Chapter II

2. Performance reviews relating to Government companies

Haryana Power Generation Corporation Limited

2.1 Construction and Operation of Unit I and II of Deenbandhu Chhotu Ram Thermal Power Plant Yamunanagar

Executive summary

As per 16th Electric Power Survey of India, the Peak power demand in Haryana was projected to increase from 3,077 MW (2000-01) to 4,203 MW (2004-05). Against this, the generating capacity of the company was 1,040.50 MW in 2001-02. The Company set up 600 MW Deenbandhu Chhotu Ram Thermal Power Plant at Yamunanagar and 500 MW Panipat Thermal Power Station at Panipat and increased its generation capacity to 2,140.50 MW. The performance audit on Construction and Operation of Unit I and II (300 MW each) of Deenbandhu Chhotu Ram Thermal Power Plant, Yamunanagar was conducted to assess economy and efficiency in project planning and execution and performance of commissioned units against envisaged standards.

Project planning and contract

The State Government approved the project in July 2002. Initially it was decided to secure price offer from BHEL. But later on the proposal to implement the project through International Competitive Bidding (ICB) was approved by the Government in January 2004. This shifting of stand delayed the project initiation which could have been avoided by adopting ICB route in the beginning. The project was awarded in September 2004 to Reliance Energy Limited (REL) though it was not a regular turnkey management and contracting agency.

Execution of the project

There was cost and time overrun. The expenditure incurred on project was Rs. 2,501.80 crore as of March 2009 against an estimated project cost of Rs. 2,338 crore. The cost overrun of Rs. 163.8 crore was mainly on account of increase in cost of land, higher interest and excess consumption of startup fuel. In the absence of suitable clause in the contract, the net excess consumption of fuel of Rs. 48.90 crore during trial runs could not be recovered from REL. The Units scheduled to be commissioned in March 2007 and June 2007 actually started commercial operations from April 2008 and June 2008 respectively. Audit noticed that the Company could have further saved Rs. 21.62 crore with better management of the project. There were other deficiencies in the execution such as inadequate capacity of coal mill reject handling system, delay in commissioning of Dry Fly ash collection system and delay in completion of computerised maintenance and inventory management system. The monitoring of the project was also found deficient.

Performance of Units

The cost of generation was Rs. 3.19 per unit for Unit-I and Rs. 3.07 per unit for Unit-II as against HERC approved (provisionally) tariff of Rs. 2.91 per unit. The high cost of generation was due to excess consumption of inputs (coal, fuel oil, auxiliary consumption) as compared to the parameters guaranteed by REL and low plant load factor of about 69 per cent as against norm of 80 per cent. The high cost of generation resulted in loss of Rs. 67.46 crore during April 2008 to March 2009.

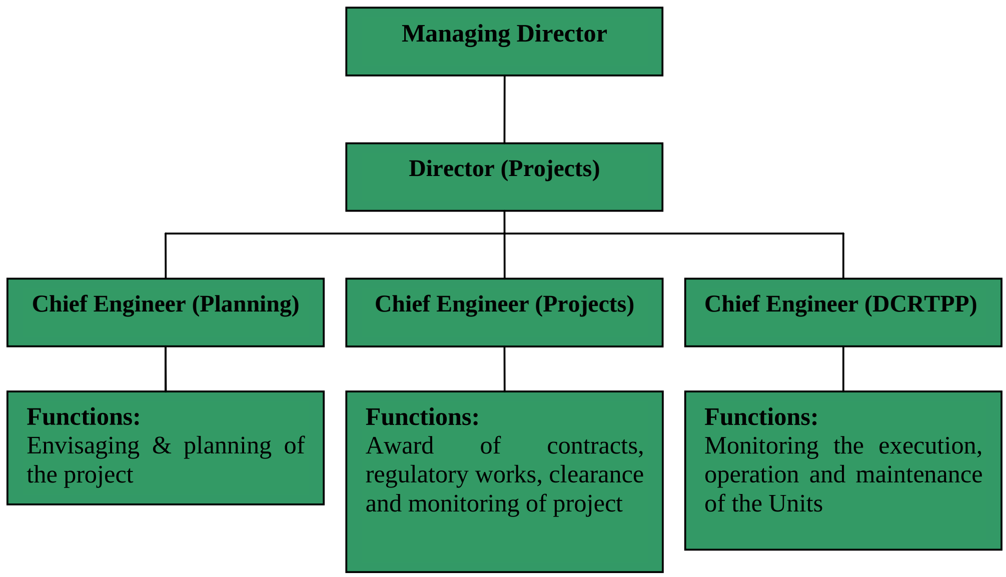
Conclusion and Recommendations

Timely commissioning could have enabled the Company generate 4,280 MUs more. Achieving 80 per cent PLF also could have resulted in additional generation of 499 MUs. This could have reduced the State's dependence on high cost power purchase. The review contains six recommendations which includes increasing the PLF and reducing the consumption of inputs.

