per acre fixed (October 2006) by PFC. The price was reduced by the Company without the approval of PFC/BoDs. This resulted in undue favour of Rs.1.48 crore and loss to Company.

The Government stated (October 2007) that keeping in view the feasibility of township for allottees of Pharma City rather than for industrial purpose, RPCIL was offered undeveloped land at a concessional rate of Rs.15 lakh per acre. The reply is not tenable since the deal with RPCIL was a commercial one and the reasons cited did not warrant concessional sale which is detrimental to the financial interests of the Company. Further price fixed by PFC needs to be reduced only after proper analysis by PFC. Thus due to allotment of land (2591.07 acre) to RPCIL at lower rates, reduction in PDF and postponement of date of effect of charging lease rentals on 690 acres resulted in loss of Rs.51.24 crore. Further, the Company is yet to recover Rs.1.85 crore towards excess cost of land (113.50 acre). The final outcome is that the Company extended a benefit of Rs.51.24 crore to RPCIL.

Allotment of land on lease at a nominal rate of Re.1/- per acre was undue favour to a private party

2.1.25 The Company acquired 9113 acres of land (February to September 2005) to develop SEZ at Visakhapatnam. The Company deposited (April 2002 to October 2005) Rs.256.86 crore with District Collector, Visakhapatnam towards land acquisition cost and rehabilitation and resettlement package. The Company allotted (April 2005) 2089 acres of undeveloped land to Bhaba Atomic Research center (BARC) on outright sale basis for Rs.96.52 crore. As per the directives of State Government, the Company also allotted (June 2006), 1000 acres of land to Brandix India Apparel City Private Limited, Sri Lanka on lease basis @ Re.1/- per acre for 25 years. 458.71 acres was identified for rehabilitation and resettlement package and 116.45 acres was kept for allotment to non-SEZ. The balance land of 5449 acres was notified (May 2007) for APSEZ. The Company is yet to (October 2007) identify the developer for developing the balance land of 5449 acres notified as SEZ. The Company has already incurred (up to November 2006) Rs.4.33 crore towards consultancy fee for preparation of project reports, identifying the developer, road shows conducted (February 2002 to September 2002) in New York, London, Singapore, and Dubai but no response was received from the bidders against Request for Proposals (RFP) bids called for (November 2003).

The following observations are made.

(i) The allotment of land (1000 acres) to Brandix India Apparel City Pvt Ltd on lease basis @ Re.1/- per acre per year was made to develop Apparel Park and to provide employment to 60,000 persons. However, proper selection process was not followed by the State Government forcing the Company to allot land at a nominal rate, whereas undeveloped land of 2089 acres was allotted for Rs.96.52 crore to BARC (Government Organisation).

The Government stated (October 2007) that the land was allotted to Brandix on lease basis based on a MOU entered into with them. The reply is not tenable as the decision of the State Government is detrimental to the financial interest of the Company.

Delay in selection of the developer and consequent non- allotment of plots resulted in blocking up of funds of Rs.174.06 crore.

(ii) The Company so far (March 2007) had not selected the developer for development of SEZ and consequent allotment of plots to potential entrepreneurs in APSEZ, Vishakapatnam. This resulted in avoidable blocking up of funds of Rs.174.06 crore.

The Government stated (October 2007) that all the amounts spent so far is only capital expenditure on land and the same is being collected by way of lease premium from the entrepreneurs. The reply is not tenable since the delay in selection of the developer and consequent allotments in APSEZ resulted in blocking up of funds, which is detrimental to the financial interest of the Company.

Thus due to selection of Brandix India Apparel City Pvt. Limited, without following any selection procedure and allotment on lease basis at a nominal rate lacks justification.

Consultancy Contracts

Appointment of PDP partner and consultants for similar services resulted in avoidable expenditure of Rs.4.30 crore.

2.1.26 The Company entered into a project development and promotion partnership (PDPP) agreement (December 1999) with Infrastructure Leasing and Financial Services Ltd, Mumbai (IL&FS) for preparation of feasibility reports, project structuring, selection of developer and assistance till technical and financial closure etc. Under this agreement the Company also entered into different agreements with IL&FS, for development of various projects[2]. The Company also entered into agreements with other Consultancy firms[3] for preparation of feasibility reports, project structuring selection of developer etc,. It was noticed that there was overlapping in the scope of work assigned to IL & FS and the other consultants as given in **Annexure -11**. It was further observed that IL&FS did not prepare any feasibility reports etc., and their role and involvement in the project development was negligible. There are no records showing the work done by IL&FS. Due to entrustment of works of similar nature and over-lapping works to other consultancy firms the Company

[2] APSEZ, Visakhapatnam, Gangavaram Port, Visakhapatnam, Pharma City, Visakhapatnam & Integrated Convention Centre and Town ship project, Hyderabad.

[3] KPMG India Consultants private limited, Chennai, L&T Ramboll consulting engineers, Chennai, Frischmann Prabhu International (Pvt) Ltd, and A.F. Ferguson Company, Mumbai.

incurred avoidable expenditure of Rs.4.30 crore as detailed below:

(Rupees in crore)

Sl. No.	Name of the Project	Name of the Consultancy	Amount Paid to Consultants	Amount paid to IL&FS
1.	AP Special Economic Zone, Visakhapatnam	KPMG India Consultants Pvt. Ltd. Chennai.	1.44	0.65
2.	Gangavaram Port, Visakhapatnam	L&T Ramboll Consulting Engineers Ltd. Chennai	2.30	1.80
3.	Pharma City, Visakhapatnam	L&T Ramboll Consulting Engineers Ltd. Chennai	0.89	0.50
4.	Integrated Convention Centre and Township Project, Hyderabad	Frischmann Prabhu Int.(Pvt) Ltd.& A.F. Ferguson Company, Mumbai	0.40	1.35
	TOTAL		**5.03**	**4.30**

Source : Compilation of figures from the payments made to consultants and IL&FS.

The Government stated (October 2007) that the services rendered by consultants and the services rendered by IL&FS are different from each other. The reply is not tenable since the services rendered by IL&FS could not be vouchsafed in the absence of records**.** Thus entrustment of similar and over lapping works to IL&FS and different consultants resulted in avoidable payment of Rs.4.30 crore to PDPP partner (IL&FS).

Formation of SPVs for execution of projects

2.1.27 *Integrated Convention Centre and Township project, Hyderabad*

State Government proposed (May 1998) to establish an integrated project of an International standard, which included Convention Centre, a Star Hotel, Golf Course and Villas. State Government designated the Company as nodal agency to develop and implement the integrated project. The Company initiated the selection process of the developer for the integrated project by calling for EoI (July 2001). In response five companies submitted (September 2001) proposals. Three companies were short-listed for RFP. RFP was released (September 2001) and pre-bid conference was held (October 2001). On the last date, a single proposal was received from Emmar Properties PJSC, Dubai (Emmar). Bid evaluation was done (January 2002) by Infrastructure Authority. The developer (Emmar) was selected through a process of competitive bidding for development, followed by negotiations as provided in the Andhra Pradesh Infrastructure Development Enabling Act, 2001 (APIDEA). The sole proposal was considered by the BoD and it was decided that matter may be referred to State Government for approval. State Government accorded (September 2002) approval to the Company’s proposal and accordingly the Company entered into MoU (November 2002). The Company formed (2003-04) three SPVs[4] with Emmar Properties, Dubai for

[4] (i) Emmar Hills Township Private Limited (EHTPL)
(ii) Manikonda Boulder Hills Leisure Private Limited (BHPL)
(iii) Cyberabad Convention Centre Private Limited (CCCPL)

execution of the projects relating to establishment of Hotel and Convention Centre, Golf Course and Township at Hyderabad.

The following are the audit observations:

i) As against an amount of Rs.236.97 crore contributed (2003-04 to 2005-06) by Emmar towards equity, the contribution (June 2005) of APIIC towards equity was in the form of land worth Rs.306.22 crore at Rs.60 lakh per acre considering the land rate of similar plots at the same location and Rs.1.45 lakh per acre as upfront fee for 235 acres of lease land. Accordingly the ratio of share holding of the Company and Emmar worked out to 56: 44 as against the agreed ratio of 24:76. Since the equity share holding of the Company in the SPVs was computed on the basis of land cost as Rs.29 lakh per acre instead of Rs.60 lakh per acre the Company contributed excess amount of Rs.85.36 crore without any controlling rights.

The Government stated (October 2007) that the land cost for the saleable area was fixed by them at Rs.29 lakh per acre and the valuation of land at Rs.60 lakh per acre does not exist. The reply is not tenable since the decision of the State Government to fix the land cost at Rs.29 lakh instead of Rs.60 lakh per acre applicable for similar plots at the same location, was detrimental to the financial interest of the Company.

Low fixation of lease rentals with out assessing probable revenue earnings.

ii) The Company also handed over 235 acres of land worth Rs.141 crore on lease basis for 66 years for development of Golf Course, for an upfront fee of Rs.3.41 crore and revenue share of grossly low two *per cent* for the first 33 years and three *per cent* for the next 33 years. No studies regarding the probable revenue earnings were conducted before handing over the land and entering into the agreement.

The Government stated (October 2007) that keeping in view of the feasibility of development of an international golf course on commercial format, State Government felt that the lease rentals for 235 acres of land for golf course would be at 2 percent of the gross revenue. The reply is not tenable since fixation of lease rentals at two *per cent* with out conducting any studies regarding the probable revenue earnings before handing over the land and entering into an agreement, is detrimental to the financial interest of the Company.

Thus the Company without safeguarding its interest allotted land at lower rates and contributed significant amount as equity without any controlling rights.

Visakhapatnam Water Supply Scheme

2.1.28 State Government decided (August 1997) implementation of Industrial Water Supply Scheme at Visakhapatnam through SPV at an estimated cost of Rs.439.26 crore.

The SPV was formed (July 2001) by contribution of equity by IL&FS (Rs.2.11 crore), Greater Visakha Municipal Corporation (Rs.7.50 crore), PSL Holdings (Rs.4.16 crore), the Company (Rs.2.19 crore) and Larsen & Toubro (L&T) (Rs.13.50 crore) for implementation of a water supply scheme at

Visakhapatnam, under the name of Vishakapatnam Industrial Water Supply Company Limited (VIWSCO). The work was entrusted (February 2003) to L&T. Loans aggregating Rs.350 crore were drawn by the Company from the bulk consumers, viz., Visakha Steel Plant (VSP), National Thermal Power Corporation Limited (NTPC) and Visakha Municipal Corporation (VMC). The entire loan amount was passed on to SPV for execution of the project. Immediately on completion of the work pumping of water from River Godavari commenced (25 December 2004). The Company entered into Bulk Water Supply Agreements with VSP, NTPC and VMC on behalf of the State Government.

In this regard deficiencies noticed are as under:

i) Although the contribution of L&T was only 46 *per cent* it was given overall control of the SPV and no mechanism was created for getting information on expenditure incurred and revenue earned. This arrangement where the financial affairs of an entity formed with funds from Government and PSUs was objectionable as there was no way to ensure that the L&T would give proper return to the Company. **Incidentally mismanagement of the finances of SPV led to disposing off the equity portion by L&T, the very entity which was entrusted to manage the SPV**.

Loans obtained in the name of the Company instead of SPV resulted in additional financial interest burden of Rs.47.39 crore.

ii) The Company borrowed Rs.350 crore from PSUs and in turn advanced loan to the SPV which was beyond its scope of activity. On default in payment of interest of Rs.47.39 crore by SPV, the Company also did not pay interest to the PSUs. The PSUs demanded (March 2007) penal interest of Rs.1.44 crore for delayed payment. The chances of recovering the principal of Rs.350 crore and interest of Rs.47.39 crore from the SPV are remote.

iii) The Company advanced (September 2006) an interest free loan of Rs.14.87 crore to VMC to purchase equity of L&T, which was not warranted, as it was an arrangement to bail out L&T. The VMC refunded (November 2006 to August 2007) the loan of Rs.14.87 crore. The unjustified advance of interest free loan resulted in loss of interest of Rs.83.65 lakh.

The Government did not offer any specific reply but stated (October 2007) that L&T along with a strategic partner PSL Holdings, are envisaged to hold 51 percent of the equity and hence they are in the controlling position. Government further stated that the PSUs from whom the Company borrowed Rs.350 crore have not agreed to lend money to SPV and preferred to give loan to the Company only and there was no other option for the Government to take the loan and execute the pumping scheme. The reply is not tenable since L&T was given overall control with 46 *per cent* contribution without any arrangement to safeguard the interest of the PSUs and the Company as a equity holder in the SPV also suffered consequently. Further decision of the State government to take loan in the name of the Company instead of SPV is detrimental to the financial interest of the Company as the SPV defaulted loan repayments.

Thus due to handing over of management to private party which contributed only 46 *per cent*, company had no control over the SPV. Further, loans were raised through PSUs on behalf of the SPV and interest along with penal interest as claimed by lending PSUs are yet to be recovered. Interest of

Rs.83.65 lakh was foregone on advances made to VMC to bail out L&T of financial crisis.

Internal control/ Internal Audit

Internal control

Inadequate internal control.

2.1.29 Internal control is a process designed for providing reliability of financial reporting and compliance with applicable laws and statutes. Audit analysis of internal control procedures/mechanism revealed the following deficiencies:

- The Projects wing did not have the details of award of work, preparation of project reports showing the name of the agency, expenditure on the work, schedule date of completion of work, actual date of submission of project report, date of approval of project report by the BoD.
- Fixed Assets Registers indicating the location, value, number of items, date of purchase, depreciation from time to time etc were not maintained properly and there was no physical verification of Assets.

  The Government stated (October 2007) that the suggestion of Audit is noted.

Internal Audit

Inadequate Internal Audit.

2.1.30 Internal Audit is a system required to ensure proper functioning as well as effectiveness of the internal control system and assist in detection of errors and frauds to the extent possible. The purpose of any internal audit is to ensure compliance with rules and regulations laid down by the Company.

Internal audit wing of the Company is headed by Chief General Manager (Finance) and assisted by General Manager / Deputy General Manager and Manager. The scope of work included verification of the transactions relating to land acquisition, development of estates, civil engineering works and finance wing of the Company

It was observed that the details of quantum of checks actually exercised against those prescribed, extent and periods of coverage of transactions in each zone, action taken on the internal Audit observations and important observations and suggestions were submitted to C&MD instead of BoD for their appraisal.

Acknowledgement

Audit acknowledges the co-operation and assistance extended by the staff and the Management of the Company at various stages of conducting the performance Audit.

Conclusion

The Company failed to follow its own pricing policy resulting in substantial loss of revenue with corresponding undue favour to allottees. Urgency was not shown in allotment/utilisation of developed industrial plots resulting in non-achievement of objectives of promoting industrialisation of backward areas and employment generation. GOI guidelines were flouted while implementing infrastructure projects with their assistance. Care was not taken in the appointment of Project Development Promotion Partner and other consultants to avoid overlapping of functions and the consequential avoidable payment to the project Development Partner.

Recommendations

The Company needs to:

- **create database in respect of acquisition of land, project wise profitability, post-allotment performance of units, employment generation etc.;**
- **introduce monitoring system to ensure that the land cost rebate is allowed for new employment;**
- **accelerate the process of Infrastructure development to achieve the economic development and employment generation in the state;**
- **frame effective marketing strategy so that the developed plots are immediately utilized for the intended purpose;**
- **prepare Perspective plan defining both short and long term plans for development of industrial Infrastructure in the state to match with the Industrial policy of the State Government;**
- **ensure accountability of personnel responsible for causing loss to the Company by extending undue favour to private parties; and**
- **strengthen internal control and internal audit systems.**

2.2 Mining and Marketing Activities of Andhra Pradesh Mineral Development Corporation Limited

Highlights

Approved mining plan was not followed for preparing Company's Annual plan, which was again not followed while carrying out excavation**.** Due to not following the annual plan for grade-wise excavation, Company lost a potential margin of Rs.16 crore.

(Paragraph 2.2.9)

Undue benefit was extended to contractor by not levying penalty of Rs.1.42 crore on account of non-achievement of target.

(Paragraph 2.2.10)

Avoidable payment of Rs.20.67 lakh was made to a contractor due to non exclusion of ineligible elements in rates.

(Paragraph 2.2.11)

Incorrect computation of grade of ore deposit resulted in avoidable payment of compensation of Rs.98.68 lakh.

(Paragraph 2.2.15)

The Company chose to enter into JV for beneficiation of low grades barites instead of doing the same on its own. It thereby lost potential margin of Rs.8.02 crore for every 2 lakh MTs.

(Paragraph 2.2.16)

Though agreements of five JVC's were terminated due to non- payment of Mining Franchise Fee (MFF), by accepting the compromise formula, the Company had to waive the interest of Rs.2.81 crore and adjust the dues of MFF of Rs.2.51 crore against security deposit, foregoing Rs.3.51 crore.

(Paragraph 2.2.20)

There was an avoidable payment of dead rent of Rs.88.27 lakh and advance dead rent of Rs.12.16 lakh on QLs not planned for quarrying.

(Paragraph 2.2.22)

Introduction

2.2.1 The Andhra Pradesh Mineral Development Corporation Limited (Company) (formerly known as Andhra Pradesh Mining Corporation Limited up to July 1981) was incorporated (February 1961) as a wholly owned Government company with the objective of:

- Development of mineral resources including exploration, exploitation and beneficiation,
- Development of mineral industries with private participation and
- Identification of best technology and investment for development of mineral resources.

The management of the Company is vested in Board of Directors (BOD) headed by a Chairperson and consisting of not more than twelve Directors including the Vice Chairman and Managing Director (VC&MD) who is the Chief Executive Officer (CEO) of the Company. The Director of Mines and Geology, Government of Andhra Pradesh is holding full additional charge of VC & MD since November 2005. The VC & MD is assisted by an Executive Director and five functional heads for Mining, Geology, Finance and Accounts, Human Resources and Company Law & Legal Affairs in Head Office and General Manager/Project Officers in Projects.

