CHAPTER-II
REVIEWS RELATING TO GOVERNMENT COMPANIES

2.1 FUEL (COAL) MANAGEMENT IN THERMAL POWER STATIONS - ANDHRA PRADESH POWER GENERATION CORPORATION LIMITED

Highlights

Andhra Pradesh Power Generation Corporation Limited owns five thermal, 15 hydel and one wind power station with a combined installed capacity of 6,560.9 MW. During the four years ending 2002-03, the Company incurred Rs.7,862 crore on purchase of coal representing 94.7 *per cent* of the total fuel costs.

(Paragraph 2.1.1)

The movement of coal to Rayalaseema Thermal Power Project for the year 2002-03 was made in variation of approved linkage in regard to source of supply and mode of transportation, which resulted in extra expenditure of Rs.2.72 crore.

(Paragraph 2.1.8)

As per Fuel Supply Agreement with The Singareni Collieries Company Limited, grade of coal is determined rake-wise while in respect of coal supplies from Mahanadi Coalfields Limited (MCL) grade is determined with reference to weighted average of useful heat value of actual supplies in a month. The difference in determination of grade resulted in an extra expenditure of Rs.12.37 crore in respect of supplies received from MCL for the period from March 2002 to March 2004.

(Paragraph 2.1.9)

Crushing charges of Rs.21.15 crore were paid to MCL by VTPS for the period March 2002 to March 2004 for the coal of 100 mm size supplied in crushed condition. This payment could have been avoided if the VTPS procured coal in 200-250 mm size and crushed the same in own crushers.

(Paragraph 2.1.11)

'F' grade coal was used as against the designed grade of 'D', in VTPS first stage power plant which resulted in loss of generation of 4428.74 MU for the years 1999-2004 with a consequential net loss of revenue of Rs.426.11 crore. Similarly designed grade of coal was not used in KTPS for the same period resulting in loss of generation of 4095.97 MU with a net loss of revenue of Rs.153.55 crore.

(Paragraphs 2.1.18 and 2.1.19)

Introduction

2.1.1 Andhra Pradesh Power Generation Corporation Limited (AP Genco) was formed on 29 December 1998 as a wholly owned State Government Company mainly to take over and operate power-generating stations of the erstwhile Andhra Pradesh State Electricity Board (APSEB). As on 31 March 2004 the Company had five thermal, 15 hydel and one wind power station with a combined installed capacity of 6,560.90 MW. The details of installed capacity and power generated for five years up to 2003-04 are given in **Annexure-9**. The contribution of thermal generation to total generation increased from 72.55 *per cent* in 1999-2000 to 88.36 *per cent* in 2003-04.

The number of plants generating power (from the five[*] thermal stations) was 20 as on 31 March 2004. The main fuels used in generation of thermal power were coal, furnace oil and high speed/light diesel oil. The Company procures coal from The Singareni Collieries Company Limited (SCCL), Andhra Pradesh and Mahanadi Coalfields Limited (MCL), Orissa. The furnace and diesel oil are procured from Indian Oil Corporation Limited (IOC). During the four years ending 2002-03, the Company incurred an expenditure of Rs.8,302.40 crore on fuel costs (including Rs.7,862 crore on coal representing 94.7 *per cent* of fuel cost) which constituted 51.9 *per cent* of total revenue expenditure during the above period.

Organisational set-up

2.1.2 The matters relating to purchase and transportation of fuels are dealt with at Head Office of the Company under the charge of Advisor (Coal and Transportation) and Chief Engineer (Generation) who report to Director (Thermal). At field level, each thermal station is headed by a Chief Engineer who functions under the overall control and supervision of Director (Thermal).

[*] Vijayawada Thermal Power Station (VTPS), Rayalaseema Thermal Power Project (RTPP), Kothagudem Thermal Power Station (KTPS), Nellore Thermal Power Station (NTS) and Ramagundam Thermal Power Station (RTS).

Scope of audit

Extent of coverage

2.1.3 The matters relating to purchase, transport and consumption of fuel (coal) in thermal power generation by three (VTPS, KTPS and RTPP) out of five power stations of the Company, were reviewed during January-April, 2004 covering a period of five years up to 2003-04 and the findings of audit are set out in succeeding paragraphs.

2.1.4 Audit findings as a result of review on fuel (coal) management in thermal power stations of the Company were reported to Government/Management in June 2004. They were also requested (August 2004) to attend the ARCPSE, so that the viewpoint of Government/ Management was taken into account before finalising the review. The meeting of ARCPSE was held on 1 September 2004 and attended by the Additional Secretary to Government, Energy Department, Government of Andhra Pradesh and the Managing Director, Director (Thermal) and Director (Finance) of the Company. The views expressed by members have been taken into account during finalisation of the review.

Procurement of coal

Procedure for procurement of coal

Coal is procured from collieries as per linkage approved by standing linkage committee of GOI.

2.1.5 The Central Electricity Authority (CEA) fixes power generation targets for thermal power stations (TPS) considering capacity of plant, average plant load factor, and past performance. The Company works out coal requirement on the basis of targets so fixed and past coal consumption trends. Based on the Company's quarterly requirement, the Central Electricity Authority (CEA) recommends the requirement to Standing Linkage Committee (SLC) of Ministry of Energy, Government of India which allots coal based on the availability at various collieries. The quantity, mode of movement, nearness of mines, etc., is taken into account by the SLC while determining the linkage. On the basis of linkage source approved by SLC, the Company enters into Coal Supply Agreements with collieries. The Company purchases coal from SCCL for KTPS, RTPP, NTS and RTS and from MCL for VTPS and RTPP as per allotment made by SLC. Coal from SCCL is transported by rail/road and from MCL by rail and rail-cum-sea-cum-rail.

Linkage

2.1.6 The linkage quantity, actual supplies and consumption of coal in VTPS, KTPS and RTPP for the five years ended 2003-04 were as follows:

(Quantity in lakh tonne)

Year	VTPS			KTPS			RTPP			TOTAL		
	Linkage	Supplies	Consumption	Linkage	Supplies	Consumption	Linkage	Supplies	Consumption	Linkage	Supplies	Consumption
1999-2000	64.50	66.74	67.03	64.65	58.22	61.70	27.00	26 .00	26.28	156.15	150.96	155.01
		(103)	(100)		(90)	(106)		(96)	(101)		(97)	(103)
2000-2001	70.50	71.92	70.95	64.50	61.00	51.21	30.30	28.84	28.00	165.30	161.76	150.16
		(102)	(99)		(95)	(84)		(95)	(97)		(98)	(93)
2001-2002	69.00	69.83	71.68	63.60	61.95	63.40	23.40	22.85	23.72	156.00	154.63	158.80
		(101)	(103)		(97)	(102)		(98)	(104)		(99)	(103)
2002-2003	70.80	71.95	72.27	63.30	63.91	66.71	22.35	21.90	22.92	156.45	157.76	161.90
		(102)	(100)		(101)	(104)		(98)	(105)		(101)	(103)
2003-2004	77.40	70.60	71.62	64.35	59.29	59.51	25.95	21.88	22.47	167.70	151.77	153.60
		(91)	(101)		(92)	(100)		(84)	(103)		(91)	(101)
Total	352.20	351.04	353.55	320.40	304.37	302.53	129.00	121.47	123.39	801.60	776.88	779.47

(Figures in brackets represent percentage of supplies to linkages and consumption to supplies)

It may be observed from the above table that the Company had received 776.88 lakh tonne (96.9 *per cent*) coal as against linkage of 801.60 lakh tonne during 1999-2000 to 2003-04 and it consumed (including opening balance) 779.47 lakh tonne during the same period. Further, the total supplies against linkages in 2003-04 were lowest at 91 *per cent* mainly due to lower supplies to RTPP, KTPS and VTPS.

Fuel supply arrangement

Coal/fuel supply agreements were in place with collieries for supply of coal conforming to specified grade.