Introduction

2.1.1 Haryana Power Generation Corporation Limited (Company) installed two thermal power Units of 300 MW each at Yamunanagar which were put on commercial operation on 14 April and 24 June 2008 respectively. The project was named as DCRTPP*.

Organisational set-up relating to construction and operation of the project is given below:



Physical and financial performance of power sector in VII Five Year Plan was last reviewed in the Report of the Comptroller and Auditor General of India for the year ended 31 March 1999 (Commercial) – Government of Haryana. The recommendations of the Committee on Public Undertakings (COPU) relating to setting up of thermal power plant at Yamunanagar are contained in 51 report presented to Vidhan Sabha in February 2004.

Scope of audit

2.1.2 The review, conducted during January - March 2009, covers project planning, award of contracts, execution of the project, commissioning and operation of the Units. Records of the office of the Chief Engineer (Planning), Chief Engineer (Projects) at headquarters and Chief Engineer (DCRTPP) at the project site for the period 2004-09 were test checked.

* Deenbandhu Chhotu Ram Thermal Power Plant.

Audit objectives

2.1.3 The audit objectives of the review were to assess whether:

- project planning and award of contracts was done with due regard to efficiency and economy;
- the execution of the project was so managed as to commission it within the time schedule;
- performance of generating Units was consistent with standards envisaged in the contract;
- actual cost of generation was as per norms approved by Haryana Electricity Regulatory Commission (HERC) while fixing tariff; and
- necessary steps for pollution control were initiated.

Audit criteria

2.1.4 The following audit criteria were adopted:

- standard procedures followed for award of contracts with reference to principles of economy, efficiency and effectiveness;
- norms/guidelines of Government of India/Central Electricity Authority (CEA)/State Government regarding planning and implementation of the project;
- terms and conditions of contract and safeguarding company's financial interest;
- norms for performance of the Units envisaged in the contract and fixed by HERC; and
- rules and regulations for pollution control.

Audit methodology

2.1.5 Audit followed the following methodologies:

- analysis of project report, loan documents, agenda and minutes of the Board of Directors;
- scrutiny of tenders/bid documents, etc. for award of work and payments made to the contractor;

- analysis of data relating to consumption of various inputs for generation of power;
- evaluation of pollution control measures; and
- interaction/discussion with the personnel of the Company.

Audit findings

2.1.6 The audit findings were reported to the Government/Management in June 2009 and discussed in the Exit conference held on 04 September 2009, which was attended by the Managing Director of the Company. Views of the Management have been considered while finalising the review. The audit findings are discussed in the succeeding paragraphs.

Project planning

2.1.7 The requirement of power at the end of Tenth Five Year Plan period ended March 2007 in the State was 4,899 MW against the availability of 3,007 MW. The Company is entrusted with the responsibility of setting up of new generating stations in order to keep pace with the increasing demand of power in the State. The Company set up 600 MW Thermal Plant at Yamunanagar in 2008-09, thereby increasing the generation capacity to 2,140.50 MW (2008-09). As per detailed project report (October 2002) for 500 MW, the estimated cost of project was Rs. 1,910.73 crore (cost per MW Rs. 3.82 crore). While, at the time of award of contract (September 2004) for 600 MW, it was Rs. 2,338 crore (cost per MW Rs. 3.90 crore), of which the scope of work of Reliance Energy Limited (REL) was Rs. 2,097 crore and of the Company Rs. 241 crore including interest during construction (IDC). Actual expenditure on the project up to March 2009 was Rs. 2,501 crore (cost per MW Rs. 4.17 crore).