The paid up Capital, Capital employed and net worth of the Company as on 31 March 2006 was Rs.6.31 crore, Rs.64.15 crore, and 64.56 crore respectively**.** The summarized working results for the years from 2002-03 to 2005-06 are given in the **Annexure -12.** During the five years period ending 31 March 2006, the annual turnover of the Company ranged from Rs.36.35 crore (2002-03) to Rs.90.00 crore (2005-06) out of which the average turnover in respect of barite works out to be 99 *per cent*.

Scope of audit

2.2.2 The matters relating to mining and marketing activities covering the five year period from 2002-03 to 2006-07 were examined at the corporate office and three out of six project offices at Mangampeta (barites), Chimakurthy (black galaxy granite), Khammam (black granite) between March and May 2007. The Company had not finalized its accounts for the year 2005-06 and not compiled the accounts for 2006-07. Hence, the figures relating to the year 2005-06 are provisional and for the year 2006-07 are tentative. The working of the Company was last reviewed in the Report of the Comptroller and Auditor General of India for the year ended 31 March 1995 (Commercial) which was discussed by COPU in 2000.

Audit objectives

2.2.3 The performance review of mining and marketing activities of the Company was conducted with a view to ascertain whether:

- the management follows the legislative provision of the Government of India (GOI)/ State Government with regard to the mining operations and environmental issues and waste management;
- the Company prepares well rounded strategic and tactical plans based on surveys and marketing for the optimum exploitation of mineral resources and the targets were achieved;
- the management was able to safeguard against the risk of loss due to non operation of leased mines, payment of dead rent, contract for excavation, transportation, grinding and loading etc;
- execution of excavation work was as per the terms and conditions of the contracts/work orders;
- mining (from planning to execution) was done economically, efficiently and effectively; and
- the internal control mechanism was effective.

Audit criteria

2.2.4 The following audit criteria were adopted:

- Rules and regulations prescribed in the Mines and Mineral (Development & Regulation) Act 1957, Mineral Concession Rules, 1960 and National Mineral Policy 1993 (as applicable);
- Orders of Department of Mines, Government of India and State Government;
- Projections made in the Annual Accounts;
- The guidelines/standard practices prescribed under works/purchase manuals for award of works; and
- Environmental laws and requirements laid down in the Environmental Management Plans.

Audit methodology

2.2.5 The methodology adopted for attaining the audit objectives with reference to the audit criteria were:

- examination of Mining and Environmental Rules, Regulations and orders of the Director of Mines and Geology with reference to lease management;
- examination of records relating to execution of contracts at Project offices i.e. Measurement Books, production records and sales records;

- examination of records maintained at Head office i.e. mining, geology, marketing and finance departments;
- review of Agenda and Minutes of Board Meetings;
- analysis of collected information; and
- interaction with management.

Audit findings

2.2.6 The audit findings were reported (August 2007) to the Government/ Management and discussed (28 September 2007) at the meeting of the Audit Review Committee for Public Enterprises (ARCPSE) where State government was represented by Deputy Secretary, Industries and Commerce department, and Management by VC & MD. The report was finalised after considering the views of the Government/Management.

The audit findings are discussed in the succeeding paragraphs.

Mining Leases in operation

2.2.7 The Company has 25 Mining/Quarry leases (ML/QL)[5] covering a total area of 561.10 hectares (Ha). Out of 15 ML covering 458.70 Ha, mining is in progress in 12 leases relating to Barite (eight leases), Ball clay (one lease), lime stone (two leases) and moulding sand (one lease) covering an area of 412.08 Ha. The details of ML/QL are indicated in **Annexure -13.**

Barite

2.2.8 Barite is the naturally occurring mineral of barium sulphate. Its main properties are; high specific gravity, very low solubility, non toxic and chemically and physically unreactive**.** For marketing purpose, grading of barite is done as per its specific gravity, A Grade – 4.20 and above, B Grade – 4.10 to 4.19 and C and D Grades – 3.50 to 4.09. A and B Grade ore occupies the bottom portion of the barite ore bed and constitute the commercial grades. ‘C’ and ‘D’ grades are rosette type barite and have very little local market. The grade wise production of Barite as per Mining plan, Annual plan and actual for the period 2002-03 to 2006-07 is given in **Annexure -14.**

Non-adherence to Approved Mining Plan/Annual Plan

2.2.9 As per the provisions of Mineral Concession Rules, 1960[♣] and Mineral Conservation and Development Rules, 1988[♦], mining operations shall be as per approved mining plan (MP) and any modifications to it requires approval before execution. The Company held eight MLs for which separate mining

[5] ML for mining of major minerals viz., Barites, Ball clay, Limestone, Calcite and Moulding sand. QL for mining of minor minerals viz., Black Granite, Blue Granite and Black Galaxy Granite.

[♣] Rule 22-A.

[♦] Rule 10 of Chapter III.

plans were prepared and got approved till 2002. The Company submitted (February 2003) a combined mining plan for all eight MLs effective for the period 2002-07. The State Government approved the same in March 2003. It inter-alia gives the Cross-Section wise and Reduced-Level wise details for excavation of ore and overburden (OB) for each year. The Company also prepares an annual plan (AP) each year, specifying the grade wise quantities of ore and OB to be excavated. The grade wise quantities of ore to be excavated and the OB to be removed as per MP/AP (targets) and the actual excavation during the period under review are indicated in **Annexure -15**.

It was observed that:

1. AP did not conform to the approved MP i.e. AP only gave grade-wise quantities to be excavated and did not specify cross section-wise and level-wise excavation to be carried out. As a result, scientific extraction of the ore could not be vouchsafed. Comparison of actual excavated quantity with the available reserves also could not be done for the same reason.
2. Cross Section numbers recorded in the approved MP and those in Measurement Books (MB) were not agreeing.
3. The actual excavation was at variance with both MP as well as AP.
4. The total quantity of ore excavated and OB removed during the period under review were 102 and 99 *per cent* respectively of the total quantity projected in the AP. The grade-wise excavation of ore varied between 47 *per cent* in respect of B grade (2002-03) and 169 *per cent* in respect of C+D+Waste (2005-06) and removal of OB between 83 (2005-06) and 147.6 *per cent* (2004-05) of AP projections.
5. The grade-wise ratio of actual quantity of ore to OB excavated was different from that planned in AP due to which actual production cost also differed. Audit worked out the presumptive cost of excavation for the planned quantity **(Annexure -15).** It could be seen there-from that the differences in grade-wise excavation significantly influenced the cost. The table below indicates how, the Company lost a potential margin of Rs.16 crore due to not adhering to grade wise excavation as planned.

Non-adherence to Mining plan/ Annual plan in carrying out excavation resulted in loss of margin by Rs.16.00 crore.

Sl. No.	Year	Loss of margin (Rs. in crore)		
		A Grade	B Grade	Total
1	2002-03	4.41	1.67	6.08
2	2003-04	2.90	0.23	3.13
3	2004-05	(13.51)	(0.17)	(13.68)
4	2005-06	8.21	0.44	8.65
5	2006-07	10.29	1.53	11.82
Total		**12.30**	**3.70**	**16.00**

Source : Annual Budget of respective years (Annexure -15)

The Government stated (September 2007) that AP is prepared on assumed figures and not based on cross sections of MP. Government further stated that

mineral available would be exploited at later date and the Company did not lose any revenue. The reply is not tenable. Company should have excavated ore in accordance with its own AP since the entire mine is open and subject to vagaries of nature. Moreover, having costly grades of barites after opening the mines is not based on sound commercial principles, or an environment friendly decision. Thus without adherence to MP/AP the Company executed the work leading to deferred revenue of Rs.16 crore besides adversely effecting the environment.

Non-levy of penalty

2.2.10 The contract for excavation of barite at Mangampet during the three years period was awarded (March 2005) to Ramakrishna Reddy (Contractor). As per terms of the contract, the contractor was required to produce 15 lakh MTs of Run of Mine (ROM) barite ore and 45 lakh Cubic Metres (Cum) of OB annually i.e.1.25 lakh MTs of barite ore (ROM) and 3.75 lakh Cum OB per month. If the annual achievement fell below 80 *per cent* and 90 *per cent* of the target during the first and second years of contracts respectively, penalty would be levied at the rate of Rs.10 per MT and Rs.22 per cum for ROM and OB respectively. It was further stipulated that levy of penalty would be on a month-to- month basis and if the shortfall was made good within one year, the penalty so levied would be refunded. On representation by the contractor, the Company reduced (November 2006) the target for levy of penalty by 50 *per cent* for the first quarter for the year 2005-06 with the condition that the shortfall was to be made good during the contract period on the same rates. The details of target, actual production, amount of penalty etc., are given in **Annexure -16.**

It was observed that:

Penalty to the tune of Rs.1.42 crore was not recovered.

- The contractor failed to achieve the target (80 *per cent*) during the first quarter of the first year. Since he did not make good the shortfall the conditional waiver of penalty granted was not in order. The net penalty which should have been recovered and retained by the Company worked out to Rs.1.42 crore (ROM Rs.12.42 lakh and OB Rs.1.30 crore).
- The Company did not recover penalty on a month-to-month basis as stipulated in agreement. Thus, undue benefit was extended to the contractor.
- The contractor represented (April 2007) for appointment of arbitrator for upward revision of rates for the third year (2007-08) of the contract. This was referred to State government for direction. No decision was received so far (September 2007). As such, it was not clear whether the contractor would be making good the shortfall of first quarter of the first year in the third year (2007-08) of contract since its continuance in the third year itself is doubtful.

The Management stated (May 2007) that the contractor is executing the work at very competitive rates and that the recovery of penalty on month to month basis was postponed in order to encourage the contractor to execute the work in the forthcoming months. The reply is not tenable since the contractor was aware of the penalty being part of the contract. Waiver of same was not in

Company's interest, which resulted in extending undue benefit to the contractor. Thus due to non enforcing the agreement conditions the Company was put to loss of Rs.1.42 crore.

Avoidable additional payment

Non-exclusion of ineligible elements resulted in extra expenditure of Rs.20.67 lakh.

2.2.11 As the OB dumped by the earlier sub-lease holder (1995) was a hindrance for development of the mine (Mangampet) the Company requested (August 2005) the contractor to remove the same at the rate of Rs.55 per Cum. (level-wise rate applicable for 0 to 30 metres depth) duly deducting 15 *per cent* of the total quantity of OB thus removed towards swell factor, since the OB was loose and not naturally compressed. It was noticed that as per "Escalation Clause" of General Conditions of contract, the rate was based on cost components were 20 *per cent* for blasting and 80 *per cent* for drilling, excavation etc. Since the excavation of loose material does not require blasting, an amount of Rs.11 (20 *per cent* of Rs.55) per Cum was to be deducted from the applicable rate (Rs.55 per Cum). Failure to deduct the same resulted in avoidable payment of Rs.20.67 lakh.

The Management stated (May 2007) that OB upto a depth of 10 metres could be excavated without blasting but the dump was in hill slope and removal was difficult. Government stated (September 2007) that due to implementation of level wise rates (Rs.55 per Cum for 0 to 30 metres depth) by present contractor when compared with composite rate quoted by earlier contractor there was saving of Rs.19.79 per Cum, though the contractor removed material without blasting. The reply is not relevant since the audit comment is based on the rates at which the present contractor is working and no blasting is required for removal of excavated OB in hill slope.

Excess expenditure on excavation of topsoil

Allowing blasting charges in excavation of top soil resulted in extra expenditure of Rs.32.80 lakh.

2.2.12 One of the provisions stipulated in the Environment Management Plan (EMP) is that the top soil/sub soil excavated should be dumped separately to be reclaimed at the time of closure of the mine for off-setting the land degradation caused. It should be removed only by scrapper/excavator so that it retains nutrients/bacteria, which help in regeneration of plant life. The excavation contracts did not contain specific clauses for the above requirements. As the top soil/ sub soil is required to be excavated without blasting, it should be treated as a separate item in contracts awarded for excavation.

It was observed that:

- Awarding of contracts on composite rate, without segregating the quantity of topsoil resulted in avoidable expenditure of Rs.32.80 lakh towards blasting of excavation of topsoil.
- The removal of topsoil by scraper/excavator and its separate dumping was not being certified by any authority/official before the bill was cleared for payment.

Government stated (September 2007) that thickness of top soil ranged from 0.25 meters to two meters for which no drilling and blasting is required. This cannot be specifically mentioned in the agreement due to uneven formation of top soil. The reply is not tenable since the Company was aware of the facts

that the top soil does not require blasting but the same was not excluded from the rate while entering into contract.

Avoidable expenditure on transportation of soft soil

2.2.13 As per terms of the contract, the contractor has to dump the OB excavated during mining operations at a place specified by the Company, which normally falls within five Kms from the mine.

The Company evacuated population in the areas, falling within 300 meters 'danger zone' of mine and accommodated them in a nearby village at a distance of three Kms from the mine. In order to level the roads there, the excavating contractor was asked to transport (September 2006 to February 2007) 32,334 Cum of OB from the nearest OB dump and a separate payment of Rs.21.01 lakh was made to him, whereas the contractor excavated OB of 19.52 lakh cum during the same period.

It was observed that:

Transportation of OB from OB dump resulted in extra expenditure of Rs.21.01 lakh.

- Payment of Rs.21.01 lakh could have been avoided had the Company asked the contractor to dump the OB at the village which was within five Kms.
- In the MB's there was no entry of earth work done.

The Government stated (September 2007) that in the absence of availability of soft soil between December 2006 and February 2007 and absence of advance information from required authorities regarding allotment of area, the contractor was asked to transport from nearest OB dump for leveling. The reply is not tenable since the village is only three Kms away from the mine and the contractor had removed 19.52 lakh Cum OB during the period. Further, the Company as per terms of contract had option to ask the contractor to dump the OB excavated within five Kms of the mine.

Avoidable loss on breaking charges

2.2.14 While the excavation contractor is required to stock the ore in size not exceeding 24 inches (60 cms) at the stockyard, the maximum size of ore that is required to be supplied to buyers was eight inches(20.3 cms) with 10 *per cent* tolerance. Hence, the sale agreement stipulated that the Company can either arrange to break the barites to the required size before sale or ask the buyer to make his own arrangement for breaking and reimburse the cost. Thirty *per cent* of the ore from mine comes in size below eight inches and does not require any breaking. For the period under review, the rate agreed for breaking was fixed at Rs. nine per MT. Based on the representation (July 2005), of breaking contractors, the Company increased the breaking charges from Rs.nine to Rs.15 per MT (August 2005) and to Rs.18.50 (August 2006) per MT.

It was observed that:

- The Company paid the breaking charges (either reimbursed or paid to the breaking contractors) on the entire quantity dispatched, instead of restricting to 70 *per cent.*

- Representation was from breaking contractors and not from buyers. Hence the Company should have reimbursed the buyers at Rs.nine per MT for 70 *per cent* of ore.

The Management accepted (June 2007) that 30 *per cent* ore produced from mine would be of less than eight inches and Company is restricting payment of breaking charges to pulverizing mill contractor to 70 *per cent* of ore supplied, but, the same was not done in case of buyers. Government stated (September 2007) that the receipt of 30 *per cent* of ore of less than eight inches could not be segregated due to difficulty of screening etc and Company increased the rate based on representation of breaking contractor. The reply is not tenable since the Company should have evolved suitable mechanism for segregation of ore and enforcing the condition of sale agreement as it involves huge burden to Company.

Avoidable expenditure of breaking charges by Rs.1.66 crore not convincing the quantity to be broken.

Thus the Company incurred avoidable expenditure of Rs.1.66 crore[♥] during 2002-07 for reimbursement to buyers of excess breaking charges on 30 *per cent ore* of less than eight inches and on the rates applicable to the breaking contractors.

Avoidable payment of compensation

2.2.15 One land owner[6] had land measuring 2.76 Acres which was encircled by the Company's leasehold land at Mangampeta. The owner requested (August 2005) the Company to estimate the total quantity of ore available in his land and arrange to pay actual cost of the mineral after deducting the cost of excavation of ore and OB as compensation in order to hand over the land to Company for its use. A three-member Committee consisting of Company's officials was constituted (August 2005) by the General Manager (Mining) for assessment of quantity of ore available. The Committee submitted (September 2005) a note stating that based on the bore hole data (prepared by GSI) of MGP-13, for determination of grade and influence of bore holes MGP-6, MGP-11 and MGP-13 for determination of quantity (since the area was waterlogged), deposits of 'A' grade barites measuring 17,418 MTs were available at the thickness of 4.80 metres. The Board (October 2005) accepted the findings of the committee and purchase of land with compensation package for Rs.1.23 crore was finalized. Accordingly, the Company paid (September 2006) Rs.98.68 lakh towards 80 *per cent* of the amount and the owner transferred (September 2006) the land.

Injudicious investment decision on land compensation by Rs.1.23 crore.

To arrive at the average specific gravity of the ore, at the thickness of 4.80 meters pit from the bottom, the bore-hole data of MGP-13 from levels 81.91 meters to 87.05 meters was considered in audit .It was noticed that the specific gravity of the ore ranged between 3.60 and 4.20 which works out to an average specific gravity of 3.99 contrary to the findings of the committee. The ore with the specific gravity of 3.99 has little local market and no export market.

[♥] Rs.84.69 lakh during 2002-07 at the rate of Rs.9 pr MT for 30 *per cent* excess quantity (9.41 lakh MT), Rs.27.90 lakh for 4.65 lakh MT at the rate of Rs.6 per MT (Rs.15 – Rs.9) during August 2005 to July 2006 at Rs.53.77 lakh for 5.66 lakh MT at the rate of Rs.9.50 per MT (Rs.18.50 – Rs.9) during August 2006 to March 2007

[6] Shri. C.M.Ramanatha Reddy, Owner of Seetharama barite mines, Mangampet.

Thus, failure of the Company to accurately compute grade of the ore deposit, resulted in injudicious investment of Rs.98.68 lakh besides making a commitment of Rs.24.67 lakh.

The Management confirmed (May 2007) that the grade as per the bore hole data of MGP-13 works out to specific gravity of 3.99. It further stated that due to typographical mistake the bore hole number MGP-13 was indicated in the note instead of the relevant borehole number MGP-11 which is conforming to 4.23 specific gravity. The Government while endorsing reply of the Company stated (September 2007) that the Committee report was not erroneous except only typographical error. Fact remains that while making such heavy investment decisions the Company should have thoroughly checked the technical details. However, so far (October 2007) this aspect was not put up to the BoDs for ratification.

