

Chapter IV

4. COMPLIANCE AUDIT OBSERVATIONS

GOVERNMENT COMPANIES

Andhra Pradesh Mineral Development Corporation Limited

4.1 Development of Mineral Resources and Mineral Based Industries

4.1.1 Introduction

Andhra Pradesh Mineral Development Corporation Limited (APMDC) was incorporated in February 1961 under the Companies Act 1956, as a wholly owned undertaking of Government of Andhra Pradesh with main objectives to develop mineral resources and mineral-based industries with private participation.

Important minerals exploited by APMDC are Barites, black galaxy granite, high grade limestone, ball clay etc. APMDC carries out exploration and marketing activities of barites on its own while Joint Venture Companies³¹ (JVs) carry out exploration and marketing activities of other minerals by paying consideration as per terms and conditions of each JV agreement.

APMDC selects promoters for its JV companies by inviting Expressions of Interest and global tenders. Final selection is made based on evaluation of responses received and taking into consideration recommendations of State Government, if any.

4.1.2 Audit findings

Audit of transactions was conducted (October 2012 and May 2013) to ensure whether process of selection of JV partner was transparent, equitable and in accordance with established procedures; consideration for exploitation and sale price of minerals was fixed properly and consistently in accordance with prudent financial principles; and terms and conditions of MOUs and agreements were adhered to. Audit revealed the following.

Black Galaxy Granite

APMDC held Black Galaxy Granite mineral bearing area of 330.80 Acres in Prakasam District. APMDC sub-leased (November 2000/ February – March 2001) 169.89 Acres to seven Joint Venture companies for Mining Franchise Fee (MFF) ranging from ₹ 10,100 to ₹ 44,900 per cu.m after inviting financial

³¹ The successful bidders (Promoter companies) form joint venture companies in collaboration with APMDC and conduct the mining activities. In such JV companies, APMDC is a stakeholder and owner of the leasehold area.

bids³² (August 2000/ January 2001) for black galaxy granite. As all JV companies defaulted in payment of MFF (between January and July 2002) and had discontinued mining operation, APMDC cancelled (June 2003) their quarry leases. Though these promoters failed to pay MFF they were allowed to participate in the subsequent bid.

APMDC invited (April 2006) Expression of Interest (EoI) from promoters on global basis for development of black galaxy granite deposits over an extent of 102.104 Ha (252.30 Acres) in four blocks (Block I to IV) for establishment of 100 *per cent* export oriented cutting and polishing units in Joint Venture mode. The objective was to encourage export of value added products and also to make raw material available for local units. Audit reviewed the sequence of events with reference to terms and conditions of agreements and observed the following.

4.1.2.1 *Defaulting firms re-allotted lease*

State Government constituted (October 2005) a High Power Committee³³ (HPC) for evaluation of responses to EoI which in turn constituted a technical committee for this purpose³⁴. Evaluation of the EoI responses was based on various non-financial parameters to rank the bidders on the basis of the Organisations' capability and experience.

Based on the ranking, in April 2007 one of the defaulting Joint venture was allotted Block IV while second-ranked bidder, (a new entrant in the black galaxy granites field) was allotted Block I. However, in April 2008, Block I allottee surrendered a portion of the block (14.17 Ha out of 37.03 Ha) which was re-allotted immediately to another JV company(third rank bidder) which was also a defaulting firm in the earlier allotment. APMDC should have restrained the defaulting parties in the earlier allotment from participating in the subsequent bidding.

4.1.2.2 *Deviation from existing practice*

Instead of adopting a bidding process based on revenue generation/ MFF under commercial bidding which would have protected the financial interests of APMDC and the State Government (particularly in view of the international renown attached to black galaxy granite from Cheemakurthy), the evaluation of the EoI responses and ranking were done based on various non-financial parameters i.e. existing core team, financial resources, expertise in mining (with specific reference to black galaxy granite), track record in the State, etc.

4.1.2.3 *Reduction in free equity*

In lieu of transfer of mining lease rights to JV partners, they have to allot free equity to APMDC. As per the 2001 agreement the sublease partner was to form a joint venture with APMDC holding 26 *per cent* free equity. However in

³² This was justified on the grounds of the policy of the State Government for development of mineral industry with private participation and to encourage joint operations.

³³ Headed by Secretary, Industries & Commerce and including Secretary, Finance, VC & MD, APIIC, DMG, and VC&MD, APMDC.

³⁴ In turn, the High Power Committee constituted a Technical Evaluation Committee consisting of Director, NIT Warangal, Regional Controller of Mines, IBM-Hyderabad and VC&MD, APMDC.

the subsequent bid documents, free equity to be allotted to APMDC in the JV was reduced from 26 *per cent* (earlier JVs) to 11 *per cent* (current JVs) and consequently deprived APMDC from business share by 15 *per cent*.

4.1.2.4 *Short fixation of consideration*

As against the MFF of ₹ 10,100 to ₹ 44,900 quoted in earlier bids (2001), the consideration amount per cu. m under the bid agreement of 2006 worked out to ₹ 3500 to ₹ 4000 as the consideration was fixed at one and half times of the prevailing seigniorage fee payable to the State Government per cu. m of blocks produced. Thus due to change in the criteria for fixing MFF, APMDC suffered a loss of revenue of ₹ 89.93 crore³⁵ till March 2013 with the loss continuing for the period of the agreement which is upto 2027.

APMDC replied (May 2013) that the selection process was done as per the orders of the Government on the basis of the recommendations of the High Power Committee. The payment of MFF proved unsuccessful as the rates quoted were prohibitively high and unviable since galaxy granite business does not involve huge profits.

MFF was quoted by the JV companies themselves on previous occasions in the process of competitive bidding. Hence fixing low consideration without calling competitive bids was not justified.

4.1.2.5 *Non/ Delayed establishment of EOU Cutting and Polishing Units*

As per the agreement, while the three JV companies were allowed to export raw blocks in the first two years and from third year onwards they were required to export processed blocks for which export-oriented cutting and polishing units with annual capacity of 5 lakh MTs were required to be established by each JV within the first two years. APMDC was to earn 10 *per cent* of the turnover as consideration from the concerned JV company.

Audit observed that as the polishing units are yet to commence production, the JV Companies were selling the blocks without polishing thereby foregoing opportunity to earn higher revenue. As APMDC was to earn 10 *per cent* of the turnover of the JV, this translated into loss of additional consideration³⁶ to an extent of ₹ 21.39 crore³⁷. APMDC issued show cause notices (April/December 2011) to all the three JV companies for non setting up of EOU plant to terminate MOUs with them.

³⁵ Actual dispatched quantity in cu. m x Lowest rate per cu. m of previous bid (i.e., ₹10100) – Actual Consideration received {(116142cu. m x ₹10100 – ₹ 48.71crore in r/o first rank bidder JV company) + (24588 cu. m x ₹10100 – ₹22.57 crore in r/o second rank bidder JV company) + (34691cu. m x ₹10100 – ₹15.97 crore in respect of third rank bidder JV company)}.

³⁶ Consideration calculation criteria - turnover calculated by applying rates of polished blocks on the 50 *per cent* of raw blocks and polished material sold for third year and 100 *per cent* polished blocks (considering 30 *per cent* wastage during processing) approved by Mines Engineers Association of India.

³⁷ Second rank bidder JV company - ₹ 19.22 crore and third rank bidder JV company - ₹ 2.17 core, being the difference between 10 *per cent* of the turnover and actual consideration paid to the end of March 2013.No loss to APMDC in the case of first rank JV company since entire land was handed over.

APMDC in its reply (March/May 2013) accepted that none of three JV companies had commenced production though two of the JV companies had established EOU plants belatedly i.e., beyond specified time. Delay was condoned by the State Government in the case of these two JV companies and APMDC was directed to take action against third JV Company.

Audit observed that no action was initiated against third JV company despite such directions. Further, APDMC also allowed (December 2013) the establishment of polishing units with less than the previously agreed minimum capacity. This decision of APMDC resulted in extension of undue favour to JV companies.

4.1.2.6 **Default on Infrastructure Development (ID) Fee**

As per the agreement, the JV companies were required to pay five *per cent* of the amount of consideration paid to APDMC for development of infrastructure and other facilities in villages around the allotted mining blocks. Audit observed that the JV companies had defaulted on ID Fee payments of ₹ 63.19 lakh (₹ 38.19 lakh from second rank bidder JV company, ₹ 22.39 lakh from third rank bidder JV company and ₹ 2.61 lakh from first rank bidder JV company) as on 31 March 2012. Further, out of ₹ 2.30 crore ID fee received by APMDC from three JV companies till 31 March 2012, APMDC, which maintains this fund, utilised only ₹ 39 lakh for development of infrastructure and other facilities in mining villages. Thus, the objective for which the ID fee was collected could not be attained.

4.1.2.7 **Loss of Revenue due to surrender of Lease Area**

As per clause-20 of JV agreement “investor shall not assign, transfer or otherwise create any interest of any kind on any part of the lease area in favour of third parties. However, in the eventuality that the investor intends to surrender part of the area, APMDC shall have the right to reallocate the same to another entrepreneur duly obtaining the consent of Government of Andhra Pradesh”. However, no specific mention in JV agreement was made about the loss of production/ revenue during the period subsequent to surrender of part of land by the JV companies till the allotment to a new JV Company.

One of the successful bidders who was allotted 37.03 Ha in May 2007 for extracting black galaxy granite surrendered the allotted land in four stages during period from April 2008 to March 2013 as shown in table No. 4.3.

Table 4.3: Details of area surrendered by allottee

SL. No.	Month of surrender	Extent of Area (Ha)	Nature of area	Status of surrendered area
1	April 2008	14.17	Unexploited	Allotted to another bidder (discussed in Para 4.1.2.1)
2	November 2011	9.00	Unexploited	Not allotted (December 2013)
3	January 2013	5.49	Exploited	Not allotted (December 2013)
4	March 2013	8.37	Unexploited	Not allotted (December 2013)

Source: Agenda and Board minutes of the company

Audit noticed that:

- While no action was taken on the surrender of area by the allottee during November 2011 to January 2013, APMDC, in March 2013, took a decision to charge consideration on the entire land till the date of surrender of the entire allotted area. APMDC, however, did not recover consideration charges of ₹ 2.98 crore³⁸ (₹ 2.70 crore on 9 Ha, ₹ 0.28 crore on 5.49 Ha) for part surrender as per the above decision.
- No action has been taken to take possession of the mines and initiate process for re-allotment resulting in loss of opportunity to earn recurring revenue of ₹ 4.57 crore³⁹ per annum.

Barites

From 1993, APMDC is exclusively mining and marketing the barites in the State. For this purpose, APMDC enters into raising and sales agreements with private parties. Major operations in barites mining activity are (i) removal of overburden, (ii) extraction of barite ore, (iii) dewatering of the mine, (iv) stacking of ore at stockyard, (v) determination of quality/ specific gravity and (vi) dispatch of the material to different buyers.

Under marketing activity, APMDC invites tenders through competitive bidding for sale of A and B grade barite ore⁴⁰ once in two years and price is decided based on the highest bid received. The sale price for C+D+Waste grade is generally fixed based on marketability and is about 25 *per cent* of the price of A grade barites.

Audit scrutiny of the records and documents revealed the following:

4.1.2.8 Loss of Revenue due to fixation of low rate For C+D+W Grade of Barites

In November 2010 APMDC decided that price fixed for C+D+Waste should not be less than 25 *per cent* of the offer price received for “A grade” barites and that in future Expressions of Interest (EOIs) would be called for with this condition.

APMDC had received (July 2011) an offer of ₹ 4,059 per MT for A grade barites quoted by a private company with effect from 8 August 2011. For C+D+W grade of barites, APMDC without inviting EoI, however, approved a price of ₹ 800 per MT as against ₹ 1015 (25*per cent* of ₹ 4059). Thus, APMDC suffered loss of revenue of ₹ 23.03 crore on sale of 10.23 lakh MTs (8.29 lakh MTs at ₹ 215 per MT + 1.93 lakh MTs at ₹ 268.75 per MT) from October 2011 to October 2012.

APMDC replied (January 2012) that though one export buyer had quoted the price at 26.37 *per cent* of A grade sale price before finalization of the price for

³⁸ 9 Ha x 500 Cu. m x ₹4000 x 1.5years + 5.49 Ha x 500 Cu. m x ₹4000 x 3/12 months

³⁹ 22.86 Ha x 500 Cu. m x ₹4000 per Cu. m (average price)

⁴⁰ Grading is done based on the specific gravity measured. A grade is considered as superior grade with specific gravity at 4.25 and over, B grade is considered as next superior grade with specific gravity between 4.25 and 4 and C+D+Waste is considered as lower grade.

A grade, the same buyer did not come forward to buy C+D+W material at the revised price i.e. 25 per cent of the new A grade price, which was higher than the finally fixed price by ₹ 215 per MT (₹ 1015-₹ 800).

Audit noticed (May 2013) that APMDC, for the year 2013-14, had invited bids for sale of C+D+W by fixing the minimum price as ₹ 1,066 per MT (being 25 per cent of prevailing A grade rate ₹ 4,264 per MT) and got an offer of ₹ 1,926 per MT which was higher by 80.68 per cent. Thus it is evident that the market was strong enough to absorb the higher rate.

4.1.2.9 Irregular raising of Invoices due to incorrect computation of Specific Gravity

As per the procedure in existence, on receipt of Delivery Orders (DOs) from Head office, dispatches are made and invoices raised by applying the rate for the grade supplied/ dispatched. The Lab Assistants/ Sampling Assistants are responsible for computing the specific gravity⁴¹ by testing the samples taken from the lots supplied. For sampling and testing, a manual procedure based on Le Chatelier's principle is used.

As per agreements concluded with the main buyers namely first buyer and second buyer for sale of A grade barites, APMDC had to ensure that the barites with a specific gravity of 4.25 (or density of 4.25 g/cu. cm) was supplied. If the density was more than 4.25 g/cu. cm, for increase of every 0.01 g/cu. cm in density, ₹ 21 per MT would be collected whereas when there is decrease of 0.01 g/cu. cm in density, ₹ 10 per MT would be passed on to the buyer, if the buyer agreed to take the delivery.

Audit checked the records related to 2010-11 and 2011-12 and noticed (December 2011) that APMDC resorted to raising the invoices at the end of the year by taking the 12 months' average which resulted in short realisation of revenue of ₹ 48 lakh during the period from April 2010 to 7 August 2011 (first buyer: ₹ 38 lakh and second buyer: ₹ 10 lakh).

Audit further noticed that the records available at laboratory did not provide buyer-wise information of specific gravity of the lots dispatched to check against the invoices.

Measurement of specific gravity is carried out manually and there is considerable lacuna in selecting the sample, in measuring the quantity, in checking the level of specific gravity and there is a possibility of occurrence of error while recording the measurements.

Audit noticed a trend of differential recording of specific gravity in respect of export buyers and other buyers, though the material taken for testing was excavated from the same area of the mine. Occurrences of these variations could possibly be reduced by exploring possibility of introducing digital based automatic recording technology for measuring specific gravity so that accuracy in measurement of specific gravity can be ensured and variations in recording avoided by way of storing the data for a specific period in data base.

⁴¹ Specific gravity is the ratio of density of the material to density of water which is 1 g/cu.cm.

APMDC replied specific gravity checks are being conducted for the past several years using a procedure accepted in all barite mines in the world and new equipment available would be looked into for better computation of specific gravity. No explanation for taking the yearly average was however given.

Bauxite

4.1.2.10 MOUs for supply of Bauxite

State Government entered into Memoranda of Understanding (MOUs) with two private parties (2005 and 2007) to set up alumina and aluminium refineries and smelters with APMDC being given equity stake in these companies. As per the terms of MOUs, APMDC had to mine and supply 240 million tonnes and 224 million tonnes of bauxite to first party and second party⁴² respectively for their aluminium plants. Accordingly, APMDC entered (October 2008) into a bauxite supply agreement with second party. In respect of first party, the bauxite supply agreement is yet to be entered into (December 2013).

Audit observed that these MOUs were entered into by the State Government on the basis of negotiations. Audit is unable to verify that the financial interests of the Government and the public interest have been properly safeguarded through such MOUs.

As per instructions⁴³ of Ministry of Mines, Government of India, APMDC should hold the mining lease and carry out the mining operations at its own cost and should enter into bauxite supply agreement with downstream mineral processing plants ensuring that the entire profit from mining would accrue to APMDC.