2.1.7 Coal is classified into different grades on the basis of useful heat value (UHV#)/gross calorific value (GCV$). The price of the coal depends on the grade of the coal. Coal is procured from the linked collieries notified by SLC from time to time. The Company had entered (June 2001) into a fuel supply agreement (FSA) with SCCL for supply of coal to its power stations (excepting VTPS) located at different places. The period of currency of the FSA was from 1 August 2001 to 30 June 2003. This was followed by another agreement executed in May 2003, for a period of three years effective from 1 July 2003. Similarly the Company entered into a coal supply agreement (CSA) with MCL for a period of three years effective from 1 March 2002 for supply of coal to VTPS.

The salient features of these agreements were as follows:

- Grade determined in the joint sampling would be final.

The Useful Heat Value (UHV) : This is defined by the formula UHV=8900-138 (Ash percentage + Moisture percentage) while Ash and Moisture are determined after equilibrating the coal at 60 ***per cent*** relative humidity and 40 degrees C temperature.

$ Gross Calorific Value (GCV) : Calorific value of coal at a constant volume expressed in calories per gram.

- Price notified from time to time by the collieries would be applicable for the supplies.
- Billing to be done by SCCL on the basis of joint sampling grade for each rake. In the case of MCL billing is done on the basis of weighted average of UHV of the supplies made in a month.
- Payment to be made for the supplies as per the agreed billing schedule.
- Property in goods passes to the buyer on loading the coal into wagons/trucks at despatch point.

Deviations/shortcomings in the fuel supply agreement (FSA) and coal supply agreement (CSA)

A review of FSA with SCCL and CSA with MCL revealed the following deviations/shortcomings:

Extra expenditure due to purchase/movement of coal in variation to pattern of linkage

2.1.8 A review of coal receipts at RTPP for the year 2002-03 with reference to linkage allowed revealed that there was variation in the source of purchases and pattern of transport of coal as shown below:

Period	Linkage (tonne)				Actual receipt (tonne)			
	SCCL	MCL (Rail)	MCL (Rail-sea)	Total	SCCL	MCL (Rail)	MCL (Rail-sea)	Total
2002-03	1695000	330000	210000	2235000	1776973	49866	379124	2205963

Movement of coal in deviation from approved linkage resulted in extra expenditure of Rs.2.72 crore.

It could be seen from the above that the purchase/movement of coal was not as per approved linkage. As a result of variation in source of supply and mode of transportation, the Company incurred an extra expenditure of Rs.2.72 crore; being the difference in landed cost of coal.

Government replied (August 2004) that the variation in the mode of transport was due to non-availability of path for free movement of coal rakes by all rail routes. The reply is not tenable as the SLC while approving linkage also takes into account all relevant aspects including rail movement constraints.

Lacuna in CSA with MCL

2.1.9 CSA with MCL envisages supply of 'F' grade coal. In the event of shortfall in 'F' grade coal, 'G' grade coal can be supplied to the extent of 30 *per cent* of supplies in a month. The sale price of such supplies is determined with reference to weighted average of UHV of the supplies.

Lacuna in coal supply agreement in regard to determination of grade resulted in an extra expenditure of Rs.12.37 crore.

Audit observed that during the period from March 2002 to March 2004, the VTPS received 11.95 lakh tonne of 'G' grade coal. The payment for the same was, however, made at the rate applicable for 'F' grade coal as a result of weighted average clause incorporated in the CSA. Thus, as a result of making payment for 11.95 lakh tonne of 'G' grade coal at the rates applicable for 'F' grade coal, the Company incurred an extra expenditure of Rs.12.37 crore for the period from March 2002 to March 2004. It is pertinent to mention that the FSA with SCCL provided for payment of coal supply bills on the basis of grade declared for each rake. Since the Company executed the CSA with MCL subsequent to the date of execution of FSA with SCCL, care should have been taken to avoid divergence in the clause for payment of coal supply bills.

Regarding payment based on joint sample grade instead of monthly weighted average of UHV (as per CSA) the Government/Company stated (August 2004) that this issue would be taken up with MCL to incorporate suitable clause at the time of renewal of the CSA.

Non-installation of automatic sampling equipment as per FSA

2.1.10 KTPS is getting coal from three despatch points of SCCL. The price of the coal is determined on the results of joint sampling. The terms and conditions of FSA *inter alia* provided for installation of automatic sampling equipment at despatch points within six months of the date of entering into agreements on equal cost sharing basis.

The following observations are made:

- The automatic sampling arrangements were to be made by the end of January 2002. The sampling equipment was, however, installed fully at one despatch point (Rudrampur) in October 2003 and partially at another despatch point (Manuguru) in November 2003. No sampling equipment was installed at the remaining despatch point (Yellandu) (April 2004).

- As against 70 samples envisaged for collection from each rake, only 4-5 samples were collected manually.

Collection of samples manually instead of through automatic sampling equipment resulted in loss of Rs.63.22 crore due to grade variation.

- Comparison of results of internal analysis of coal sampling done at power station with the results of joint sampling of coal supplied revealed variation in grades. As per management's working, it amounted to Rs.63.22 crore for the period from February 2002 to December 2003.

The variation in grades was also corroborated by the fact that GCV of the coal consumed as worked out by the Company was less than the GCV of supplies actually received (with reference to minimum GCV of billed grade). The loss due to grade difference could have been avoided by and large, if the Company had insisted on installation of automatic sampling equipment as envisaged in the FSA. Audit observed that the FSA did not envisage penalty for the delay/ non-installation of automatic sampling equipment by SCCL.

The Company/Government attributed (August 2004) the delay in installation of auto sampling equipment to the 'inability' and 'no positive response' expressed by the firms on whom orders for supply of automatic coal sampling equipment were placed by SCCL. Pending installation of auto sampling system, samples were manually collected at hourly increments as per FSA. The fact however, remains that due to absence of penal provisions, the Company could not take any action for the delay in installation of auto sampling equipment by SCCL. By timely installation of auto sampling equipment the extra payment on account of grade differences could have been avoided.

Unjustified procurement of 100 mm size coal

2.1.11 VTPS had been receiving 100 mm size coal along with 200 to 250 mm size coal from MCL. During March 2002 to March 2004 it received 96.83 lakh tonne of 100 mm size coal; the payment for which included charges of Rs.21.84 (including taxes) per tonne towards processing 200-250 mm size coal into 100 mm size coal.

Purchase of crushed coal while keeping own crushers idle resulted in avoidable expenditure of Rs.21.15 crore.

It was observed that the VTPS had eight coal crushers with a combined installed capacity of 280.32 lakh tonne to crush coal lumps up to the size of 300 mm. As the annual consumption of coal being 70 lakh tonne, the capacity available was quite adequate to meet the needs of VTPS. In view of availability of sufficient crushing capacity it would have been advantageous financially to purchase coal of the size of 200-250 mm without crushing it into 100 mm size from MCL. By purchasing coal of 200-250 mm size and crushing the same in its crushers, VTPS could have avoided the payment of Rs.21.15 crore[@] made to MCL towards crushing charges for the period from March 2002 to March 2004.

Government/ Company stated (August 2004) that MCL had plans to provide surface miners which automatically cut 100 mm size coal and hence insisted for 100 mm size coal and that there was no option except to accept 100 mm size coal.

Reply is not tenable as there was no documentary evidence available in records to prove that MCL had insisted for 100 mm size coal.

Avoidable payment of under-loading and penal over-loading charges

Disadvantageous agreement terms led to extra financial burden of Rs.1.79 crore towards under-loading and penal over-loading charges.

2.1.12 As per clause 14.1 and 14.2 of the FSA dated 30 June 2001/ 22 May 2003 with SCCL, the under-loading and penal over-loading (POL) charges are entirely borne by the seller. The CSA with MCL, however, provided that under-loading and POL charges payable to railways shall be shared in the ratio of 50:50 by seller and buyer. Thus, as a result of divergence in the clause incorporated in CSA with MCL, the Company was placed at a disadvantageous position financially. The Company made

[@] In the absence of data for cost of operation of crushers, the entire crushing charges paid were considered as avoidable.

avoidable payment of Rs.1.79 crore being the 50 *per cent* of under-loading and POL charges for the period from March 2002 to March 2004.