Beneficiation of low grade Barites

2.2.16 The barites with specific gravity of 4.00 – 4.09 and 3.50 – 3.99 are C and D grades respectively are considered low grade and have little local market. The same is required to be proportioned with higher grades to obtain higher specific gravity to make it marketable. As per the report (August 2004) of National Metallurgical Laboratory (NML), Jamshedpur, through beneficiation, 74.3 – 75.6 *per cent* yields of 4.20 – 4.14 specific gravity respectively could be obtained from C+D+Waste grade. The State Government directed (December 2004) the Company, to go in for beneficiation plant either on its own or through joint venture. The Company got studies conducted by NML on the economic viability of barites beneficiation plant. As per their report (January 2005), the cost of various items i.e. process consultancy, detailed project report, capital cost, operating cost and anticipated profit are shown in the table below.

(a) Process consultancy	Rs.45 lakh
(b) Detailed Project report	Rs.30 lakh
(c) Capital cost	Rs.23.70 crore
(d)Total investment required (a) to (c) including Service tax (Rs.9 lakh) @ 12.25% on (a) and (b) above	Rs.24.54 crore
(e) Quantity to be proportioned	2 lakh MTs
(f) Anticipated production (@74 *per cent)* recovery	1.48 lakh MTs
(g) Sales realisation (at an assumed rate of Rs.2000 per ton) 1.48 lakh x 2000	Rs.29.60 crore
(h) Process and other costs	Rs.11.35 crore
(i) Interest @ 12 p a on capital invested and depreciation	Rs.5.40 crore
(j) Total cost (h) + (i)	Rs.16.75 crore
(k) Anticipated profit (g-j)	Rs.12.85 crore
(l) Internal rate of return (k/c)	52 *per cent*

Source : Project Report of National Metallurgical Laboratory.

Had the Company gone in for its own beneficiation plant, the anticipated profit for every two lakh MTs of barites, would have been Rs.12.85 crore. However, it was seen that the Company, with out working out economics, invited (June 2006) 'Expression of Interest' (EOI), for forming Joint Venture Company (JVC). Four responses were received. Three firms were considered.

Improper decision in setting up joint venture potential margin lost was Rs.24.06 crore per annum.

The condition for forming JVC was to allot 11 *per cent* free ride equity and buying low grade ore @ Rs.210 per MT ex- mine with an increase of four *per cent* every year. The anticipated income from each JVC (for every two lakh MTs) worked out to Rs.4.83 crore. Thus the potential loss of earning per annum for one JVC worked out to Rs.8.02 crore (Rs.12.85 – Rs.4.83). The total loss to the Company for three JVCs would be Rs.24.06 crore per annum. Funds were not a constraint for the Company as it had fixed deposits ranging between Rs.50 crore and Rs.70 crore (2004-07). The Company also had sufficient raw material as it had accumulated low grade barite stocks amounting to 20.23 lakh MTs as at the end of March 2007.

The Government stated (September 2007) that cost of segregation of 30 *per cent* of waste from low grade ore and its transportation works out to Rs.110 per MT resulting in increase of cost. The reply is not tenable since Rs.300 per MT (Rs.100 per MT for handling and forwarding and Rs.200 per MT for bagging) was included in the process and other cost and was taken care of while calculating the cost of production by NML.

Thus due to not working out the economics for establishment of the projects the Company suffered a potential loss of Rs.24.06 crore of earning per annum.

Barites Powder

Under-utilization of Pulverization Plant

2.2.17 The barites pulverizing plant was established (1978) at a cost of Rs.36.81 lakh with installed capacity of 90000 MTs (@ 30,000 MTs per mill for three mills). Only two mills were in operation (one mill as standby) during the period under review and accordingly the annual installed capacity of plant worked out to 60,000 MTs per annum. An amount of Rs.63.25 lakh was spent during the period (2002-07) towards the Repairs & Maintenance (R&M) of the mills.

The following table indicates utilisation of capacity:

Year	Installed working Capacity (MTs)	Annual Plan (MTs)	Actual (MTs)	Percentage of actual capacity to installed working capacity
2002-03	60000	15000	15939	26.57
2003-04	60000	15000	11825	19.71
2004-05	60000	15000	18815	31.36
2005-06	60000	24600	17460	29.10
2006-07	60000	24000	21872	36.45

Source : Annual Plan of respective and production records.

It was observed:

Capacity under utilized due to lower targets.

- The capacity utilization of the plant ranged between 19.71 *per cent* to 36.45 *per cent* of the installed working capacity during the period under review. Thus the plant was under utilised.
- Annual plan Quantum pulverisation fixed was always less than the installed capacity.

- The Company did not take sufficient steps to increase capacity utilization of pulverization plant.

Not accepting the ONGC offer resulted in loss of Rs.4.72 crore.

- ONGC who buys barites powder on rate contract from the Company offered (August 2005) to place orders ranging between 10000 to 15000 MTs per month. The Company accepted (August 2005) to supply 5000 MTs, but did not pursue the offer and resultantly lost the opportunity to earn revenue of Rs.4.72 crore (October 2005 to April 2007) (**Annexure -17**).
- Gujarat State Petroleum Corporation (GSPC) also consumes barites powder for their operation and their average annual requirement is around 5000 MTs. The Company failed to contact this source.

Government stated (September 2007) that due to low orders the Company did not take steps to increase the utilization of plant and further due to non availability of labour Company could not fulfill the order. Though ONGC offered to place orders on nomination basis but actually did not place orders. The GSPC neither approached the Company for supply of powder nor participated in tender. The reply is not tenable since the Company did not pursue with ONGC to get the orders on nomination basis and the Company did not have any marketing strategy to identify potential customers for powder and thereby could not increase the powder market so that the plant is put to optimum utilisation.

Thus a concerted effort on the part of the Company would have ensured sufficient orders for the plant. Thereby Company lost potential revenue of Rs.4.72 crore.

Mining/Quarry leases not in operation

2.2.18 The details of ML/QL not in operation are indicated in the **Annexure - 13**. It was observed that two ML for calcite with an area of 46.62 Ha and seven QL with an area of 85.06 Ha are not in operation.

Black Galaxy granite

2.2.19 Out of total 85.06 Ha of QL, the Black galaxy granite covers an area of 81.66 Ha. The Black Galaxy Granite which enjoys the highest demand within and outside country is being quarried by private parties extensively over an area of five Square Kms between Rajupalem-Laxmipuram and Ramathirtham villages of District Ongole. This is the only working mine[♦] of its kind in the entire world and is very unique.

2.2.20 ***Allotment of Land and reserves***

As per the decision taken (December 1997) in the State Investment Promotion Board (SIPB) for quarrying of black galaxy granite, the State Government reserved (February 2002) an extent of 61.50 acres of Prohibitory Order Book (POB) land with a condition that joint venture should be promoted on the basis

[♦] Report of Geological Survey of India : Evaluation of Bronzite – Bearing Gabbro (Black Galaxy Granite) in and around Rajupalem Lakshmipuram Village, Chimakurthi Mandal, Prakasam Distrcit, Andhra Pradesh of May 2000.

of international bidding. The estimated reserves in POB land calculated upto 70 meters Reduced Level (RL) were 5.99 lakh cum of marketable granite. Further the State Government transferred (October 2002) an extent of 266.36 acres of Cattle Breeding Farm (CBF) land belonging to Animal Husbandry Department having black galaxy granite reserves, in favour of the Company at a cost of Rs.2.56 crore. However, no condition was stipulated in this case as in the case of POB land. The estimated reserves in CBF land calculated upto 70 meters RL were 29.98 lakh Cum of marketable granite. Both the lands are situated at Rajupalem Laxmipuram village, Ongole district.

Cattle Breeding Farm (CBF) land

2.2.21 The Company divided CBF land into 10 blocks and after following due tender procedure entered (between March 2001 and November 2001) into two sets of agreements viz. Project Cooperation and Investment Agreement (PCIA) and Mining Franchise Fee (MFF) agreement with seven companies for seven blocks. The Prospecting License (PL) and surface rights in favour of the JVCs were transferred between January 2001 and December 2001. The JVCs in turn allotted 26 *per cent* free ride equity to the Company. The firms who entered into joint venture with the Company were the firms who were quarrying black galaxy granite in the surrounding areas. As per the agreements, the MFF payable by JVCs ranged between Rs.10,100 to Rs.44,900 per Cum. The production target for each of the JVC was fixed at 100 Cum. for the first year and 300 Cum. per annum from the second year onwards. As per the terms of MFF agreements the JVC should pay MFF per Cum of galaxy granite produced and dispatched from the allotted block in addition to all statutory taxes, levies etc or MFF per annum for minimum targeted production whichever is higher. If the JVC fails to pay MFF or violate the terms and conditions of MFF agreements or fails to rectify the same (violations) within 15 days from the date of Company notifying the same, such failure shall constitute a breach of the terms of the agreement and the company is empowered to terminate this agreement and restrain the JVC from entering into the area held under license/lease by withdrawing the consent over surface rights and forfeiting the security deposit paid by the JVC under PCIA.

Out of seven JVC (7 blocks), two JVCs (two blocks) regularly paid MFF as stipulated in the agreements. Four JVCs after payment of first half yearly installment of MFF and one JVC after payment of two half yearly installments of MFF, appealed (April 2002) to the Hon'ble High Court (HC)/Hon'ble Supreme Court (SC) challenging the validity of MFF. While the case was pending in the SC, the Company issued (February 2003) show cause notice to the JVCs and finally terminated (March 2003) both the agreements of all the five JVCs. The Company (16 May 2003) intimated the Director of Mines and Geology (DMG) about the withdrawal of surface rights and cancellation of agreements and the DMG in turn cancelled (June 2003) the quarry leases granted to the JVCs. As per the directions of the State Government the BoD, in its meeting (July 2005) proposed to call for global tenders. The Company invited (August 2005/ April 2006) global tenders in CBF land relating to the allotted five blocks of five JVCs (who went to Court) and three left over blocks by dividing it into three blocks and POB land into one block. The Company finalized the tender and entered (June 2007) into agreement on two separate blocks and other two blocks were not finalised. Out of two finalised

blocks, one JVC (Midwest Granite (Pvt) Limited) is the one who went to Court.

Meanwhile, the five JVCs offered (January 2007) to withdraw the case in SC provided that the Company waives the interest and allow them to pay the due amount after adjustment of security deposit in installments, which was agreed (April 2007) to by the Company.

It was observed that:

- The Company entered into joint ventures with its competitors though there was no such compulsion for it to do so as in the case of POB land. The Company later noticed that these parties had an intention of stalling the production (this was expressed by the Company to SC in their written statement).
- Though two parties (those without any litigation) were paying minimum MFF of Rs.27.50 lakh per annum without any production the Company neither pursued the JVC for starting production nor took any action for termination of JVC agreement.
- The Company failed to undertake mining on its own by hiring men and machinery and could not start quarrying under JVC arrangement due to prolonged litigation (February 2000 to January 2001) despite having obtained (May 2000 to June 2001) PL over an extent of 262.40 acres of CBF land.
- The Company did not take any action regarding three leftover blocks till August 2005. These were also included (August 2005) in the global tenders. In respect of two blocks put to global tender, there was poor response/no response.
- Without obtaining any legal opinion, the Company accepted the compromise formula offered by the five JVCs, waived the interest of Rs.2.81 crore (as at 31 March 2007) and adjusted the security deposit of Rs.84.40 lakh against the dues of MFF of Rs.2.51 crore for withdrawal of the cases, thereby foregoing Rs.3.51 crore.
- The Company did not even consider the case for compensation on account of legal cost and other related expenditure, loss of profit etc. incurred by it before accepting the JVC's offer.
- On the entire CBF land, the Company lost a potential revenue of Rs.124.47 crore (Rs.11.32 crore for the first year, 2001-02 being 50 *per cent* of expected production and Rs.113.15 crore for five years, 2002-07 and thereafter). Apart from the potential loss to the Company, the revenue of State Government to the extent of Rs.51.85 crore by way of seignorage[7] charges (@ Rs.2083 average per cum. for an expected production of 248941 Cum. during 2001-07) also stands deferred.
- The Company did not take any action to black list the five JVCs.

[7] Statutory amount payable to State Government in consideration of sanction of quarry lease under the provisions of Andhra Pradesh Minor Mineral Concession Rules 1966.

Government stated (September 2007) that black listing of JVC in tender participation would amount to interference with judicial procedure and hence Company did not resort to such action. It was also stated that in view of uncertainty of final judgment of Hon'ble Supreme Court the Company compromised with JVCs by foregoing interest and when compromise deal was finalized it can not expect legal expenses. The reply is not tenable since loosing of the case is mere assumption of the Company not supported by any legal verdict/opinion.

Thus bad planning in allotment of blocks to competitors and undue favour to the five JVCs by withdrawing court cases resulted in non achievement of objective of extraction of valuable minerals. Consequently the Company also lost opportunity to earn potential revenue of Rs.124.47 crore of expected production during six years (2001-07). The State Government was also deprived to earn seignorage charges of Rs.51.85 crore (2001-07).

Land entered in Prohibitory Order Book (POB)

2.2.22 As against the demarcation of 61.50 acres by the State Government, the Company was granted (February 2005) QL over an extent of 46.50 acres leaving 15 acres which is under legal dispute. 15.53 acres of the land leased (April 1994) to Victorian Granites by State Government (who are quarrying in neighborhood) was interspersed within the land of the Company. Similarly 14.03 acres belonging to the Company was lying close to the land leased to Victorian Granites.

It was observed that:

(i) In order to facilitate continuous mining, the Company exchanged the land with Victorian Granites without ascertaining available deposits. While the land belonging to the Company was virgin, the land received from lessee was partially excavated. The area given in exchange by the Company was having deposits of 136422 Cum. against deposit of 21038 Cum. in respect of area obtained in exchange. Thus the Company had to forego 115384 Cum. reserves (136422 minus 21,038). Considering the average margin of Rs.5,000 per Cum. the Company lost revenue of Rs.57.69 crore.

Government stated (September 2007) that Company got additional land of 1.50 acres with a deposit of rock mass of 2,60,000 Cum up to a depth of 100 meters which would compensate the excavated rock mass by Victorian Granites. The reply is not tenable since the calculation by audit regarding reserves was upto 70 meters RL depth based on GSI data, whereas the management while replying considered the reserves upto 100 meter RL. In the absence of data for the 30 meters (between 70 meters RL and 100 meters RL) and the basis of calculation upto 100 meters audit is not in a position to verify the calculation of reserves. Moreover, the excess area of 1.50 acres stated in government reply is not relevant as revenue in QL depends upon the deposit of the mineral and not the surface area.

(ii) The Company did not initiate any action for promotion of joint ventures on the basis of international bidding as per the directions of the State Investment Promotion Board (SIPB) till April 2006. However, tenders were finalised only in June 2007. This resulted in

loss of potential revenue of Rs.6.03 crore (Rs.2.01 crore for 2005-06 and Rs.4.02 crore for 2006-07) to the Company in addition to deferred revenue of Rs.3.35 crore to the State Government by way of seignorage charges.

Avoidable payment of dead rent

2.2.23 As per the provisions of Andhra Pradesh Minor Mineral Concession Act 1966, the quarry lease holder shall pay dead rent (in advance each year) or seignorage charges on the mineral dispatched or consumed from the land at the rates specified under Schedule I & II there under which ever is higher. The liability for payment of dead rent will come into force from the date of execution of QL. The Company paid Rs.99.24 lakh dead rent (June 2003 to March 2007) and Rs.40.39 lakh advance dead rent for the period 2007-08 relating to 201.78 acre (**Annexure -18**). It was observed that the Company had no plans to carry out quarrying on its own or through JVCs but it still executed the lease deed and continued to pay dead rent.

The Management stated (June 2007) that in order to strengthen the case in courts, the Company needs to have mineral rights and hence executed the lease deeds and in order to avoid payment of interest to State Government the Company paid dead rent.

Government stated (October 2007) that the Company adjusted already paid dead rent (from 24 April 2004 to 8 February 2005) while making payment (2005-06) for not having physical possession of the area due to orders of Hon'ble High Court. The adjustment so made worked out to Rs.10.97 lakh. The reply is not tenable as the Company had the surface rights and there was no need to execute the agreement and pay dead rent unless the Company had plans for excavation either on its own or through JVCs.

Thus, the fact remains that even after taking adjustment of dead rent into consideration the Company made an avoidable payment of dead rent of Rs.88.27 (Rs.99.24 lakh – Rs.10.97 lakh). In respect of advance dead rent for 2007-08, the recovery of Rs.12.16 lakh (25.209 Ha) is doubtful of recovery as there was no response for the global tender called for this portion of the quarry.

Acknowledgement

Audit acknowledges the co-operation and assistance extended by the staff and the Management of the Company at various stages of conducting the performance Audit.

Conclusion

In case of Barytes the Annual Plans prepared by the Company were not in conformity with the approved Mining Plan. The grade wise actual excavation was not in accordance with the Annual Plans. The Company did not recover from contractor penalties on account of shortfall in production. Avoidable payments were made to contractors towards shifting of overburden, excavation of topsoil, transportation of soft soil and additional breaking charges. The company also made avoidable

payment of compensation. It entered into joint venture for beneficiation despite having the capability to handle it on its own, which was found to be more profitable. There was only 20 *per cent* to 36 *per cent* utilisation of the pulverisation plant.

In case of quarry leases, though obtained, operations were not started resulted in payment of dead rent. The company, in case of black galaxy granite, failed to undertake mining on its own and entered into joint venture with its competitors which landed in court case and finally resulted in compromise and loss on its part.

Recommendations

The Company needs to:

- **prepare Mining plans and Annual Plans taking the practicability of mining into account, in conformity with each other and strictly adhered to contractual terms and conditions to ensure exclusion of ineligible elements in the rates and its clauses to be strictly adhered to;**
- **explore the possibility of having its own barites beneficiation plant;**
- **take steps to develop capacity utilisation of pulverisation plant; and**
- **ensure quarrying black galaxy granite.**

2.3 Purchase, performance, maintenance and repair of Transformers in power sector companies

Highlights

The connected load of all power sector Companies in the State was more than the Distribution Transformer capacity, which ranged between 30.1 to 47.4 *per cent* for four years up to 2005-06. The overloading of existing Distribution Transformers resulted in premature failure/damage of transformers, voltage problems, etc.