APMDC was given a nominal equity of 1.5 *per cent* which was worked out on the basis of valuation of the mines and the investment required for establishment of the Aluminium companies. Audit observed that the value of all the mines was taken at ₹ 258 crore only as against the value of the mines of ₹ 11,400 crore indicated by the Government in September 2004 during a general review meeting of Principal Secretary. Besides, in case of other minerals like Granite, Beach sands etc., APMDC has obtained 11 *per cent* free ride equity.

APMDC accepted (May 2013) the audit observation and stated that the issue will be renegotiated.

As per Clause 9 of the agreement concluded with second party, if APMDC decides to hire machinery and other equipment required for mining and decides to award a raising contract, the first right of refusal is to be given to party. Thus, APMDC lost the opportunity of selecting the raising contractors/ mine development operators through competitive bidding process.

APMDC acknowledged (May 2013) that Clause 9 of agreement does give preferential rights to the party but also added that Ministry of Tribal Welfare,

⁴² Second party was Government of foreign country for implementation of the Aluminium project.

⁴³ Letter No.4/116/2006-MIV dated 30 August 2007.

Government of India has sent orders for cancellation of leases. Matter has been taken up with GoI for reconsideration after which decision on renegotiation of agreement terms would be taken up.

Audit observed that State Government informed Government of India that entire profit from sales of bauxite will accrue only to APMDC. Contrary to this, sale price of bauxite was fixed based on royalty method (based on the report of the consultant) and profit was limited to 1.25 times royalty charged for bauxite.

Audit further noticed that APMDC sought permission (April 2012) of GoAP for renegotiating the terms and conditions of MOU/ agreement with second party for revision of Bauxite pricing. APMDC informed GoAP that additional profit of ₹ 12,451 crore⁴⁴ could be earned by increasing Bauxite price in line with prevailing market rate.

Limestone

4.1.2.11 Irregular allotment of Mining Rights

Lessee held a mining lease for mining of limestone for use in the manufacture of cement at their plant located at Devapur, Adilabad District from 21 March 1980 to 20 March 2000 over an area of 798.26 Ha. When the lease became due for renewal in the year 2000, Lessee's application was rejected citing the A.P. Scheduled Areas Land Transfer Regulations, 1959, which specified that a lease lying in a scheduled reserve forest could be held only by persons belonging to Scheduled Tribes or a Government Instrumentality. Lessee approached (2000) the Government and the Government issued (March 2000) directions to APMDC to hold lease rights and permit Lessee to extract limestone for its captive consumption to manufacture cement. Accordingly, APMDC entered into an Agreement (August 2001) to allot the whole of the mining lease area in Rally Reserve Forest of Devapur Village on exclusive basis for mining, raising and captive consumption to Lessee.

Audit reviewed the Government orders and terms of agreement and observed that:

- Action of State Government/ APMDC in allotting mining rights to Lessee for mining and raising for captive consumption was irregular and in violation of A.P. Scheduled Areas Land Transfer Regulations 1959.
- No validity period of lease was indicated in the agreement, which is almost equivalent to handing over the mine outright to Lessee for unlimited period.

APMDC should have taken up the excavation works of limestone on its own through separate raising agreements and sold the quantity at prevailing market rates to Lessee.

⁴⁴ Based on cost of production, present sale value as per criteria adopted by GMDC and total reserves in Jerrela, Araku & Sapparla group of mines.

4.1.2.12 **Fixing of nominal Escot Charges**

Initially, nominal 'Escot charges'⁴⁵ at 75 paisa per tonne for production up to 16 lakh tonnes per annum (₹ 12 lakh per annum) and 50 paisa per tonne over and above 16 lakh tonnes of limestone was fixed. APMDC did not provide for any increase of Escot Charges during tenure of Agreement, which is detrimental to the financial interest of APMDC.

Realising the fact that Lessee was making profits by commercial exploitation of limestone mine, APMDC revised (May 2008) Escot Charges to an annual minimum fixed charge of ₹ two crore and a varying charge of ₹ 10 per MT produced over and above 20 lakh MT. Lessee paid revised Escot Charges at ₹ 10 per MT under protest and represented to APMDC as well as State Government to restore original rates of 75/50 paisa per MT and to return extra amount paid.

Later, in view of increase in commercial production and use of huge quantity of limestone in manufacturing cement by Lessee, APMDC approved (October 2010) increase of Escot Charges from ₹ 10 per MT to ₹ 90 per MT with effect from 1 November 2010. Lessee went in for arbitration. Subsequent to commencement of arbitration proceedings, APMDC decided (October 2011) to further examine rates of limestone for increase of Escot Charges which would have a reasonable stand. No further progress was made in this regard (December 2013).

Audit observed that APMDC had fixed Escot charges without any basis on the first and second occasions while on the third occasion raised them to ₹ 90 per MT considering price of limestone declared by the Indian Bureau of Mines. Escot Charges which were now being paid at ₹ 10 per MT represents merely 0.40 *per cent* of net sales income of limestone unit⁴⁶ of Lessee and was not even equal to royalty paid to Government on quantity used for captive consumption at ₹ 63 per MT. Had the Escot Charges been fixed equal to royalty rate, APMDC would have earned an additional revenue of ₹ 2.08 crore (3,92,000 MT x ₹ 53) in 2011-12 and ₹ 2.39 crore (4,50,000 MTs x ₹ 53) in 2012-13 and would have continued to earn more income during subsequent years also.

Beach Sand Heavy Minerals

Andhra Pradesh has a long coastline of about 960 km and is endowed with large reserves of beach sand heavy minerals like ilmenite, rutile, zircon, monazite, garnet, sillimanite, etc.

4.1.2.13 **Irregular allotment of mining lease violating Atomic Energy Rules**

APMDC called for (March 2005) Expression of Interest (EoI) for mining lease of 26.10 sq. km in Srikakulam district and received 16 applications. One of the applicants (foreign origin), for both stretches, approached Government of

⁴⁵ The actual word 'Scot' means a share in a payment, a tax, levy.

⁴⁶ Net sales ₹ 1,393.28 crore in 2011-12 and Escot charges paid ₹ 4.50 crore worked out to 0.33 *per cent*.

Andhra Pradesh to allot the areas to them, citing their tie up with the world's major producers of Titanium in another foreign country.

The applicant submitted a revised proposal (April 2006) stating that they have selected another partner in tie-up instead of first foreign company to form a Joint Venture with APMDC for the purpose of establishing Titanium Project in Andhra Pradesh. Government of Andhra Pradesh entered into MOU (18 April 2006) with the new foreign company partner, who had provided tie up.

Audit scrutiny revealed the following:

- JV Company was formed and mining rights were shared with JV Company without obtaining licence from AERB under Rule 3 of Atomic Energy (Radiation and Protection) Rules 2004.
- Even after lapse of six years, there was no progress towards the objective of mining heavy beach mineral from beach sand. In the absence of termination clause in agreement, APMDC could not terminate the contract owing to which the agreement is still in force, blocking the stretches from mining activities (December 2013). Though review has to be done within a period of five years from the date of agreement, no such review was done (December 2013).

APMDC replied (May 2013) that license from Atomic Energy Regulatory Board (AERB) is to be obtained after the mining lease is granted by the State Government but prior to setting up Mineral Separation plants.

However, letter of approval for grant of mining lease received (1 February 2010) from Government of India stipulates that mining lease for beach sand shall not be granted unless a license is obtained from AERB.

4.1.2.14 Irregularities in entering in to Joint Venture with Private Partner for Beach Sand Mining

APMDC called for (August 2005) EoIs to establish mineral separation plant and value addition industry for processing ilmenite and other important minerals in Gara Mandal, Srikakulam District and 14 EoIs were received.

State Government (vide GO No. 204 dated 25 July 2006) constituted a High Power Committee (HPC)⁴⁷ to scrutinize and evaluate the EoIs and to recommend the JV Partner. The offers submitted by two firms viz. First Private Party⁴⁸ and Second Private Party were evaluated by the committee and First Private Party was selected as JV Partner. Audit scrutiny of the selection of First Private Party as JV partner revealed the following:

- In response to the invitation of EoI, in their application First Private Party indicated the year of establishment as 1989 whereas First Private Party was a partnership firm of three individuals registered under Indian Partnership Act in April 2000. The HPC without verifying the status of

⁴⁷ High Power Committee consisting of Secretary to Government, Industries and Commerce Dept. as Chairman, Secretary to Government, Finance Dept., VC&MDs of APIIC and APMDC, Director of Mines and Geology as members.

⁴⁸ A partnership firm.

the applicants, selected First Private Party as JV Partner by accepting the incorrect information provided by them.

- The State Government has not framed any guidelines for state PSUs for entering into JVs with private partners.
- After it was selected as JV partner (Sep 2006), First Private Party requested (Nov 2006) APMDC for assigning additional area of 709.60 Ha to the already notified area of 768.26 Ha to the JV. APMDC agreed to the request and Government also agreed for assigning these additional areas without negotiating any additional compensation/ free equity for assigning additional areas resulting in undue benefit to partner.
- Partner was to offer free equity of 26 *per cent* in the Joint Venture Company as done by other JV companies established for beach sands. However, free equity was reduced to 11 *per cent* without justification. No papers were made available to audit relating to fixing of free equity as 11 *per cent*. Further, profitability of JV company depends to a large extent on the debt-equity ratio of project. APMDC would stand to benefit most with low debt level and high equity stake and equity amount. The Corporation failed in negotiating fair terms in respect of equity stake and the total equity to be contributed by the JV partner. The total equity contribution made by the JV Partners is only ₹ 8.90 lakh.
- The Law Department of State Government approved the agreement which did not have time limit; APMDC does not have any other option but to extend the lease period in case the JV Company opts for it. Providing option of renewal to one party and the obligation to extend on the other party indicates arbitrariness.
- In the absence of any clause in the agreement to restrict the JV partner from engaging in similar kind of business, APMDC could not take any action on the JV partner which had business interest in a company which was competing with JV company.
- There was no mention of inducting local partner in EoI, however, APMDC allowed JV partner to transfer 26 *per cent* of equity in the JV to a local Partner (whose earlier unsolicited direct proposal to APMDC was rejected during tendering process). Thus, allowing induction of local partner was irregular as it deprived other parties of similar opportunity.

State Government and APMDC need to review all aspects of the case since interests of State Government/ APMDC do not appear to have been safeguarded.

Iron Ore

4.1.2.15 Low Grade Iron Ore in Joint Venture with Private party

APMDC invited Expression of Interest (EoI) in April 2004 for grant of Mining Lease in Tanguturu and Ongole mandals of Prakasham district, from interested parties for mining of iron ore deposits and establishment of beneficiation plant for the production of iron ore concentrate under joint venture. APMDC

received EoI from five parties and sought commercial bids in prescribed format and four parties submitted their commercial offers in February 2005. The offer of a Private party was selected (March 2005) and an MOU was entered into on 4 March 2005.

The salient features of the MOU were that

- Private party being a promoter shall take necessary steps to form joint Venture Company by allotting 11 *per cent* equity to APMDC, within three months and should commence commercial production in 36 months. In the event of not doing so within the time limit the allotment would be terminated.
- JV Company shall pay Escot charges of ₹ 45 per MT of Iron Ore concentrate with a minimum guaranteed income of ₹ 1.13 crore per annum from the date of commercial operations.

JV was created (September 2005) for establishing a plant for beneficiation of iron ore with 11 *per cent* free ride equity shares to APMDC. Mining lease with surface rights was transferred in May 2009 to the partner and APMDC paid ₹ 42 lakh towards the Stamp Duty and Registration Fee on behalf of it. An agreement (July 2009) with JV partner was executed to form two separate JV Companies as Special Purpose Vehicles (SPVs), one for mining and the other for beneficiation plant. As such, in addition to first JV, another JV Company was formed (May 2009) for undertaking the mining of low grade iron ore with allotment of 51 *per cent* free ride equity shares to APMDC.

In this connection Audit observed that

- APMDC has transferred mining lease only in May 2009 that is after four years by which time the JV companies should have commenced commercial production.
- Even after three years of grant of mining licence the JV companies did not initiate action either to extract the mineral or to set up beneficiation plant till date (December 2013). As the land leased to JV company was lying without intended use for more than 4 years after transfer of mining lease rights, APMDC could not earn the expected revenue i.e. ₹ 4.48 crore (at ₹ 1.12 crore per year i.e., the minimum guaranteed amount). Even the performance guarantee of ₹ one crore was not forfeited.
- In addition the amount of ₹ 42 lakh incurred by APMDC on stamp duty for execution of mining lease deed was yet to be reimbursed by partner (December 2013).

In their reply, APMDC has not given any reason for the delay of more than four years in transferring the mining lease or termination of the agreement with JV Company. However, about reimbursement of the Stamp Duty and Registration Fee, APMDC stated that the partner requested for making the payment and after receipt of this amount, permission would be given to commence the mining operations.

Conclusion

- The promoter firms whose JV companies defaulted in payment of MFF were allotted subsequent leases. The process of selection of JV partners was not transparent. The consideration payable by the JV companies for mining of black galaxy granite was fixed at low rates. There was also delay in establishment of polishing units.
- There was loss of revenue due to fixation of low rate for C+D+Waste grade barites.
- MOUs for bauxite were entered into based on negotiations without following the process of EoI. The value of bauxite mines was understated. The price of bauxite to be supplied was fixed based on royalty without adopting the market price.
- Escot charges for limestone mining were fixed at nominal levels.
- The process of selection of JV partner for beach sand minerals was not transparent. Deficiencies like low free equity in JV, allotment of additional land without additional compensation etc., were noticed in the JV agreements. JV company was formed for mining ilmenite without obtaining license from the Atomic Energy Regulatory Board.

Recommendations

- *State Government should formulate guidelines for PSUs entering into joint venture agreements with private entities.*
- *Government/APMDC should consider terminating agreements to protect the financial interests of the State as per applicable rules and statutory provisions.*

4.2 Loss of revenue due to idling of prime office space

The Company, keeping its own prime office space vacant, shifted its office to rented building resulting in loss of revenue.

Andhra Pradesh Mineral Development Corporation Limited (Company) has its own office space admeasuring 15,920 Square Feet (Sft) at prime location in Hyderabad. Due to expansion of activities like Bauxite, Heavy Mineral Beach Sand, Coal Blocks, etc., the Company moved (January 2010) a proposal to renovate their office space to bring it up to corporate standards, at an estimated cost of ₹ two crore. Vice-Chairman & Managing Director (VC&MD) of the Company approved (March 2010) initially taking up important renovations at an estimated cost of ₹ 50 lakh, which it was noticed were not carried out but recorded reasons were not available. Company shifted its office to a rented building of Hyderabad Metro Water Works and Sewerage Board (HMWSSB) duly entering (September 2010) into an agreement with HMWSSB for 5 years at monthly rent of ₹ 5.25 lakh (15000 Sft at ₹ 35 per Sft) and incurred capital expenditure of ₹ 2.78 crore on internal works in the rented building. Further the Company entered into another agreement with HMWSSB, without Board's approval, in January 2013, for additional space of 4314 Sft at 4th floor in the same building.

It incurred ₹ 2.38 crore towards rent and maintenance charges till September 2013.

Audit observed that though the Board approved partial shifting of office, the Company shifted (February 2011) entire office to rented building leaving their own building located in prime commercial locality, unused for the last 3 years resulting in loss of rental income of ₹ 95.52 lakh (15,920 Sft at the rate of ₹ 20 per Sft⁴⁹ for 30 months) from March 2011 to September 2013.

Government replied (December 2013) that the Company decided to let out its own office building to Government organisations only. However, no concrete action was taken so far (December 2013) to rent out vacant building in prime locality.

Thus, keeping its own prime office space vacant for three years resulted in loss of revenue and shifting office to rented building, involving additional financial burden, lacked financial prudence.

Andhra Pradesh Trade Promotion Corporation Limited

4.3 Trade promotion and Logistics activities

4.3.1 Introduction

Andhra Pradesh State Export Import Corporation Limited, originally incorporated on 05 June 1970 under the Companies Act, 1956 was renamed as Andhra Pradesh State Trading Corporation Limited (APSTC) on 31 January 1972 and was converted into AP Trade Promotion Corporation Limited (APTPCL) with effect from 14 September 2007, to act as a catalyst in promoting trade, commerce and industry in the state. Its objectives were promoting, designing, developing and maintaining infrastructure facilities meant for trade promotion. For this, along with Trade Centers and Convention Centers, the Company had to develop and provide facilities like cargo handling, cold storage, warehousing and other trade related services.