Undue delay in approval of the project and finalisation of tendering

2.1.8 The thermal project at Yamunanagar with two units of 210 MW each was initially sanctioned by the Planning Commission during September 1984 which was to be completed by the end of 1988-89. Due to shifting strategy in execution of project from the then Haryana State Electricity Board (Board) to NTPC and then selection of wrong private party for execution, the project could not be taken up on which the Board had incurred an expenditure of Rs. 38.57 crore on purchase of land and maintenance of colony. On observation of the COPU (51 report), the State Government stated that the staff colony which could not be utilised due to held up project, would be utilised at later stage. Central Building Research Institute, Roorkee, however, on reference by the Company, had recommended (May 2007) not to go for rehabilitation of the colony houses as it would involve heavy cost of rehabilitation work, lesser safety as compared to new construction. These houses remain unoccupied due to their unsuitability, resulting in waste of Rs. 4.59 crore spent on construction of colony.

The Company proposed (August 2001) to the State Government for adding the capacity of State Sector Units by another 500-600 MW by installing two Units (Unit-I and II) of 250/300 MW each at Yamunanagar. The project was proposed to be implemented in the Tenth Plan period (2002-07). The State Government accorded approval in July 2002 to set up 500 MW (two units of 250 MW each) coal based plant and agreed (October 2002) to contribute 20 *per cent* of the project cost as equity. The balance 80 *per cent* was to be funded by Power Finance Corporation (PFC). The Government of India had issued (1995) guidelines to adopt the International Competitive Bidding (ICB) route for implementation of power projects. As the tendering process through ICB route involves about one year, the Board of Directors (BOD), with a view to implement the project on fast track, with the approval of the State Government approved (November 2002) to secure the price offers from Bharat Heavy Electricals Limited (BHEL) for turnkey scope as well as their proprietary packages (Steam Generator & Turbo Generator and their auxiliary packages). Accordingly, BHEL was requested (November 2002) to submit two separate self contained independent offers for turnkey scope as well as their proprietary packages. BHEL submitted its technical offer in May 2003. When the technical offer of BHEL was under evaluation, some Companies[*] gave expression of interest to the Chief Minister for submitting bids for this project. Accordingly, the Company initiated (December 2003) the proposal for implementation of the project through ICB route and the proposal was approved (January 2004) by the State Government with the configuration of the two Units as 250 MW to 250 + 20 *per cent* MW each. Notice inviting tender (NIT) was floated on 20 May 2004 and offers of BHEL and REL were received. The contract was awarded on turnkey basis to REL, an engineering, procurement and construction (EPC) contractor, in September 2004, being the lowest evaluated bidder.

Audit observes the negotiated route also takes time and, hence, it does not provide much time saving vis-à-vis ICB route which takes about a year. However, the negotiated route compromises on ‘competition’ aspect and may lead to not getting the best price and product. The overall delay of 14 months (November 2002 to December 2003) on account of shifting mode of tendering resulted in delayed availability of power from these Units.

The Management stated (September 2009) that the Company made best effort to explore the possibility of setting up of thermal plant in the minimum time by exploring both the routes of tendering i.e. negotiation and ICB route and during this period the Company continued to obtain various statutory clearances from various agencies. The reply is not convincing as the Company should have gone in for ICB route *abinitio* which was as per GOI guidelines as well as widely accepted mode of tendering.

Award of contract

2.1.9 The Company placed (30 September 2004) letter of intent on REL at a

[*] Reliance Energy Limited, Noida, Shanghai Electrical Company, China, Skoda Export Company Limited, Czech Republic

firm[#] contract price of Rs. 2,097 crore (Rs. 1,572 crore for supply of machinery and equipments and Rs. 525 crore for civil works and erection, testing and commissioning) on turnkey basis with commissioning schedule of 30 and 33 months for Unit – I and II respectively. Regular purchase order and work order against the above letter of intent were placed in November 2005 and contracts were signed in March 2006. The deficiencies noticed by audit in award of contracts are discussed in succeeding paragraphs.

Undue favour to REL

2.1.10 The Company invited (May 2004) bids on ICB basis for setting up of the plant on EPC basis. The bidder, who is regular turnkey management and contracting agency, which had executed coal fired thermal power plants on EPC basis for atleast two Units of 210 MW or higher rating, would be eligible to bid. In such case, the bidder should associate/collaborate with the manufacturer of Steam Generator (SG) and Steam Turbo Generator (STG) of atleast two sets of 250 MW or higher rating and should furnish along with the bid a copy of the agreement jointly executed for this project by him and the manufacturer of SG and STG for successful performance of thermal power plant including SG, STG and associated auxiliary equipments. The bidder should also furnish the annual plant availability and plant load factors achieved since commissioning of these Units.