(Paragraph 2.3.7)

Due to delay in completion of sub-station works, four power transformers (PTRs) purchased at a cost of Rs.20.13 crore remained idle for 4 to 17 months.

(Paragraph 2.3.10)

Failure to include risk purchase clause for default in supplies, resulted in procurement of 1000 distribution transformers (Eastern Power Distribution Company of Andhra Pradesh Limited) and 8871 Power Transformers/Distribution Transformers (Central Power Distribution Company of Andhra Pradesh Limited) at higher cost resulting in extra expenditure of Rs.1.39 and Rs.22.37 crore respectively.

(Paragraph 2.3.11 and 2.3.14)

Due to delay in retrieving back Power Transformers after repair, AP Transco purchased 13 numbers of 16 MVA and two numbers of 31.5 MVA new PTRs at a cost of Rs.1.36 crore which was avoidable.

(Paragraph 2.3.22)

Transformers are guaranteed for satisfactory performance for a period of five years from the date of commissioning. As many as 853 transformers valuing Rs.3.52 crore failed within guarantee period and are lying un-attended by the suppliers for over one to three years.

(Paragraph 2.3.24)

In none of the Companies (AP Transco/Discoms), the rolling stock of transformers was 4 *per cent* of existing transformers as per norm. This affected the replacement of failed transformers within time prescribed by Andhra Pradesh Electricity Regulatory Commission.

(Paragraph 2.3.27)

Introduction

2.3.1 Transformer is a static device installed for stepping up or stepping down voltage in transmission and distribution of electricity. Union Ministry of Power (MoP) notified (March 1994) the life of new transformers as 25 years, however, no life has been prescribed for repaired transformers. Power generated at 11 Kilovolt (KV) to 15.75 KV is stepped up[1] (132 KV, 220 KV and 400 KV) through power transformer for transmission to load centres, where it is stepped down (132 KV, 33 KV and 11 KV) for supply to different categories of consumers. Power is distributed to the consumers through transmission and distribution lines at a voltage of 400 volts to 132 KV. Transmission Corporation of Andhra Pradesh Limited (AP Transco) is responsible for transmission of power while four other Distribution companies (Discoms)[*] are responsible for distribution of power in the state.

Each Company is headed by a Chairman and Managing Director (C&MD). In AP Transco C&MD is assisted by three Chief Engineers who are responsible for purchase and maintenance of power transformers. In Discoms, Director (Operation) who is assisted by Chief General Manager (Purchases and Material Management) and General Manager (Operation) at Corporate Office level and Superintending Engineer (Operation) and Divisional Engineer (Transformer) at field level are responsible for purchase, maintenance and repair of distributions transformers.

Scope of Audit

2.3.2 The performance review was conducted during September 2006 to March 2007, wherein the matters relating to purchase, performance, maintenance and repair of transformers for the period from 2002-03 to 2006-07 by AP TRANSCO and four Discoms were seen. Records maintained at respective corporate office, 24 out of 86 sub-stations of AP Transco and 12 out of 26 operation circles of four Discoms were examined. The sub-stations were selected based on the investments made and operation circles were selected based on the number of transformers existing in circle.

Audit objectives

2.3.3 The Performance review of the purchase, performance, maintenance and repair of transformers in power sector companies was conducted with a view to assess whether:

- the Discoms had made well rounded policies and plans for building dependable and efficient transmission and distribution capacities keeping in view the available power and future requirement so as to minimize T & D losses and damage to the system due to over loading;

[1] Power is stepped up to higher voltage at generating stations to reduce the losses during transmission at low voltage.
[*] Central Power Distribution Company of Andhra Pradesh Limited (CPDCL); Northern Power Distribution Company of Andhra Pradesh Limited (NPDCL) Southern Power Distribution Company of Andhra Pradesh Limited(SPDCL) and Eastern Power Distribution Company of Andhra Pradesh Limited (EPDCL).

- requirements for transformers were realistically assessed, procurement initiated well in advance and made on competitive rates;
- contracts for procurement were awarded in transparent manner, specification decided in advance and contracts managed professionally;
- the Management had devised and put in place a dependable and effective quality assurance mechanism.
- the transformers were being maintained as per the maintenance schedule optimising their useful life and were repaired immediately in case of brake-down optimally utilizing the in house capacity; and
- the internal control system of the Discoms were working efficiently and were being monitored by the top Management.

Audit criteria

2.3.4 The following audit criteria were adopted:

- electricity policy of the State Government;
- power statistics and matters mentioned in the Annual Revenue Requirement report filed with Electricity Regulatory Commission;
- budget/annual power plan, provisions of purchase/maintenance manual and guidelines issued by the entities from time to time;
- terms and conditions of purchase orders and agreements for repairs;
- norms fixed by Ministry of Power(MoP) for life of transformers, terms and conditions of transformers repair agreements;
- norms fixed by CEA regarding T&D losses; and
- best practices for inventory management.

Audit methodology

2.3.5 The mix of following methodologies was adopted

- scrutiny of records relating to load particulars of transformers;
- scrutiny of tender specification files, supply orders execution files, cases of uneconomical purchases;
- scrutiny of MIS reports generated by field units;
- examination of records relating to maintenance programme, cause-wise reasons for failure;
- evaluation of performance of special maintenance sheds (SPMs);
- evaluation of time taken to repair the failed transformers; and
- issue of audit observations and interaction with the management at various levels.

Audit findings

2.3.6 Audit findings were reported to the Government/Management on 18 May 2007 and discussed at the meeting (28 September 2007) of the Audit Review Committee for Public Sector Enterprises (ARCPSE) where Government was represented by the Joint Secretary, Department of Energy, Government of Andhra Pradesh and Management was represented by Chairman and Managing Director/Director Finance of the Companies. The review was finalised after considering the views of Government /Management.

The audit findings are discussed in succeeding paragraphs.

Capacity mis-match

2.3.7 Adequate grid power transformation capacity is needed for evacuation of power from generating stations. Sub-power transformation capacity (STC) is the middle chain for feeding distribution transformers to meet power load of the consumers.

The table below shows the growth of power transformation capacity, distribution transformation capacity (DTC) and connected load for the four years ended 2005-06♣:

Sl. No	*Particulars*	2002-03	2003-04	2004-05	2005-06
(i)	Grid power transformation capacity				
	MVA	25925.0	27346	28886	32396
	MW	22036.25	23244.1	24553.1	27536.6
	No. of transformers	628	660	706	755
(ii)	Sub-power transformation capacity (STC)				
	MVA	15316	16336	17355	18182
	MW	13018.6	13885.6	14751.75	15454.7
	No. of transformers	3121	3329	3537	3705
(iii)	Distribution transformation capacity (DTC)				
	MVA	17763.39	19976	22425	24483
	MW	15098.9	16980.2	19061.8	20811.3
	No. of transformers	242668	323033	405937	488436
(iv)	Total connected load				
	MVA	26182.45	29146.5	30516.45	31860.33
	MW	22255.09	24774.53	25938.98	27081.28
(v)	Percentage of DTC in excess of STC (MVA)	15.98	22.29	29.22	34.66
(vi)	Connected load in excess of distribution capacity (MW)	7156.19	7794.33	6877.18	6269.98
(vii)	Excess load in percentage	47.4	45.9	36.08	30.13
(viii)	Sub-power transformation capacity per MVA of connected load	0.58	0.56	0.57	0.57
(ix)	Distribution Transformation capacity per MW of connected load	0.68	0.68	0.73	0.77

Source : Administrative reports of respective years.

♣ Information for 2006-07 not readily available.

It will be seen from the above that.

- During 2002-06, the growth in sub-power transformation capacity was 2866 MVA, which was much lower than the growth in distribution transformation capacity (6720 MVA) and the connected load (5677.88MVA). This resulted in overloading of sub-power transformation system.
- The connected load in all the four years upto 2005-06 was in excess of Distribution transformation capacity ranging between 30.13 to 47.40 *per cent* This resulted in excessive load on existing transformers leading to over loading of the system and premature failure/ damage of the Distribution transformers (DTRs).
- The excess capacity of DTC over STC increased from 15.98 percent (2002-03) to 34.66 *per cent* (2005-06), which indicated over loading of DTC.

There was mismatch between sub transformation and distribution transformation capacity and the connected load.

It will be seen that the sub-power transformation capacity and distribution transformation capacity did not match with the connected load for all the four years upto 2005-06. The mismatch among power transformation capacity, distribution transformation capacity and connected load had resulted in low voltage of supply and over loading of transformers.

Further the details of analysis of sub-transmission/distribution capacity and growth of sub-transmission/distribution capacity during the years 2002-03 to 2005-06 are given in **Annexure -19**.

The Management while accepting the observation stated (September 2007) that efforts were being made to achieve the system stability by enhancing the transformation capacity with the available funds on top priority.

Targets and Achievement

2.3.8 The projects and planning wing of the AP Transco/Discoms fixed year wise targets based on assessment of requirement under system improvement scheme. Year-wise and Company wise targets and achievement for the five years ended 2006-07 are given in **Annexure -20**.

It could be observed from the annexure that the achievement against target was lowest in AP TRANSCO during the year 2002-03 (66.66 *per cent*). The achievement was lowest in CPDCL during the year 2004-05 (57.35 *per cent*, EPDCL during the year 2006-07 (28.16 *per cent*), in NPDCL during the years 2004-05 (48.71 *per cent*) and in SPDCL during the year 2004-05 (51.64 *per cent*). The funds for the construction of sub stations in APTransco and Discoms were met from internal resources, funds received from Government, financial institutions Rural Electrification Corporation, Power Finance Corporation and others.

Procurement

2.3.9 Based on the past consumption, future requirement and availability of funds the requirement of transformers proposed for purchase is assessed. The purchase committee (PC) is involved in finalisation of tenders. There was a

PC only in AP Transco, CPDCL and EPDCL. In SPDCL and NPDCL there was no PC and tenders are finalised with the approval of BoDs.

The table below gives the details of Power Transformers (PTR) and Distribution Transformers (DTR) required, ordered, and the actual quantity received for five years up to 2006-07:

Name of the Company	Required (in Nos)		Ordered (in Nos)		Actual quantity received (in Nos)	
	PTRs	DTRs	PTRs	DTRs	PTRs	DTRs
AP Transco	241 (11209)	--	241 (11209)	--	189 (8895)	--
CPDCL	202 (1214)	52555 (1960.17)	195 (1110)	121192 (2855.85)	120 (672)	69008 (1753.91)
NPDCL	262 (1409)	81021 (2483.61)	192 (1029)	68189 (2005.88)	182 (976)	58242 (1679.7)
SPDCL	617 (3346)	101120 (2950.79)	397 (2126)	95120 (2801.77)	326 (1732)	84418 (2472.83)
EPDCL	222 (1200)	58363 (1591.94)	222 (1200)	58363 (1750.26)	206 (1117)	47587 (1282.20)

Note : Figures in brackets indicates capacity in MVA
Source :Purchase and Material Management returns.

Assessment of requirement was not done scientifically.

Despite the high requirement of distribution transformers to strengthen the distribution system, none of the Discoms could procure the required number. It could be seen from the above that the quantities ordered by the Companies except AP Transco, CPDCL and EPDCL were far below the requirement. Further, in none of the years the ordered quantity was received in full, resulting in over loading of existing transformers leading to break down and forced outages. It was observed that there was no scientific method of assessment of requirement by various field units. In this regard no guidelines have been issued by the Discoms. The reasons for delay in receipt of ordered quantity were delay in finalisation of tenders, scarcity of material (transformer core) and huge escalation in cost of material like transformer core, copper and oil etc, in the market.

The Management stated (September 2007) that from 2007-08 the tenders were floated and processed in advance. Thus failure on the part of the Discoms to finalise tenders on time, led to delay in receipt of transformers leaving wide gap between requirement and availability. This resulted in overloading of existing transformers and consequently break down and forced outages.

Delay in construction of sub-stations

2.3.10 Delay in completion of construction of sub-station works resulted in idling of equipment as discussed below:

- As a part of system improvement AP Transco placed (November 2003) two work orders for construction of 400/220 KV sub-stations at Nellore and Mahaboobnagar which were to be completed within 15 months (2 March 2005) from the date of placement of orders or handing over of the site. The PTRs valued at Rs.10.52 crore were received (March 2005 two numbers) but could be erected in July 2005 due to delay in construction of sub-station. This resulted in idling of equipment and avoidable blocking of Rs.10.52 crore for four months with consequential loss of interest thereon amounting to Rs.42.08 lakh.

Delay of 17 months in commissioning of transformers resulted in loss of interest of Rs.1.63 crore.

- AP Transco placed (July 2003) two purchase orders at a cost of Rs.9.61 crore for supply of two numbers of 315 MVA PTRs for Vemagiri 400/220 KV sub-station. The work order for construction of sub-station was placed (December 2002) for completion within 15 months (5 April 2004) from the date of placement of order or handing over of the site. The sub-station was actually completed after delay of 17 months (27 September 2005) while the transformers were received in September 2003 and March 2004. Delay in construction of sub station resulted in idling of the equipment and blocking of Rs.9.61 crore with a consequential loss of interest of Rs.1.63 crore for the period of delay in commissioning.

The Management while accepting the audit observations attributed (September 2007) the reasons for delay to non-completion of inter-connecting lines (Mahabubnagar and Nellore) and non-handing over of site for want of leveling (Vemagiri). It was also stated that by procuring the transformers in advance, the Company was benefited by way of avoiding escalation in prices of transformer. The reply is not logical as the transformers remained idle for 4 to 17 months and there was loss of interest of Rs.2.05 crore.

Default in supply of ordered quantities

Non inclusion of risk purchase clause resulted in extra expenditure of Rs.1.39 crore.

2.3.11 EPDCL invited (April/May 2004) open tenders for supply of 2000 DTRs. After opening of (May 2004) tenders, the purchase orders were placed (October 2004) on two firms for supply of 1000 DTRs each at Rs.19912.84 per DTR inclusive of taxes for supply by January 2005. It was observed that as against the lead-time of 90 days envisaged in the purchase manual for release of purchase orders after opening of tenders, the EPDCL took 138 days. Further no risk purchase clause was included in the terms and conditions of purchase orders.

As against the ordered quantity of 2000 Nos, the firms supplied (March 2005) 830 DTRs and the balance quantity was not supplied, on the ground that there was abnormal increase in raw material cost by the time of placement (October 2004) of purchase order by the Company. EPDCL floated (November 2005) fresh tenders and released fresh purchase orders in November 2005 on the

same firms for supply of 1000 DTRs at an ex-works price of Rs.21,105 each excluding taxes with provision for price variation. As a result there was an extra expenditure of Rs.1.39 crore on the purchase of 1000 DTRs afresh which could have been avoided if EPDCL had included the risk purchase clause in the purchase orders placed on the suppliers. The loss could have been further reduced if EDCL had forfeited the bank guarantee of Rupees two lakh.

The Management stated (September 2007) that action is on hand to procure the transformers from other vendor and to recover the difference cost from the firm as a measure of penalty. The Management's reply is not tenable as in this case fresh orders were placed on same firms and not on other vendors.

Inventory Management System

2.3.12 APTransco and Discoms had not adopted requisite material management techniques viz., classification of items for management reporting and fixation of norms of various levels for inventory management, (ii) forecasting of material requirements and indenting procedures (iii) fixation of responsibilities for undertaking various inventory analysis, (iv) review and monitoring inventory status with reference to norms and reorder levels for various items, (v) inventory control techniques and procedural guidelines for their application. This led to procurement of material without assessment and in excess of requirement, excess holding of inventory as discussed below:

2.3.13 CPDCL procured (June 2004) 24,116 Nos. of 11KV/3/250 volts and 10,519 Nos. of 11KV/250 volts DTRs as a substitute for small capacity 15 KVA three phase DTRs. These are meant for use in High Voltage Distribution System (HVDS) of agricultural sector. Out of 34,635 DTRs procured, the CPDCL installed (December 2006) 32,548 DTRs leaving 2087 DTRs in stock. Even after allowing four *per cent*[♠] as rolling stock for the existing transformers, 785 DTRs as on December 2006 valuing Rs.1.46 crore are held in surplus at various locations. The reasons for excess procurement of DTRs were not furnished by Management. Thus, procurement of DTRs without assessment of requirement and not following requisite material management technique resulted in excess inventory holding in CPDCL of Rs.1.46 crore.

Lack of action against defaulting suppliers

Non inclusion of risk purchase clause resulted in extra expenditure of Rs.22.37 crore.

2.3.14 A review of purchase orders placed by CPDCL for the years 2002-07 revealed that against 45 supply orders (2002 to 2005) the firms did not supply the ordered quantities in full. The balance material was procured subsequently at higher rates. Audit observed that the CPDCL except invoking the meager bank guarantee for Rs.2 lakh each could not initiate any action against the defaulting suppliers due to non-inclusion of risk purchase clause in the purchase orders. Default in supply of PTRs/DTRs against 45 purchase order led to procurement of 8871 PTRs/DTRs during 2004-06 at an extra expenditure of Rs.22.37 crore.

The Management stated (September 2007) that in future tenders risk purchase clause would be included.

[♠] four per cent internal norm has been fixed in Purchase manual for the Discoms.

2.3.15 Similarly SPDCL placed three purchase orders (23 October 2003 to 10 June 2004) on firm price basis on Sree Rama Electricals for supply of five PTRs and 1340 DTRs valued at Rs.9.04 crore without ascertaining manufacturing capacity of the firm. The PTRs were to be delivered by January 2004 and the DTRs by January–February 2005. The firm after supplying four PTRs during May 2004 and September 2004 (valuing Rs.57.84 lakh) failed to supply the balance one PTR (Rs.14.46 lakh) and 1340 DTRs (Rs.9.04 crore). The Company did not take any action against the delinquent firm except forfeiting the meagre bank guarantee of Rs.2 lakh due to non-inclusion of risk purchase clause in purchase orders. At the request of the supplier, (April 2005) SPDCL cancelled (January 2006) the balance quantity and procured the same during 2005-06 at an extra expenditure of Rs.4.27 crore. Thus despite the contract being on firm price the management had to incur an extra cost of Rs.4.27 crore.