4.3.2 Audit Findings

The Company undertook setting up of the following four logistic facilities during 2008 to 2013:

- Container Freight Station (CFS), Begumpet, Hyderabad;
- Logistic Facility, Visakhapatnam;
- CFS, Mamidipally, Hyderabad; and
- Common Aseptic Packaging Unit⁵⁰ (APU) for Mango pulp and developing an Agri Export Zone (AEZ) at Chittoor.

Audit of trade promotion activities, efficacy and effectiveness of the infrastructure facilities developed by the Company was conducted and the following observations are made.

⁴⁹ Offer received from one organisation

⁵⁰ **Aseptic processing** is the process by which a sterile (aseptic) product (typically food or pharmaceutical) is packaged in a sterile container in a way that maintains sterility.

Logistics Activity

The logistic facilities are common user facilities offering services for handling and temporary storage of import/ export containers (laden or empty) with or without custom bonding.

4.3.2.1 Conversion of Air Cargo Complex (ACC) into Container Freight Station (CFS) at Begumpet without assessment of feasibility

The Company had constructed (November 2005) Air Cargo Complex (ACC) at Begumpet Airport, Hyderabad on land leased from the Airports Authority of India (AAI) and commenced operations, but due to coming up of new international airport at Shamshabad (August 2007), it lost a major volume of its business at ACC. In order to utilize available facilities it decided to convert the ACC into CFS exclusively for Air Cargo without conducting any demand survey and without taking into account already existing facilities for cargo handling available at new international airport, Inland Container Depot at Sanathnagar and two CFSs at Patancheru and Kukatpally. Traffic restriction in the city, on movement of heavy vehicles during daytime, which affects delivery of cargo was ignored. Consequently volume of air cargo handled was minimal during the years 2008-13 resulting in loss of ₹ 3.28 crore during the same period.

The Company in order to reduce losses, awarded (October 2010) Operation & Maintenance (O&M) contract to a contractor, for a period of 15 years for an annual license fee of ₹ 11.20 lakh in the first year and royalty⁵¹ determined on profit after Tax. In addition, the contractor was to reimburse amount payable to AAI (lease rentals) and customs department (establishment expenditure) also. However, the Company failed to hand over CFS to contractor (October 2013).

Management replied (October 2013) that it was expected that on account of strategic location, CFS would become cost effective. It was further stated that CFS would be handed over to O&M Contractor.

However, considering locational advantage alone for establishment of CFS is not justified. O&M contract entered in December 2010 was also not made operational due to non-handing over of the facility, by December 2012, as scheduled.

Thus, conversion of ACC into CFS was a failure due to erroneous planning on the part of the Company that led to wasteful expenditure.

4.3.2.2 Non-utilization of Cold Storage Plant (CSP) at CFS Begumpet

The Company was operating (Agreement period 2001 to 2006) a Cold Storage Plant (CSP) at ACC, Begumpet, for which license fee at the rate of ₹ 91,000 per month was being paid to AAI. Even though volume of cargo handled

⁵¹ Royalty subject to minimum of ₹ 5 lakh during the first 5 years, ₹ 10 lakh for 6 to 10 years and ₹ 15 lakh for 11-15 years

therein was minimal⁵² giving negligible returns, the Company continued to operate the CSP even after expiry of its agreement in September 2006. Further, though there were no operations at CSP after closure of Begumpet Airport (2008), only in December 2011 did it finally request AAI to take over the CSP immediately, and requested to waive lease rentals from 1 April 2010, stopping payment of license fee from then on. However, CSP was not handed over so far (March 2013) to AAI due to dispute with AAI regarding area utilized by the Company.

Management replied (October 2013) that agreement was not extended as CSP was not viable and that CSP was retained for the benefit of trade and industry. It was further stated that AAI was being pursued not to charge lease rentals for CSP from 1 April 2010.

In view of low business, the Company ought to have surrendered the CSP on expiry of Agreement in September 2006 itself and thereby could have avoided payment of lease premium of ₹ 56.90 lakh (from 06 July 2006 to 06 April 2010), besides possible liability of payment of lease premium beyond April 2010 (₹ 33.02 lakh), which was as yet unsettled (November 2013).

4.3.2.3 Unfruitful expenditure due to idling of the Logistic facility constructed at a cost of ₹ 5.73 crore

The Company acquired (July 2009) 3.5 acres of land (cost ₹ 1.42 crore) from Andhra Pradesh Industrial Infrastructure Corporation (APIIC) at the Apparel Export Park (AEP), Visakhapatnam, for setting up of logistics facility at a cost of ₹ 8.55 crore. The construction works awarded (November/ December 2009/ August 2010) to four contractors at a cost of ₹ 4.44 crore commenced in December 2009 and were completed in April 2011 at a cost of ₹ 5.73 crore, of which ₹ 4.10 crore was released (June 2011/ June 2012) by the GoAP towards ASIDE⁵³ grant.

Though Company had invited bids for Operation and Maintenance (O&M) of the facilities in September 2010, actual award of O&M contract was held up till March 2012 due to non-settlement of land cost payable to APIIC. The O&M contract was finally awarded (April 2012) to a contractor for 15 years on payment of lease rent at ₹ 43.50 lakh per annum with an enhancement of five *per cent* each year besides royalty of ₹ 2 lakh every year. The allotted land could be registered in the name of the Company only in December 2012 when its cost was settled.

The Company requested (January 2013) Customs Authorities to notify the facility as a Bonded area and applied for power connection in February 2013 which was still pending (March 2013). The O&M contractor could not take possession of the facility due to these reasons and so far had not paid any lease rental to the Company (November 2013).

Audit observed that due to failure of Company to settle the land cost expeditiously and get custom notification/ power connection, logistics

⁵² Cargo handled from 2003-04 to 2006-07 ranged between 237 and 269 tonnes per annum as against estimated cargo of 1000 tonnes per annum.

⁵³ Assistance to States for Development of Infrastructure and Allied Activities.

facilities created at a cost of ₹ 5.73 crore had remained unproductive (November 2013).

Management replied (October 2013) that the facility would be handed over to Contractor on complying with conditions of contract on or before 15 November 2013.

4.3.2.4 Delay in completion of CFS, Mamidipally, depriving trading community of benefits

The Company decided (December 2008) to utilize 7.3 acres of land at Mamidipally near Shamshabad, Hyderabad, for creating a logistics facility for warehousing and submitted (February 2009) a project proposal of ₹ 16.43 crore to the Commissioner of Industries (CoI), GoAP, Hyderabad for approval and release of project cost under ASIDE scheme. The Company obtained approval (April 2009) of the Ministry of Commerce, GoI, for setting up a CFS at Mamidipally.

a) Delay in completion of construction: After inviting tenders (August 2009/ January 2010/ March 2010) for various works⁵⁴, for an aggregate contract value of ₹ 11.30 crore, works were awarded (October/November 2009, March/April/ May 2010) to 10 lowest bidders. It was observed that works were delayed for more than two years. Reasons for delays were stated to be incessant rains, encountering hard rock and cutting the rocks manually as blasting was prohibited, additional works undertaken, disputes with villagers during construction, non-clearance of site, delay in obtaining power supply etc. The facility was completed at a cost of ₹ 11.99 crore in April 2011.

b) Delay in handing over Container Freight Stations to O&M Contractor: Company after inviting tenders (November 2009/ October 2010) awarded O&M contract of the CFS to a contractor, who quoted lease rent of ₹ 65 lakh per annum for a period of 20 years with periodical annual enhancement. The Company issued Letter of Intent (June 2011). Letter of Award for O&M of CFS facility could not be given till February 2013 and the O&M contractor could not start their activities on account of non-possession / non-availability of the facility. The Concession Agreement has not yet been (March 2013) finalized, due to which the Company could not receive amounts as per terms of contract. Though the Company requested (July 2011) the Commissioner of customs to notify it as the custodian of CFS operating through O&M contractor, notification was not issued so far (March 2013).

Audit observed that

- Non-completion of works and non-issue of notification by the Customs Department resulted in idling of the facility created at a cost of ₹ 11.99 crore for 2 years.

⁵⁴ Construction of Admin Building, Security Room; Sub-Structure of Pre-Engineered Building (PEB) and Miscellaneous Works; 100 tonne Weigh Bridge, compound wall & miscellaneous civil works and provision of M-50 Cement Concrete paver blocks; supply and erection of Fire fighting equipment, installation of CCTV system, optical fibre cable and external electrification works.

- Company had to forego revenue of ₹ 1.14 crore⁵⁵ due to non-execution of concession agreement besides non-collection of success fee of ₹ 40 lakh and security deposit of ₹ 81.25 lakh (March 2013). Proper and comprehensive planning and monitoring of project execution could have avoided this loss.

Management replied (October 2013) that agreement with O&M contractor was entered into in August 2013 and that the facility would be taken over on or before 31 December 2013.

The fact remains that after completion of the construction, the facility remained idle without generating revenue as envisaged.

4.3.2.5 Delay in utilization of the facility constructed at a cost of ₹9.16 crore

In order to establish an 'Agri. Export Zone'⁵⁶ (AEZ), as per directives of GoAP, the Company acquired (September 2007) 13.76 acres of land in Chittoor District but could not make any progress in implementing the project till January 2010 due to failure of Joint Venture partner to mobilize equity contribution. The Company invited (February 2010) tenders for Design, Supply, Installation, Testing, commissioning and Training of the plant and machinery for setting up Aseptic Packing Unit (APU) for Mango pulp at Chittoor on Turnkey basis, as a part of AEZ project. Bids were evaluated (March 2010) and a contract company was awarded (March 2010) the work at a cost of ₹ 7.99 crore, to be completed by August 2010.

Audit observed that the contract company completed works by July 2011 with a delay of more than one year due to reasons of hard rock conditions, non-availability of ground water, delay in getting HT power connection, delay in getting permission from the Directorate of factories and boilers, etc., which are avoidable by proper planning and coordinated efforts.

The Company had, after inviting bids (September 2010), entered into agreement (July 2011) with a private O&M contractor, for operating APU for 10 years and developing rest of the land as AEZ investing ₹ 5 crore over a period of three years and for managing the AEZ for a period of 33 years. However, it was observed that the Plant was handed over to O&M contractor in July 2012, after a delay of one year due to dispute with construction contractor on issues of raw materials and other consumables used during trial runs.

Thus, due to avoidable delays in implementation of the project, the plant scheduled to be completed by August 2010 was not commissioned even during 2011 and 2012 mango seasons, delaying the availability of the facility and depriving packaging and marketing benefits to the processing industry.

Management replied (October 2013) that that the APU was run during mango season 2013. It was also stated that Contract Company was directed to forward

⁵⁵ Quarterly lease rentals of ₹ 16.25 lakh for 7 quarters from July 2011 to March 2013.

⁵⁶ Agri. Export Zone is meant for facilitating production, processing of fruits and vegetables in a contiguous area and sourcing the raw materials, their packaging leading to final exports.

detailed proposals for development of agri-projects and pay lease rentals due.

Lease and license premium remains unrealized and also the development of AEZ was not progressing as envisaged.

4.3.2.6 Trade Promotion Activities

The Company has planned (August 2011) to develop

- World-class venues with state-of-the-art facilities for International/National exhibitions, conferences, trade shows and corporate events in different cities of Andhra Pradesh; and comprehensive trade promotion facilities manned by professionals and offer services of high standards to members of trade and commerce.
- The Company recruited (June 2011) a Manager (Trade promotion) on contract basis, at a salary of ₹ 33,600 per month, to develop a knowledge base and tie up with trade Promotional organizations like India Trade Promotion Organisation (ITPO). Though the Board approved (September 2012) an Export Guidance & Documentation Cell (EGDC) and Computerised Trade Information Centre (CTIC), they are still in the process of establishment. It only participated in India International Trade Fair (IITF), New Delhi consecutively for four years (2009-12) and conducted Hyderabad Jewellery, Pearl & Gem fair at Hyderabad International Convention Centre (HICC) in partnership with a private company during 2010. No concrete proposals were formalized towards achievement of other Trade promotional activities.

4.3.2.7 Non-utilisation of land purchased for establishment of Trade Fair Centre at Kadapa

To meet its objective to establish Trade Fair Centres (TFCs), the Company selected (August 2007) YSR⁵⁷ district in first phase for development of TFC without any feasibility study. On request of the Company, the District Collector, YSR district allotted and handed over (December 2007) land admeasuring 20.01 acres and the Company paid ₹ 40.02 lakh (February 2010) towards cost of land.

Notice Inviting Tender was issued (September 2009) for obtaining Expression of Interest (EoI) for commercial exploitation of the land, which did not get proper response. Efforts to explore possibilities of development of the land by Government organizations like APIIC, APIDC, AP MARKFED etc. also did not evoke any response (March 2013).

Audit observed that the Company had not conducted any demand survey or feasibility study. The selection of location of TFC at YSR district was merely on the basis of location of the land abutting ring road connecting to National Highway and proximity to industrial area, which resulted in blocking of funds of ₹ 40.02 lakh on purchase of land.

Management replied (October 2013) that there were scant chances of developing the land into a trade fair centre as expected development did not

⁵⁷ Formerly Cuddapah/ Kadapa

take place. It was also stated that the Company would further explore the possibility of creation of a facility for use of trade and industry and make it viable.

The fact is that land acquired for creation of TFC was still idle without any concrete action for its development.

Conclusion

- Facilities established at a cost of ₹ 26.88 crore were not put to productive use due to lack of planning and proper synchronization;
- There were delays in land alienation, obtaining power connections and notifications from Customs Department;
- The Company's efforts in creation of trade promotional facilities suffered as the lone attempt to establish Trade Fair Centre at YSR district turned out to be a non-starter due to lack of proper planning/choice of location.

Southern Power Distribution Company of Andhra Pradesh Limited & Northern Power Distribution Company of Andhra Pradesh Limited

4.4 Implementation of High Voltage Distribution System

4.4.1 Introduction

Four Distribution Companies⁵⁸ (DISCOMs) in Andhra Pradesh decided (2004-06) to convert the existing Low Voltage Distribution System (LVDS), in rural areas, into High Voltage Distribution System (HVDS) to reduce the distribution losses.

Conversion of existing LVDS to HVDS included the following broad items viz., replacement of existing high capacity Distribution Transformers (DTRs of 50 KVA to 100 KVA) with low capacity DTRs (16 KVA and 25 KVA); conversion of existing 3 phase Low Tension (LT) line into 11KV High Tension (HT) line; laying of Aerial Bunched (AB) cables to prevent unauthorised tapping; etc.

The purpose of conversion of LVDS into HVDS was envisaged as – reduction of line losses, theft and DTR failures.

4.4.2 Audit findings

Audit of transactions relating to implementation of HVDS in two DISCOMs, viz. SPDCL and NPDCL (in Chittoor & Kadapa circles and in Karimnagar & Nizamabad circles, respectively) during 2006-13 (in two phases i.e., Phase-I: October 2005 to December 2012 and Phase-II: March 2007 to July 2013) was conducted to ascertain whether Detailed Project Reports (DPRs)/ estimates

⁵⁸Southern Power Distribution Company of Andhra Pradesh Limited (SPDCL); Northern Power Distribution Company of Andhra Pradesh Limited (NPDCL); Central Power Distribution Company of Andhra Pradesh Limited (CPDCL) and Eastern Power Distribution Company of Andhra Pradesh Limited (EPDCL).

were prepared based on field studies and economical market rates/cost data; and project execution was managed efficiently and economically with proper monitoring, and the following observation are made.

4.4.2.1 Deficiencies in DPRs

The details of project cost as per DPRs, loan sanctioned by REC and actual expenditure incurred there against are as given below:

Table 4.4

(₹ in crore)

Name of the DISCOM	Phase-I			Phase-II		
	Scheme Cost as per DPRs	Loan sanctioned by REC	Expenditure	Scheme Cost as per DPRs	Loan sanctioned by REC/Foreign Bank	Expenditure
SPDCL	349.72 (March 2005)	311.10	350.79	556.50 (August 2006)	556.50	565.53
NPDCL	61.85 (June 2005)	58.26	36.74	241.59	222.74	209.29
Total	411.57	369.36	387.53	798.09	779.24	774.82

Source: DPRs, REC loan sanction orders and progress reports of DISCOMs

A comparative position of quantities projected in the DPRs, quantities included in the bid documents and actually executed are detailed in **Annexure-4.1**.