Government/ Company replied (August 2004) that negotiations would be held with MCL for bearing POL and under-load charges completely in the next agreement due from March 2005.

Quality of coal

2.1.13 Each thermal station is designed for usage of particular grade of coal. Usage of envisaged grade of coal ensures optimizing generation of power and economizing cost of generation. Audit observed that the grade of coal received from collieries was not always of the specified grade required by the thermal stations and was either inferior or ungraded coal. During 1999-2004, RTPP, VTPS, and KTPS received 355.75 lakh tonne of inferior/ungraded coal from SCCL and MCL for which payment was made as per declared/billed grade. This resulted in avoidable payment of Rs.747.92 crore to the collieries. Claims made against collieries for refund were not admitted due to absence of CSA (with MCL) or delay in entering into FSA (with SCCL). These are discussed in succeeding paragraphs.

Absence of fuel supply agreement led to rejection of grade difference claims aggregating Rs.731.99 crore.

2.1.14 During the period April 1999 to July 2001 KTPS and RTPP received 146.62 lakh tonne of coal from SCCL which was of inferior/below grade to that of billed grade. Claims aggregating Rs 495.54 crore towards grade differences filed by the Company were not admitted by SCCL on the ground that there was no agreement for entertaining such claims. Further, during April 1999 to July 2001, KTPS received ungraded coal (below 'G' grade) of 11.98 lakh tonne valued at Rs.96.75 crore from different mines of SCCL and the payment for the same was made as claimed. As the ungraded coal was not useful for the designed needs of the thermal plants, the Company from time to time filed claims for refund of Rs.96.75 crore being the cost of ungraded coal. These were, however, not entertained by SCCL on the ground that there was no contractual obligation for admitting the claims. Although the Company indicated (September 1999) that efforts were on to negotiate terms of the agreement with SCCL for joint sampling and analysis to avoid supply of inferior/ungraded coal, FSA was entered into with SCCL only in June 2001 involving a delay of two years. The payment for ungraded coal could have been avoided substantially with the timely execution of FSA.

2.1.15 Similarly, VTPS received 184.41 lakh tonne of inferior quality coal from MCL during the period April 1999 to February 2002. Claims aggregating Rs.139.70 crore preferred with MCL for grade differences were not admitted due to absence of an agreement with the Company.

Government/Company replied (August 2004) that it initiated action for concluding FSA in 1999. As it involved protracted correspondence, detailed discussions and detailed study of FSAs/CSAs with other coal companies, FSA/CSA with SCCL/MCL could be concluded only in August 2001/February 2002. It further added that in the absence of FSA or CSA, the coal cost was payable as per the declared grade.

Reply is not tenable, as delay of two and two and half years for entering into agreements with collieries was not justified.

Actual grade of coal was at variance with billed grade resulting in avoidable expenditure of Rs.15.93 crore.

2.1.16 During 1999-2000 to 2003-04 RTPP received 10.40 lakh tonne (through rail-cum-sea-cum-rail route) and 2.34 lakh tonne (through direct rail route) of coal from MCL, the actual grade of which was different from that billed. Claims aggregating Rs.15.93 crore filed for grade differences against MCL were not admitted on the ground that there was no joint sampling agreement for the coal despatched to RTPP. In this connection, it is pertinent to mention that the Company had entered into CSA with MCL effective from 1 March 2002 in respect of coal supplies to VTPS and coal bill payments were made based on the results of joint sampling. The Company by entering into CSA in respect of RTPP from March 2002 could have saved Rs.3.60 crore (being the value of grade differences noticed) for the period from March 2002 to March 2004.

The Company stated (August 2004) that it was not found feasible to enter into agreement with MCL as two transhipments were involved and supplies were on FOR basis.

Reply is not tenable as the CSA was for ensuring proper grade of coal supply at the agreed rates and transhipments cannot be a valid ground for not entering into CSA.

Consumption of coal

Consumption in excess of standards due to high heat rate

Coal consumed in excess of standards of heat rate was valued at Rs.925.07 crore.

2.1.17 Specific consumption of coal depends on GCV of the coal received from the collieries and the heat rate of the plant. On the recommendations of boiler suppliers, Management fix standard consumption for each thermal plant separately. Details of designed GCV of coal to be fed, standard heat rate, standard coal consumption as per design, actual coal consumption, etc., for the five years ending 2003-04 in respect of VTPS, KTPS and RTPP are given in **Annexure-10**. It would be observed therefrom that the heat rate achieved for all the three stations was above the standard heat rate. This resulted in consumption of coal in excess of standards for the years 1999-2004 by 79.09 lakh tonne valued at Rs.925.07 crore.

Management stated (September 2004) that the high heat rate was due to ageing of the plant, absence of ideal conditions and non-taking up of Repair and Maintenance (R&M) and capital overhaul works (VTPS & RTPP) since inception. Management further stated that action would be initiated to undertake R&M works/capital overhauling and to use washed coal to maintain the designed parameters.

Loss of generation due to usage of low-grade coal

2.1.18 The designed GCV of coal for VTPS (first stage units) was 4500 Kcal[#]/Kg ('D' grade). The average gross calorific value of the coal fed into the units of VTPS – first stage (during 1999-2000 to 2003-04) ranged between 3461 to 3597 Kcal/Kg which conforms to the parameters of 'G' grade (from 3065 to 3814 Kcal/Kg). The coal linkage for the power station was from the mines of MCL, which are supplying 'F' grade coal.

Usage of coal of lower grade than that envisaged resulted in loss of generation valued (net) at Rs.426.11 crore.

Audit observed that had the Company procured and fed 'D' grade coal as designed, it would have earned an additional revenue of Rs.674.02 crore by generating 4428.74 MU additionally for the above period. After setting off the additional cost of Rs.247.91 crore involved in the usage of 'D' grade coal, the net revenue lost by the Company was Rs.426.11 crore.

2.1.19 The designed GCV of coal required was 3,777 Kcal/Kg of 'F' grade, 4,300 Kcal/Kg of 'E' grade and 3,900 Kcal/Kg of 'F' grade coal for the three plants of KTPS–A, KTPS–B and KTPS–C respectively. As against this the average GCV of coal fed into these three plants of KTPS ranged from 2,958 Kcal/Kg to 3,494 Kcal/Kg (during the period from 1999–2000 to 2003–04) which conformed to parameters of 'G' grade (from 3,201 Kcal/Kg to 3,600 Kcal/Kg) and below. The coal linkage for the power stations was from the mines of the SCCL and the stations were getting 'C'/'E' grade coal from Manuguru mines, 'F' grade coal from Rudrampur/Yellandu mines and 'G' grade coal from Yellandu mines.

Failure to procure and feed coal as per designed quality resulted in loss of generation valued (net) at Rs.153.55 crore.

Audit observed that had the Company procured and fed coal as per the designed quality, it would have generated 4,095.97 MU additionally to earn an additional revenue net of Rs.153.55 crore (after setting off the additional cost of Rs.464.36 crore involved in the usage of higher grade coal) during five years ending 2003-04.

Government/Company stated (August 2004) that problems were encountered in getting required grade of coal from SCCL and Ministry of Coal arranged linkage from MCL which also did not have sufficient quantity of 'D' grade coal.

The reply is not tenable as the Company had been continuously getting only 'F' grade coal and even the CSA with MCL did not contain a clause for getting 'D' grade coal to the extent of its availability. Further, the Company had not furnished documentary proof in support of its efforts to get required grade of coal.

Government further stated (August 2004) that:

- Coal requirement would be projected thermal station-wise but not unit-wise and quality of coal would not be taken into consideration while allotting the quantities from the coal companies.

[#] Kilo Calories

- Allotment of higher grade coal for units 1 and 2 (first stage) of VTPS was never sought for, and

- Feeding of superior coal to units 1 and 2 and inferior quality of coal to other units was totally not feasible.

The reply is not tenable as:

- The Company did not pursue with CEA/Collieries for getting the coal of designed grade.