The Company received two bids for the project one from BHEL and another from REL and awarded the contract to REL being the lowest evaluated bidder. REL had submitted (July 2004) its bid as an EPC contractor after entering into agreement with Dongfeng Electric Corporation, China (DEC), manufacturer of SG and STG, for executing the project. In support of the claim as an EPC contractor, REL stated that they had executed 2 x 250 MW Dahanu thermal power project (DTPP) in Maharashtra in 1991-95, when it was known as BSES Ltd., and submitted the certificate for plant availability and PLF since their commissioning in 1995-96 till 2003-04. The Company while verifying the technical qualifications of the bidders considered REL as technically qualified EPC contractor.

The Company extended undue favour to REL by accepting it as technically qualified EPC contractor.

Audit observed that REL (formerly known as BSES Limited, a power distribution company) had executed the DTPP long back in 1991-1995 as its owner for distribution of power. The project was in-fact executed by the generation division of the Company by following split package route on competitive bidding basis and the main plant package was supplied by BHEL and thereafter no coal based power project had been executed. The end user certificate submitted by REL for plant availability and load factor and execution of work was signed by REL being owner of the plant as no plant had been executed for a third party. Hence, REL was not eligible to be considered as a regular turnkey management and contracting agency in terms of NIT.

The Management stated (September 2009) that inhouse experience of REL (formerly BSES) was considered to be sufficient for the purpose of eligibility because the experience of the wholly owned subsidiary company could be considered as experience of parent company which was consented to by the project consultants and review consultants. The reply is not convincing as REL was not a regular turnkey management and contracting agency.

[#] Prices which will remain fixed during the execution of the contract.

Change of collaborator

2.1.11 After award of work, REL was required to submit unconditional Bank Guarantee from the collaborator equivalent to 5 *per cent* of material to be supplied by him towards faithful performance of joint deed. Instead of complying the above, REL requested (15 December 2004) to change the collaborator from DEC, China to Shanghai Electric (Group) Corporation (SEC), China to achieve improved reliability, flexibility and availability of the power plant.

The State Government/Company observed (May 2005) that it was apparent that REL had neither chosen their collaborator wisely nor settled terms with it clearly and decided that request of REL for change of collaborator may be denied. The decision of the Government was communicated (13 June 2005) to REL who agreed (13/15 June 2005) to stand guarantee on improved parameters of SEC as reference base. The Government/Company agreed (August 2005) for change of collaborator and extended the zero date of the project to 20 August 2005 with completion period of 27/30 months.

Audit noticed that in the absence of any specific provision in the bid document for permitting or barring change of collaborator, the Company changed the collaborator after the work was awarded to them. This ultimately resulted in delayed completion of project.

Execution of the project

2.1.12 The Company was to execute the raw water intake system and construction of colony and township. REL was to execute the works relating to main plant (Boiler Turbo Generator packages) and balance of plant (coal handling plant, ash handling system, ash dykes, railway siding and marshalling yard and other civil works like chimney, cooling towers, buildings and roads, landscaping etc.). Against this, the Company got executed raw water intake system from the Irrigation department on deposit work basis and residential colony from Haryana Roads and Bridges Development Corporation Limited. The work of the colony was under progress (August 2009). Deficiencies noticed during execution of the project are discussed in succeeding paragraphs**.**

Time overrun

2.1.13 Due to delay in commercial operation of the Units by REL there was generation loss of 4,279.68 MUs as tabulated below:

Sl. No.	Particulars	Unit-I	Unit-II
1.	Schedule date of commissioning	29 March 2007	29 June 2007
2.	Revised schedule date of commissioning	19 November 2007	19 February 2008
3.	Date of commercial operation	14 April 2008	24 June 2008
4.	Delay in days	382	361
5.	Generation Loss* (MUs)	2200.32	2079.36
		4,279.68	

* At 80 *per cent* PLF approved by HERC.

Delay in commercial operation of the Units resulted in generation loss of 4,279.68 MUs and purchase of power at an extra cost of Rs. 498.48 crore.

In order to meet the shortage of power in the State, the Power Sector Companies had to procure 1,135.81 MUs of power valuing Rs. 706.70 crore through short term power purchase at weighted average price of Rs. 6.22 per unit and 2,563.63 MUs of power valuing Rs. 957.10 crore through unscheduled interchange at weighted average price of Rs. 3.73 per unit, which was higher as compared to the cost of generation of Rs. 3.15 per unit at the project. This resulted in extra expenditure of Rs. 498.48 crore on purchase of 3,699.44 MUs of power during the period from April 2007 to June 2008 for the State.