- Before preparation of Phase-I DPR a detailed survey was not conducted by SPDCL, due to which there were variations between quantities projected in the DPR and those actually used. In SPDCL, conversion of LT to HT was less by 36.91 per cent in Phase I and 37.58 per cent in Phase II. Installation of 25 KVA DTRs was 101 and 243 per cent more than DPR projections, in Phase I and Phase-II, respectively, which indicates that the DPRs were not prepared with proper survey.
- In respect of Phase-II DPR, SPDCL got a limited pilot study conducted in five villages of Chittoor district through a Consultancy covering 568 pump sets under 37 DTRs, which was extrapolated to 1,10,549 agricultural services. This extrapolation resulted in non-identification of varying ground conditions of work field at different locations, which led to delay in execution.
- NPDCL projected 11,375 Nos. 16 KVA DTRs in Phase-II DPR, while the agreement was entered for erection of 18,280 DTRs, however, the actual installation was 16,442 DTRs which also indicates lack of initial field survey.
- Audit further observed that SPDCL & NPDCL planned to implement HVDS in 817 and 169 LT feeders respectively. However, SPDCL executed only 163 feeders under Phase-I against 261 awarded. Details of feeders executed in Phase-II against awarded 375 feeders were not provided to Audit. NPDCL completed 79 feeders out of 169 planned in both Phases. Thus, there was shortage in implementation of HVDS in LT feeders in both the DISCOMS.

The Government/SPDCL/NPDCL stated (November/ October 2013) that the

DPRs were prepared after conducting detailed survey by field officers. However, work of detailed route survey was included in the scope of work awarded to the contractors.

Deficiencies in Estimates

SPDCL indicated that estimate data for each item of work (HVDS) was prepared as per the rates of latest purchase orders, cost data of 2004-05 and Standard Schedule of Rates (SSR) 2006-07 of SPDCL. However, the following deficiencies and irregularities in preparation of estimates for the HVDS works were noticed.

4.4.2.2 Excess expenditure of ₹ 51.52 crore due to inflated estimated cost of DTRs

DTR is the most significant element of HVDS works and is about 63 *per cent* of the estimated cost of the works. Thus correct estimation of cost of DTR is essential to achieve economy in execution of HVDS works.

Audit observed that cost estimates were prepared by SPDCL at high rates of ₹ 77,308 and ₹ 58,130 for 25 & 16 KVA DTRs each, respectively, as against the rate of ₹ 52,488 and ₹ 38,477 each, as per purchase orders placed during the same period for their regular O&M works in the distribution network. This has resulted in additional financial burden of ₹ 44.87 crore on supply of 61,656 Nos. 25 & 16 KVA DTRs under Phase-II works (after adjusting tender percentage).

The Government/SPDCL stated (November 2013) that cost as per IEEMA⁵⁹ rate was directly considered in order to avert calculation of price variation while arranging payment. However price of DTRs could increase/ decrease in future and could be dealt as per applicable provisions on actual supplies, instead of inflating cost estimates for future increase.

Similarly, for Phase-I works, NPDCL adopted ₹ 59,696 for each 25 KVA DTR being the estimated rate of SPDCL, while its own purchase cost during the same period was ₹ 36,806. This has resulted in excess expenditure of ₹ 6.65 crore being the differential rates on supply and erection of 2,906 DTRs.

The Government/NPDCL stated (November/ October 2013) that the DTR rates of SPDCL were adopted instead of the purchase order rates existing at that time. However company should have adopted their own purchase rate of DTR for HVDS works.

4.4.2.3 Execution of the Scheme

SPDCL divided the HVDS works into 26 schemes in respect of Chittoor and Kadapa Districts. After inviting open tenders, the works were awarded to 13 contractors under 27 agreements during the period from October 2005 to August 2007 at total aggregate contract value of ₹ 894.70 crore (Phase-I: ₹ 354.13 crore and Phase-II: ₹ 540.57 crore).

⁵⁹Indian Electrical & Electronics Manufacturers Association

APNPDCL divided the works into 16 schemes in Karimnagar and Nizamabad Districts. After inviting open tenders, the works were awarded to 9 contractors under 15 agreements during March 2006 to May 2007 at total aggregate value of ₹ 255.40 crore (Phase-I: ₹ 36.84 crore and Phase-II: ₹ 218.56 crore).

As per the terms of the contract all the works were to be completed within 12 months from the date of award. However, Audit observed that the contractors actually completed the works with delay (including extensions) ranging from 5 to 42 months (SPDCL) and 43 to 69 months (NPDCL) as per the details in **Annexure-4.2**. Both DISCOMs accorded extensions against each agreement, sometimes up to 10 times.

The Government/SPDCL/NPDCL stated (November/ October 2013) that extension were accorded due to seasonal problems, field conditions and objections by farmers to carry out work in the fields with standing crops.

These are routine and seasonal problems inherent in line works, which could have been overcome had the works been properly planned/ monitored to be executed during non-crop/ non-seasonal period.

4.4.2.4 Price variation claims (PVC)

As per the terms of the Purchase Manual of APTRANSCO adopted by DISCOMs, in case of variable prices 'the bidders would be informed that the price variation would be on the basic price of raw materials only and price variation would be regulated as per the scheduled delivery/ actual delivery whichever is less'. However, Audit observed that the bid condition did not contain any provisions in this regard and there were no recorded reasons for the deviation from the Manual provisions.

Price variation allowed beyond scheduled execution period: SPDCL paid an amount of ₹ 65.64 crore to the contractors towards price variation claims on DTRs as per IEEMA variance formula throughout the contract execution period, even though majority of the DTR supplies took place after the original contractual schedule of 12 months. NPDCL also paid an amount of ₹ 20.48 crore towards price variation claims on DTRs supplied beyond scheduled date of completion.

DISCOMs' failure to include a suitable clause for restricting the Price variation claims to the contractual delivery schedule (in accordance with provisions of purchase manual) resulted in undue benefit of ₹ 86.12 crore to the contractors.

Price variation allowed on inadmissible items: Audit also observed that price variation was allowed on inadmissible items viz., manufacturing, administration and Profit elements and in excess of the ceiling limit of 30 per cent (upto 62 per cent).

The Government/SPDCL stated (November 2013) that there is no policy for limiting the price variation upto the material cost and for restricting the price variation to the upper limit, however the suggestion given by audit would be taken into consideration. However price variation would be on the base price of raw materials only subject to maximum ceiling of 30 per cent as per the

Purchase Manual.

The Government/NPDCL stated (November/ October 2013) that the IEEMA formula takes care of proportion of material cost only. But the fact remains that company admitted price variation on manufacturing, administrative expenses and profit elements also.

4.4.2.5 Excess payment of taxes and Duties in work bills

Audit scrutiny of work bills with reference to the terms of Agreement/ Purchase Manual relating to taxes and duties (Excise Duty (ED) and VAT on material) revealed that excess payments were made resulting in undue-benefit to contractors.

- Though Purchase Manual specified that either increase or decrease in rates of taxes and duties shall be to purchasers' account, a clause to this effect was not included in agreements. As a result, both the DISCOMs paid ED on material at an uniform rate of 16.32 *per cent* inspite of the fact that rates of ED decreased and ranged between 8.24 to 14.42 *per cent* during the execution period, resulting in avoidable excess expenditure of ₹ 40.71 crore. Thus failure to include proper clause has resulted in excess payment of ED.

The Government/ SPDCL stated (November 2013) that while entering into agreement the clause for ED did not specify whether the variations in the ED is applicable from time to time, hence the ED was allowed with the rate mentioned at the time of agreement.

Reply is an admission of non-incorporation of safeguarding clause in the Agreement.

- In SPDCL, agreements of Phase-I works specified that VAT at 4 *per cent* on the estimated rates will be paid extra. However, during the execution stage, Government revised the rate of VAT to 2.80 *per cent*. Audit observed that even after revision, the DISCOM continued to deduct VAT at 4 *per cent* from contractors and remitted it to the Sales Tax Department. Based on Contractors' objection to deduction at higher rate, SPDCL refunded the excess recovered tax portion of 1.20 *per cent* amounting to ₹ 4.25 crore, without obtaining refund of the same from the Sales Tax Department.

Thus failure to include necessary clause in the Bid Document in accordance with the provisions of Purchase Manual resulted in excess payment of VAT.

4.4.2.6 Short levy of liquidated damages

Management of both DISCOMs accorded extensions of time indiscriminately, against each agreement (extensions from two to 10 times) without any recorded justification for recommending them. Audit observed as under:

- Despite delays by contractors in completion of works, SPDCL levied ₹ 3.30 crore towards Liquidated Damages (LD) as against leviable LD of ₹ 72.81 crore as per the terms of agreement (levy of LD for delay at 0.05 *per cent* on the estimated cost per day against prescribed milestone

subject to a maximum of 10 *per cent* of the Contract value). Further, LD of ₹ 2.86 crore in 16 cases was refunded to contractors after condoning the delays.

- In NPDCL, delay in execution of works ranged between 43 to 69 months. The company levied and deducted LD of ₹ 2.29 crore only against leviabale LD of ₹ 18.47 crore.

Payment of price variation during the delay period, non-levy of LD at prescribed rate and refund of penalty in spite of inordinate delays in execution of turnkey works indicate absence of financial prudence and improper contract management.

The Government/SPDCL/NPDCL stated (November/ October 2013) that to save delay in execution of the work, the agreements were not short closed and the LD could not be imposed on the contractors.

4.4.2.7 Post bid amendment to pay mobilization advance

The Central Vigilance Commission (CVC) Guidelines (June 2004) on mobilization advance, *inter alia* stipulated that if advance is to be given, it should be expressly stated in the NIT/BID documents, indicating the amount, rate of interest and submission of Bank Guarantee of equivalent amount. The bid for Phase-II works of HVDS in NPDCL did not provide any clause for payment of mobilization advance. However, Audit observed that NPDCL decided (July 2007) to issue post bid amendment to the agreements with various contractors, enabling payment (September 2007) of 15 *per cent* mobilization advance. Accordingly, an amount of ₹ 12.29 crore was released (August 2007 to April 2008) as mobilization advance to nine contractors.

Further, in the amendment order interest clause was not mentioned. The CMD, NPDCL directed (December 2007) recovery of 25 *per cent* of the running bill amount towards adjustment of mobilization advance with REC rate of interest applicable from time to time.

The Board of Directors of NPDCL accorded approval (February 2008) to levy of interest on mobilization advance at 5.825 *per cent* i.e., half of the interest rate charged by REC (11.65 *per cent*). Audit observed that charging of interest at lower rate was detrimental to the financial interest of the company and resulted in undue financial benefit of ₹ 1.05 crore to the contractors.

The Government/ NPDCL stated (November/ October 2013) that mobilization advance clause was not stipulated in the tender document of HVDS works as the tenders were floated in May 2006 i.e., prior to issue of CVC guidelines in April 2007. Further the Board of Directors of NPDCL took the decision to pay mobilization advance to contractors in order to mobilize more workers and speed up the works.

But CVC guidelines existed prior to floating tenders of HVDS works (June 2004).

4.4.2.8 Non-submission of closure proposals to REC

NPDCL had not submitted the closure reports as it did not obtain work

completion certificates and final payment bills are still pending (December 2013).

4.4.2.9 Additional interest burden due to increase in rates of interest

Audit observed that due to delay in execution of works DISCOMs could not adhere to REC Loan drawal schedules. As per the REC Loan sanction terms, the rates of interest for repayment of loan would be those prevailing at the time of first tranche drawal of that instalment. The interest rates prevailing during REC permitted execution period (24 months), ranged from 8.75 to 10.75 *per cent* (Phase-I) and 9.6 to 10.4 *per cent* (Phase-II), whereas the same increased subsequently and ranged from 11 to 14 *per cent* (Phase-I) and 10.75 to 12 *per cent* (Phase-II) during the delayed period of execution. DISCOMs had to bear the additional interest burden of ₹ 11.50 crore (SPDCL - Phase-I: ₹ 5.06 crore + Phase-II ₹ 6.44 crore) and ₹ 8.24 crore in APNPDCL (Phase-I - ₹ 1.15 crore + Phase II - ₹ 7.09 crore) over the loan repayment period of 10 years due to fluctuation of interest rates.

Timely execution of works could have avoided the additional interest burden.

4.4.2.10 Excess payment of interest on foreign bank loan by SPDCL

A loan of ₹ 556.50 crore was sanctioned by a foreign bank (August 2006) to SPDCL through REC. As per terms and conditions of the loan, foreign bank would provide finance for only cost of material and erection, all other expenditure (general and administrative expenses and taxes and duties) would be financed by REC. Out of the total sanctioned loan of ₹ 556.50 crore, ₹ 418.00 crore was foreign bank portion and ₹ 138.50 crore was REC portion. foreign bank loans carry interest rate of 9.25 *per cent* and REC loans carry 9.75 *per cent*, which is subject to revision.

Audit observed that REC was charging interest rate ranging between 9.6 and 13.5 *per cent* on the entire loan, instead of charging 9.25 *per cent* for foreign bank portion and 9.75 *per cent* for REC portion, which was paid as per demand without verifying the correctness of applicable rate of interest. This resulted in excess payment of interest of ₹ 15.81 crore⁶⁰.

Conclusion

- The DPRs were found deficient and not based on realistic data obtained through proper baseline survey, resulting in variance between estimated and actual quantities, abnormal delays and shortfall in conversion of planned feeders.
- Estimates were not economical due to inflated cost of DTRs, which resulted in additional financial burden to DISCOMs.
- Non-stipulation of a Bid clause restricting payment of Price Variation Claims (PVC) to the scheduled delivery period, payment of PVC on

⁶⁰ Worked out by Audit, being the differential rate between 9.25 *per cent*(applicable) and 9.6 to 13.5 *per cent*(actually paid) on foreign bank portion of loan for the period from April 2008 to February 2013.

ineligible components and without stipulated ceiling limit resulted in undue benefit to contractors and avoidable expenditure to DISCOMs.

- Excess payment was made to contractors towards Excise Duty and VAT.
- Indiscriminate time extensions were accorded to contractors and LD was not levied as per the provisions of agreement.
- While Post-bid amendment to pay mobilization advance vitiated bid process, levy of interest on mobilisation advance at half the borrowing cost lacked justification with undue benefit to contractors.
- Delay in execution of works and consequent slippage in loan draws resulted in payment of interest at higher rates.

Recommendations

The DISCOMs should ensure

- *effective detailed survey before preparation of DPRs;*
- *preparation of estimates based on available economic rates;*
- *inclusion of enabling clauses in the Bids to safeguard financial interest with regard to interest on advance, Price Variation and various taxes and duties.*

Central Power Distribution Company of Andhra Pradesh Limited

4.5 Avoidable excess payment of ₹6.17 crore towards Excise Duty

Due to non-adherence to the purchase manual conditions in respect of HVDS phase III bids, CPDCL incurred expenditure of ₹ 6.17 crore, in excess of actual, towards excise duty with corresponding undue enrichment of the contractors.

In order to convert the Low Voltage Distribution System in five districts⁶¹, into High Voltage Distribution System (HVDS), Central Power Distribution Company of Andhra Pradesh Limited (CPDCL/Company) entered into five contracts during 2008-09 and 2009-10 for HVDS Phase-III works on turnkey basis for an aggregate value of ₹ 250 crore (₹ 50 crore each). The scope of works *inter alia* included supply and erection of 16 & 25 KVA Distribution Transformers (DTRs), Pre-stressed Cement Concrete (PSCC) Poles, AAA conductors, etc.

As per the Provisions of Purchase Manual of CPDCL, payment of taxes and duties will be regulated as per actual paid, subject to a maximum of what is quoted by the bidder. Any variation in taxes and duties or new levies introduced after signing of the contract and during the delivery period will be to the account of purchaser.

⁶¹ i) Kumool; ii) Medak; iii) Mahabubnagar; iv) Nalgonda; and v) Rangareddy.

The Company, contrary to its own purchase manual provision, framed the following bid conditions relating to 'Bid Prices' without recording reasons for such deviations:

- All duties, taxes and other levies payable by the contractor under the contract, or for any other cause are included in the estimated prices. The bidder shall verify the correctness and quote his price.
- Any variations in the taxes & duties during the contract period will be borne by the bidder.

Audit observed further that the Company had not included any clause in the bid documents, to ascertain the actual payments of the taxes made by the contractor.