Non inclusion of risk purchase clause resulted in extra expenditure of Rs.4.27 crore.

The Management stated (September 2007) that since the firm was a local S.S.I unit the risk purchase clause was not invoked. However the firm was black listed for two years and purchase orders were cancelled for non-supply of balance of one PTR and DTRs. The reply is not tenable since there is no provision for exempting SSI units for invoking risk purchase clause SPDCL did not recover the cost difference from the defaulted supplier.

Price variation

2.3.16 Two purchase orders were placed (November 2005) on two different firms for supply of 400 Numbers of 63 KVA DTRs at Rs.60,800 each and 1,500 Nos. of 100 KVA DTRs at Rs.77,500 each by NPDCL on behalf of SPDCL. The supplies were to be completed during February 2006 to April 2006. After placement (November 2005) of the order, the delivery schedule was extended up to September 2006 at the request (November 2005) of the firms. While amending the delivery schedule NPDCL did not insist for supplies on firm price basis during the extended period of delivery. As this was not done, the firms claimed Rs.78.15 lakh towards price variation, which was admitted by NPDCL. Thus, extension of delivery period without incorporating a suitable clause safeguarding against price variation resulted in extension of undue benefit of Rs.78.15 lakh to the suppliers.

The Management stated (September 2007) that since the delivery schedule was revised the price variation was allowed. The reply is not tenable since the terms and conditions of the PO did not contain any clause with regard to allowing price variation in case of revision of schedule of delivery at the behest of supplier.

Delay in supply of materials to the contractors

2.3.17 AP Transco purchased (November 2002) one 100 MVA PTR at a cost of Rs.2.02 crore. The PTR was installed and commissioned (November 2003) after a delay of about one year. This was due to delay in supplying the related materials like circuit breakers, insulators and cables, etc. to the erection contractor by AP Transco. As a result, the equipment valuing Rs.2.02 crore remained idle for one year, as it could not be used for the purpose it was purchased, resulting in consequential loss of interest of Rs.18.17 lakh.

The Management while accepting the audit observation stated (September 2007) that the delay was attributed to diversion of required accessories to O&M works. The Management's reply is not tenable as due to lack of planning on the part of the Company, sufficient stock of accessories was not available for O&M works. As a result the material had to be diverted to O&M works and commissioning of PTR was delayed.

Performance

Maintenance of records

2.3.18 The maintenance of history cards for each DTRs containing full particulars such as the name of the supplier, capacity, voltage ratio, date of issue, date of installation, date of energisation and date of failure, date of expiry of guarantee, normal life of transformer, date of repair and subsequent re-commissioning, etc. was necessary to monitor performance and to ascertain the working life of transformers in use. As the life of new transformer is 25 years as notified (March 1994) by MoP it is equally important to have history card for each transformer. It was observed that none of the Discoms maintained the history cards with the result that monitoring of their performance was rendered difficult.

The Management stated (September 2007) that necessary instructions were issued to the field officers for maintenance of history cards as suggested. Fact remains that the performance and the working life of transformers were not monitored in absence of history cards.

Failure of distribution transformers

2.3.19 The Andhra Pradesh Electricity Regulatory Commission (APERC) fixed the norm of failure of DTRs as 15 *per cent* for 2002-03 and 12 *per cent* for 2003-04 in respect of CPDCL, NPDCL and SPDCL. The norm was fixed at 13 *per cent* (2002-03) and 7 *per cent* (2003-04) for EPDCL. While the internal norms by CPDCL, NPDCL and SPDCL for 2004-05 to 2006-07 was 12, EPDCL for 2004-05 fixed the norm at seven and for 2005-06 and 2006-07 at three. The Commission had not fixed any norm for the years 2004-05 to 2006-07.

The details of DTRs failed, norms fixed for failure and the expenditure incurred on repairs by all Discoms for five years ending 2006-07 are given in **Annexure -21**. It was observed that the percentage of failures was in excess of the norm fixed either internally or by APERC. In respect of EPDCL during the years 2002-03 to 2006-07, the percentage of failure in excess of norms ranged between 0.1 *per cent* to 5.49 *per cent*. In respect of CPDCL and SPDCL, during the year 2002-03 the percentage of failure in excess of norms was 1.27 *per cent* and 0.16 *per cent* respectively. Further in NPDCL the percentage of failure was in excess of norms during 2002-03 and 2003-04 by 3.83 *per cent* and 3.81 *per cent* respectively. Failure of transformers could have been minimized had adequate steps been taken for periodical preventive maintenance and by avoiding over loading.

The Management stated (September 2007) that necessary steps were taken to minimize the failure of the DTRs and expenditure on their repairs. Fact

remains that the failure rate of DTRs remained above the norms fixed internally or by APERC and no visible steps were taken to arrest the excess failure rate.

2.3.20 Cause-wise analysis of failure of DTRs in selected circles of four Discoms is given in the **Annexure -22**. It will be seen from the **Annexure -22** that failure on account of overloading accounted for 50.59 to 57.60 *per cent* of the total failure in all the four Discoms for the period from 2002-03 to 2006-07. Further it can be seen that failures on account of short circuit, improper earthing etc could have been controlled by undertaking proper preventive maintenance.

The Management stated (September 2007) that necessary remedial action has been taken to minimize the failures. The facts however did not corroborate the Management reply as DTRs failure rate remained high on account of overloading, short-circuits and improper earthing.

Repairs

2.3.21 The Discoms undertake repair of damaged transformers both in-house at the transformer repair workshops and through outside agencies. Though the Discoms prescribed 60 days time limit for return of repaired transformers, it did not monitor the number of transformers awaiting return from repairing agencies and the prescribed time limit for placement of repair orders.

The Management stated (September 2007) that the present stipulation of 60 days for repair of PTRs is a general condition and it was assured that action would be taken to specify the required number of days in the PO in future.

Delay in repair of Power Transformers

2.3.22 Though the repair orders envisaged completion of repairs within 60 days, there were abnormal delays in carrying out repairs as shown below:

Name of the firm	No. of PTRs issued for repair during June 2002-June 2006	No. of PTRs repaired with delay	Period of delay (excluding 60 days)	Unrepaired in Transco custody (Period in days)
Ramakrishna Transformers	38	16	10 to 140	13 to 4019
K.K. Rao Engg. Works.	43	10	23 to 234	11 to 3104
StarTek Electricals	29	12	33 to 143	10 to 4937
Sree Rama Electricals.	32	9	20 to 237	20 to 2647

Source : Contract records.

Non repair of failed transformers resulted in purchase of new transformers valuing Rs.1.36 crore.

It was noticed that due to abnormal delay in receiving the PTRs after repair, AP Transco resorted to purchase of thirteen 16 MVA and two 31.5 MVA new PTRs during 2004-05 costing Rs.1.36 crore which could have been avoided had the transformers sent for repairs been received in time. As there was no penal clause, no penalty could be imposed on the repairers for the delay in delivering the repaired PTRs.

The Management stated (September 2007) that the penal clause for delay in delivery of repaired PTRs was implemented from April 2007.

Some instances of delay in repairing the failed PTRs noticed are discussed below:

Repaired power transformers lying idle since 51 months.

- One 5 MVA Accurate make PTR costing Rs.30 lakh purchased (November 2003) and commissioned (November 2004) during 2004 failed (27 September 2005) in Thakkal sub-station within guarantee period. The failed transformer was handed over to the manufacturer (July 2006) after a delay of 278 days. The transformer was commissioned in February 2007. Thus, non-initiation of appropriate action for getting the transformer repaired, resulted in equipment remaining idle for over one year.
- One 100 MVA BHEL make PTR failed (August 2000) at 220 KV sub-station Sitaramapatnam (AP Transco). The repairs were carried (November / December 2002) out by BHEL at a cost of Rs.3.51 lakh. After the PTR was transported (August 2003) to Kadapa for installation after a delay of eight months it was found that certain parts/accessories were missing, On Load Tap Changer (OLTC) panel was defective and fan structures/motors required replacement. The missing materials were purchased (October 2006) again from BHEL at a cost of Rs.24.41 lakh for repairing the PTR. It was observed that even after a lapse of 51 months, the repaired PTR remained to be commissioned (March 2007).
- One 31.5 MVA 132/33 KV PTR which failed (November 1998) at Nizamabad sub-station (AP Transco) was shifted (March 1999) to the premises of the manufacturer. AP Transco placed (September 2003) the repair order stipulating delivery by December 2003. The repaired PTR was delivered in September 2004. The PTR remained idle for nearly five years due to delay in getting it repaired. Hence it could not be used for the purpose for which it was purchased. The repaired transformer was commissioned at 132 KV sub-station, Tanuku on 15 April 2005.

The Management stated (September 2007) that non availability of required number of repairing material for O&M works generally led to delay in commissioning of PTRs. No specific reasons for delay in the five cases were given. It was stated that the PTR (Sitaramapatnam) would be commissioned shortly. The Management also stated (April 2007) that penalty clause has been included. The Company's failure to make alternate arrangements for repairs and to maintain adequate material for O&M and not giving required priority to commissioning of PTRs resulted in delay in repairs.

Poor performance of repairing agencies

2.3.23 AP Transco entered (September 1998) into a rate contract agreement with Vijai Electricals, Hyderabad for repair of single-phase distribution transformers, initially for a period of two years and was extended from time to time up to 2006-07. A test check of records of Anantapur circle of CPDCL

revealed that there were delays in attending repair work by the firm as detailed below:

Year	No. of DTRs issued for repair				No. of DTRs received back with a delay of more than 2 weeks	Balance DTRs yet to be received
	WGP	BGP	RGP	Total		
2003-04	130	78	18	226	154	72
2004-05	209	55	14	278	278	Nil
2005-06	434	74	4	512	466	46
2006-07	257	41	-	298	256	42

Note: WGP= within guarantee period; BGP= beyond guarantee period; RGP = repaired guarantee period.
Source : Agreements records.

As per the terms of agreement the repairing work was to be completed within two weeks from the date of handing over of sick transformer failing which five *per cent* of the value of repairs of the transformers remaining uncompleted was recoverable from the bills of the firm. It was observed that this clause was not invoked to levy penalty in spite of delays in return of DTRs after repair.

The reasons for not invoking the penalty clause for delay in repair of PTRs were not furnished by the Management.

Delay in repair/replacement of transformers failed within guarantee period

2.3.24 As per the general terms and conditions of purchase order, the suppliers have to guarantee the performance of transformers for five years from the date of supply. The details of transformers which failed within the guarantee period (during May 2003 to March 2007) and awaiting replacement/repair are given below:

Name of the company	No. of transformers failed within guarantee period	Value (Rs.in lakh)	Period from which awaiting repair/replacement
EPDCL	256	87.44	September 2005 to March 2007
NPDCL	218	104.00	December 2003 to March 2007
CPDCL	256	91.96	May 2003 to March 2007
SPDCL	123	68.72	January 2006 to March 2007
Total	**853**	**352.12**	

Source : Periodical returns.

Transformers failed within guarantee period remained un-repaired even after lapse of four years

It was observed that no action was taken against suppliers for their failure to rectify/replace the failed transformers. As a result funds aggregating Rs.3.52 crore were blocked up in transformers which failed within guarantee period. As per guarantee clause, the failed transformers have to be rectified/replaced with good transformers within 60 days failing which the extent of failed units would be deducted from the subsequent bills/bank guarantee of the suppliers. It was observed that this clause was not invoked.

The Management stated (September 2007) that action is being initiated to get the transformers repaired departmentally and to recover the amount from the pending bills of the contractor.

Under utilisation of departmental repair sheds

2.3.25 The Discoms are maintaining departmental Special Maintenance Sheds (SPMs) in each operation circle for carrying out repairs to transformers and at the same time the companies are off loading the repair work on rate contract basis to outside agencies. Though the departmental SPMs are equipped with required infrastructure, the installed capacity has not been fixed by the Discoms to ensure an objective evaluation. It was observed that the SPMs by and large remained under utilised. As per norms prescribed (1994) by erstwhile Andhra Pradesh State Electricity Board, 50 DTRs per month were to be repaired by each SPM.

- CPDCL has a total No. of five SPMs for 10 circles. A review of performance of three SPMs (Guntakal, Hyderabad South and Hyderabad North) in three circles for the years 2006-07 revealed that as against the norm of 50 transformers per month for each departmental SPM (150 transformers for three SPMs), the actual number of transformers repaired during the above period varied between nine and 20 transformers per month (for all three SPMs). The main reason for the non-achievement of norms fixed was lack of advance action in procurement of required material.
- NPDCL has a total no. of 19 SPMs for five circles (March 2007). In NPDCL during the years 2002-03 to 2006-07, in one circle, as against the norms of 50 transformers per month for each SPM (200 transformers per month for four SPMs), the average no. of transformers repaired per month ranged from 38 to 76 (for all four SPMs).
- EPDCL has a total no. of five SPMs for five circles (March 2007). In EPDCL (during 2002-07), in five circles, as against the norm of 50 transformers per month for each SPM (250 transformers per month for five SPMs) the average number of transformers repaired per month ranged from 120 to 160. (for all five SPMs).

It would be observed from the above that despite having required infrastructure and sufficient man power SPM centres in three Discoms were not able to repair number of transformers as required under norms, due to lack of advance action in procurement of required material. This leads to avoidable expenditure towards idle manpower besides expenditure in outsourcing for repair of equal number of transformers.

Maintenance

2.3.26 The sub-stations are responsible for maintaining PTRs while the divisions/sub-divisions for maintenance of the DTRs. Maintenance of power transformers was to be done according to manufacturers' recommendations.

A test check revealed:

- Neither the divisions nor the sub-divisions kept record of detailed programme for periodical maintenance of DTRs.
- As per Transformers Information Management System (TIMS) followed by all Discoms, code numbers were to be given for DTRs and

its structure enabling the identification of defective structures as well as failure of DTRs. It was observed that in CPDCL as against 1,71,257 DTRs and structures existing as on 1 April 2005 code numbers were allotted under TIMS for 1,51,698 DTRs (89 *per cent*) and 1,42,145 structures (83 *per cent*) by the end of December 2006. There was no close monitoring of maintenance of transformers even after implementation of TIMS, as scrutiny of 287 cases of failure (January 2006 to March 2007) revealed that in 60 cases there were repeated failure of transformers on the same structure ranging from two to 10 times.

- There was no system of getting feed back on maintenance of DTRs/structures by the operation divisions to the circle/head office for monitoring and control purpose.
- Efficient load management involves avoidance of overloading and consequent avoidance of failure of transformers. Discom-wise details of failed DTRs for the period under review are given below:

Name of Discom	2002-03		2003-04		2004-05		2005-06		2006-07	
	Existing DTRs (Nos)	Failed DTRs (Nos)	Existing DTRs (Nos)	Failed DTRs (Nos)	Existing DTRs (Nos)	Failed DTRs (Nos)	Existing DTRs (Nos)	Failed DTRs (Nos)	Existing DTRs (Nos)	Failed DTRs (Nos)
CPDCL	88519	3360	118573	4169	147314	3637	164687	5897	173795	3764
NPDCL	53989	2986	66674	2735	86842	2513	102177	2927	110688	931
SPDCL	59732	4705	93996	5704	115205	6666	139016	8601	158160	6437
EPDCL	40428	1599	46195	1572	56576	1585	69079	1082	76722	631

Source: Periodical returns of the Discoms.

- Though load registers showing transformer-wise connected load were maintained by sections concerned, the same are not monitored by divisions/sub-divisions hence growth of load could not be assessed.
- Though overhauling was prescribed under maintenance schedule, no overhauling was undertaken during the five years ending 2006-07 in SPDCL, CPDCL and NPDCL. Checking of voltage, earth resistance, leakages, internal inspection, etc. were not performed regularly.

The Management (CPDCL) stated (September 2007) that the data is being updated regularly. The reply is however silent on specific observation on incomplete data, lack of monitoring and failure of DTRs.

Thus, due to failure of the management to update the data and review the same, failure of DTRs could not be checked through effective monitoring.

Non-maintenance of rolling stock

2.3.27 As envisaged in purchase manual, the operation circles are required to maintain rolling stock of four *per cent* of the existing number of DTRs in order to ensure un-interrupted supply of power. APERC directed (July 2005) the power utilities to replace the failed DTRs within 24 hours in urban areas and 48 hours in rural areas. The details of rolling stock as per norm vis-à-vis actuals for five years up to 2006-07 are given in **Annexure -23**. It could be seen that in none of the years the rolling stock was maintained as per the norm

prescribed resulting in non-compliance of directive of APERC. A test check of records (September 2006 to February 2007) of EPDCL revealed that the time taken in replacing the failed DTRs was more than 24 hours to six days in 59 instances out of 391 cases. This was mainly due to non-maintenance of rolling stock as per the norm. In other Discoms, records indicating the time taken for replacements of failed transformers were not properly maintained.

The Management (EPDCL) stated (September 2007) that the rolling stock of DTRs as on 31 March 2007 was 3.2 *per cent*. The reason for non-maintenance of rolling stock were not furnished by other Discoms.

Usage of sub-standard core material in HVDS transformers

2.3.28 With a view to taking up the conversion of existing LT network into HVDS in Chittoor and Madanapalle divisions, SPDCL entered (January 2003) into a turnkey agreement with Nagarjuna Constructions, Hyderabad for supply and erection of 15 KVA (13050 numbers) and 25 KVA(1908 numbers) three phase DTRs. The date of completion of the work was extended to January 2005. The firm guaranteed the performance of DTRs for a period of 18 months. As at the close of the agreement period, the firm erected 13,050 numbers of 15 KVA and 1,908 numbers of 25 KVA DTRs. The value of the work completed was Rs.73.32 crore.