Cost overrun

2.1.14 At the time of award (September 2004) of turnkey contract for construction of two Units of 300 MW each, estimated cost was Rs. 2,338 crore. The rescheduling of commissioning period resulted in increase of estimated project cost from Rs. 2,338 crore in September 2004 to Rs. 2,400.23 crore in August 2005. This was due to increase in cost of land (Rs. 30 crore) and interest during construction (Rs. 32.23 crore).

Delay in commissioning of units resulted in cost over run of Rs. 163.80 crore.

Audit noticed that there was cost overrun of Rs. 163.80[#] crore due to delay in commercial operation of the project and excess consumption of fuel during trial operation as per details given below:

(Rupees in crore)

Particulars	Original estimate in September 2004	Revised in August 2005	Actual as on 31.03.2009
(A) Turnkey scope of work	2,097.00	2,097.00	-
Gross value of work done and paid to REL	-	-	1,971.63
Pending work of turnkey scope	-		125.37
Total (A)	**-**	**-**	**2,097.00**
(B) Company's scope of work	**-**	**-**	**-**
Preliminary investigation	0.55	0.55	
Employee cost	15.51	15.51	
Contingency	10.81	10.81	57.13
Land	40.00	70.00	68.21
Review engineering through consultants	2.00	2.00	1.90
Raw water intake system	4.00	4.00	8.96
Residential colony	20.00	20.00	30.00
Startup fuel cost	4.00	4.00	108.86
Training cost	2.00	2.00	0.25
Total (B)	**98.87**	**128.87**	**275.31**
Project cost without IDC (A+B)	**2,195.87**	**2,225.87**	**2,372.31**
Interest during construction (IDC) estimated at 7.25 *per cent* p.a. payable quarterly (annualised 7.45 *per cent)*	142.13	174.36	129.49
Project cost with IDC	**2,338.00**	**2,400.23**	**2,501.80**

The Management stated (September 2009) that cost of land increased to Rs. 70 crore at the time of making actual payments in comparison to estimated

[#] Rs. 2,501.80 crore minus Rs. 2,338.00 crore. Cost overrun is without considering the revenue of Rs. 59.96 crore earned on generations of power during prolonged trial run.

cost of Rs. 40 crore and increase in IDC was due to increase in prevailing interest rates of PFC. The reply did not mention reasons for increase in cost of other components particularly start up fuel cost and residential colony.

In addition, Audit noticed that the Company could have saved Rs. 21.62 crore with better management of the project, as explained in succeeding paragraphs 2.1.16 to 2.1.18.

Irregular payment of advance on taxes and duties

2.1.15 As per terms and conditions of purchase order and work order placed (November 2005) on REL, 10 *per cent* interest free advance for supply portion, was payable on Ex-works/Cost insurance freight value and for service portion on contract price, inclusive of service tax/value added tax (VAT). The Company released (November 2005) five *per cent* advance amounting to Rs. 91.85 crore (of Rs. 1,837.09 crore) after excluding custom duty on imported supplies, excise duty and central sales tax on Indian supplies. The second advance of Rs. 91.86 crore was subsequently paid in March 2006.

Excess payment of advance of Rs. 2.57 crore due to inconsistency in terms of contract.

Audit observed (March 2009) that due to inconsistency in the provision between the supply and service portion of the contract, the Company did not exclude the service tax on erection, testing and commissioning (ETC) and Civil works from the contract price leading to excess payment of advance of Rs. 2.18 crore. Further the Company while paying advance for the structural works did not reduce the VAT of Rs. 3.94 crore as a result of which advance of Rs. 39.41 lakh was also paid in excess.

The Management stated (September 2009) that advance was released to the contractor in stages as per the contract. The reply was not convincing as there was inconsistency between the terms of supply and service contracts.