Audit observed that the Excise Duty on DTRs and other material decreased from 14 *per cent* (March 2008) to 10 *per cent* (with effect from December 2008) and further reduced to 8 *per cent* (with effect from February 2009) and increased to 10 *per cent* (with effect from February 2010). However, the Company paid the contractors claims at 14 *per cent*, resulting in excess expenditure of ₹ 6.17 crore during 2009-12 and undue enrichment of the contractor to that extent.

The Government replied (December 2013) taxes and duties component is kept constant in order to avoid additional payments over and above the scheme cost and increase in taxes and duties cannot be foreseen, but did not give any reasons/ justification for deviating from the Purchase Manual conditions.

But increase in statutory levies cannot be treated as additional expenditure and reimbursement to the contractor should have been made on actuals.

Thus, due to non-adherence to the Purchase Manual conditions in respect of HVDS phase III bids CPDCL incurred avoidable excess expenditure of ₹ 6.17 crore towards excise duty with corresponding undue enrichment of the contractors by the same amount.

Andhra Pradesh Power Generation Corporation Limited

4.6 Expansion/ Construction of Thermal Power Generating Units

4.6.1 Introduction

Andhra Pradesh Power Generation Corporation Limited (GENCO) is wholly owned Government Company engaged in generation of power in the state. GENCO set up (March 2006) a Subsidiary company named as Andhra Pradesh Power Development Company Limited (APPDCL) for development of Coal based Super Critical Thermal Power Station near Krishnapatnam in Nellore Dist (2 X 800 MW). GENCO held 51 *per cent* equity of APPDCL remaining 49 *per cent* is contributed by four distribution companies of AP (DISCOMs) and Government of AP.

National Electricity Policy (NEP), February 2005, envisaged that power

demand should be met fully by 2012, energy and peaking shortages⁶² should be overcome, adequate spinning reserve⁶³ be made available and per capita availability of electricity⁶⁴ to be increased to over 1000 units by 2012.

4.6.2 Audit findings

Audit of execution, of two⁶⁵ out of five completed/ commissioned projects and four⁶⁶ ongoing projects, during the period 2008-13, was conducted to assess whether planning for capacity addition of thermal units was done keeping in view power shortages in the State; tendering processes were followed and works awarded as per specifications, terms and conditions of contracts in a transparent manner; and execution and monitoring was done economically, efficiently and effectively. The following observations are made.

4.6.2.1 Shortfall in meeting peak demand

Data of Peak demand⁶⁷, peak demand met and actual generation including share of GENCO for last five years is as follows:

Table 4.5 Statement of peak demand from 2008-09 to 2012-13

Year	Peak Demand (MW)	Peak demand met (MW)	Shortfall (MW)	Actual generation (MU)		
				GENCO	Others	Total
2008-09	10866	9997	869	31111 (46)	36511	67622
2009-10	12010	10880	1130	29691 (40)	45168	74859
2010-11	12734	11829	905	34749 (45)	43152	77901
2011-12	14361	11972	2389	39237 (46)	46631	85868
2012-13	14736	11630	3106	38040 (46)	45088	83128

Source: Information furnished by GENCO MU: Million Units; MW: Mega Watts
Figures in brackets indicate percentage of total generation.

Above data indicates that shortfall in meeting peak demand increased from 869 MW in 2008-09 to 3106 MW in 2012-13, leading to power shortage. Further, share of GENCO out of total generation remained stagnant between 40 to 46 per cent. Due to delay in commissioning of completed projects and implementation of ongoing projects, the State was compelled to purchase power from open market at higher cost.

Planning

4.6.2.2 Preparation of DPRs and obtaining approvals

Main objective of NEP was to meet power demand by 2012, State Electricity Plan was required to be prepared (December 2006) by Transmission Corporation of Andhra Pradesh Limited (TRANSCO) and approved by AP

⁶² Peaking shortage is defined as shortfall in generation capacity during the time when the electricity consumption is at the maximum.

⁶³ The **spinning reserve** is the extra generating capacity that is available by increasing the power output of generators that are already connected to the power system.

⁶⁴ Per household, per annum.

⁶⁵ Kothagudem Thermal Power Station (KTPS) Unit 11: 500MW; Rayalaseema Thermal Power Plant (RTPP) Unit 5: 210 MW.

⁶⁶ Kakatiya Thermal Power Project (KTPP) Unit 2: 600 MW, RTPP Unit 6: 600 MW, Sri Damodaram Sanjeevaiah Thermal Power Station (SDSTPS) - Krishnapatnam Unit 1 & 2: 800 MW each.

⁶⁷ The term **peak demand** refers to the highest amount of electricity being consumed at any one point in time across the entire net work system.

Electricity Regulatory Commission (APERC). However, as plan was not finalized so far (December 2013), GENCO planned for capacity addition of thermal units on *ad-hoc* basis.

Government of India and State Government have established policy and regulatory frameworks for setting up of electricity generation stations and accordingly certain permits and clearances (statutory and non-statutory) are required to be obtained from different Government and Statutory Agencies at various stages of development phase of the project.

Audit observed that there were delays in obtaining statutory clearances such as clearance from MoE&F (KTPP – Unit 2), Ministry of Coal, AP Pollution Control Board (KTPS – Unit 11, KTPP – Unit 2 and RTPP – Unit 6) etc. at various stages of development phase, which also contributed to time and cost overruns and ultimate delay in achievement of Commercial Operation Date (COD).

As against 4,720 MW of energy capacity planned to be added through thermal power projects during 11th Five Year State Plan (2007-12) only 2130⁶⁸ MW was added. Further, 9,382 MW of thermal capacity was proposed to be added during 12th Five Year State Plan (2012-17) by GENCO (800 MW was to be added in first year i.e., 2012-13). GENCO could not add any thermal capacity during 2012-13 as Krishnapatnam (Unit 1) project was not completed in time. Details of Plan-wise proposed, completed and ongoing thermal projects are given in **Annexure – 4.3**.

4.6.2.3 Funding of construction/ expansion projects

As per financial structure indicated in DPRs, projects were proposed to be financed by loan and equity of 80 and 20 *per cent* respectively. Loan capital of 80 *per cent* would be financed from Power Finance Corporation (PFC), REC (Rural Electrification Corporation) and Scheduled banks as follows:

Table 4.6: Project-wise details of cost, loan and equity mobilized by GENCO

(₹ in crore)

Name of Unit	Estimated/ Revised cost	Loan		Equity		
		PFC/REC	Scheduled Banks	Required	Internal	Bank Loan
KTPS/Unit 11	2801.00	1762.00	462.45	560.20	331.91	200.00
RTPP/Unit 5	1322.00	796.80	200.00	264.40	238.45	0.00
RTPP/Unit 6	3028.86	2423.00	0.00	605.77	122.77	0.00
KTPP/Unit 2	3652.51	2170.00	500	593.73	224.22	0.00
SDSTPS/Unit 1 & 2	10450.00	6868.52	1827.48 [#]	2090.00	1458.90	0.00
Total	21254.37	14020.32	2989.93	4114.10	2376.25	200.00

Source: Information furnished by GENCO

[#]Externally Aided Project loan from foreign bank, Germany

It could be seen that GENCO availed loan from PFC/REC/Scheduled banks. However, with regard to equity requirement amounting to ₹ 4,114.10 crore, GENCO could mobilize only ₹ 2,376.25 crore (58 *per cent*) till end of March 2013, out of which the State government contributed ₹ 80 crore; DISCOMs contributed ₹ 594.06 crore in SDSTPS and GENCO could invest ₹ 1,702.19

⁶⁸ Including RTPP Stage-II Unit-3(210 MW) of 10th Plan commissioned in August 2007

crore from internal resources.

Audit observed that while State government contribution to the equity was less, GENCO could not mobilise equity from internal sources as envisaged and had to go for more borrowings with consequent higher interest burden.

GENCO replied (October 2013) that the GoAP did not allocate any equity for new projects as a result GENCO has to meet equity through borrowing from Scheduled banks/ internal resources.

4.6.2.4 Awarding and Execution of Projects

Works of a thermal generation project include Boiler, Turbine and Generator (BTG) works comprising design, engineering, manufacturing, supply and erection of manufactured main equipment; Balance of Plant (BOP) works comprising Civil works, Mechanical viz., Coal/ Ash/ Fuel oil handling systems; water treatment plant/system; cooling towers, etc., Electrical viz., switchyard, transformers, cabling/ lighting system, etc., Instrumentation & Controls viz., Communication system, control panels, Uninterrupted power supplies, etc.

In view of huge expenditure and critical technology involved in establishing power plants, it is desirable to award the works on International Competitive Bidding (ICB) route to have transparency and competitive offers. GENCO, however, had not followed ICB route except in SDSTPS on the ground that ICB route requires a lot of time for preparation of tender documents and finalization of contracts (it was contemplated that ICB may take about 9 to 10 months), instead it followed negotiated route with BHEL.

GENCO awarded BTG works of four projects to BHEL on negotiated route (two completed projects: KTPS - Unit 11 and RTPP - Unit 5; two ongoing projects: RTPP- Unit 6 and KTPP- Unit 2). Audit observed that even though the main reason for not following ICB route was to save the time and cost, in contracts finalised through negotiated route also there were abnormal delays which ultimately resulted in time and cost overrun, defeating main objective of reduction of costs and saving time as discussed in subsequent paragraphs.

4.6.2.5 Time overrun

The details of Purchase Orders (POs) placed, scheduled date of completion, actual date of completion in respect of completed projects and progress achieved in respect of ongoing projects are given in **Annexure – 4.4**

It can be seen from Annexure – 4.4 that both completed projects (KTPS – Unit 11 and RTPP – Unit 5) did not achieve Commercial Operation Date (COD) as per schedule resulting in time overrun of 17 and 15½ months, respectively. Main reasons attributed for delay in execution of project works were

- Delays by BHEL in supply of equipment and rectification of defects in equipment supplied;
- Delays by BOP contractor in completion of mechanical and civil works;
- Delays in providing work fronts by GENCO.

- In respect of KTPS Unit 11 GENCO awarded BOP works to a contractor in March 2008 i.e., after 13 months after award of contract for BTG to BHEL due to delay in finalization of technical consultancy contract. This gap as against CEA norm of six months from zero date⁶⁹ contributed to delay in completion of the project.
- Lack of adequate monitoring at top management level and non-adherence of schedules/ milestones as per DPR/PO conditions at Unit level.
- In case of BTG works of KTPS – Unit 11, only ₹17.47 crore out of ₹ 108.72 crore of Liquidated Damages (LD) leviable, was recovered from BHEL and balance of ₹ 91.25 crore was not recovered.

GENCO replied (October 2013) that delay was due to shortage of skilled/unskilled manpower consequent to overloading of contractors, BHEL was also overloaded with many orders, incessant rains and local disturbances.

The reply is very general. Since works were awarded to BHEL/ contractors considering their capabilities to execute such works, with an objective to achieve intended COD within scheduled time. GENCO should have ensured timely execution of works by various contractors in accordance with agreement conditions.

Delays in completion of ongoing projects

GENCO awarded (September 2008 to December 2010) four thermal projects of 2800 MW capacity namely RTPP-Unit 6, SDSTPS unit 1 & 2 and KTPP-Unit 2. Construction works of all the four units were however delayed due to which three units which were to be already commissioned (except RTPP - Unit 6) by January 2013 were still under construction as discussed below.

(a) Delay in completion of KTPP/UNIT 2 due to belated award of BOP contract

- BOP contract was awarded with a delay of 16 months (November 2010) as against CEA norm of within 6 months from Zero date (January 2009)
- BOP works are in slow progress due to insufficient deployment of manpower by BOP contractor and shortage of good quality sand.
- Though 223 hectares (ha) of existing land, where infrastructure facilities were available was planned and identified as against required land of 263 ha, balance 40 ha land for Coal Conveyor from Tadicherla coal block (Captive mining) is yet to be acquired.

GENCO replied (October 2013) that due to litigation there was delay in placing BOP order, which affected overall project schedule. It was also replied that civil works were delayed *inter alia* due to lack of proper planning and insufficient deployment of manpower and materials by BOP contractor. However, the fact remains that contractor was selected based on capabilities to carry out such projects.

⁶⁹Zero date is either date of payment of advance to contractor or date of handing over site to contractor or date of issue of Letter of Intent, as the case may be.

Availability of total required land is a prerequisite for grounding project works. Failure to ensure the same also led to delays in implementation in above case.

(b) Delay in completion of SDSTPS (800 MW x 2) project at Krishnapatnam due to inadequate pre project site investigation

APPDCL took up Mega Thermal Power Project at Krishnapatnam (unit 1 and 2) with an estimated project cost of ₹ 8,432 crore, which was subsequently revised to ₹ 10,450 crore (August 2012). Tenders were called on ICB basis for three major packages, viz; Boiler, Turbine Generator and BOP packages and works were awarded to BHEL and two private contractors respectively, to be completed by August 2012 and February 2013 (Unit 1 and 2). However all three contract companies have delayed their respective works, due to which scheduled completion dates were revised twice⁷⁰.

Reasons for delay were attributed to -

- Delay in supply and commissioning of major equipment and finalizing designs of Boiler and related equipment by BHEL.
- Poor site specific soil conditions resulting in increase of number of piles and depth of piles, which has taken more time for designing of structure like Chimney, TG foundations, etc.
- Change in location of Ash Pond, to avoid contamination of water.
- Delay in exchange of inputs among main contractors
- Above indicate deficient pre-project site investigations and lack of effective project monitoring.

(c) Delay in completion of RTPP/UNIT 6 due to delay in land acquisition

Even after three years after placing POs, works were still under execution/ initial stage (50.87 and 22.15 *per cent* completion of BTG and BOP works, respectively). For this unit, GENCO had planned to acquire 595.38 acres⁷¹ of land out of which 348.22 acres was acquired (November 2010) and remaining 247.16 acres is still to be acquired (December 2013).

GENCO replied (October 2013) that civil works were delayed due to non-availability of inputs/ design changes from BHEL, delay in providing work fronts, agitation/ disturbances, etc.

However, these are incidental to any project and GENCO failed to overcome these routine obstacles due to lack of proper plan and monitoring. Further, out of four thermal units which were under construction, only KTHP Unit 2 comes under Region affected by disturbances.

Regarding land acquisition GENCO replied (October 2013) that Dharakastpatta (DKT) lands⁷² of 104.14 acres required for RTPP are under

⁷⁰Initially to March and June 2013 and subsequently to February and June 2014 for Unit 1 and 2, respectively.

⁷¹ Total land of 595.38 acres consist of Patta land: 358.87 acres; DKT land:142.31 acres and Government land 94.20 acres.

⁷² The lands being given on applications to the poor and downtrodden, who are landless at free of cost.

their control obtained by convincing farmers and made available to BOP contractor in March 2012. However, audit noticed that as per progress report of Civil Circle of December 2012, Revenue authorities were requested to prepare necessary acquisition proposals for DKT lands. In the absence of actual payment of required compensation and completion of formal acquisition process, contractor may not be able to commence construction work.

4.6.2.6 Cost overrun

For two completed projects (KTPS – Unit 11 and RTPP – Unit 5) the project cost of ₹ 3121.17 crore was revised to ₹ 4123.20 crore, with cost overrun of ₹ 1,002.03 crore, mainly due to increase in Interest During Construction (IDC - ₹ 363.25 crore), addition of new items (₹ 234.09 crore) apart from increase in Electrical & Mechanical works, civil works, establishment and administrative costs (₹ 404.93 crore).

Similarly in respect of ongoing project of SDSTPS, project cost increased by ₹ 2,018 crore mainly on account of increase in IDC (₹ 737 crore), exchange rate variation (₹ 529 crore), Taxes & duties (₹ 308 crore), etc.⁷³.

GENCO replied (October 2013) that there was revision of cost of the projects due to execution of works which were not originally envisaged, increase in interest rates, etc.

However, main contributors for cost overrun were IDC and cost escalations due to time overrun, which could have been avoided by timely comprehensive planning and better monitoring of the project works.

4.6.2.7 Avoidable purchase of expensive power from open market due to delayed commissioning of thermal units

Due to abnormal delays in completion of new thermal projects, GENCO could not generate power to the extent of 12,731 MU in respect of five thermal stations consisting of 5 units during 2009-10 to 2012-13.