- Notwithstanding the station-wise projections, the Company had entered into FSA with SCCL for supply of ‘E’, ‘F’ and ‘G’ grades of coal, and CSA with MCL for supply of ‘F’ and ‘G’ grades of coal.

- The contention that it is not feasible to feed higher grade coal to some units and inferior quality of coal to other units was not substantiated with documentary evidence.

Transport

Payment of surcharge on railway freight

Avoidable payment of surcharge of Rs.74.74 crore to railways due to non-payment of freight in advance.

2.1.20 Prepayment of freight does not attract payment of surcharge. In case of failure to make prepayment of freight or shortfall in pre-deposit to freight account with railways, wagons are booked (by railways) on ‘freight to pay’ basis. The ‘freight to pay’ railway receipts attract payment of surcharge at 15 *per cent*. During the four years period ending 2002–03 the VTPS had incurred an expenditure of Rs.81.53 crore towards surcharge on coal booked on ‘freight to pay’ basis.

The monthly freight payment for the above period ranged from Rs.23.62 crore to Rs.0.64 crore. Audit observed that the Company could have saved a surcharge of Rs.74.74 crore if it had borrowed funds at an interest of 15 *per cent* per annum to defray the expenditure on freight.

Government replied (August 2004) that due to non-availability of funds to pay freight in advance, surcharge was paid to railways from 1999–2000 to 2002–03. The reply is not tenable as this was reflective of improper working capital management.

Transport of coal by ‘rail’-cum-‘sea’-cum-‘rail’

2.1.21 As per approved linkage, certain quantity of coal was required to be moved by rail-cum-sea-cum-rail from MCL mines to RTPP. In order to move this quantity as per the approved mode of transport, the Company during 1999–2004 entered into an agreement (one for each year) with South India Corporation Limited (contractor). The agreements envisaged transportation of coal from MCL mines to RTPP (excepting the agreement for 2002–03, which envisaged transportation of coal from Paradeep Port to RTPP). The agreed rates included rail freight, ocean freight, handling charges, etc. As per terms of agreement, the contractor was responsible for all the shortages. The contractor was entitled for shortage allowance at prescribed rate even if there were no shortages.

Payment of shortage allowance of Rs.1.30 crore to a coal transport contractor without assessing actual shortage.

As per terms of agreement a shortage allowance of Rs.6/Rs.8.50 per tonne of coal handled at Paradeep and Chennai ports respectively was payable to the contractor for the period from August 1999 to August 2000. The rate was however, reduced to Rs.2.50/Rs.2.05 per tonne for the period from August 2000 to November 2001. The Company for the period from August 1999 to November 2001 had paid a total shortage allowance of Rs.1.30 crore to the contractor.

Audit observed that the payment of shortage allowance without assessing the actual savings and without judging the contribution of the contractor in saving shortages was not justified. Though the contractor handled 15.15 lakh tonne of coal against the two contracts, shortages recorded/noticed at delivery point at the destination were only 997.22 tonne working out to a meager 0.066 *per cent*. Hence, payment of shortage allowance without having any basis for its working/assessing shortages was not justified. For the period subsequent to November 2001 the Company contracted for payment of lump sum rate without giving element-wise break-up.

Conclusion

Minimising the cost of procurement of fuels and their economic use in the generation of power would go a long way in making available power at a very reasonable rate to the end consumer. Expenditure on coal constituted 94.7 *per cent* of the total expenditure on fuels. Economics of moving coal in deviation from approved linkage with regard to source of supply and mode of transportation were not examined. Terms and conditions of fuel/coal supply agreements with two coal companies were not evenly placed. Divergence with regard to determination of grade of coal, etc., remained to be set right, as a result extra financial burden could not be avoided. Measures were not adequate to keep the consumption of coal within the permissible limits and guard against receipt of ungraded coal to contain the extra expenditure involved. Efforts were also lacking to procure coal as per designed quality and avoid usage of low grade coal, with the consequence that occurrence of loss of generation of power could not be avoided.

The Company, in order to avoid wastage of resources should ensure purchase and use of coal of correct grade and quality, ensure proper planning of funds to avoid payment of surcharge on rail freight, re-negotiate terms and conditions of fuel supply agreements on most favourable terms and follow best practices to keep consumption of fuel within the specified standards.

2.2 FUNDS MANAGEMENT IN POWER SECTOR COMPANIES

Highlights

Andhra Pradesh Power Generation Corporation Limited (AP Genco) and Transmission Corporation of Andhra Pradesh Limited (AP Transco) formed on 1 February 1999 deal with generation and transmission of power respectively. Four separate companies formed on 1 April 2000 deal with distribution of power. The fund management of distribution companies till 2001-02 was controlled by AP Transco and thereafter financial autonomy was given to them.

(Paragraph 2.2.1)

Due to delay in realisation of power dues, excess holding of stocks, etc., dependence on borrowing increased. The outstanding loans of six power sector companies increased from Rs.5,870.04 crore in 1999-2000 to Rs.9,971.31 crore to the end of 2002-03.

(Paragraph 2.2.10)

Lack of pursuance, delay in payment of premium, and delayed restructuring of high cost debt resulted in forgoing interest benefit of Rs.23.40 crore by AP Genco and AP Transco.

(Paragraphs 2.2.12 to 2.2.17)

Funds were kept in current account without earning any interest while at the same time availing of cash credit facility from banks. As a result of this, AP Genco and AP Transco suffered loss of interest of Rs.1.15 crore for the five years ending 2003-04.

(Paragraphs 2.2.19)

Borrowings were not need based, with the result funds borrowed at high rate of interest were kept in term deposits by EPDCL and AP Transco which resulted in avoidable net interest burden of Rs.3.08 crore.

(Paragraphs 2.2.20 and 2.2.21)

Thermal power stations held spares valued at Rs.111.91 crore in excess of norm prescribed by Central Electricity Regulatory Commission resulting in locking up of funds with a consequential loss of interest of Rs.13.43 crore.

(Paragraph 2.2.30)

Loan funds from nationalised banks were mobilised through a Syndicator instead of approaching the commercial banks direct, which resulted in avoidable payment of arrangers fee of Rs.4.50 crore by AP Genco.

(Paragraph 2.2.35)

Introduction

2.2.1 There are six power sector companies in the State viz., Andhra Pradesh Power Generation Corporation Limited (AP Genco), Transmission Corporation of Andhra Pradesh Limited (AP Transco), and four power distribution companies (DISCOMS) wholly owned by State Government. AP Genco and AP Transco formed on 1 February 1999 deal with generation and transmission of power respectively. Four DISCOMS viz., Eastern Power Distribution Company of Andhra Pradesh Limited (EPDCL), Southern Power Distribution Company of Andhra Pradesh Limited (SPDCL), Northern Power Distribution Company of Andhra Pradesh Limited (NPDCL) and Central Power Distribution Company of Andhra Pradesh Limited (CPDCL) formed on 1 April 2000 which deal with distribution of power. The fund management of the distribution companies was controlled by AP Transco till 2001-02; and thereafter financial autonomy was given to DISCOMS.

Organisational set-up

2.2.2 The Finance wing of the respective companies is headed by Director (Finance) who is assisted by Financial Advisor and Chief Controller of Accounts (FA&CCA)/Chief General Manager (Expenditure) at Head Office and by Senior Accounts Officer/Accounts Officer/Assistant Accounts Officer at field level. Funds management is centralised at Head Office of the respective power sector companies.

Scope of audit

2.2.3 The review covers deficiencies and lapses in fund management in power sector companies covering a period of four years from 1999-2000 to 2002-03. The findings of the review are set out in succeeding paragraphs.