Release of adhoc advance in violation of the terms of contract

2.1.16 In addition to the 10 *per cent* interest free advance as referred in para 2.1.15 supra, the Company released Rs. 65.98 crore (Rs. 44 crore in September 2007 and Rs. 21.98 crore in January 2008) as adhoc advance against the material received at site, for which despatch instructions and billing break up had not been approved by the Company for want of some clarifications and delay in submission of equipment test certificates/inspection reports by the REL to the Company. Though the delay in making progressive payment was due to non completion of formalities by REL, the Company released adhoc advance of Rs. 65.98 crore, without any provision in the contract. The first adhoc advance of Rs. 44 crore was sanctioned (September 2007) as one time measure with the condition that it was to be adjusted against payment of bills. Without adjustment, second adhoc advance of Rs. 21.98 crore was also released on 22 and 28 January 2008. The adhoc advance of Rs. 65.98 crore was adjusted from 31 January 2008 to 30 October 2008 after submission of required documents by REL. Thus, release of adhoc advance without any provision in the contract had resulted in loss of interest of Rs. 4.66 crore* to the Company.

Loss of interest of Rs. 4.66 crore on release of adhoc advance without any provision in the contract.

* calculated at 10.5 *per cent* per annum cash credit rate allowed by HERC.

The Management stated (September 2009) that in order to achieve the aggressive schedules, the contractor had many times supplied the material at site without even waiting for dispatch instructions. Further as per PO/WO, all the payments were to be released within 30 days on receipt of bills subject to fulfillment of appropriate documents and adhoc advance was released to avoid any hindrance to the commissioning schedules. The reply is not convincing as the adhoc advance was released without any provision in the contract and the fact, however, remains that even after release of advance, the commissioning schedule could not be achieved.

Non-recovery of liquidated damages

2.1.17 As per the special conditions of contract (clause 4.1.0), the Unit commissioning schedule i.e. the date of provisional taking over (PTO) of the Units by the owner from effective date of contract (20 August 2005) was 27 and 30 months for Unit I and Unit II respectively. Time was the essence of the contract and in order to obviate the delay in completion of the project, the contract provided for levy of liquidated damages (LD) for delay in completion of intermediate milestones at the rate of 0.25 *per cent* of the Unit contract price per week or part thereof for a period of four weeks and subsequently at the rate of 0.50 *per cent* per week or part thereof subject to maximum of 10 *per cent* of the contract value.

The Company could not recover liquidated damages of Rs. 55.86 crore.

Audit observed (March 2009) that against the scheduled commissioning dates of 19 November 2007 and 19 February 2008, though the commercial operation of Unit I and Unit II was started on 14 April 2008 and 24 June 2008 respectively, the Units were provisionally taken over on 31 August 2009. In terms of the clause as referred above, the maximum liquidated damages of Rs. 204.47[*] crore i.e 10 *per cent* of the contract price were required to be deducted from the bills of the contractor. The Company had actually recovered only a sum of Rs. 148.61 crore till July 2009 leaving a balance of Rs. 55.86 crore. The non-recovery of liquidated damages stage wise by the Company had also resulted in loss of interest of Rs. 16.15 crore[**] up to July 2009.

The Management stated (September 2009) that the balance recovery was pending due to non-receipt of bills on account of procedural requirements like despatch instructions, approval of billing break up schedule etc. However, it was seen in audit that payments of bills had been made without recovering the LD. For instance bills amounting to Rs. 73.05 crore were lying with the Company during the period 30 November 2007 to 28 January 2008, when amount of LD recoverable was Rs. 46.01 crore against which first installment of LD of Rs. 5.86 crore was recovered on 31 January 2008 while making payment.

[*] 10 *per cent* of Rs. 2044.70 crore (Rs. 2097 crore less Rs. 52.30 crore, being value of mandatory spares).

[**] calculated at 10.5 *per cent* per annum cash credit rate allowed by HERC.

Loss of interest rebate

Loss of interest rebate of Rs. 0.81 crore due to non communication to PFC.

2.1.18 The Company approached (August 2005) PFC for financial assistance of Rs. 1,920 crore for setting up of the plant involving total cost of Rs. 2,400.23 crore. PFC agreed (October 2005) for this loan. The Memorandum of Agreement (MOA) was subsequently signed in February 2006. Terms and conditions of the MOA, *inter alia*, provided that interest on the loan was payable at the rate of interest prevailing on the date of disbursement and after commissioning of the Unit-I, the Company was eligible for rebate of 0.25 *per cent* of interest on the loan amount drawn/to be drawn and the same was applicable from the date of commissioning only if the information was received by the PFC within five days of commissioning or from the date of receipt of information by PFC, whichever later. Audit observed that no communication was made to PFC in terms of MOA to claim interest rebate as a result of which, the Company could not avail interest rebate of Rs. 0.81 crore (from 15 April to 14 July 2009) for the loan drawn (Rs. 1,300.95 crore) up to July 2008.