In the Aggregate Revenue Requirement (ARR) proposals submitted to APERC, the DISCOMs project purchase of power from various Generators (GENCO, Central Generating Stations, Private Generators) and open market. As the quantum of power projected to be purchased from GENCO was based on planned generation, delay in completion of projects and consequent non availability of projected power from GENCO units compelled DISCOMs to

⁷³ Price Variation Claims (₹ 66 crore), Construction & Supervision Charges (₹ 87 crore), Sea Water Intake and Outfall system – new item (₹ 268 crore), External coal conveying System (₹ 81 crore), Township – new item (₹ 135 crore) and Land cost and Development Charges (₹ 40 crore), Transmission Lines (₹ 22 crore) and Initial Spares (₹ 255 crore).

purchase power from open market from different traders as indicated below.

Table 4.7: Details of market purchase of power by DISCOMs

Financial Year	Market purchases (MU)		Difference (MU)
	APERC approval	Actual	
2008-09	(-) 2.98	7881.18	7884.16
2009-10	0.00	4046.09	4046.09
2010-11	860.33	5169.54	4309.21
2011-12	1375.84	8846.10	7470.26
2012-13	13281.36	10714.39	-*
Total	-	-	23709.72

Source : Tariff Orders of APERC and information furnished by GENCO

*During 2012-13, Company did not exceed the APERC approval.

It can be seen that GENCO resorted to market purchases of 23709.72 MU power in excess of sanction by APERC during 2008-12.

Audit observed that market purchases were made at higher rates, which ranged between ₹ 4.49 and ₹ 6.95 per unit for the period 2009-12 and at ₹ 5.17 per unit during 2012-13 as compared to GENCO's cost of power ranging between ₹ 2.23 to ₹ 3.54 per unit during the same period. Extra expenditure on market purchases for delayed periods was passed on to consumers in the form of Fuel Surcharge Adjustment (FSA) by DISCOMs.

4.6.2.8 Allocation of captive coal block

GENCO was allotted (December 2005) Tadicherla 1 coal block (Karimnagar district) by Ministry of Coal for captive mining to be matched with commissioning of Unit 2 of KTPP (July 2012). As per original milestones, land acquisition was to be completed by December 2008 and coal production to be commenced by June 2009 in line with scheduled commissioning of KTPP Unit 2. Out of 2,318.66 acres of land required, GENCO acquired 2,113.44 acres of land and only 72.89 acres of assigned land and 132.33 acres of forest land remained un-acquired.

GENCO signed (August 2010) an MOU with SCCL for mining and agreed to provide access to coal block to SCCL within six months from date of signing MOU. However, access to SCCL was provided in November 2011, with a delay of nine months due to problems in land acquisition. SCCL revised the programme of mining operations which would commence by April 2013. However till date (December 2013) coal production has not started.

GENCO replied (October 2013) that all out efforts are being made for development of the coal block to match with commissioning of KTPP Unit 2.

However, draft feasibility report submitted by SCCL (June 2013) was not yet approved by GENCO (December 2013) and Environmental clearance is still awaited.

Conclusion

- There were abnormal delays in execution of projects due to deficient planning and project management with consequent time and cost overruns.
- There were cases of non-levy/ short levy of liquidated damages.
- As GENCO could not complete the projects as planned in DPRs, DISCOMs purchased expensive power from open market to tide over shortages.

Recommendations

- *Possibility of entrusting major works like boiler, turbine and generator to more than one agency by calling ICBs be explored;*
- *Land acquisition, all statutory clearances from forest and mining; ensuring availability of raw water, timely development of captive coal blocks should be done well before awarding contracts for supply and erection of plant and machinery to avoid delays and escalation of costs as well as timely completion of projects as planned;*
- *Put in place a mechanism for effective, efficient and timely completion of projects to avoid cost and time overrun.*

Southern Power Distribution Company of Andhra Pradesh Limited & Eastern Power Distribution Company of Andhra Pradesh Limited

4.7 *Information Technology Audit on High Tension billing systems*

4.7.1 *Introduction*

Electricity consumers are divided into two categories i.e. Low Tension⁷⁴(LT) consumers and High Tension⁷⁵(HT) consumers. Majority of HT consumers represent industries and commercial establishments. HT consumers are classified into various categories⁷⁶ as per the provisions of the Tariff Orders issued by Andhra Pradesh Electricity Regulatory Commission (APEREC) from time to time and are being billed through computerised billing applications. In view of the significance of the HT revenue in overall finances (comprising 50 *per cent*) of the distribution companies (DISCOMs) and complexity involved in the HT billing, IT audit of HT billing was taken up. As the two DISCOMs viz., Central Power Distribution Company of Andhra Pradesh Limited (APCPDCL) and Northern Power Distribution Company of Andhra Pradesh Limited (APNPDCL) were already covered by audit and results included in the Audit Report for the year ended 31 March 2007, IT audit of HT billing in

⁷⁴ Low Tension consumer means a consumer who is supplied electricity at a voltage up to 440 volts;

⁷⁵ High Tension consumer means a consumer who is supplied electricity at a voltage higher than 440 volts but not exceeding 33000 volts

⁷⁶Category IA (Industry-general), IB (Ferro Alloys), II (Others),III (Aviation Activity at Airports), IV A (Government lift irrigation schemes), IV B (Agricultural), IV C (Composite Water Supply schemes), V (railway traction) and VI (Townships and residential colonies), VII (Green Power), VIII (RESCOs) and IX (Temporary).

the remaining two DISCOMs viz., Southern Power Distribution Company of Andhra Pradesh Limited (APSPDCL⁷⁷) and Eastern Power Distribution Company of Andhra Pradesh Limited (APEPDCL⁷⁸), have been taken up.

The HT revenue as percentage of total revenue during the last five years ranged from 38.11 *per cent* to 45.88 *per cent* in APSPDCL and from 55.70 *per cent* to 60.73 *per cent* in APEPDCL.

4.7.2 IT Organisational set up

General Manager (IT), who heads IT Organisation, directly reports to the Chairman & Managing Director in APSPDCL while in APEPDCL, reports to Chief General Manager (Operations). The Senior Accounts Officer (assisted by Junior Accounts Officers) at each circle office is responsible for billing the HT consumers in both the DISCOMs.

Apart from HT Billing, both the DISCOMs have implemented SAP –ERP with Finance & Controlling (FICO), Material Management (MM), Human Resources (HR) and Asset Management (AM) modules.

4.7.3 HT billing applications

HT billing was developed by erstwhile APSEB on SunOS (renamed later as Solaris) with Oracle 7.3 at the backend, SQL*Forms 3 at the front end and Pro*C as programming language.

APSPDCL

The DISCOM continued using the same legacy system for generation of bills of HT consumers. APSPDCL has opted (2009) to implement MBC (Metering, Billing, Collection) application offered by IT Implementing Agency (ITIA) selected by Ministry of Power for implementation of R-APDRP programme in Andhra Pradesh. The R-APDRP program plans to covers 32 towns which consist of 26 percent of the total HT consumers billed by the DISCOM. Thus remaining 74 *per cent* HT consumers will continue to be billed using legacy system. The MBC application is still under implementation.

APEPDCL

The DISCOM had switched over (March 2010) to a new billing application (Revenue Assurance System -RAS) offered by an IT Solutions firm (firm) for both HT and LT billing. An agreement was entered into with the firm for implementation of RAS application on a “Software as a Service” (SaaS) model under which ₹ 0.32 per service connection (i.e. per consumer – both LT & HT consumers) per billing month was payable for a period of three years from March 2010 to the firm by APEPDCL.

The RAS application is a Web based open architecture running on RED HAT Linux Enterprise version 5.2 Operating System with Jboss 4.2.2 application using Oracle 11g RAC environment as Database.

⁷⁷Chittoor, Nellore, Kadapa, Guntur, Ongole and Krishna Circles

⁷⁸Vishakhapatnam, Vizianagaram, Srikakulam, East Godavari and West Godavari Circles

RAS system consists of Metering, Billing, Collections, remittances and accounting activities pertaining to both LT and HT billing. HT billing module was an application with centralised processing at corporate office and decentralised data feeding at Circles offices. LT Billing module was a fully decentralised application with both data feeding and processing located at the numerous Electricity Revenue Offices (ERO) across the DISCOM.

4.7.4 Scope of Audit, Audit objectives, Audit Criteria and Audit Methodology

Billing data pertaining to the period from 2008-09 to 2012-13 for both DISCOMs were examined in audit during October 2012 to June 2013.

The HT billing databases of APSPDCL and of APEPDCL were analysed using CAATs⁷⁹. The results of queries on the databases were cross verified with physical records at Circle offices, to evaluate the adequacy of IT controls, to identify loss/leakage of revenue and to examine comprehensiveness of the System.

The objectives of Audit were to:

- Examine whether proper checks and controls were adhered to during acquisition and development of applications;
- Verify whether adequate operational controls exist at various stages of the System, to ensure Confidentiality, Integrity and Availability of information to all stakeholders;
- Examine whether business rules were properly mapped and all required functionalities provided in the billing applications, to ensure correct billing.

The audit criteria adopted for ensuring the achievement of audit objectives were:

- Provisions of Electricity Act, 2003;
- Retail Supply Tariff Orders, Regulations and Directives issued by APERC from time to time;
- General Terms and Conditions of Supply (GTCS) of Distribution and Retail Supply Licensees approved by APERC; and
- Comparison with other DISCOMs in the State.

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

- Examination of documents i.e. System Development, Agreement with the Contractor at APEPDCL;
- Test check of network vulnerabilities using utilities like NS Auditor in APSPDCL.

The audit findings were reported to the Management and the Government in

⁷⁹Computer Assisted Audit Techniques.

September 2013 and the replies of the Government were received in December 2013.

4.7.5 Audit Findings

The audit findings of the two DISCOMs with relevance to each of the audit objectives are discussed in the succeeding paragraphs. The findings of similar nature across the two DISCOMs are combined wherever feasible.

Acquisition and Development

An IT policy/ strategy is desirable for guidance in acquisition and development of new software and their integration with other existing software for improved decision-making.

4.7.5.1 Lack of formulated and documented IT policy

Both DISCOMs are utilising automated applications like HT billing, LT billing, SAP ERP etc. However, they are yet to formulate and document a formal IT policy and long/ medium-term IT strategy incorporating the time frame, key performance indicators and cost benefit analysis for developing and integrating these applications.

Both the DISCOMs replied that formulation of an IT policy / strategy is under process.

Design Issues

4.7.5.2 Duplication of work due to lack of integration between SAP and HT billing system

In APEPDCL, HT consumer accounts are maintained in both HT Billing system and the SAP ERP. Interface for transferring monthly demand data from HT billing system to SAP was created. However, interface was not created in APSPDCL between HT Billing system and SAP to transfer payments received from the consumers and journal entries (JEs) thereof and the same is being fed into the HT billing system and SAP ERP separately leading to duplication of work and wastage of several man-hours while leaving scope for variations in the data, thus affecting the integrity of the databases.

Management/ Government replied (December 2013) that proper integration/ interface between SAP and billing applications would be provided during development of a new billing application that has been proposed.

4.7.5.3 Undue advantage to an IT Solutions firm

The Board of Directors of APEPDCL decided (22 June 2011) to continue with RAS application till the finalization of MBC application under R-APDRP⁸⁰. Subsequently when MBC application was ready for implementation APEPDCL decided (30 March 2012) to continue with RAS instead of opting for the MBC solution. It was further decided to change the existing distributed

⁸⁰Restructured Accelerated Power Development and Reforms Programme under which funds (grant/loan) were provided to DISCOMs for implementing IT applications.

architecture of LT billing module of RAS to a centralized architecture.

Accordingly, a quote was obtained from the same firm, which was operating the RAS, for outright purchase and implementation of RAS on a centralized architecture. The firm after negotiations quoted ₹ 3.45 crore for software, ₹ 0.90 crore for implementation and AMC of 18 *per cent* on software cost.

The Board, however, decided (29 September 2012) to go for tender for implementing a new billing application. The only quote received was from the existing firm and agreement for implementation of the new billing system was entered with the firm for an amount of ₹ 8.30 crore on 23 January 2013 and the same is under implementation (September 2013).

In this regard, audit observed the following:

- In the tender document, the Company did not inform prospective bidders about the availability of Source code of the existing RAS application with the Company.
- The original offer of the firm was ₹ 4.35 crore which included ₹ 3.45 crore towards software cost. The DISCOM, however, already owned the software as per the agreement of March 2010. Thus DISCOM under this arrangement was required to only bear the additional cost of ₹0.90 crore towards its implementation.
- By entering into fresh agreement with the same firm for the same software DISCOM ended up incurring additional cost of ₹ 7.40 crore (i.e., ₹ 8.30 crore – ₹ 0.90 crore).

Management / Government replied (December 2013) that APEPDCL is not the owner of RAS HT application.

However, DISCOM had source code, for exclusive and unlimited use, provided by the firm as per the agreement of March 2010.

General Controls

Proper general controls ensure the integrity of the programs, data files and computer operations.

4.7.5.4 Data Integrity Issues

Change in tariff of HT consumers requires changes in master data table containing tariffs and changes in categories require changes to the HT Billing application. These changes are required to be documented, adequately tested and properly controlled to ensure the correctness and accuracy of billing.

4.7.5.5 Deficiencies in Master Data Changes

In APSPDCL, modifications made to both master data and the application to accommodate the changes in business rules were not documented. Further, a formal policy for authorising such changes and for testing their accuracy does not exist.

Management/ Government replied (December 2013) that sample bills are

verified by revenue wing before issue and that necessary modifications are done in co-ordination with HT revenue wing at Corporate Office.

Audit noted that though the changes were verified by IT wing using test data, the accuracy of the same was not ensured in the absence of concurrence from the Finance Wing/ Circles.

4.7.5.6 Categorisation of a consumer under different categories for regular billing and R&C penalties simultaneously

A HT consumer in APEPDCL was categorized as Category II for regular billing while the same consumer was categorized as Category I A for levy of R&C⁸¹ penalties during the billing month of February 2013, indicating maintenance of duplicate master data which may give scope for incorrect billing.

Management/ Government did not furnish reply.

4.7.5.7 Master Data quality issues

Queries on the data dump pertaining to October 2012 provided by APSPDCL revealed that the database contained invalid or inconsistent data pointing towards lack of validation checks and input controls as evident from the following:

- Contracted Maximum Demand (CMD) of a consumer, which is an essential element for the purpose of billing, was blank in one case resulting in excess levy of ₹ 0.90 lakh. This indicates inadequate control over completeness of master data.
- In 192 cases, “Date of commencement of supply” was prior to “Agreement date” ranging from 1 day to 43 years 7 months and 19 days which is inconsistent ;
- In respect of 36 HT consumers, address details were not available in the master table;
- In respect of 30 HT consumers, subdivision code was not filled in the master table;
- In the master table, in respect of 350 SCs, ‘specified KV’ was not filled in;
- In 541 SCs, specified KV did not match with Actual KV in the master table;
- Date of commencement of supply and date of agreement in respect of 73 SCs and 1402 SCs is respectively left blank in the master table;
- Likewise, analysis of data for the period April 2008 to September 2012 revealed that in 1,043 cases relating to 733 consumers, the Power Factor was recorded more than maximum possible Unity i.e., 1 and ranged from 1.01 to 20565.00;

⁸¹ Restriction & Control measures impose restriction on power consumption by HT consumers. If consumption exceeds allowed limit, penalties ranging from two to six times of normal tariff are leviable.

- The fields “bill issue date” and “bill due date” in the monthly bills were left blank in respect of 37,249 records.

Further, it was noticed that though the date of changes were being recorded the time was not being indicated.

Management/ Government replied (December 2013) that necessary action would be taken to incorporate validation checks and input controls in the proposed new software.

4.7.5.8 *Lack of Backup Policy*

It was noticed that both DISCOMs did not have an approved backup policy.

Management/ Government replied (December 2013) that backup strategy would, henceforth, be followed scrupulously.

4.7.5.9 *Lack of ‘Business Continuity and Disaster Recovery Plan’*

While APEPDCL had prepared a business continuity plan as part of ISO certification, it did not have a disaster recovery plan outlining identities of personnel and their roles/ responsibilities, plan/procedure to support such a critical IT system in the event of a failure. APSPDCL, however, neither had a business continuity nor a disaster recovery plan (BCDRP).

Management/ Government replied (December 2013) that steps would be taken to implement and document the disaster recovery plan.

Logical Access Controls

4.7.5.10 *Outsourcing of critical activities*

APEPDCL entrusted critical activities like system administration and database administration to contract personnel without defining and documenting roles and responsibilities and screening the third party personnel in violation of provisions of its Security Manual. Assignment of important tasks like System administration and Database Administration of critical business application, like RAS-HT to contract personnel, in the absence of adequate recording and monitoring of logs of System Administrator / DBA access makes RAS vulnerable to unauthorised changes.