2.2.4 Audit findings as a result of review on funds management in power sector companies were reported to Government/Management in May 2004. They were also requested (August 2004) to attend the Audit Review Committee for State Public Sector Enterprises (ARCPSE), so that the viewpoint of Government/Management was taken into account before finalising the review. The meeting of ARCPSE was held on 2 September 2004 and attended by the Additional Secretary to Government, Energy Department, Government of Andhra Pradesh and the Managing Director/ Directors' (Finance) of the respective companies. The views expressed by members have been taken into account during finalisation of the review

Sources and utilisation of funds

2.2.5 The main sources of funds were realisations from sale of power, subsidy from State/Central Governments, loans from State Government/Banks/Financial Institutions (FI), etc. These funds were mainly utilised to meet payment of power purchase bills, debt servicing, employee and administrative costs, and system improvement works of capital and revenue nature. Audit observed that the companies were not preparing annual cash flow statements to assess requirement of funds in advance. Cash flow statements were being prepared on month to month basis on the basis of actuals duly forecasting funds required for the following month. Details of sources and utilisation of resources on actual basis for all the power sector companies for the years 2000-01 to 2002-03 are given below:

(Rupees in crore)

		2000-01	2001-02	2002-03
	Sources			
1.	Net Profit/(loss)	(3085.73)	(2398.85)	(585.68)
2.	Add: adjustments	5027.32	4147.00	3159.15
3.	Funds from operation (1+2)	1941.59	1748.15	2573.47
4.	Cash deficit (9-3)	--	252.39	1172.33
5.	Total (3+4)	1941.59	2000.54	3745.80
	Utilisation			
6.	Capital expenditure	1338.36	1069.18	1432.26
7.	Increase in working capital	396.10	931.36	2313.54
8.	Cash surplus (3-(6+7))	207.13	--	--
9.	Total	1941.59	2000.54	3745.80

Cash deficit was due to poor/delay in recovery of power dues and interest commitment on loans.

The cash deficit was overcome mainly by increased borrowings in the form of cash credit/loans from commercial banks. Main reasons for cash deficit identified by audit were due to poor/delay in recovery of power supply bills, heavy interest commitment on loans, locking up of funds in inventory not required immediately, heavy capital expenditure without adequate returns, etc., as discussed in succeeding paragraphs.

Revenue realisation

2.2.6 AP Genco is in the business of generation of power from its power plants. AP Transco purchase power from AP Genco and Central power generating agencies and private generating stations and transmit to distribution companies for sale to individual consumers.

AP Genco

2.2.7 The main source of revenue of AP Genco was from sale of power generated by its power stations to AP Transco. The details of demand, realisation and balance of energy charges on account of sale of power to AP Transco for the four years ending with 31 March 2003 are shown in the table below:

(Rupees in crore)

Year	Opening Balance	Demand	Total	Reali-sation	Closing Balance
1999-2000	369.25	3604.24	3973.49	3042.43 (77)	931.06
2000-01	931.06	3796.27	4727.33	3902.71 (83)	824.62
2001-02	824.62	3961.03	4785.65	3751.02 (78)	1034.63
2002-03	1034.63	4604.24	5638.87	4507.68 (80)	1131.19

(Figures in bracket represent percentage)

The accumulation of arrears was mainly due to non-payment of monthly energy bills in full by AP Transco. The accumulation of arrears forced the Company to depend on borrowings. The borrowings of Rs.3,581.89 crore outstanding as on 31 March 2000 had increased to Rs.5,154.77 crore as on 31 March 2003 as dealt with in para 2.2.10 *infra*.

AP Transco

2.2.8 AP Transco purchases energy in bulk from different sources and supplies the same to the four distribution companies for eventual sale to end consumers.

The particulars of demand, collection and balance of energy charges of AP Transco for three years up to 2002-03 were given below:

Outstanding energy charges increased from Rs.502.99 crore as on 31 March 2001 to Rs.917.07 crore to the end of 31 March 2003.

(Rupees in crore)

Year	Opening Balance	Demand	Total	Realisation	Closing Balance
2000-01	309.22	4781.35	5090.57	4587.58 (90)	502.99
2001-02	502.99	7585.52	8088.51	7632.35 (94)	456.16
2002-03	456.16	8325.15	8781.31	7864.24 (90)	917.07

(Figures in bracket represent percentage)

The accumulation of arrears was mainly due to non-payment of monthly energy bills in full by the distribution companies. The non-clearance of monthly bills to the full extent by power distribution companies was due to delay in collection of power dues from the consumers.

Power distribution companies

2.2.9 The position of demand, collection and balance of energy charges of four distribution companies for the three years up to 2002-03 are given in the **Annexure-11**. Breakup of dues outstanding cause-wise and distribution Company–wise for the years 2001-03 were as given in **Annexure-12**. An analysis of the revenue dues revealed that out of total dues of Rs.2,485.02 crore as on 31 March 2003, Rs.741.71 crore (previous year Rs.542.80 crore) and Rs.86.12 crore (previous year Rs.86.82 crore) were due from disconnected services and consumers against whom suits were decreed. In addition Rs.322.50 crore (previous year Rs.363.75 crore) were outstanding against Government departments and local bodies. No reasons were given by the power distribution companies for increase in dues from disconnected services. This had a bearing on the financial position of the companies.

Borrowings

2.2.10 The details of outstanding loans of AP Genco, AP Transco and power distribution companies for the four years ending 2002-03 are given in the table below:

(Rupees in crore)

Year	AP GENCO	AP TRANSCO	CPDCL	SPDCL	NPDCL	EPDCL	Total
1999-2000	3581.89	1722.70	128.67	180.33	223.08	33.37	5870.04
2000-01	3827.65	1784.98	271.78	306.00	317.66	134.76	6642.83
2001-02	4732.47	2007.13	398.71	398.63	419.61	233.51	8190.06
2002-03	5154.77	2715.28	672.26	568.83	471.60	388.57	9971.31

Outstanding loan increased from Rs.5870.04 crore to Rs.9971.31 crore to the end of 2002-03.

It would be seen from the table that the outstanding loans increased from Rs.5,870.04 crore in 1999-2000 to Rs.9,971.31 crore in 2002-03. The increase was mainly on account of delay in realisation of power dues from consumers, delay in restructuring of high cost debt, excess holding of stocks, etc. The power sector companies paid interest aggregating Rs.4,966.24 crore on the borrowings for the years 1999-2000 to 2002-03. Some of these cases are discussed below:

Delay in release of loans by the State Government

AP Transco

Delayed release of World Bank funds increased the dependence on commercial borrowings.

2.2.11 As per Government of India (GOI) guidelines, the State Government was to release World Bank (WB) funds to AP Transco carrying interest at 12 *per cent* per annum. Audit observed that there were delays in releasing funds by the State Government ranging between 15 days and 110 days during the period from January 2000 to January 2003. As a result the Company had to avail of cash credit facility from State Bank of India (SBI) at higher rate of interest ranging between 12 and 16 *per cent*. Due to delay in release of funds by the State Government, the Company had to bear additional interest liability of Rs.0.59 crore for the period from February 2000 to January 2003.

Delay in swapping of high cost loans

2.2.12 Due to liberalised economic policies, the interest rates on the loans started declining from 1999-2000 onwards. Different bankers reduced the rates of interest on the existing loans. Similarly Financial Institutions also evolved schemes to restructure the high cost loans into low cost loans with certain conditions. It was therefore, advantageous for the companies to go for swapping/restructuring of the existing high cost loans so that there would be substantial saving in interest. Audit observed that the power sector companies were neither prompt in pursuing with Financial Institutions for debt restructuring nor evinced interest for swapping high cost debt with low cost debt. This had, therefore, resulted in forgoing interest benefit of Rs.23.40 crore. These cases are discussed in succeeding paragraphs.

Loan from LIC

Lack of adequate pursuance with LIC for swapping high cost debt resulted in forgoing interest savings by Rs.2.86 crore.

2.2.13 AP Genco had an outstanding loan of Rs.143 crore as on 31 March 2002 borrowed from Life Insurance Corporation of India (LIC) carrying interest at rates ranging from 14 to 18 *per cent*. The loan agreement with LIC provided for pre-payment of loan. Without taking advantage of this, the Company requested (April 2002) LIC for reducing the rate of interest on existing loans which was not accepted (August 2002) by them. The Company requested (March 2003) LIC to permit it to pre-pay the entire loan in lump sum so as to avoid high rates of interest. In response, LIC agreed (May 2003) for reduction of rates of interest to a uniform rate of 11 *per cent* subject to payment of Rs.5.96 crore, being the 50 *per cent* of the net present value of loss of interest. The Company had paid the above premium amount in July 2003 and loan was restructured at an interest rate of 11 *per cent* per annum.