The Divisional Engineer (Transformers) Tirupati reported (December 2006) failure of 989 numbers of 15 KVA DTRs in 2005-06 and 1196 numbers in 15 KVA DTRs in 2006-07 erected under HVDS due to use of substandard core material by the contractor. During repair of failed transformers it was observed that the weight of the copper winding used by the supplier in case of 120 transformers was less than 15 Kg as against the normal standard weight of 15 to 17 Kgs and the no load current drawn by these DTRs is on high side. No action has been taken against the firm.

The reply furnished (September 2007) by SPDCL is not specific to the observation.

Short retrieval of transformer oil from defective transformers

2.3.29 A transformer with no leakage and oil seal intact normally should contain oil to full tank capacity. Transformer oil up to two *per cent* of the tank capacity is prescribed as the norm for shortage. A test check of records of four Discoms for five years ended 2006-07 revealed that as against 504.58 lakh litres of transformer oil recoverable from 2,60,052 transformers, 409.51 lakh litres of transformer oil was recovered, indicating a shortage of 95.08 lakh litres (18.84 *per cent*) valued at Rs.28.52.crore. The shortages were not investigated to fix responsibility.

The Management while accepting the observation, stated (September 2007) that instructions were issued to DEs concerned to take appropriate action against those responsible for shortage.

Delay in disposal of scrapped transformers

2.3.30 The transformers, which are not fit for repair, are to be scrapped after survey for disposal. AP Transco/Discoms did not maintain any consolidated record showing the details of transformers awaiting survey/disposal. It was

noticed that there were abnormal delay in the survey/disposal of the sick transformers as shown below:

Unusable transformers were awaiting disposal for one to 19 years.

Name of the Company	No. of sick transformers awaiting survey/disposal	Assessed value (Rs in lakh)	Period of delay in survey/disposal
AP Transco	17 PTRs	45.16	One to six years
NPDCL	523 DTRs	23.09	Two to 19 years
EPDCL	11 PTRs	12.51	One to seven years
CPDCL	879 DTRs 12 PTRs	55.24	Two years
Total		**136.00**	

Source : Returns and survey reports of transformers.

Thus, the delay in survey/disposal of sick transformers resulted in consequential delay in realisation of Rs.1.36 crore being the assessed value of the transformers awaiting disposal and wear and tear due to passage of time.

The Management (AP Transco and EPDCL) stated (September 2007) that action is being taken to expedite the disposal process.

Internal Control

2.3.31 Internal Control is a management tool used to provide reasonable assurance that management objectives are being achieved in an efficient, effective and adequate manner.

A review of the Internal Control system revealed the following deficiencies.

(i) AP Transco/Discoms failed to match sub-Power transformation and distribution transformation capacities and connected load.

(ii) AP Transco/Discoms could not evolve a system of proper monitoring of performance of DTRs.

(iii) The procedures and control measures followed in respect of purchases, stores management of transformers were not yielding desired results as cases of delay in finalisation of tenders and excess procurement of transformers were noticed.

(iv) AP Transco could not evolve procedures to see that failed transformers are repaired within the stipulated time.

Acknowledgement

Audit acknowledges the co-operation and assistance extended by the staff and the Management of AP Transco/Discoms at various stages of conducting the performance audit.

Conclusion

The sub-power transformation capacity and distribution transformation capacity was far short of connected load which resulted in over loading and consequent failure of transformers. The procurement of transformers was far below the actual requirement, on the other hand, delay in construction of substations resulted in transformers procured as per schedule lying idle. The rate of failure of transformers was much above the norm mainly due to overloading. There were abnormal delays in repair of transformers by the agencies but no action was taken against the defaulting agencies. The rolling stock as per norm was not maintained which resulted in delay in replacement of failed transformers.

Recommendations

- **There is a need to ensure that the transformation capacity is commensurate with the connected load capacity.**
- **The procurement of transformers needs to be streamlined providing for risk purchase clause and blacklisting of defaulting supplier to act as deterrent against default in supply of entire ordered quantity at initially agreed rates.**
- **The in-house facilities for repair of transformers need to be strengthened and streamlined so that it can be ensured that available infrastructure and manpower are utilized optimally.**
- **Maintenance of rolling stock as per norms should be ensured.**
- **Civil work for construction of sub station needs to be planned well to avoid delay in completion**.

The above findings were reported to Government in May 2007, their reply is awaited.

2.4 Outsourcing activities/functions in Central Power Distribution Company of Andhra Pradesh Limited

Highlights

The Company has no clear cut policy/methodology regarding engagement of persons against crucial posts. Their duties or responsibilities were not defined.

(Paragraph 2.4.7 to 2.4.10)

There was no uniform methodology regarding engagement of manpower and persons over and above sanctioned strength engaged.

(Paragraph 2.4.11)

As principal employers the Company failed to ensure recovery and remittance of Statutory dues (EPF & ESI).

(Paragraph 2.4.12)

On outsourcing of repairing of Distribution Transformers the Company incurred avoidable expenditure of Rs.2.10 crore.

(Paragraph 2.4.13)

The Company paid different rates to spot billing agencies in the same region.

(Paragraph 2.4.15)

There were cases of undue advantage given to collection agencies

(Paragraph 2.4.16)

There were instances of injudicious outsourcing of maintenance of Capacitor Banks

(Paragraph 2.4.18 &2.4.19)

Substantial amounts were spent on outsourcing Internal Audit function without getting due return benefit

(Paragraph 2.4.20)

Introduction

2.4.1 Outsourcing refers to assigning of non-core activities/functions of a business to an external entity specializing in the management of that operation. The decision to outsource is often made by a business in the interest of lowering costs and redirecting its resources towards its core competencies.

Central Power Distribution Company of Andhra Pradesh Limited (Company), one of the four distribution companies in the State was incorporated (30 March 2000) as a subsidiary of Transmission Corporation of Andhra Pradesh Limited (AP Transco) a wholly owned State Government company, to take over the retail distribution of power from AP Transco in an area covered by seven[8] out of 23 districts in the State. The Company started commercial operations with effect from 1 April 2000. As such, the Company was granted sole distribution and retail supply license with effect from 1 April 2001 for carrying on its business in the designated areas. The business of retail distribution of power for the first year of operation was carried out by AP Transco on "no profit no loss" basis.

The Company is headed by a Chairman and Managing Director (C&MD) who is assisted by functional directors looking after projects, finance and operation wings respectively. Outsourcing in the Company is done at various levels from Divisional Engineers in the field offices to Directors in the Corporate Office within the delegated powers. The authority outsourcing the functions enters into works contract, K2 agreement or Chit agreement[9], with the contractors after calling for tenders (limited or open) or by nominations on need basis.

Scope of audit

2.4.2 Matters relating to the outsourcing of activities/functions/services such as man power, maintenance of sub stations, repairing of Distribution Transformers (DTRs), billing and accounting, collection of revenue, maintenance of capacitor banks, hiring of vehicles and internal audit, during the five years period ending 31 March 2007, in CPDCL were examined. Records pertaining to these activities maintained at Corporate Office and two circles i.e., Hyderabad North and South were examined.

Audit objectives

2.4.3 The performance review of outsourcing of activities/functions/services in Company was conducted with a view to assess whether:

- the outsourcing was done only after detailed studies/planning and cost benefit analysis;
- the Company's management had taken due care to cover the risk associated with outsourcing with special reference to Business Continuity Planning;

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[8] Anantapur, Hyderabad, Kurnool, Mahaboobnagar, Medak , Nalgonda and Rangareddy
[9] K2 agreement is entered for contract up to a value of Rs.5 lakh and Chit agreement is for smaller amounts.

- the envisaged/targeted objectives/benefits of outsourcing were achieved in full;
- proper internal controls/safeguards were devised and put in place;
- a dependable monitoring mechanism was established and was operative; and
- outsourcing of activities/functions was done economically, efficiently and effectively.

Audit criteria

2.4.4 The following audit criteria were adopted:

- norms fixed on various activities/functions/services by the Corporate Office;
- sanctioned strength vis-à-vis vacancy position and actual deployment of contract labour;
- terms and conditions of various agreements/contracts entered for outsourced activities;
- orders issued by State Government for outsourcing activities;
- provisions applicable in respect of Employee's Provident Fund and Miscellaneous Provisions Act and Employee's State Insurance Act;
- provisions of Contract labour (Regulation and Abolition) Act;
- gazette Notifications issued by Chief Commissioner of Labour; and
- Board Agenda Notes/Minutes

Audit methodology

2.4.5 The methodology adopted for conducting the review were:

- study of provisions of various labour laws relating to contract labour engagement.
- examination of MIS Reports, concerned files and notings of the Company for outsourcing the activities.
- examination of relevant norms/guidelines with reference to the actual results.
- examination of contracts entered by the Company for manpower engagement.
- scrutiny of agreements entered into with the personnel appointed to crucial positions.
- issue of Audit Enquiries and interaction with the officers concerned.

Audit findings

2.4.6 The audit findings were reported to the Government and the Management on 14 September, 2007 and discussed at the meeting of the Audit Review Committee for Public Sector Enterprises (ARCPSE) held on 28 September, 2007 where the Government and Management was represented by the Joint Secretary to Government and Director (Finance) respectively. The review was finalized after considering the views of the Government/ Management.

Audit findings are discussed in succeeding paragraphs.

Outsourcing of crucial posts

2.4.7 The organizational structure of all the Discoms was reviewed (April 2002) by the State Government in association with AP Transco and Discoms, after getting sole distribution and retail supply license (1 April 2001) for carrying out their business and decision was taken/orders issued (May 2002) for creation of following six new posts.

1. General Manager (Corporate Planning),
2. Chief Vigilance Officer,
3. Public Relations Officer,
4. Chief General Manager (HRD),
5. General Manager (IT) and
6. General Manager (Costing)

Position of above posts in the hierarchy of the organization and their reporting structure is given in **Annexure -24**. While the post of Chief Vigilance Officer (CVO) was to be filled on deputation basis from the State Government, the other five posts were to be filled through direct recruitment. It was observed that while the post of Chief Vigilance Officer was filled up on deputation basis (March 2002), personnel for the other five posts were appointed on contract basis off and on. These posts carry decision-making responsibilities of sensitive nature. Hence, utmost care was to be taken in operating the same on contract basis. It was observed that duties and responsibilities of these posts were not clearly defined so as to fix accountability.

The details of personnel engaged, period of engagement etc., for these five posts are given in **Annexure -25**. Scrutiny of records revealed;

General Manager (IT)

Two persons were on rolls for 10 months against one sanctioned post.

2.4.8 The first incumbent was appointed (December 2003) after a delay of one year and eight months since the date of creation of the post (April 2002). There was a reference (September 2004) by the Director (Finance) that there are shortcomings in the working of the incumbent and some of the initiatives taken up by the Company were languishing in the absence of pursuit by the incumbent and it was ordered (September 2004) by Director (Finance) to discontinue the services of the incumbent duly paying three months salary in

lieu of notice. However, he continued till June 2005. While the first incumbent was still continuing despite unsatisfactory performance, one more incumbent was appointed (November 2004) and both of them continued till June 2005.

It was observed that

- there was no record to show as to why the first incumbent was allowed to continue despite order to dispense with his services due to dissatisfactory performance.
- two incumbents were on rolls resulting in overlapping for eight months (November 2004 to June 2005) and extra expenditure of Rs.1.62 lakh.
- while the sanction was to appoint through direct recruitment, the incumbent was taken on deputation.
- there was no record to show whether the work of the present incumbent was reviewed to assess the progress of the Company's initiatives, which were lagging behind because of the earlier incumbent.

The Government stated (October 2007) that one incumbent was required for managing the team while another to take care of IT initiatives taken up by the Company and as such two incumbents had to continue for few months. The reply is not in conformity with the creation of posts. Moreover appointing two persons against the same post and duties not only involves extra expenditure but creates hindrances in decision making.

General Manager (Costing)

GM (Accounts) was operated against a sanctioned post of GM (costing).

2.4.9 One incumbent was appointed (October 2003) after a delay of one year and six months from the date of creation of post (April 2002). The incumbent resigned (January 2005) after just 16 months but no other person was appointed and the post is lying vacant (August 2007). However the Company appointed another incumbent against this post as General Manager (Accounts) with effect from June 2004.

It was observed that:

- due to opting for contract employment, continuity could not be ensured which resulted in non-maintenance of cost records prescribed under section 209(1)(4) of the Companies Act, 1956 leading to repeated qualification by statutory auditors since its inception.
- two incumbents were appointed as General Manager (Accounts) and General Manager (Costing) for a period of eight months i.e. from June 2004 to January 2005 against one single post sanctioned. This resulted in over lapping for eight months and extra expenditure of Rs.1.62 lakh.

The Government stated that General Manager (Accounts) was appointed subsequent to appointment of General Manager (Costing) to help implementation of computerization initiatives and hence both continued for some time. The reply is not tenable since the post of General Manager (Accounts) was not included in the government order issued (May 2002). It

was also stated that cost records as required have been maintained. The reply is not acceptable since Statutory Auditor continued the qualification with regard to non-maintenance of these records since inception.

General Manager (Customer Services)

GM (customer service) was appointed against a sanctioned post of GM (Energy conservation).

2.4.10 Though this post was neither contemplated nor sanctioned when the six crucial positions of management were created (April 2002), an incumbent was appointed (February 2004). The Company is however operating this post against a vacancy of General Manager (Energy Conservation).

It was observed that:

- though the post is continued for more than four years, there was no record to show that ratification has been obtained for creation of this post.
- keeping the post General Manager (Energy conservation) vacant, efforts on conservation of energy, is being ignored. Audit is not in a position to comment on the impact of the decision as job description of the post has not been defined.

Engagement of Contract Manpower

2.4.11 Manpower outsourcing involves hiring of personnel for a fixed contract period.

Despite noticing engagement of manpower without concurrence of corporate office no monitoring system was established.

In an exercise made by the corporate office (December 2004), it was noticed that 7099 (3750 skilled, 2153 semi skilled and 1196 unskilled etc.) persons were engaged on contract basis since inception of the Company (31 March 2000). Finding that the engagements of persons were more than the sanctioned strength, the corporate office instructed (October 2005) to maintain the strength of contract man power to 4931.

It was observed that:

- engagement of contract manpower (excluding drivers) in excess of sanctioned strength resulted in irregular expenditure of Rs.47.35 crore as shown in **Annexure -26**.
- the Company failed to take corrective action immediately even after knowing that excess manpower was engaged without approval and the excess manpower was allowed to continue up to September 2005.
- no norms were fixed for calculating the requirement of staff.
- the Corporate office neither called for, nor received any feedback from the field offices whether men in position were in accordance with sanctioned strength after issuance (October 2005) of instructions for reduction of manpower to 4931.
- the Company did not prescribe any management information system to review requirement of personnel with regard to work, company constraints, policies with the objective of getting maximum returns at

minimum cost while ensuring efficiency and effectiveness of contract personnel.

- despite engaging more than 40 *per cent* of sanctioned strength on contract basis, the Company did not frame any outsourcing policy which would result in cost cutting, reducing liabilities, satisfying public, and from which the Company could benefit in the long run.

The Management, while confirming the facts and figures admitted (August 2007) that no norms were fixed for engaging the contract labour. In the absence of new sanctions or regular recruitments, for newly formed sections, contract labour was engaged depending on the exigencies of the work. The Government stated (October 2007) that as suggested a monthly return has been designed to collect information and the same would be done from 2007-08 and fresh norms will be worked out after implementing the ongoing computerization initiatives. The fact remains that the Company engaged excess outsourced manpower, without fixing any norm for requirement, nor framing any outsourcing policy resulting in irregular expenditure of Rs.47.35 crore on excess outsourced manpower.

Recoveries and Remittance towards Employees Provident Fund and Employees State Insurance (EPF and ESI)

As principal employer the company failed to ensure the recovery and remittance of statutory dues (EPF& ESI).

2.4.12 The Company invited open/limited tenders for engaging the contract manpower. As such the Company becomes the principal employer. As per the provisions of AP Contract labour (Regulation and Abolition) Rules, 1971, the contractor as employer and the Company as principal employer have to maintain statutory records such as register of persons employed, muster roll, wages register and register of contractors and as per the provisions of Employees' Provident Funds Scheme, 1952 principal employers has to ensure both employer's and employee's contributions towards Employees Provident Fund (EPF), and Employees State Insurance (ESI) to the respective authorities regularly. It was, however, observed that:

- the Company did not maintain the register of contractors as required under the provisions and the contractor also did not maintain the register of persons employed, muster roll, wages register.
- the Company did not ensure that the contractors recovered contributions towards EPF & ESI from the employees and remitted (up to October 2005) the same along with their (employer) contribution to the authorities concerned.
- from November 2005 onwards the contractors recovered the employees' contribution of EPF & ESI and remitted the same along with the employer's contribution on reduced wage of Rs.1200 per month per labour instead of Rs.3654 per month per labour actually paid to them.

The Government stated (October 2007) that the instructions have been issued to all concerned to reimburse these contributions to contractors after verification. It was also replied that suitable instructions have been issued for maintenance of registers as required.

Repairs to Distribution Transformers

Though the manpower was sufficient to repair failed DTRs the same was outsourced.

2.4.13 The Company had Special Maintenance Centers (SPMs) for repair of failed Distribution Transformers (DTRs) in three (one each at Hyderabad North, Hyderabad South and Anantapur Circles) out of 10 operation circles and outsourced the work (prior to 2002-03) in other circles. As per the norms prescribed (May 1994) by the erstwhile APSEB, each SPM center is required to be manned by 11 employees and should repair 50 DTRs per month on an average. Scrutiny of records of two SPM centers at Hyderabad, (under the control of Hyderabad North and South Operation Circles) revealed that during the period 2002-03 to 2006-07 these Centers outsourced the repairing work at a cost of Rs.2.64 crore. The available man power, target of DTRs to be repaired, failed DTRs received, DTRs repaired at the centre, DTRs got repaired through private agencies, expenditure incurred thereon, avoidable expenditure are indicated in **Annexure -27.** The annexure shows that the manpower available in the SPM Centres was sufficient to carry out the repairs of all the DTRs without resorting to outsourcing. It was seen that one of the reasons for not being able to achieve the target was non-availability of material at SPM centre which could have been avoided by the management. Therefore, due to unnecessary outsourcing of the repairs of DTRs, the company incurred an avoidable expenditure of Rs.2.10 crore being the difference in repair cost. In addition, the infrastructure and manpower at SPM centers were not utilized to full extent.