Management/ Government replied (December 2013) that as activities of System administration and Database administration require special skills, DISCOM assigned the facility management services to third party agencies.

However, appropriate checks in terms of confidentiality agreement, generation and periodic review of access logs and onsite access control are to be built up.

4.7.5.11 *Lack of maintenance of Audit Trails*

DISCOMs did not enable any audit trails and logging of critical activities like changes to master data and transaction data thereby leaving no scope for verification of changes made or authorisation thereof. Risk is enhanced in APEPDCL where the system is outsourced.

Management/ Government replied (December 2013) that audit trails and activity logs will be maintained in the proposed HT billing system.

4.7.5.12 Weak User authentication

Passwords are used as a mechanism for user identification, authentication and non-repudiation. It was noticed that APSPDCL neither has password policy approved by competent authority nor has it imposed restrictions on password usage by users/ administrators. Therefore, there was a risk of unauthorized access and data modification that could not be traced. Further, there is no option in APSPDCL to change the password allotted to a user, thus forcing the user to use perpetually same password allotted by the administrator. In the event of a violation of security policy under a user ID, it would be difficult to fix responsibility. The same could have been avoided by requiring the user to change his password compulsorily, after logging in for the first time.

Management/ Government replied (December 2013) that password policy would be framed and enforced and password change option would be provided to users.

4.7.5.13 Lack of Confidentiality - Usage of single User ID by more than one person

It was noticed in APSPDCL that user IDs allotted to Senior Accounts Officers of Circles are being shared by section staff of the Circle concerned for various activities like feeding of meter readings, generation of bills etc. Sharing of privileges and perpetuation of same passwords increases the risk of unauthorised change and would lead to difficulty in locating it.

Management/ Government replied (December 2013) that additional user IDs are being created for miscellaneous transactions.

SOD violations

4.7.5.14 Lack of segregation of duties between Database Administrator and System Administrator

A clear Segregation of Duties (SoD) between a **Database administrator (DBA) and System administrator** is very important. Further, activities of these users must be logged and the log files must be preserved permanently to ensure confidentiality, integrity and availability of database. However, it was noticed that both responsibilities of System Administrator and DBA are being performed by a single official along with access to the Oracle super-user "SYS", thus giving complete access to the Database from back-end. This coupled with non-maintenance of logs and audit trail rendered the system vulnerable to unauthorized changes.

Management/ Government replied (December 2013) that the guidelines would be followed during the development of the new system.

Security Controls

Proper security controls are necessary to minimise security risks relating to IT Assets.

4.7.5.15 Network Security Issues

APSPDCL is still using TELNET protocol to connect to the server, which is not a secure protocol, thus providing scope for interception of the data including passwords.

Management/ Government replied (December 2013) that SSH protocol would be adopted by using open source terminal emulator application (PuTTY client).

4.7.5.16 Open ports-Risk of susceptibility to malware

A scan of the LAN of APSPDCL (using a software “Free IP tools”) revealed that vulnerable ports were open on the computers connected to the network, exposing the system to attacks of malware like viruses and worms and intrusion by hackers. These vulnerabilities coupled with unencrypted transfer of data by TELNET protocol exposed the entire system and data residing in the server at risk.

Management/ Government replied (December 2013) that action would be taken to close/ hide all unused ports both on end user systems and server, based on the recommendations of the IT Security consultants of APSPDCL.

4.7.5.17 Improper configuration of Access Control List

It was noticed that APSPDCL instead of configuring an Access Control List (ACL) of its Router and Firewall to restrict access to the server to the IP addresses allotted to the authorised users, had allowed access from any of the IP addresses on their Local Area Network (LAN). This coupled with unencrypted data transfer of the TELNET protocol, makes the system vulnerable to unauthorized access.

Management/ Government replied (December 2013) that ACL was modified to permit access to only circle level users. It was also replied that SSH protocol was adopted in place of TELNET.

Application Controls

Application controls ensure that input data is valid (input controls/ validation checks) and data is processed correctly (processing controls), calculations are accurate; process errors are logged and corrected in timely manner; and that sufficient audit trails were in place.

Non Mapping of Business rules

4.7.5.18 Failure to compare kWh and kVAh readings to ensure application of business rules

APSPDCL started billing its HT Consumers (3533 nos.) on kVAh basis since 2011-12. As per the norms, kVAh⁸² consumption should not be less than

⁸²Kilo Volt Ampere Hour. $kWh = kVAh * PF$. kVAh and kWh are equal when Power Factor =1. As PF reduces, consumption in kWh units also reduce thus resulting in lower realization to DISCOMs. Under kVAh tariff, DISCOMs get full amount irrespective of PF. The burden will be on the consumer to improve PF at his premises. kVAh represents the amount of power supplied while kWh represents the amount of power actually used by the Consumer.

kWh⁸³ consumption. An analysis of the data dump for the month of October 2012 revealed that the kWh consumption was more than the kVAh consumption in case of 676 records of 476 HT consumers during the period from May 2011 to August 2012 indicating lack of proper input controls/validation checks. Failure of the system to ensure that the kWh readings are not more than kVAh readings resulted in short billing of ₹ 35.32 crore.

Management/ Government replied (December 2013) that consumption data of above cases is referred to field for verification and correction. Action will be initiated once the verification is completed.

4.7.5.19 Incorrect levy of low Power Factor surcharge

APERC provided for levy of low Power Factor (LPF) surcharge for consumers with PF less than 0.95 so as to ensure that the PF does not fall below threshold level. However, this rule was found to be incorrectly mapped leading to instances of wrong levy of LPF surcharge.

LPF surcharge of ₹ 0.53 lakh during the period 2009-10 and 2010-11 was short-levied by APEPDCL due to such mapping of rule.

Management/ Government replied (December 2013) that the shortfall will be collected from the consumers

4.7.5.20 Short levy of LPF surcharge

As per the provisions of tariff order 2008-09, LPF surcharge had to be levied on the actual energy consumed or on the minimum energy billed for that month, whichever is higher. However, failure to levy LPF surcharge on minimum billed energy in cases where actual energy consumed is less than the minimum energy billed, had resulted in short levy of ₹ 77.62 lakh in APEPDCL.

Management/ Government replied (December 2013) that the billing was carried out as per the clarification issued (15 November 1999) by APTRANSCO. However clarification was issued prior to APERC tariff order. The billing should have been carried out as per the tariff order.

4.7.5.21 Failure to levy LPF Surcharge and Customer Charges on RESCO consumer

APSPDCL started billing its HT Consumers on kVAh basis since 2011-12. However, RESCOs were continued to be billed under Kwh basis for which low power factor (LPF) surcharge was applicable. LPF surcharge was not levied on RESCO, Kuppam in APSPDCL as per the Tariff Order resulting in shortfall of ₹ 36.42 lakh for the period from December 2011 to February 2013.

Though RESCOs were classified as Consumers under a new HT Category – VIII from the year 2012-13, the customer charges were not levied on RESCO, Kuppam resulting in a shortfall of ₹ 0.14 lakh for the period April 2012 to March 2013. This indicated incorrect mapping of categories for levy of customer charges in the system.

⁸³Kilo Watt Hour.

Management/ Government replied (December 2013) that the demand has been raised for the shortfall.

4.7.5.22 Non adherence to APERC provisions in HT Billing system in APSPDCL

As per Regulation 5 of 2004 of APERC, Payments received from consumers have to be adjusted in order of priority of previous year arrears, Current year arrears, Current month bill respectively. In APSPDCL payments made by the consumers are not being adjusted in the order of priority.

Management/ Government replied (December 2013) that action is being taken to incorporate the same in new software being developed.

4.7.5.23 Incorrect billing of Ferro Alloy consumers

Tariff Order for the year 2009-10 stipulated that in the event of non-segregation of lights and fan loads in the factory premises by a HT category I (B) consumer i.e. Ferro Alloy Units, 15 per cent of the total energy consumption shall be billed at 440 paise per unit and the balance units shall be charged at the corresponding energy tariff under HT Category I (A). However, in two cases, the balance units were not billed at HT – IA category resulting in short billing of ₹ 20.17 lakh.

Management/ Government replied (December 2013) that demand has been raised for shortfall for the balance units.

4.7.5.24 Deficiencies in the criteria for computing LF Incentive

The DISCOMs, with the approval of APERC, introduced a scheme (2001-02) of allowing incentive (discount on tariff) for HT-I (A) consumers with Load Factor (LF) above a stipulated threshold limit which was 50 per cent for the tariff years 2006-07 to 2009-10. The incentive scheme was withdrawn from the tariff year 2010-11.

An analysis of incentives allowed to consumers during the period from April 2008 to March 2010 revealed the following discrepancies:

A scrutiny of database, in APSPDCL, revealed that contrary to the scheme, incentive amounting to ₹ 4.77 lakh (August 2010) was allowed to one consumer other than HT Category I-A, who was otherwise not eligible for such incentives.

Management/ Government replied (December 2013) that the incentive allowed to ineligible consumers will be recovered.

In APSPDCL, it was noticed that there were 2 cases from April 2008 to March 2010 where incentives amounting to ₹ 0.91 lakh were allowed to consumers even though their LF was lesser than the threshold limit of 50 per cent (applicable during the period).

Management/ Government replied (December 2013) that the audit comment is accepted and action will be initiated after detailed study.

4.7.5.25 Failure to segregate Aviation and Non-Aviation loads

As per the provisions of Tariff Order for the year 2012-13, in case of non-segregation of airport loads into aviation and non-aviation related activities by the end of July 2012, entire load shall be billed under HT Category II (others) from 01 August 2012 till date of such segregation. It was noted that changes were not made to map this business rule in the application that had impact on revenue / billing.

Two service connections catering to airport loads were under APSPDCL. In one case though segregation was not done, energy was not billed under HT category II while in another case, though segregation was done, non-aviation loads were billed under LT category IB instead of HT category II resulting in a total short billing of ₹ 4.79 lakh. These indicate lack of implementation of business rules/ provisions of tariff orders in the HT billing software.

Management / Government replied (December 2013) that a demand of ₹ 3.44 lakh was raised towards shortfall on the ground of non-segregation.

Processing Controls

Lack of Functionalities

It was observed that certain components of HT billing were excluded from the HT billing application due to which manual operations were depended upon.

4.7.5.26 Lack of functionality to raise demand for excess drawing of energy by RESCOs

No subsidy is available for the power drawn by the RESCOs, in excess of the quantum approved by the APERC. The DISCOMs would bear the loss of revenue, if any, for the excess quantum of power drawn. Thus, to protect its financial interests, APSPDCL has to watch the drawal of power by the RESCO and address RESCO if it was likely to exceed the allotted quantum. Any excess drawal beyond that quota should be billed at a rate derived from RESCO's additional sales weighted average revenue realisation.

In this context, it was observed that:

- The system did not generate any warning or prompt even though RESCO had exceeded its quota by 26.43 MU during the tariff years 2008-09 to 2011-12; and
- The software also does not provide for billing the excess power drawn at an enhanced rate as per the methodology approved by APERC.

Management / Government replied (December 2013) that the functionality will be included in the new billing software being developed.

4.7.5.27 Lack of functionality resulting in manual intervention

Audit noticed that certain HT billing components were excluded from the software necessitating manual calculations/ interference, thereby affecting the

integrity of the system and completeness of the database as detailed below:

Component excluded	Reply
In APSPDCL, temporary HT service connections are being billed manually till they are regularised and not routed through the HT billing application resulting in lack of completeness of the database.	The management of both companies stated (April 2013 & June 2013) that action would be taken to include the said functionality in the proposed new software.
In case of APEPDCL, billing of temporary HT connections is being carried out through the system. However, users cannot differentiate between a temporary service and a regular service as there is neither an indication on the bill nor reports generated due to which billing of a temporary connection at normal tariff cannot be identified, thus making the system vulnerable to fraud.	
The HT billing system in APSPDCL does not provide for billing of HT services on proportionate basis where the number of days to be billed is less than a complete month. Bills for new consumers for the first month from the date of supply are being prepared manually or incorrectly prepared through the HT billing system. In one case an excess demand of ₹ 4.25 lakh was raised.	The system is not configured to issue demand for a part of month and that action would be taken to include the said functionalities in the proposed new software.
APSPDCL did not automate the process of calculation of banking charges of banked energy ⁸⁴ but is doing it manually.	Will be incorporated in the new HT billing software being developed.
APSPDCL did not provide any functionality in the HT billing system to pursue the receipt of the SD demanded and to automatically levy surcharge in the event of default. This resulted in dependence on manual calculations thereby leading to non-adherence to the instructions in vogue, undue favour to the consumers, postponement of surcharge of ₹ 84.65 lakh for the year 2012-13 and an incomplete database.	Will be incorporated in the new HT billing software being developed.
Non-provision of functionality to generate demand for minimum agreement period in spite of disconnection led to belated raising of demand of ₹ 51.63 lakh (March 2013) for the period from March 2012 to March 2013, resulting in loss of interest of ₹ 4.65 lakh	Will be incorporated in the new HT billing software being developed.

Further, the following functionalities/ features are not provided in the HT billing systems of both the DISCOMs:

- provision for billing of malpractice or theft cases;
- provision to capture billing data pertaining to short-billed units, change in CMD etc. As a result, data generated for calculation of Fuel Surcharge Adjustment (FSA) and Additional Consumption Deposit is incomplete;
- provision for maintaining consumer history i.e., changes in load, contracted demand, multiplying factor, meter changes etc.

The above changes are being recorded by way of posting a Rectification Journal Entry (RJ) due to lack of required functionality. The revised billing particulars are not incorporated in the original data/tables. The database

⁸⁴Banking means keeping in reserve, the delivered energy supplied to the Company by a scheduled generator, in any billing month(s), in excess of the energy required to be wheeled by the Company to the scheduled consumers in that month, with the purpose of wheeling such excess energy in any succeeding month(s) to the scheduled consumers.

continues to depict the old and incorrect data and do not show the revised billing particulars. In the absence of non incorporation of changes in the database, the reports generated will be incorrect and the database continues to carry the incorrect data.

Management/ Government replied (December 2013) that manual mode is used for calculations, which are then fed into the system to prepare a complete bill to the consumer and that action would be taken to incorporate above features in the proposed software.

As manual processing results in lesser transparency and may lead to errors, action should be taken to automate the above processes in the billing system covering all HT services of APSPDCL.

Manual Interventions

Audit observed that the data processed through the applications are being modified manually thereby affecting the integrity of database as observed below:

4.7.5.28 Manual withdrawal of DPS

Delayed Payment Surcharge (DPS) of ₹ 2.02 crore on a consumer of Tirupati Circle of APSPDCL, for the period from April 2010 to February 2013, though correctly levied by the system, was subsequently withdrawn from the billing application every month at Circle with the approval of Corporate office. As against this, an amount of ₹ 44.20 lakh was raised subsequently (November 2011) leaving balance of ₹ 1.58 crore (February 2013).

Management/ Government replied (December 2013) that the notice to the consumer had been issued for payment of surcharge due.

4.7.5.29 Lack of restrictions on manual entry of data

Though users of the RAS were authorised to enter metering data manually, restrictions on usage of the same continuously for several months for a consumer were not built-in in the system leading to leakage of revenue as illustrated in case of a Ferro Alloys consumer of APEPDCL where the lights and fans meter was malfunctioning for more than five years. However, the system allowed feeding of average meter reading of 446000 units per month for the above period in spite of instructions in GTCS to recalibrate the HT meters once a year.

Management/ Government replied (December 2013) that defective meter was replaced on 20 May 2013.

Conclusion

- Lack of interface between the billing systems and SAP ERP led to duplication of work in both DISCOMs;
- APEPDCL did not ensure the implementation of provisions of the agreement with the software provider;

- Both DISCOMs have neither adequate backup policy nor a disaster recovery plan;
- The billing systems had poor general information technology controls especially regarding the security features such as access controls, network protocol, passwords and audit trails etc. Thus the system was vulnerable to unauthorised access and data manipulation;
- Excess rights to the administrators and lack of segregation of duties exposed the system of APSPDCL to unauthorised data manipulation;
- The application of APSPDCL contained various design deficiencies and a number of billing components were not automated but continued manually leading to incomplete and inaccurate database;
- The application of APSPDCL lacked input controls resulting in inconsistent and meaningless data residing in the database affecting the quality of master data;
- Some business rules framed by APERC were either not incorporated or improperly incorporated into the billing applications of both DISCOMs. This led to incorrect billing of the consumers, especially in cases of changes in the consumer parameters leading to financial loss to the Company.