Audit observed that the Company should have invoked the agreement provisions for pre-payment of loans initially instead of entering into correspondence for reduction in rate of interest. The delay of six months in restructuring the loans resulted in forgoing interest of Rs.2.86 crore.

Management replied (June 2004) that the matter was pursued with the LIC several times over phone and that the restructuring of loans was delayed because of delay in taking policy decision by LIC and not because of non-pursuance by AP Genco. The reply is not tenable as there was a delay of six months on Company's part in taking up the matter again (March 2003) with LIC after rejection (August 2002) of its initial request by LIC for reducing the rate of interest on loans.

AP Transco

Failure to show urgency for restructuring high cost debt resulted in extra burden of interest of Rs.35.22 lakh.

2.2.14 The Company borrowed funds from LIC carrying interest at 14 *per cent* per annum. An amount of Rs.11.74 crore was outstanding as on 31 October 2002. LIC was addressed in November 2002 to bring down the rate of interest to the current level of 11 *per cent* or to allow pre-payment of the outstanding loan. In response, LIC promised (December 2002) to consider restructuring/pre-payment of loans subject to payment of premium, at 100 *per cent* of the net present value of loss of interest. The Company did not pursue the matter thereafter. Subsequently AP Genco in May 2003 had restructured the loan with LIC by paying premium at 50 *per cent* loss of interest. AP Transco, however, after one year i.e., in April 2004 requested LIC to consider restructuring the loan with 50 *per cent* premium. In response, LIC agreed (July 2004) to restructure the loan, but the company had not taken any action so far (August 2004). The delay in taking up the matter with LIC by AP Transco was due to lack of co-ordination between the sister concerns. This resulted in restructuring the high cost debt of LIC with a resultant extra burden of interest by Rs.35.22 lakh for the period from July 2003 to June 2004.

Government replied (July 2004) that on hearing that AP Genco had swapped its loans, the matter was taken up with LIC in April 2004. Reply is not tenable as AP Genco had swapped its loans in July 2003 itself and as such there was no justification for the delay in pursuing the matter.

Loans from Power Finance Corporation (PFC)

2.2.15 AP Genco borrows funds from PFC. As on 31 December 2001, the outstanding loan drawn from PFC stood at Rs.442.79 crore carrying interest at 16.75 to 18 *per cent* per annum. PFC envisaged (January 2002) restructuring of 20 *per cent* of outstanding loan per annum at reduced rates of interest subject to payment of premium at the present value of differential interest.

Delayed restructuring of high cost loans led to extra burden of interest Rs.2.96 crore.

The Company requested (February 2002) PFC to inform the premium payable for restructuring the high cost loans. This was reminded in July 2002. In response PFC communicated (August 2002) the premium payable as Rs.8.95 crore for a loan amount of Rs.168.07 crore with cut off date as

30 August 2002. The Company paid the premium on 27 September 2002 out of borrowings and the loans were restructured to the lower rate of interest of 12.5 *per cent* per annum. Delay in restructuring the loan amount of Rs.168.07 crore initially because of non-pursuance of the matter with PFC up to July 2002 and subsequent delay in payment of premium resulted in extra interest burden of Rs.2.96 crore.

Management replied (June 2004) that the Company delayed restructuring of high cost loan due to delay in acceptance by PFC and insufficient cash inflow from AP Transco and not because of non-pursuance. The reply is not tenable as the Company addressed the PFC in February 2002 and reminded them only in July 2002 to which PFC communicated acceptance in August 2002. Since the Company had paid the premium amount in September 2002 out of borrowings, it could have as well borrowed the funds in March 2002 itself to derive the benefit of restructuring of loans.

Absence of adequate pursuance led to delayed restructuring of high cost debt with consequential extra interest burden of Rs.1.12 crore

2.2.16 AP Transco approached (December 2002) PFC for restructuring a loan of Rs.40 crore carrying interest at 14.5 *per cent* per annum with lower rate of interest loan. Follow up action was taken only in July 2003. In response, the Company received a reply from PFC (August 2003) stating that they had not received any request earlier from AP Transco. As approved by PFC in August 2003, high cost debt of Rs.38.35 crore was restructured to low cost debt at 9.5 *per cent* interest per annum. Thus, due to absence of adequate pursuance there was delay in restructuring high cost debt of Rs.38.35 crore by seven months with a resultant extra interest burden of Rs.1.12 crore.

Loans from Government

2.2.17 State Government directed (March 2003) that the PSUs must strive to reduce the interest rates on loans to below 10 *per cent* as the ruling market rates were about 8.5 to 9 *per cent*. It was also directed that where the lenders were not agreeable to restructure or reduce interest rates, new loans should be raised to repay high cost loans.

Concrete steps to restructure Government loans were not taken resulting in extra interest burden of Rs.16.11 crore.

Accordingly AP Genco had restructured/swapped all its institutional loans outstanding to the end of March 2003. The Company had also an outstanding loan of Rs.704.05 crore payable to State Government carrying interest at 12 to 13 *per cent* per annum; out of this, it had repaid Rs.79.84 crore during 2003-04, leaving a balance of Rs.624.21 crore outstanding as on 31 March 2004. The balance amount was repaid to Government in July 2004 by raising funds through bonds. Audit observed that the delay of one year in raising bonds after the Government instructions in March 2003 resulted in extra interest burden of Rs.16.11 crore for one year (2003-04).

Management/Government replied (June 2004/July 2004) that in view of limitations to finance the loans by the Financial Institutions (FIs) and Banks, the Company had given priority for swapping of high cost loans of FIs and Banks in the first instance. The reply is not acceptable as the Company should have raised funds simultaneously by issue of bonds without wasting time for one year.

Cash management

Availed cash credit facility without utilising available funds in current account.

2.2.18 Efficient cash management requires that minimum bank balances are kept in current account and the borrowings should be need based to avoid payment of interest on idle funds. Audit observed that borrowed funds had remained in current account for substantial periods. It was also observed that on one side huge bank balances remained in the current account and on the other side cash credit was availed of, resulting in avoidable payment of interest. Some of these cases are discussed in succeeding paragraphs:

Retention of borrowed funds in current account

AP Genco

2.2.19 AP Genco had a cash credit facility with State Bank of Hyderabad (SBH). A review of the system of transfer of funds revealed that funds transferred from Head Office, out of cash credit up to Rs.6.44 crore in Vijayawada Thermal Power Station (VTPS) alone, have remained in the current account at unit offices without earning any interest. The main reasons for retention of heavy balances identified by audit were due to delay in presentation of cheques by outstation parties for clearance, writing cheques in advance for purchases and retaining them with stores department for handing over to parties on delivery of goods.

Idling of funds drawn out of cash credit in current account resulted in loss of interest of Rs 1.15 crore.

On the basis of monthly minimum balances, ranging between Rs.13.43 lakh and Rs.1.71 crore, held in bank at unit offices, the loss of interest for the five years ending 2003-04 worked out to Rs.1.15 crore.

Government stated (July 2004) that large balances remained in the Banks because of delay in presentation of cheques by various parties; the funds did not belong to the Company and could not be utilised. It was also stated that payment of interest could not be avoided. The reply is not convincing as large borrowed funds drawn out of cash credit remained idle involving payment of interest. The Company should have obtained sub-limits for cash credit in which case the cash credit account would become operational only when the parties present the cheques for payment and the possibility of interest payment on idle funds could be eliminated.

Drawal of loans in excess of actual need resulted in avoidable payment of interest of Rs 30 lakh.