The Management stated (September 2009) that the loan had not been bifurcated Unit-wise but was only one for the project as a whole. Accordingly, the COD of the Unit-II (June 2008) becomes the COD of the project and the interest rebate was being availed with effect from 15 July 2008 (the standard date). The reply was not correct because as per circular dated 12 March 2007 of PFC the interest rebate was available on the entire loan from the date after the date of COD of first Unit (15 April 2008) itself.

Deficiency in Coal Handling Plant

2.1.19 As per the terms of contract with REL, the Coal Handling Plant (CHP) valuing Rs. 22.01 crore was to be commissioned by 5 October 2007. The plant, however, could be made partially operational by December 2007, when the Company started receiving coal rakes and most of other works were completed by June 2008. The CHP had not yet been commissioned so far (August 2009) as coal sampler was not completed as a result of which the sampling of coal was being done manually.

The Company suffered generation loss of 8.515 MUs due to deficiency in coal handling plant.

The Company observed (August 2008) that operational performance of roller screens in the plant was very poor and there were frequent breakdowns. Accordingly, the matter was referred (October 2008) to REL which informed (October 2008) that roller screens installed were as per NIT and approved Design Basis Report (DBR) and these were capable of handling 300 mm coal lump with 15 *per cent* maximum moisture contents. REL, however, submitted (November 2008) a proposal to replace one roller screen with grizzly feeder in the plant for which the Company agreed and requested REL to replace one roller screen before onset of monsoon. Due to interruption in coal flow, there was problem in maintaining adequate stock in the coal bunker as a result of which Unit-I remained under shut down for 17:10 hours and Unit-II for 18:19 hours during June 2008 – March 2009. This had resulted in loss of generation of 8.515 MUs. Audit scrutiny revealed that while approving the DBR of CHP, the Company overlooked the performance of same type of roller screens installed for Unit-7 and 8 at Panipat which were also not performing satisfactorily.

The Management stated (September 2009) that improper functioning of roller screens was due to deteriorated quality of coal and teething troubles during year of commissioning. The reply was not convincing as the Company was well aware of the quality of coal being received at the plants and should have installed grizzly screen from initial stage.

Inadequate capacity of coal mill reject handling system

2.1.20 As per turnkey scope of work, coal mill reject handling system was required to be installed at the Plant. REL submitted (July 2005) the draft design basis report (DBR) envisaging the mill reject system for one *per cent* of coal mill capacity. The Project Consultants (Desein Private Limited) and Review Consultants (CEA) reviewed (December 2005) draft DBR and requested REL to design the mill reject system taking coal reject quantity as three *per cent* of maximum coal quantity to be handled. REL re-submitted (January 2006) the DBR reiterating the reject system design for one *per cent* reject coal (480 Kg/hr/mill) on the ground that as per Boiler supplier the maximum reject/mill when firing worst coal would be 140.352 Kg/hour/mill. Accordingly, the Company approved (July 2006) the DBR of coal mill reject handling system without any observation. In June 2008, the mill reject handling system was installed at the plant at a cost of Rs. 4.42 crore. After commissioning of the system, the Chief Engineer, DCRTPP, Yamunanagar informed (June 2008) that inadequate capacity of mill reject (ranging between 1.42 *per cent* and 5.42 *per cent*) was resulting in frequent choking of mills, damaging the mill internals, frequent and long outages of mills and wearing out all the bends and mill reject conveying pipes which needed immediate replacement. REL was asked (31 July 2008) to modify the mill reject handling system from existing one to three *per cent*. Due to non-replacement the Management issued (30 September 2008) notice of 30 days to REL to address the problem. REL stated (6/18 October 2008) that the system had been installed as per the approved DBR and in case, the Company still wanted to augment the mill reject system without effective control on coal quality, it could either get this modification done itself or place an order for additional work on them. Board of Directors approved (27 November 2008) the proposal for inviting competitive bids for augmentation of mill reject handling system at the risk and cost of REL. The work had not been allotted so far (March 2009).

Audit noticed that the mill reject handling system for inadequate capacity had been installed on the basis of DBR approved by the Company itself. In reply Management admitted (September 2009) that the coal mill reject handling system was inadequate and the same was being augmented at the risk and cost of the contractor.