Recommendations

DISCOMs should

- *Formulate and document an information technology and backup policy;*
- *Document all amendments made to the software and bring all aspects of HT billing into the application;*
- *Maintain activity logs and audit trails;*
- *Address the security vulnerabilities and implement access controls keeping in view "Segregation of Duties" requirements;*
- *Formulate and implement a comprehensive Business Continuity Plan.*

STATUTORY CORPORATION

Andhra Pradesh State Road Transport Corporation

4.8 Commuter Amenity Centers/ Bus Terminal Complexes constructed under JnNURM Scheme

4.8.1 Introduction

Government of India (GoI), Ministry of Urban Development (MoUD) launched 'Jawaharlal Nehru National Urban Renewal Mission' (JnNURM) scheme, in December 2005 for planned development of urban infrastructure, which includes Urban transport projects in the mission cities. Hyderabad, Visakhapatnam and Vijayawada cities in Andhra Pradesh qualify for financial assistance under JnNURM. Andhra Pradesh State Road Transport Corporation (Corporation) initially formulated proposal for Hyderabad city.

The Corporation, as an implementing agency, proposed to set up Commuter Amenity Centers (CACs) under JnNURM scheme as a part of improved measures to increase use of Public Transport by commuters. CAC is a structure having a Bus Depot and centrally air-conditioned Bus Terminal (BT) with ultra-modern facilities⁸⁵.

4.8.2 Audit findings

Audit of implementation of above scheme in the Corporation was conducted (February to May 2013) to assess efficiency and effectiveness in implementation and the following are audit findings.

Planning

4.8.2.1 Detailed Project Report

DPR was to be prepared considering all the important aspects concerning the project viz. land requirement, built up area details, project cost, source of funds, projected expenditure/ income, market potential, investment details, mode of implementation etc.

Corporation prepared (May 2007) a vision plan 2006-2010 for Hyderabad followed by submission (October 2007) of a Detailed Project Report (DPR) to GoI, MoUD for creation of Transport Infrastructure⁸⁶ under JnNURM and other Auxiliary infrastructure⁸⁷ items at an estimated cost of ₹ 3,547.94 crore⁸⁸ spread over four year period 2007-2011. Proposed sources of project cost were Central Grant (₹ 720.23 crore), loan under the scheme (₹ 496.71 crore) and capital contribution from the Corporation (₹ 2,331 crore).

The above DPR was prepared to gear up for the increased transportation needs of citizens of Hyderabad city arising out of development of ambitious projects of State Government⁸⁹. However, since it would not be possible for the Corporation to invest huge capital for this project and development of proposed State Government projects would likely take some more time to materialise, the Corporation included a pilot project in DPR for ₹ 206.06 crore for development of immediate Infrastructure.

Audit noticed that the Corporation prepared DPR without considering important aspects like market potential, financial feasibility, viability, etc., for each CAC and not backed by any professional Consultant Study. The DPR was not exclusively prepared for each of the CAC for submission to MoUD.

⁸⁵Facilities like Banking, e-seva, Cafeteria, Pass issue counter, Reservation Counters, Waiting Hall, Toilets, Medical Assistance, Drinking Water, Internet Cafe, 'Park and Ride' facility and passenger information on arrival and departure of buses through electronic passenger information boards.

⁸⁶consisting of 20 new depots, 66 Inter-Modal Transit Centres (IMTCs), 46 major Bus Terminals, 700 Bus shelters, 41 Commuter Amenity Centres, 25 Nodal points, 4 Workshops, 2684 Buses.

⁸⁷Employee Development Centres, Solar lights, Environment, Water Harvesting, Global Positioning System, Passenger Information System & Interactive Voice Response System, Electronic destination boards, Electronic Ticket Issuing Machines, Computerisation, Surveillance System.

⁸⁸ Infrastructure: ₹ 2,046.30 crore; Land cost: ₹ 681.51 crore and Vehicles/ Rolling stock: ₹ 820.13 crore.

⁸⁹ viz., Bus Rapid Transit System, Outer Ring Road project and New Satellite Townships

Central Sanctioning and Monitoring Committee (CSMS), GoI sanctioned (February 2008) the Pilot Project for creation of 11 infrastructure projects at a cost of ₹ 162.13 crore, to be completed by March 2010, as detailed below:

- Five CACs with new depots and air conditioned Bus Terminals (₹ 86 crore) of 50000 Sft. plinth area at Musheerabad; Hayathnagar; Bandlaguda; Turkayamzal; and Shamshabad.
- Two CACs (₹ 26 crore) at existing depots i.e., creation of air conditioned BTs of 50000 Sft. plinth area at Kukatpally and Mehdipatnam.
- Four BTs (₹ 40 crore) of 50000 Sft. plinth area at Koti; Patancheru; ECIL X roads; and Farooqnagar.
- Creation of Auxiliary infrastructure (₹ 10.13 crore).

However, the Corporation could not construct even a single integrated CAC (Bus depot and BT in one premises) and went ahead with construction of seven Bus depots and nine BTs at different locations including two Bus depots in place of BTs. Two Bus depots in place of BTs was disallowed by MoUD (January 2013), who reduced the above sanctioned cost to ₹ 123.92 crore (Auxiliary infrastructure cost was also reduced to ₹ 8.41 crore). Thus, the Corporation deviated from the main objective of constructing integrated CACs.

Audit observed that there were delays and deviations in implementing the project as discussed in Paragraph 4.8.2.4, mainly in selection and acquisition of land, lack of response to tenders for construction, etc., which could have been better addressed had DPRs been prepared on the basis of proper field studies.

The State Level Steering Committee also stated (April 2011) that DPRs are being prepared by project implementing agencies without paying adequate attention to availability of land and without obtaining necessary clearances from Line Departments, resulting in inordinate delays and revision of DPRs.

Thus, planning for JnNURM projects is defective as DPR is deficient with regard to site availability and suitability, commercial viability, etc., resulting in delays and deviations in implementation as discussed in following paragraphs.

4.8.2.2 *Engagement of consultant for preparation of project-wise DPRs*

The Corporation after inviting quotations from shortlisted consultants, entered into an agreement with a Consultant in September 2008 for preparation of DPRs for seven CACs and four BTs including Architectural Services and Bid Process Management for submission within 18 months from date of agreement for a consultancy fee of ₹ 2.60 crore. DPRs for six projects⁹⁰ were submitted by Consultant in July 2009, after which the Corporation disengaged services of Consultant as Consultant did not follow timelines as per agreement and paid

⁹⁰Mehdipatnam, Kukatpally, Koti, ECIL X roads, Patancheru & Farooqnagar.

₹ 97 lakh towards consultancy charges.

Audit observed that by the time Corporation engaged Consultant for preparation of DPRs (September 2008), the pilot project was already sanctioned by GoI, based on consolidated DPR submitted by Corporation, and first instalment of grant was received (March 2008). Further the Corporation entered into agreements for construction of four BTs⁹¹ (December 2008 to January 2009) prior to receipt of DPRs from consultant. Thus, six DPRs provided by Consultant could not be submitted to MoUD, rendering the expenditure unfruitful.

4.8.2.3 Funding

As per funding pattern of JnNURM, project cost would be funded by Central Assistance (35 per cent), State Assistance (15 per cent) and balance 50 per cent was to be arranged by implementing agency.

Audit observed that:

- the State Government has not contributed its share of assistance of 15 per cent of project cost and AP Urban Finance Infrastructure Development Corporation, nodal agency for JnNURM, converted 40 per cent of central share into loan with 7.5 per cent interest and also deducted 2 per cent of central share towards Administrative & other expenses. Thus, in effect only 21 per cent of project cost is received as grant and remaining 79 per cent is loan, which would be a burden on debt ridden Corporation.
- the Corporation implemented the project without analysing financial viability of the projects and apprising the Board of the fact of non-availability of State Government grant and partial conversion of Central grant as loan by nodal agency, which would adversely affect the availability of financial support.

Corporation received ₹ 22.24 crore against central assistance and incurred ₹ 65.86 crore till end of March 2013. Initially JnNURM scheme was up to March 2012 but extended up to March 2014 for completion of already commenced projects.

4.8.2.4 Delay and deviations in implementation of Pilot Project

As per schedule, Pilot Project should have been completed by March 2010. Audit observed that even after more than three years after scheduled completion date the Corporation could not implement Pilot Project in toto. After more than five years of first sanction (March 2008), the Corporation could spend only ₹ 65.86 crore (up to March 2013), which is 53 per cent of revised pilot project cost (₹ 123.92 crore). Details/ status of sanctioned projects are given in **Annexure-4.5**. It can be seen from Annexure that:

- Not even a single integrated CAC was constructed;

⁹¹Koti; ECIL X roads; Patancheru and Kukatpally.

- Delays for eight out of 10 completed projects (five Depots and five BTs) ranged from 7 to 36 months, works of two BTs are still in progress and work of two BTs is yet to start (June 2013);
- Locations of three BTs and two Depots were changed; and
- Plinth area was reduced by 9 to 37 *per cent* in respect of five BTs.⁹²

Main reason for deviation was non-availability of suitable and adequate land for construction of Depot/BT. Thus, the Corporation failed to implement the project as proposed in original DPRs and thereby envisaged amenities were not provided to the commuters.

4.8.2.5 *Delay in taking over completed projects and invitation of bids for leasing out commercial space by user department*

Audit scrutiny of four out of five completed BTs revealed substantial delay in utilisation of commercial space as indicated in table 4.8.

Table 4.8

Particulars	Kothi	ECIL	Patancheru	Kukatpally	Total
Actual date of completion of civil and allied works	20.4.2011	5.12.2010	31.3.2011	30.4.2011	
Date of handing over to operating Department	07.1.2013	18.12.2010	29.6.2011	22.3.2012	
Date of issue of NIT for leasing commercial space	30.10.2012	17.6.2011	19.1.2012	30.10.2012	
No. of months delay in handing over	20	0	3	11	
No. of months delay in issue of NIT from date of handing over	0	6	6	6	
No. of months delay in issue of NIT from date of completion of civil and allied works	18	6	9	18	
No. of months from date of NIT, to 31 March 2013	5	21	14	5	
Total Commercial Space (Sft.)	20643	7567	23748	20877	72835
Commercial space leased out (Sft.)	0	162	595	515	1272
Average lease rent per month (/ Sft)	257	352	417	42	
Loss of revenue (₹ in crore)	9.55	1.60	8.91	1.58	21.64
Commercial space not advertised (Sft.)	0	4053	7328	5234	16615
Loss of revenue till date (₹ in crore)	0	2.99	4.28	0.11	7.38

Source: Information/ data furnished by Corporation

Audit observed that only one BT at ECIL was taken over by concerned Regional Manager/ Depot within a month of its completion while remaining three projects were taken over after a gap of three to 20 months. BT at Koti, which was completed in April 2011 was taken over by user department in January 2013 only after a gap of 20 months, for which no recorded reasons were found. In addition to this, there was substantial delay in inviting bids for

⁹²Kukatpally; Midhani; Koti; ECIL X Road; and Farooqnagar.

leasing out commercial space even after taking over by user department. Out of 72,835 Sft. commercial spaces available in four completed projects, the Corporation could let out 1,272 Sft. commercial space (1.75 *per cent*) only up to March 2013. Non-letting of commercial space resulted in loss of revenue of ₹ 29.02 crore to the Corporation up to end of March 2013.

4.8.2.6 *Loss due to non leasing of space identified for advertisements at BTs/CACs*

Corporation had identified 4,378 Sft. for advertisement space in three CACs/BTs already completed viz., Kukatpally, Patancheru and Koti. However, even after a delay of more than two years efforts were not made to lease out space by inviting bids.

4.8.2.7 *Defective penalty clause*

Out of 12 projects for which contracts were awarded, in six projects, delays in completion of work ranged from 10 to 20 months against stipulated time of nine to 12 months. As per Clause 12 read with Clause 20.3 of agreements entered into with contractors, penalty would be imposed for delays as per Clause 60 – Preliminary Specifications to AP Standard Specifications (APSS), subject to a maximum of five *per cent* of contract value. However, audit observed that agreements did not specify percentage/ amount of penalty to be levied for different periods of delay in execution. Consequently, Corporation levied penalty of ₹ two lakh only (ranging from ₹ 5000 to ₹ 1,35,000; 0.01 to 0.25 *per cent* of contract value) as against leviable amount of ₹ 1.69 crore (at five *per cent* of contract value). Thus, agreements are deficient in specifying method of calculation of penalty, due to which Corporation levied meagre penalties not commensurate with the delays.

4.8.2.8 *Non achievement of scheme objectives*

As per scheme, availability of commuter facilities like Park and Ride, ATMs, Mall centres, internet café, cafeteria etc., in CACs/BTs would improve patronising of public transport and curtailment of personal motor transport trips besides revenue to the Corporation to meet O&M expenditure to achieve creation of self-sustainable assets. But, it was observed that the Corporation failed to provide ultra-modern facilities in any of the BTs completed. Parking areas provided are small and most of the commercial areas are vacant resulting in non-provision of benefit to the commuters as envisaged in JnNURM objectives and DPR.

The Corporation incurred expenditure of ₹ 48 lakh against sanction of ₹ 8.41 crore on auxiliary infrastructure, thereby depriving commuters of information and safety arrangements at CACs/BTs.

Conclusion

- DPR was prepared without conducting basic field studies, ensuring availability of suitable land and assessing commercial and financial viability.
- The Corporation could not completely implement Pilot Project even five years after sanction.

- Due to delay in both handing/ taking over of completed projects and leasing out commercial/ advertisement space after taking over the projects by Regional Manager/Depot, the Corporation was deprived of commercial revenue.
- Ultramodern passenger amenities envisaged in DPR/ Scheme were not provided in BTs, thus DPR/ scheme objectives were not fully achieved.

Recommendations

- *The Corporation should take action to complete all projects without further delay and provide all envisaged commuter amenities to achieve the objective of improved patronising of public transport and curtailment of personal motor transport trips besides earning revenue.*
- *For future projects, the Corporation should prepare DPRs after ensuring availability of adequate land, financial/ commercial viability and source of funds.*

4.9 Lack of policy and efforts to minimise expenditure on toll tax resulted in additional burden on the Corporation - ₹ 50.69 crore

Lack of policy on collection of toll charges from the passengers and lack of efforts to minimise expenditure on toll tax resulted in additional burden of ₹ 50.69 crore on Corporation.

Andhra Pradesh State Road Transport Corporation (Corporation) has been paying toll tax to private toll plazas, for their buses, as per the notifications issued by National Highway Authority of India (NHAI) from time to time. NHAI revises toll charges annually. The expenditure incurred on toll tax was being borne by the Corporation till December 2005. However, from January 2006 the Corporation decided to recover the toll tax by imposing user fee from passengers.

Following deficiencies were noticed in audit which led to additional burden on the Corporation.

- In the absence of any policy, the Corporation had not revised user fees to be collected from passengers corresponding to annual revision of toll tax by NHAI during the period 2010-13, which resulted in additional burden of ₹ 50.69 crore (April 2010 to May 2013) being borne by the Corporation.
- Corporation did not avail facility of monthly pass for vehicles, which is cheaper by 32 to 40 *per cent* compared to daily payment.
- Commercial vehicles registered in districts are allowed 50 *per cent* concession in toll tax since 2012. However, as all vehicles of Corporation are registered in Hyderabad, this concession could not be availed by the Corporation even though most of these buses were based and ply within various districts. The Corporation had not made any efforts to overcome this simple technical issue, which would reduce toll tax expenditure by 50 *per cent*.

The Corporation replied (August 2013) that it has been submitting proposals to Government of AP from time to time seeking permission to enhance the toll plaza charges, for recommending to Government of India to exempt the Corporation from payment of toll fee and putting all efforts to reduce losses on account of payment of toll fee.

Fact remained that Corporation had incurred additional expenditure due to non-recovery of toll tax from passengers and lack of conclusive efforts to minimize expenditure on toll tax.

Hyderabad
The

(LATA MALLIKARJUNA)
Accountant General
(Economic & Revenue Sector Audit)
Andhra Pradesh

Countersigned

New Delhi
The

(SHASHI KANT SHARMA)
Comptroller and Auditor General of India