2.2.20 On a specific request of AP Transco (May 2000), the State Government released (July 2000) a loan of Rs. five crore at 12.75 *per cent* interest per annum to clear the pending bills of AP Hazard Mitigation (APHM) Scheme assisted by World Bank (WB). These funds were kept in current account and term deposit account with banks and utilised to the extent needed. On completion of APHM scheme works in October 2001, the Company refunded the unutilised loan funds of Rs.3.85 crore (Rs.3.05 crore in March 2002 and Rs.0.80 crore in July 2003) to the State Government. The delay in return of unutilised funds even after completion of project resulted in avoidable payment of interest of Rs.30 lakh for the period from November 2001 to July 2003.

Government replied (July 2004) that due to exclusion of certain works and reduction in rates of certain material full amount of loan could not be utilised. The reply is not tenable since the Company had kept the unutilized funds even after completion of the scheme.

Investment of borrowed funds in short term deposits

DISCOMS

2.2.21 During July 2002 to March 2003 EPDCL received Rs.19.48 crore by way of loans from Rural Electrification Corporation and State Government under Prime Minister’s Grameen Yojana scheme at interest rates of 12 *per cent* per annum, for the purpose of rural electrification works. The Company invested these funds in short term deposits initially for 30 days and subsequently up to a maximum period of 18 months earning interest at rates ranging from 4 to 6 *per cent* per annum. The Company paid an interest of Rs.3.06 crore on loan funds, whereas interest earned amounted to Rs.1.19 crore on term deposits for the same period resulting in a loss of interest of Rs.1.87 crore.

Similarly Rs.44.74 crore drawn under Accelerated Power Development Reform Programme (APDRP) scheme (50 *per cent* of which i.e., Rs.22.37 crore as loan and balances 50 *per cent* as grant) from the State Government was invested in term deposits during August 2002 to March 2004. The Company earned an interest of Rs.1.37 crore on the above deposits as against Rs.2.28 crore paid towards interest on the loan portion resulting in loss of interest of Rs.0.91 crore.

Borrowed funds were kept in term deposits without utilising the same resulted in additional interest burden of Rs.2.78 crore.

Audit observed that out of the total funds of Rs.64.22 crore (including grant of Rs.22.37 crore), Rs.21 crore only was utilised up to June 2004 for the intended purpose, leaving an unutilised balance of Rs.43.22 crore.

Government/Company replied (June 2004/July 2004) that the funds remained unutilised mainly due to delay in tendering for works, delay in submission of bills by contractors and utilisation of funds available under other head of account. This is indicative of lack of proper estimation of need for funds and drawal of loans in advance of actual need which was avoidable.

Collection and remittance of revenue

Reconciliation of funds deposited in banks was not prompt and regular causing delayed credit to bank account.

2.2.22 The power distribution companies made arrangements with various banks for deposit and transfer of funds from field units to Head Office (HO). As per the arrangement cash collections are deposited in a non-operating account by the field offices with the specified banks. The banks in turn, were required to transfer the funds to HO account on the next day of deposit. The power distribution companies also had separate agreements with banks to the effect that revenues collected from certain offices were to be transferred to AP Transco account towards payment of power purchases. Reconciliation of funds deposited in banks was not prompt and regular. There was delay in detecting cases of delayed crediting of transfers by banks resulting in loss of interest. Few such cases are discussed in succeeding paragraphs.

SPDCL

Loss of interest of Rs.3.27 crore due to delay in crediting funds transferred to Head office account.

2.2.23 The Company was operating six bank accounts at its HO at Tirupathi. Audit observed that there were delays in transferring/crediting of funds deposited by field offices. Such delays ranged from three to 241 days. Bank reconciliation was not done on regular basis which resulted in belated identification of missing credits. The delay in crediting the funds to Head Office account by banks during 2000-03 resulted in loss of interest of Rs.3.27 crore. A few of these instances are given below:

- Rs.1.35 crore transferred by Nellore SBI branch on 14 July 2000 was credited to Head Office account on 23 May 2003.
- Similarly, Rs.0.64 crore and Rs.0.72 crore transferred by Nellore SBI branch on 14 November and 15 December 2000 respectively were credited on 31 May 2003.

Rupees 32.67 crore deposited by field offices still remained to be credited/ matched.

2.2.24 Besides, Rs.32.67 crore deposited by field offices during 2000-04 still (June 2004) remained to be credited to HO account. This was due to non-tracing of transfer particulars from the branch account to HO account which resulted in loss of an interest Rs.8.14 crore up to March 2004. Although the matter was taken up with respective banks, there was no positive response. The fact remains that the delay in detecting missing credits was mainly due to delay in reconciliation.

Belated crediting of funds deposited in bank ranged from two to three years which resulted in loss of interest of Rs.1.48 crore.

2.2.25 Revenue collections of certain specified field offices under the control of SPDCL are deposited in various bank branches for eventual transfer to a non-operating account/no-lien account opened in the name of AP Transco at State Bank of Hyderabad (SBH), Hyderabad. A test check of remittances made by the bank branches revealed that Rs.4.24 crore deposited during April 2000 to May 2001 were credited with a delay ranging from two to three years. This had come to notice as a result of bank reconciliation taken up in October 2003. The delay in reconciliation had, therefore, resulted in delayed availability of funds with a consequential loss of interest of Rs.1.48 crore.

Management accepted (June 2004) the observation and indicated that it had taken corrective steps to avoid such delays. It further replied (September 2004) that there were certain unmatched amounts with the Company and similarly un credited amounts and indicated that this needed reconciliation.

CPDCL

Delayed detection of missing credits resulted in loss of interest of Rs.2.44 crore.

2.2.26 There were delays in transfer/crediting of funds deposited by field offices to HO account. Audit observed that Rs.7.92 crore deposited by field offices during 2000-2003 were still (June 2004) to be credited to the Company's account. Some of the cases of delay are discussed below:

- Rs.2.76 crore (12 cases) and Rs.1.20 crore (13 cases) remitted by Electricity Revenue Office (ERO), Saidabad during May 2002 to June 2002 were not credited to Company's account.

- Similarly remittances in 37 cases (Rs.1.14 crore) made in 2000-01 to EROs of Kurnool and Ananthapur districts still remained to be credited to the Company's account.

The delays resulted in loss of interest of Rs.2.44 crore (at 12 *per cent* up to June 2004). As the bank reconciliation was not done on regular basis, missing credits could not be identified in time.

Locking up of funds due to over stocking of spares

2.2.27 The table below indicates the position of inventory in power sector companies at the close of each of four years ended 2002-03.

(Rs. in crore)

Name of the Company	Value of closing stock			
	1999-2000	2000-01	2001-02	2002-03
SPDCL	16.63	25.90	32.77	37.18
CPDCL	19.40	27.33	21.61	38.42
NPDCL	22.58	25.46	30.12	40.53
EPDCL	14.18	13.56	12.71	32.26
AP Transco	16.62	25.90	106.59	136.98
AP Genco	188.10	259.07	175.92	206.20

Review of materials held by AP Genco and AP Transco revealed locking up of funds in the form of excess stock which are discussed in succeeding paragraphs:

AP Transco

Held stock of conductor in excess of actual need which resulted in loss of financing charges of Rs.4.32 crore.

2.2.28 During February 2002 to January 2004 minimum and maximum stock of conductor (non-stock item) held in Kadiam/Bommuru stores of AP Transco was Rs.18.01 crore and Rs.32.10 crore respectively. Holding stock of Rs.18.01 crore (being minimum balance) idle for 24 months affected financial position of the Company with a resultant interest loss of Rs.4.32 crore.

Government replied (July 2004) that the stock would be utilised on ongoing schemes and the loss of interest on stocking would off set the price escalation in case the Company now procured the materials. The reply is not acceptable as it was not wise to stock materials out of borrowed funds anticipating price escalation.

Tower parts were procured in excess led to loss of interest of Rs.3.06 crore.

2.2.29 The minimum and maximum stock of Tower parts (non-stock item) held during the period from April 2001 to January 2004 was Rs. nine crore and Rs.18.37 crore respectively. Holding of a stock of Rs. nine crore idle for 34 months (being minimum balance) not only affected the ways and means position of the Company but also resulted in loss of interest of Rs.3.06 crore.

AP Genco

Stock of spares held in excess of CERC guidelines amounted to Rs.111.91 crore.