The Government stated (October 2007) that the staff of SPM centers are being utilized for preventive maintenance to ensure uninterrupted power supply. The reply is not tenable as the infrastructure and manpower available at SPM centers are meant for repairs of failed DTRs as per the orders in force. Moreover, the staff of SPM centres are stationery and cannot be expected to undertake maintenance of DTRs, which are spread through out the field.

Billing and Accounting

2.4.14 The accounting and billing services relating to consumers was outsourced (1987) in the erstwhile APSEB and continued by the Company. The work is entrusted (1987) to different Private Accounting Agencies (PAAs). These agencies were required to prepare the bills from the readings noted in the meter reading books, prepare bills for issue to the consumers, account for the same and maintain required books and generate various status reports. Subsequently, one of these functions viz., the preparation of bills for issue to consumers was outsourced to different agencies. These agencies visit the consumers' premises, take the reading and issue bills on the spot. The 'Spot Billing' work was introduced in Hyderabad and Ranga Reddy circles prior to 2002-03 and in Ananthapur, Kurnool, Mahaboobnagar and Medak circles from 2004-05 onwards. Scrutiny of records revealed the following.

Spot Billing Agencies

Lack of exchange of information between circles lead to different rates for same work.

2.4.15 Spot billing is a process where the billing is done at consumer premises by taking reading and issues the bills on the spot to the consumers.

The details of rates being paid to different spot billing agencies in circles of Hyderabad, Secunderabad and Rangareddy Districts are indicated in **Annexure -28.** The annexure shows that different circles were paying different rates to these agencies. Since all these agencies are working in the same region of Hyderabad, the rates also should have been uniform. The extra payment made to different agencies due to non-fixing of uniform rates, amounted to Rs.48.69 lakh during 2005-06 and 2006-07.

Thus, the Company failed to:

- coordinate/maintain uniform rates within circles in the same region.
- monitor the rates being fixed by the circles, so that it do not vary and there is no overall loss to the company.
- review/obtain feed back for taking timely remedial action.

The Government stated (October 2007) that rates in Hyderabad city were finalised based on division wise tenders and applying uniform rates is not feasible. The reply is not tenable since the Company did not even make any efforts towards fixing the same rate.

Private Accounting Agencies

Due to delay in reassessment of work load consequent to introduction of spot billing, the company incurred avoidable expenditure of Rs.40.64 lakh.

2.4.16 Consequent to introduction of spot billing (2002-03) the following items of billing work hitherto done by the Private Accounting Agencies (PAAs) were not required to be done by them.

- Collection of statistics such as Permanent Receipt (PR) numbers. Bill Collectors' Remittance Challan (BCRC) numbers, amount etc, and feeding them into computers.
- Collection of Meter statistics.
- Preparation of current consumption (CC) bills.

Though the quantum of work of PAAs was reduced (2002-03), the rates paid to these PAAs were not reviewed and revised instantly. The rates were revised from April 2005, only after lapse of 3 years from Rs.1.15 per bill to Rs.1.00 per bill.

The Government stated (October 2007) that instead of preparation of CC bills now the PAAs are uploading data into spot billing machines. However the quantum of work was reassessed and rates were reduced to Rs.1.00 from 1 April 2005. However, the fact remains that due to not reducing the rates from the date of introduction of spot billing the company made an avoidable payment of Rs.40.64 lakh (2002-05) on 270,94,290 **(Annexure -29)** number of bills at differential rate of Rs.0.15 per bill.

Collection of Revenue

AP Online

Due to obtaining of Bank guarantee for amount lesser than provided in agreement, the collections are not adequately secured.

2.4.17 The Company entrusted (December 2003) collection of its revenue from consumers of Hyderabad, Secunderabad and Rangareddy to AP Online (a joint venture of the State Government). It was mutually agreed to (a) pay a commission of Rs.5 per bill collected after due reconciliation of collections with Electricity Revenue Offices concerned (b) the collections would be remitted by AP Online in the first hour of next day, failing which a penalty at prime lending rate of State Bank of India would be levied.

It was observed that

- as against the Bank guarantee of Rupees one crore required to be obtained, the Company obtained Bank guarantee for Rs.15 lakh only.
- as the Bank guarantee has been obtained for Rs.15 lakh only and had not been renewed beyond April 2006, the daily collections ranging between Rs.0.27 lakh and Rs.46.79 lakh were not adequately secured.
- though there were delays in remittance ranging between one and 18 days during the year 2006-07 penalty of Rs.10.20 lakh (details vide **Annexure –30**) leviable for delays has not been levied and collected.

The Government stated (October 2007) that Bank guarantee of Rs.15 lakh being one day's collection as security was obtained. It was also stated that the penalties would be deducted. The reply is not tenable since as per agreement the Company was to obtain bank guarantee for Rupees one crore.

Maintenance of Capacitor Banks

2.4.18 The erstwhile APSEB procured (1995) Capacitor Banks (CB) on lease purchase basis and installed at different sub stations to save energy. Opening balance of 423 nos of 11KV, 2 MVAR CBs (2001-02) were available with the Company. While four of them were maintained by Company itself, the maintenance of 419 CBs were outsourced to (1) Asian Electronics Limited (AEL) (324 nos) and (2) Klen & Marshel Limited (95 numbers). A review of the records relating to outsourcing of maintenance of CBs revealed the following:

Awarding of maintenance contract in advance

Renewal of maintenance contracts before expiry of contract deprived the company of getting a competitive rate.

2.4.19 As per the terms and conditions of lease agreement (1995), 324 CBs were to be installed and maintained by Asian Electronics Limited (AEL) for a period of six years from the date of installation. All the 324 CBs were installed between 1996-97 and 2000-2001. The details of number of CBs installed during each year and the period up to which they have to be maintained were as follows:

No of CBs	Installed during	To be maintained up to
85	1996-97	2002-03
115	1997-98	2003-04
78	1998-99	2004-05
46	2000-01	2006-07

Source : data compiled from contract records

On completion of six years period (2002-03) in respect of 85 CBs (installed during 1996-97) the Company, on nomination basis, entered (May 2003) into another maintenance agreement for a period of three years at the rate of Rs.9000 per month per CB for all the 324 CBs. The period of three years for each batch of CBs would be reckoned from the date of expiry of six years from the date of installation. In other words, the Company entered into maintenance contract much in advance as shown in table below. The table below indicates the year in which the advance contract awarded (May 2003) would expire.

Sl.No.	No of CBs	Year of installation	Year when due for awarding contract	Year in which the advance contract would expire
1	85	1996-97	2002-03	2005-06
2	115	1997-98	2003-04	2006-07
3	78	1998-99	2004-05	2007-08
4	46	2000-01	2006-07	2009-10

Source : data compiled from contract records

Thus, in respect of 124 CBs (items at Sl.no.3 and 4) installed during the years 1998-99 (78) and 2000-01 (46) the initial lease period of six years expires only by 2004-05 and 2006-07 and these CBs were required to be given for regular maintenance only thereafter. It was seen that though the Company noticed (April 2005) that the performance of the firm was far from satisfactory, the agreement was not terminated.

The Company invited (January 2006) tenders for awarding maintenance of 204 CBs as the maintenance contract for 2005-06 and 2006-07 was due to expire (item at Sl.1-85 Nos., item at Sl.2-115 Nos. and 4 which were maintained earlier by department). The contract was awarded (June 2006) for a further period of two years to the same firm (L-1) at the rate of Rs.6800 per month per CB.

It was observed that

- the Company had awarded the first three years maintenance contract to the same firm on nomination basis without inviting any tenders. The possibility of awarding of contract at higher rates cannot be ruled out as the contract was awarded at a lesser rate subsequently.
- as the performance of the firm was not satisfactory the Company should have disallowed AEL participation in tender.
- awarding the regular maintenance contract before the completion of its lease period was not a prudent decision, as the same was not warranted. As the Company got (September 2006) competitive rate of Rs.6800 per month per CB, the excess commitment of Rs.2200 per month per CB could have been avoided in respect of 124 CBs. The extra commitment on this account amounted out to Rs.74.18 lakh[10].

[10] 124 (78+46); 2200x78CBsx19months (June 2006 to March 2008=37.75lakh plus 2200x46CBsx36months (2007-08 to 2009-10)=36.43 lakh

The Government Stated (October 2007) that subsequent reduction in maintenance charges might be due to absorption of required skills and more trained personnel available locally. The reply is not relevant since the observation was about awarding the contract much before expiry of the existing contract.

Thus due to entering into maintenance contract before expiry of existing contract resulted in payment of avoidable extra expenditure of Rs.74.18 lakh.

Internal Audit function

2.4.20 The Company comprises of Corporate Office with 11 wings including four Superintending Engineers and 10 Operational Circles having 140 units including their office, Divisional Engineers, Electricity Revenue Offices. Against these available 151 units, the company identified only 134 units to be covered by Internal Audit leaving seven units in Corporate office and one Divisional Engineer, Detection of Pilferage of Energy in each circle since they were not independent accounting units. The internal audit wing of the Company with four officers and one General Manager do not perform any audit function and only look after administration part of it. The Company decided (October 2003) to outsource the "Internal Audit" function by engaging teams of Chartered Accountants (CA) consisting of one CA and two Assistants at a cost of Rs.31000 per team and accordingly six to nine teams were engaged to conduct the audit of circles by assigning one or two circles to each team at a total expenditure of Rs.1.03 crore up to March 2007. A scrutiny of records relating to audit programme of CA teams revealed that on an average, two units were allotted to each team every month, and the programme were communicated each month in advance to the teams, duly specifying the dates of audit, due date for receipt of Inspection Report and also the items of work to be carried out.

Assigning other duties resulted in arrears of audit.

It was observed that

- As per the audit programme, 438 units (88 in 2003-04, 195 in 2004-05, 75 in 2005-06 and 80 in 2006-07) were scheduled for audit against the 536 units (134 x 4) to be covered. The left over units were covered in subsequent visits without any extra man-days thus giving scope for leaving areas uncovered. As per the register maintained and statement showing the units covered, the units not covered come to 203. The difference in number of units covered needs reconciliation.
- The manpower hired was sufficient to cover 665 units during the period under review, i.e. at the rate of one fortnight for each unit, whereas only 438 units were covered. The balance time was utilized for doing other work such as, validation of SAP Trial Balances, ensuring quantity reconciliation between SAP/manual ledger, verification of compounding fee, audit of cheques issued etc., Thus out of the total remuneration paid for 665 man fortnights, Rs.35.18 lakh (involving 227 man fortnights) was for other purposes.

- Contracts were renewed for three months and six months instead of one year at a stretch, leading to inability to plan properly to avoid accumulation of arrears.

Further, from the scrutiny of 10 Inspection Reports of Internal Audit, it was observed that

- the Inspection Reports did not specify, as required, the total population, sampling technique adopted etc., to assess the reasonableness.
- areas covered and areas left out were not indicated;
- check list of items was not attached;
- where the teams visited the same office subsequently, IR was a mere repetition of same observation with a different data, which means corrective action was not taken;
- sufficiency, accuracy or otherwise regarding maintenance of required records were not brought out;
- replies from the audited units were not being pursued effectively in Corporate office to ensure corrective action;

The Government/Management stated (October 2007/August 2007) that observation of audit in respect of inclusion of the excluded units is noted and would be followed and in respect of observation regarding conducting, reporting and review of internal audit, the suggestion of audit would be followed and performance of the internal audit would be improved. It was also stated that from August 2007 audit work is being entrusted to the departmental staff. However, there was no mention regarding assigning of other duties to the Internal Audit teams.

Acknowledgement

Audit acknowledges the co-operation and assistance extended by the staff and the Management of the Company at various stages of conducting the performance audit.

Conclusion

The Company did not have any separate centralized outsourcing wing. There was no clear-cut policy/methodology regarding engagement of persons against crucial posts, neither their duties nor responsibilities clearly defined. There was no uniform methodology regarding engagement of manpower and persons over and above sanctioned strength were engaged. There was avoidable expenditure with reference to outsourcing of repairing of Distribution Transformers. Different rates were being paid to spot billing agencies in the same region. There were cases of undue advantages given to collection agencies. There were instances of injudicious outsourcing of maintenance of Capacitor Banks. Substantial amounts were spent on outsourcing of Internal Audit Function without getting due return benefit.

Recommendations

- **The Company should formulate a centralized outsourcing cell with clear-cut policies to have control over the field offices while undertaking the outsourcing activities.**
- **In view of the risks involved in appointing the outsourced personnel to the crucial positions, appropriate accountability clauses may be kept in the agreements.**
- **Periodic reviews/assessments may be undertaken with reference to benefits accrued vis-a-vis costs involved.**
- **Legal cell of the Company may be strengthened to take care of all legal complications while outsourcing in the present as well as future especially with reference to the Labour Laws.**
- **A Management Information System may be evolved in such a way that the information/developments-taking place in the outsourcing front from different circles of the Company and from other Discoms is regularly received for gainful utilisation.**
- **It should be ensured that penalties wherever leviable are promptly levied and collected.**
- **Outsourcing should be judicious and need based with adequate monitoring of corporate office to rule out wastage and misuse.**

2.5 High Tension Billing in two Power Distribution Companies (CPDCL and NPDCL) of Andhra Pradesh

Highlights

The Discoms (CPDCL and NPDCL) did not have an IT strategy and have not drawn up a long term/short term IT policy to enhance the packages being used for HT billing.

(Paragraph 2.5.6)

The objectives of migrating to a new and comprehensive package developed by outsourcing in CPDCL were not fully achieved. NPDCL continued with an old legacy system which was deficient.

(Paragraphs 2.5.9 and 2.5.10)

Inadequacies in checks for data validation resulted in presence of inconsistent and meaningless data in the databases maintained by the systems of both the Discoms (CPDCL and NPDCL)

(Paragraph 2.5.11)

Supply to 552 HT consumers continued despite these continuing with a Power Factor of less than 0.75 for more than seven consecutive months which otherwise should have been disconnected as per provisions of the tariff orders of APERC.

(Paragraph 2.5.13)

A number of deficiencies were observed in the basis for computation of Load Factor incentives. Analysis of the databases revealed anomalous situations where irrational incentives have been given to the HT consumers in both CPDCL as well as NPDCL.

(Paragraph 2.5.15)

Temporary HT consumers were not billed through the HT billing system.

(Paragraph 2.5.16)

Introduction

2.5.1 As a part of reforms in power sector, the erstwhile Andhra Pradesh State Electricity Board (APSEB) was unbundled into two companies' viz., Andhra Pradesh Power Generation Corporation Limited (AP Genco) and Transmission Corporation of Andhra Pradesh Limited (AP Transco) with effect from 1 February 1999. AP Genco was responsible for power generation; AP Transco for power Distribution.

Four-distribution companies (Discoms) viz., Central Power Distribution Company of Andhra Pradesh Limited, Hyderabad (CPDCL- seven districts[11]), Northern Power Distribution Company of Andhra Pradesh Limited, Warangal (NPDCL-five districts[12]), Eastern Power Distribution Company of Andhra Pradesh Limited, Visakhapatnam (EPDCL-five districts) and Southern Power Distribution Company of Andhra Pradesh Limited, Tirupathi (SPDCL-six districts) were set up on 31 March 2000 as subsidiary companies of AP Transco to take over retail distribution of power in the geographical area of 23 districts in the State of Andhra Pradesh.

The business of retail distribution of power for 2000-01 was carried out by AP Transco on 'no-profit/no-loss' basis in the absence of separate licenses for Discoms for carrying out retail business for that year. The Andhra Pradesh Electricity Regulatory Commission (APERC) governs all the companies.

The electricity consumers are divided into two categories i.e. High Tension[13] (HT) and Low Tension[14] (LT). The HT consumers are categorised into six categories[15]. The HT consumers are billed as per the Tariff Orders issued by APERC from time to time.

The details of revenue from HT consumers in CPDCL and NPDCL, which were selected for audit, and the total revenue from sale of power during the last three years, in the two DISCOMS are as follows:

(Rupees in crore)

Discom	Total revenue			HT Revenue (figure in brackets - percentage to total revenue)		
	2004-05	2005-06	2006-07	2004-05	2005-06	2006-07
CPDCL	4139.94	4559.42	5047.60	1988.98 (48.04)	2310.82 (50.68)	2593.25 (51.38)
NPDCL	1221.30	1219.24	1279.24	531.20 (43.49)	635.11 (52.09)	607.32 (47.48)

[11] Rangareddy, Mahaboobnagar, Kurnool, Anantapur, Nalgonda, Medak and Hyderabad
[12] Warangal, Karimnagar, Khammam, Nizamabad and Adilabad.
[13] High Tension consumer means a consumer who is supplied electricity at a voltage higher than 440 volts but not exceeding 33000 volts.
[14] Low Tension consumer means a consumer who is supplied electricity at a voltage up to 440 volts;
[15] Category I (Industry-general), IB (Ferro alloys), II (non-industrial), IV a (Government lift irrigation schemes), IV b (agricultural), V (railway traction) and VI (Townships and residential colonies).

The process of HT billing was initially automated in-house by the erstwhile APSEB in June 1988. The package was developed in Solaris 5.8 with Oracle 7.3 at the backend, SQL*Forms3 at the front end and Pro*C as programming language. APSEB and later AP Transco prepared the HT Bills up to February 2002, after which the same package was handed over to the four Discoms for generation of bills of HT consumers.

NPDCL was using (as of July 2007) the same legacy system as developed by the AP Transco in 1988. However, in CPDCL, HT billing operations were being carried out using a new package developed by Andhra Pradesh Sahakara Vignana Samithi Limited, Hyderabad (APSVS) since June 2002. The package developed by APSVS and now in operation was developed in Linux9, with Oracle 9.2 at the backend and Visual Basic 6 at the front-end.

IT Organisational set up

2.5.2 For administrative purposes each of the Discoms are governed by Board of Directors including Chairman and Managing Director (C&MD) who is assisted by Directors for Finance, Projects & Materials Management, Operations, Human Resource Development & Commercial respectively. The area of operations is divided into circle offices each headed by a Superintending Engineer (SE). At the Corporate level, General Manager (IT) who directly reports to the CMD heads IT Organisation in the Discoms. The process of HT Billing is carried out at the Corporate Office. The Senior Accounts Officer (assisted by Junior Accounts Officer/UDCs) at each circle office is responsible for billing the HT consumers

Process of HT billing

2.5.3 The entire HT billing process is centralised at the respective Corporate Offices of Discoms. In CPDCL, after completion of billing cycle, the system administrator places the closing meter readings of previous month on the internal mail server. The data is accessed by the circle offices and the details like current month meter readings taken by field engineers, meter status etc., are entered in an excel sheet. The same is uploaded into the billing application, the bill process is run and bills generated. After examination of the bills generated with manual meter cards, the staff from Circle office collects the bills for distribution to the consumers.

In NPDCL, the current month meter readings taken by field engineers are keyed in the database at the respective circle offices through wide area network. The data is accessed at the Corporate Office, the bill process is run and bills generated. After examination of the bills generated with manual meter cards, the staff from Circle office collects the bills for distribution to the consumers.

Audit objectives

2.5.4 Audit had the following objectives:

- examine IT billing applications, to see whether the intended objectives were achieved in the two Discoms i.e., CPDCL and NPDCL;
- obtain assurance regarding IT controls in the HT billing applications and evaluate accuracy, efficiency, economy and effectiveness of the process of HT Billing in the two Discoms;
- ensure that the billing application supports various systems of procedure/terms and conditions/tariff orders/regulations issued by APERC relating to HT billing; and
- ensure that the data on collections and arrears is promptly incorporated in the database.

Scope of Audit, methodology and coverage

2.5.5 For the purpose of IT audit, two Discoms viz., CPDCL (having 3026 HT Consumers as of January 2007), and NPDCL (having 606 HT consumers as of January 2007), along with two circle offices under each viz., Anantapur, Nalgonda circle offices under CPDCL and Warangal, Karimnagar circle offices under NPDCL were selected.

The data residing at the databases relating to the period from June 2002 to February 2007 was analysed using CAATs[16]. The results of queries on the databases were cross verified with physical records at Circle offices, to evaluate the adequacy and working of IT controls, to identify loss/leakage of revenue and to ensure comprehensiveness of the package/data. The audit findings are discussed in the succeeding paragraphs.

Audit findings

Lack of formulated and documented IT policy

2.5.6 Though both the Discoms are operating the automated billing applications since their inception; these are yet to formulate and document a formal IT policy and long-term/medium-term IT strategy incorporating the time frame, key performance indicators and cost benefit analysis for developing and integrating various systems. As a result, CPDCL even after experimenting with various billing applications have not standardised a comprehensive billing application. NPDCL continue to operate the legacy package without any changes thereto for removing the deficiencies of the old system.

[16] Computer Assisted Audit Techniques.

Lack of Physical security controls

2.5.7 In both selected Discoms no fire/water-fighting equipment was installed to protect the critical IT assets/systems. No documentation exists detailing the tested emergency plans in case of disruptions.

HT bills not test-checked for assessing accuracy and compliance with applicable tariff rules

2.5.8 The Senior Accounts Officer functioning at the circle office is responsible for generation and accuracy of the bills served to the consumers. It was noticed in both the Discoms that no records exist to indicate that the HT bills generated were test checked by higher authorities on a regular basis and whenever there is a revision in tariff. Also, HT billing process has not so far been audited internally by the two Discoms.

Objectives of migration to a comprehensive HT billing application were not fully achieved in CPDCL

2.5.9 A scrutiny of the agreements entered into with the two software firms viz., Andhra Pradesh Sahakara Vignana Samithi Limited, Hyderabad (APSVS) and Phoenix IT Solutions, Visakhapatnam (Phoenix) revealed that (i) the agreements were entered into post facto, (ii) the terms of the agreements were not adhered to and (iii) the objectives of entering into the agreements were not achieved. The various observations are as follows.

In January 2002, APSVS was awarded (January 2002) the task of developing and implementing a new HT billing application. It was also noticed that though bills were being generated through system developed by APSVS since June 2002, formal agreement was entered into and purchase order was issued post facto only in July 2003.

The objectives of migration/features of new HT billing package were to develop a web based application including for LT category III (B)[17] consumers enabling multiple users to log on and work simultaneously from Circle offices, manage revenue collection by tracking of revenue and demand in an integrated manner, generate reports to study demand and revenue pattern, collection pattern in a month, defaulted payments etc., automate and standardise the processing of HT billing, generate statutory and analytical reports for the management, generate revenue collection information to ensure seamless integration of metering, billing and collection processes, make the staff of the Company familiar with the billing system by imparting training and to overcome the deficiencies in the legacy package.

Audit observed that the billing application as planned was not implemented and most of the features of the system are not built into the package being put to use by CPDCL. The current system is not a web based application necessitating interventions for data transfers from the field to the corporate offices making the whole process vulnerable to unauthorised changes. Various MIS reports as envisaged in the scope of the project are not generated by the

[17] Industrial consumers (Small Scale Industrial Units) with connected loads above 75 HP and up to 150 HP. The demand in excess of Contracted Maximum Demand would be billed at demand charges prescribed under HT Category-I.

system which otherwise could have minimised the instances of incorrect billing. It was further observed that there were inherent weaknesses in the process for change management as many of the prevailing business rules are not incorporated in the logic of the system leading to losses as pointed out later in the report. Thus the objectives were not fully achieved.

Also the agreements entered into with APSVS specified that the billing application would include LT Category III (B) consumers, however there was no facility in the billing application to bill these consumers and they are billed separately at Electricity Revenue Offices.

Deficiencies in the legacy system being used by NPDCL for billing

2.5.10 No changes were made to the HT billing application taken over from AP Transco. It was seen that the HT billing application had the following deficiencies

- Lack of provision for maintaining History data i.e., changes in Load, contracted demand, Multiplying factor, meter changes etc
- Lack of provision for calculation of surcharges and penal charges. These charges are manually prepared and fed into the billing package
- Exception reports such as consumers not availing supply at specified voltage, consumers with a Power Factor of less than 0.75, defective meter cases, etc. were being generated for use of the management,
- The application does not support billing of LT Category III (B) consumers

Lack of data validation in the billing systems

2.5.11 Queries on the database of CPDCL pertaining to the period from June 2002 to February 2007 revealed that the database contained invalid entries or inconsistent data pointing towards lack of validation checks and input controls as evident from the following

- The database contained 32 records indicating present meter reading date beyond system date (between 19/6/2019 and 23/6/2024)
- In 291 cases of billing (relating to 178 live consumers), the meter status was shown as ‘working’, though the consumption was ‘nil’ for the periods ranging between 1 to 27 months.
- The “Date” fields in the table relating to monthly bill contained invalid entries. In 90,751 cases, the fields “bill issue date” and “bill due date” were blank.
- Date of installation of meters was blank in 3,452 cases (including disconnected cases)
- In 461 cases, the fields “Date of commencement of supply” and “agreement date” contained dates between “1950-1999” and “1963-2008”, respectively and the “Date of commencement of supply” was prior to “Agreement date” which is inconsistent.

- Though a separate field has been created for "voltage surcharge" on the consumers' not availing power at specified voltage, the field contains no data. Instead, the surcharge is being included in 'Demand charges' and as such amount of voltage surcharge levied cannot be known separately.
- The tables relating to Consumer Master and Monthly Billing Data also contain data relating to HT consumers outside CPDCL.
- Each consumer is allotted a Consumer number, which is unique. Though this being so, it was noticed that in 14 out of 46 reconnected cases, consumer numbers were re-allotted to another consumer. Resultantly, the arrears in respect of 14 old consumers were not depicted correctly in the table containing the data on arrears. Since, consumer number is the primary and unique key in the database, allotting the same to a different consumer is not only against the cardinal principles of Relational Data Base Management System, but also renders the database weak and unreliable.
- In 12870 cases of billing of HT consumers, the Billed Maximum Demand (BMD) was recorded as Nil although it should be equal to the recorded maximum demand or 80 *per cent* of the contracted maximum demand.

Likewise, analysis of data in NPDCL for the period June 2002 to June 2007 showed that in 153 cases relating to 97 consumers the Power Factor (PF)[18] was recorded as more than 1.

Irregular time limit for payment of Bills by consumers

2.5.12 As per terms and conditions of supply of power, "Bills shall be paid by the High Tension consumers within 14 days from the date of the Bill (15 days from the year 2004-05), failing which the consumer shall be liable to pay additional charges at the rates as prescribed from time to time.

In the current system for HT Billing used in CPDCL, the 'bill issue date' and 'bill due date' were constant, irrespective of the month of the year i.e., 26th of the month and 10th of the following month and the number of days for payment varied depending on the number of days in that month. As a result there were variations in the number of days allowed for payment ranging from 12 to 16 days as against 15 days stipulated as per the tariff orders issued by the APERC.

Audit could not compute delayed payment surcharge possibly short levied in all cases because the HT billing application does not capture the actual date of payment. Test check of manual records at Anantapur and Nalgonda circles of CPDCL revealed that between billing months of April 2006 and February 2007, the realisation of an amount of Rs.130.24 crore was delayed by one day as the same was realised on the 16th day.

[18] Power factor means the ratio of kilowatt-hours consumed in the month to kilovolt ampere-hours registered during the month, which shall be calculated to two decimal places and cannot exceed one.

Non-disconnection of supply where the PF was below 0.75 for six consecutive months

2.5.13 According to Tariff orders, should the PF drop below 0.75 and remain so for a period of two consecutive months, it should be brought up to 0.90 within a period of six months, failing which the supply to the consumer may be discontinued.

It was noticed that in respect of 552 consumers (226 in CPDCL and 326 in NPDCL) that though the PF recorded was less than 0.75 for periods ranging from seven consecutive months to 58 consecutive months the information was neither made use of for generating MIS reports, nor the supply disconnected.

On being pointed out the Discoms replied (July 2007) that most of these cases of low PF relate to Government departments and as such no disconnections were affected. The reply of the company is not acceptable because, in the matter of low power factor the tariff orders do not differentiate between Government and non-Government consumers. Further, non-maintenance of a healthy PF would adversely affect the efficiency of distribution system of the Discoms.

Variations in arrears indicated in the database vis-à-vis books of accounts.

2.5.14 As per the guidelines issued by the APERC, the arrears due from the consumer are to be exhibited on the face of the bill. Accordingly in NPDCL the amounts due from the consumer are printed on the bill.

In Karimnagar circle office of NPDCL the database exhibited Rs.11.53 crore (from 104 consumers) as due from consumers as on March 2006. However the Trial Balance and Schedules for that year indicated that the amount due from the consumers was Rs.38.49 crore. Thus the database exhibited Rs.26.96 crore less than the actual arrears.

It was also noticed that the arrears involved in court cases/due from disconnected cases was not maintained separately in the database to watch their recovery. Further, the data on the amounts collected was also not being incorporated/updated in the database, rendering the database incomplete and undependable in the matters of arrears. It is apparent that the arrears shown on the face of the bill are not correct.

Deficiencies in the basis for computing Load Factor Incentives

2.5.15 The Discoms, with the approval of APERC introduced a scheme of allowing incentive (discount on tariff) for HT-I (A) consumers from the year 2001-02**.** These consumers would be eligible for incentives subject to fulfillment of two conditions viz., (i) monthly consumption of the consumer should be in excess of average monthly consumption for the year 2000-01; and (ii) the Load Factor of the consumer should be above the threshold level of 40 *per cent*. From the year 2002-03, however, the incentive scheme was revised. The relation with the base year was removed. According to this scheme, all HT I (A) category consumers including new consumers, whose Load Factor was above a certain limit, would be eligible for incentive. The rates of

incentive were revised every year and were notified in the respective tariff orders.

In view of the fact that from the year 2002-03 the incentive was no longer linked to the consumption of the base year and was based on the Load Factor, the method of computation of Load Factor assumes significance. An analysis of incentives allowed to consumers during the period from April 2002 to January 2007 revealed that HT I-A consumers are being allowed incentives based on Load Factor computed using a formula[19].

In the matters of allowing Load Factor incentives, Audit noticed that there were variations in practices followed by the two Discoms, the revisions made in the formula were neither documented nor formally approved, and the HT billing application allowed incentives to consumers under categories other than HT I-A.

(A) Calculation of Load Factor adopting PF even if below 0.90

On the issue of allowing incentives to consumers who maintain a PF above 0.90 as it reduces losses, CPDCL had stated that for an ideal system, the PF should approach unity (i.e., one) and the LPF surcharge was imposed so as to ensure that the PF does not fall below a certain level and this does not mean that incentive should be paid if PF is above that level.

APERC was also of the view that ideally the PF should be unity and those with higher PF are achieving only what is normally expected of them; and therefore did not find any justification for providing incentives for this purpose.

It was noticed in audit that in CPDCL up to the year 2005-06, PF even if below 0.90 was being reckoned for computation of Load Factor. In the formula for computation of Load Factor, PF is one of the denominators, and any value less than unity would increase the Load Factor thereby increasing the incentive allowed. This also would result in passing on higher rewards to such consumers whose installation was inefficient than to those whose installation was efficient and healthy.

During the period from April 2002 to March 2006 a total number of 2,330 consumers, who had a PF between 0.01 and 0.89 were allowed incentives to the extent of Rs.4.02 crore resulting in extension of irrational benefit to consumers.

In NPDCL during the period from April 2002 to March 2007 a total number of 348 consumers, who had a PF between 0.01 and 0.89 were allowed incentives to the extent of Rs.34.60 lakh resulting in extension of irrational benefit to consumers.

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[19] $$LF = \frac{\text{Billed KWH}}{\text{Billed KVA * power factor recorded * (number of days * 24 hours)}}$$

(B) Incentives allowed to ineligible consumers

Further, a scrutiny of database, in NPDCL, revealed that contrary to the scheme, incentives amounting to Rs.31.77 lakh were allowed to 17 consumers other than HT Category I, who were otherwise not eligible for such incentives.

(C) Low Power Factor surcharge levied was less than incentives allowed

As indicated earlier, consumers who did not maintain a PF of 0.90 were liable to pay a surcharge at the rates prescribed. However, it was noticed that in CPDCL in 926 cases the LPF surcharge levied was less than the Load Factor incentives allowed. The excess of incentive allowed over the surcharge levied during the above period worked out to Rs.2.21 crore.

In NPDCL, it was observed in audit that in 118 cases the LPF surcharge levied was less than the Load Factor incentives allowed. The excess of incentive allowed over the surcharge levied during the above period worked out to Rs.14.56 lakh.

(D) Incentives allowed to consumers who had no consumption and were billed at minimum charges

As per the original scheme, the incentives were allowed depending on the consumption in excess of the base year consumption and to encourage consumption.

However, it was noticed that in 58 billing cases in CPDCL pertaining to the period from May 2002 to February 2006, consumers who recorded no consumption and thus were billed minimum charges were also allowed incentives to the extent of Rs.3.03 lakh.

In NPDCL it was noticed that in 28 billing cases pertaining to the period from April 2003 to December 2006, consumers who recorded no consumption and thus were billed minimum charges were also allowed incentives to the extent of Rs.3.15 lakh.

(E) Incentives allowed to consumers who had Load Factor less than the threshold limit

In NPDCL it was noticed that there were 315 cases between January 2002 and January 2005 where incentives amounting to Rs.66.28 lakh were allowed to consumers even though their Load Factor was lesser than the threshold limit of 30 *percent* (applicable during the period).

(F) Incentives allowed to consumers who had arrears

In terms of para 243 of tariff order 2001-02, incentives should be allowed to consumers only if the consumer does not have any outstanding dues to AP Transco/Discoms.

Contrary to the above, CPDCL allowed incentives to consumers who were in arrears. A test check of one month (January 2007) records revealed that in 548

cases incentives amounting to Rs.10.10 crore were allowed to consumers who had outstanding arrears amounting to Rs.18.25 crore (other than Court cases).

Likewise, in NPDCL incentives were allowed to consumers who were in arrears. A test check of one month (January 2007) revealed that in 82 billing cases incentives amounting to Rs.1.14 crore were allowed to consumers who had outstanding arrears amounting to Rs.18.68 crore (other than Court cases).

Temporary HT Consumers were not billed through HT billing application

2.5.16 During the course of audit it was noticed that in both the Discoms 'temporary HT' consumers were being billed, manually, at respective Circle offices, though Masters were created in the billing application for tariff applicable to Temporary consumers.

As the total number of temporary connections, units sold and revenue realised has been increasing year after year, there is a necessity to bill them through the HT billing application to have uniformity and control.

The database lacks completeness to this extent and the MIS Reports generated from the database regarding sale of power, revenue realised etc., from the consumers, are also not accurate and deficient as these do not incorporate data about temporary HT connections.

The matter was referred to the Government/Management in August 2007; their reply is awaited.

Conclusion

Though IT systems were introduced way back in 1988 and HT billing is being done using automated systems which continued in four Discoms after 2002, there were deficiencies found in both the systems being used by CPDCL and NPDCL. The applications lacked input controls resulting in inconsistent and meaningless data residing in the databases. It was observed that the systems are not used for MIS purposes. Both the Discoms were yet to formulate and document an IT strategy and to focus effectively for harnessing the potential of IT. Data analysis of the billing data of HT consumers revealed that not all business rules framed by APERC have been incorporated into the billing applications.

Recommendations

The Discoms should formulate IT policy and document business continuity and disaster recovery plan.

- **There is need for an assessment of the working of the HT Billing applications operational in CPDCL and NPDCL with a view to enhance these to leverage the advancement in technology. Till such time system enhancements are done, there is need for assuring that all latest business rules especially the tariff orders are built into the logic of the system.**
- **There is need for having a strong change control mechanism to immediately incorporate all changes in the business rules into the systems after authorisations at appropriate levels.**
- **Validation controls should be built into the billing system to avoid inconsistent and meaningless data residing in the system.**
- **Reporting features in HT Billing applications should be strengthened to facilitate better control and monitoring of the billing process which may result in better realisation of revenues from the HT consumers.**
- **Temporary HT connections and LT Category III (B) consumers may be billed through the HT billing applications.**