2.2.30 As per the guidelines of Central Electricity Regulatory Commission (CERC) the Thermal Power Stations (TPS) have to maintain spares of Rs. four lakh for each MW of installed capacity. As worked out by the Company, the value of spares to be maintained by the TPS[$] on the basis of CERC guidelines worked out to Rs.98.90 crore. As at the end of August 2003, the TPS[$] held a stock of spares valued at Rs.210.81 crore resulting in holding of spares in excess of norm by Rs.111.91 crore. This resulted in locking up of funds and corresponding loss of interest (at 12 *per cent*) of Rs.13.43 crore for one year alone.

Government/Management accepted the observation and indicated (June 2004/July 2004) that for smooth running of thermal power stations at optimum level it was necessary for the Company to maintain the excess spares. It was also stated that efforts would be made to minimise the stock level of the spares to the extent possible. The contention is not acceptable as the norms are fixed taking into consideration all the factors.

Dues from Government

2.2.31 State Government was extending assistance to the Company by way of loans and also grants and subsidies as per the tariff orders of APERC. While the companies borrowed funds from Government, banks and financial institutions, substantial funds of the companies were also locked up with Government departments by way of recoverable dues, as discussed in the succeeding paragraphs.

[$] Excluding KTPS (5th stage).

DISCOMS/AP Transco

Executed Panchayat Raj works without collecting service line and development charges of Rs.25.90 crore.

2.2.32 As per clauses 7 and 8 of the terms and conditions for supply of power, service line charges and development charges were to be paid by the consumer in advance. At the instance of State Government the power distribution companies (DISCOMS) released power supply from time to time to water supply schemes of Panchayat Raj Department without collecting service line and development charges. At the end of February 2004, an amount of Rs.25.90 crore was outstanding for recovery from the Panchayat Raj Department. Executing the Panchayat Raj works without collecting the service line and development charges had impacted the finance of the companies with a resultant loss of interest of Rs.2.61 crore for the period from April 2003 to February 2004.

Government recovered interest in excess of actual dues by Rs.468.74 crore.

2.2.33 State Government was adjusting the interest on loans out of subsidy released from time to time. Audit observed that the State Government during 1999-2000 to 2002-03 had recovered interest by way of adjustment in excess of that actually due by AP Transco and DISCOMS by Rs.468.74 crore; out of this Rs.463.10 crore was released by Government in January 2004/March 2004. The delay in releasing the excess recovered interest had impacted the finances of the companies besides resulting in extra burden of interest by Rs.170.66 crore.

Miscellaneous

Non-collection of Additional Consumption Deposit

Additional consumption deposit of Rs.61.48 crore remained un-collected from consumers.

2.2.34 As per terms and conditions of supply of electricity, all consumers shall keep an amount equivalent to three months' consumption charges as Consumption Deposit (CD). Consumers should make good the shortfall, if any, in the CD once in a year within 30 days of demand. It was observed that based on the consumption for 2002-03, a cumulative demand of Rs.61.48 crore had remained uncollected as on 31 March 2004 by four distribution companies. The delay in collection of CD resulted in loss of interest of Rs.5.53 crore for the year 2003-04. Timely collection of CD would have reduced the Company's dependence on borrowings for working capital needs. Government stated (July 2004) that efforts were being made by the distribution companies to realise the dues in time.

Avoidable payment of arranger fee

AP Genco

2.2.35 The work of refurbishment of Kothagudem Thermal Power Station[#] (KTPS) was awarded (March 1998) to BHEL-Siemens at a total cost of Rs.435.50 crore with an understanding that the consortium would arrange finance/funds required for the project as loan. The consortium companies

[#] Unit of erstwhile APSEB.

expressed (October 1998) inability to arrange funds due to restrictions by Reserve Bank of India's (RBI) on funding projects sponsored by companies not constituted under the Companies Act, 1956 or corporation under a relevant Act. Consequently, the Company accepted (June 1999) an offer of a Syndicator for arranging finance of Rs.450 crore on payment of arranger fee at one *per cent* of the loan amount. The loan was arranged through Nationalised Banks led by State Bank of India (SBI).

Failure to approach commercial banks direct for loans resulted in avoidable payment of arranger fee of Rs.4.50 crore.

Accordingly the Company concluded (November 2000) an agreement and availed of a loan of Rs.450 crore with SBI (lead bank) and 10 other Nationalised Banks. The Company paid (July 2000-March 2001) Rs.4.50 crore to the Syndicator towards arrangers fee.

The contention of the consortium companies that the erstwhile Andhra Pradesh State Electricity Board (APSEB) was not a body constituted under a statute was not correct as it was formed under the provisions of Electricity Supply Act, 1956. A separate Company by name AP Genco was carved out of erstwhile APSEB with effect from 1 February 1999. In view of this, the erstwhile APSEB/Company was entitled to mobilise funds direct from Financial Institutions/banks and as such there was no need to engage a Syndicator for mobilisation of funds from banks. The Company should have approached the banks directly by itself to save on Syndicator's fee of Rs.4.50 crore.

Government/Management replied (June 2004/July 2004) that in view of rigid financial market position Siemens & BHEL consortium were reluctant to mobilise funds for the project and therefore funds were mobilised through arrangers. The reply is not tenable as the consortium companies in October 1998 expressed their inability to arrange funds due to restrictions imposed by RBI and not on account of rigid financial market.

Advances to contractors/suppliers

AP Transco

2.2.36 Advances of Rs.2.83 crore made during 1994-95 to 1998-99 by erstwhile APSEB/AP Transco to 19 contractors for execution of HUDA works remained (January 2004) to be recovered or adjusted even after a lapse of five to 10 years. Allowing advances to remain with the contractors for long without recovery resulted in loss of interest of Rs.2.83 crore. Management replied (January 2004) that necessary follow up for recovery of advances made to contractors was being made.

Internal control

2.2.37 Due to absence of adequate checks and controls, misappropriation of revenue collections of Rs.1.43 crore had taken place which are discussed below:

Non-verification of daily remittances as per cash challans led to mis-appropriation of electricity revenue of Rs.1.38 crore.

- In Electricity Revenue Office (ERO), Kurnool under the control of CPDCL, Rs.1.38 crore was found misappropriated during January 1998 to November 2000 by manipulating the bank remittance challans. This was facilitated as a result of non-verification of daily remittances as per cash challans and the amounts actually credited in bank. If the daily remittances and the amounts credited in bank were verified on daily basis the misappropriation of funds could have been detected.

- Out of total collections of Rs.52.35 lakh as per Bill Collector (BC) receipts (October 2000 to October 2001), the amount actually remitted into bank was Rs.46.76 lakh resulting in short remittance of Rs.5.59 lakh. The short remittance could have been detected if the collections and remittances made by the BCs were verified regularly. Statutory Auditors also observed that internal control procedures in regard to cash collections and bank reconciliation were not adequate.

Government/Management replied (July 2004) that instructions were issued to the field offices to be vigilant in exercising internal controls.

Conclusion

Efficient fund management is the need of the hour in any organisation. This also serves as a tool for decision making, for optimum utilisation of available resources and borrowings at favourable terms at appropriate time. There were abnormal delays in Bank reconciliation which resulted in loss of interest. Advantage of finance available at low rate of interest was either not availed of or availed of belatedly to swap high cost debt. Funds were locked up in inventory not required immediately and in advances to contractors and suppliers without recovery or adjustment. Receivables in the form of power dues, consumption deposits, recoveries towards disconnected services and from consumers against whom suits were decreed were piled up due to lack of proper pursuance. Prudence was not shown in transferring the funds available in current account to cash credit account to save interest charges. Further, lack of adequate planning in borrowings resulted in retention of funds either in current account or in term deposits entailing avoidable expenditure on interest.

The power sector companies should, therefore, streamline their systems and procedures to avoid: delays in Bank reconciliation, locking up of funds in idle inventory and outstanding advances, borrowings in advance of actual need, delay in swapping high cost debt with low cost debt, etc., and pay attention for preparation of cash flow statements in advance to have effective control over fund management.