Delay in Commissioning of Dry Fly ash collection system

2.1.21 As per turnkey scope of work, Ash handling plant, common to both the Units, was also to be installed by 19 September 2007. The plant consisted of two systems – one for dry fly ash (80 *per cent*) with two silos which was to be allotted to cement manufacturers and the other for bottom ash (20 *per cent)* in slurry form which was to be dumped in the ash pond. After award of work, it was decided (April 2007) to relocate the ash silo in view of proposed third unit at Yamunanagar. On being asked (April 2007) to relocate the ash silo, the REL intimated (May 2007) that the re-location would result in abandoning of all the civil and structural works and any delay would be to the Company's account. REL further intimated (July 2007) the cost implication of Rs. 1.85 crore for change in location of ash silo. Audit observed (March 2009) that belated decision for re-location of ash silo when the work relating to piling and preliminary engineering was completed led to non-commissioning of dry fly ash handling system so far (March 2009). Due to delay in commissioning of dry fly ash system, 5.71[*] lakh MT of dry fly ash generated during 14 April 2008 to 31 March 2009 from Unit I and II, meant for sale, was dumped in ash pond. Dumping of fly ash had resulted in loss of potential revenue of Rs. 17.82 crore (calculated at the rate of administrative charges of Rs. 312/MT for fly ash as per sale order issued to cement manufacturers during June 2007).

Delay in commissioning of dry fly ash system resulted in loss of potential revenue of Rs. 17.82 crore.

The Management stated (September 2009) that as per GOI guidelines (September 1999) the fly ash was to be given to various cement manufacturers, brick–klin manufactures free of cost. As such, there was no loss to the Company. The reply is not convincing because the Company had issued sale orders during June 2007 to recover administrative charges.

Delay in completion of computerised maintenance and inventory management system

2.1.22 As per turnkey scope of work, a computerised maintenance and inventory management system (CMIMS) was to be installed for the project. The CMIMS with features like generation of work order, preventive maintenance schedule, inventory control, storing of equipment information, job planning and report generation was to be made available by 17 September 2007.

Audit noticed (March 2009) that the supply of CMIMS valuing Rs. 87 lakh was completed by 22 February 2008. However, the installation and commissioning of CMIMS was still in progress (March 2009). Thus due to non commissioning of CMIMS the work envisaged to be done through it, had to be done manually. Thus the expenditure of Rs. 87 lakh incurred on it remained unutilised.

The Management stated (September 2009) that delay in completion of CMIMS system had not affected the working of the plant and expenditure

[*] 21,00,189 MT coal consumption quantity x 0.34 ash content in coal x 0.80 dry fly ash component in total ash generation.

incurred was fully justified. The fact however remains that the works which were required to be done through the system were being done manually.

Ineffective monitoring of the Project

2.1.23 For execution of the project and to review the progress of various activities, a "Project Management Committee" under the name of Technical Coordination Committee consisting of representatives of the Company, REL, Consultants and review consultants (Central Electricity Authority - CEA) was constituted. During August 2005 to December 2007, the Committee held 17 meetings at intervals ranging from one to three months to review the progress of the project. Thereafter, next meeting was held on 13 August 2008 after a gap of eight months. No meeting was held during the declaration of commercial running of the Unit–I (14 April 2008) and Unit–II (24 June 2008).

Ineffective project monitoring delayed the completion and final take over of the project.

Audit noticed that the Committee was ineffective in deciding and finalising the matters as there were many ancillary works as on 20 March 2009, which could not be resolved in time and remained pending (details as per ***Annexure 7)***. Besides, the PG test of the various activities (details as per ***Annexure 8)*** which should have been completed prior to contractual schedule dates i.e. 19 November 2007 and 19 February 2008 for Unit–I and Unit–II respectively, were pending due to which formal take over of project was held up.

Commissioning and performance

Trial operation and delay in provisional taking over

Prolonged trial runs resulted in excess consumption of fuel valuing Rs. 104.86 crore.

2.1.24 The contract with REL provided that the Units would be accepted for commercial operation on completion of continuous satisfactory trial operation for 14 days and the Performance Guarantee (PG) test. Readiness of each item of equipment by the scheduled date of commissioning was a pre-requisite for trial operation and PG test. After synchronisation of Unit-I on 13 November 2007 and Unit-II on 29 March 2008, the Company allowed trial operation though various works relating to Balance of Plant[♥] (BOP) which were common to both the Units had not been completed. Audit noticed that there were repeated failures/trippings during trial operations of both the Units due to oil leakage, high rotor vibrations, tube leakages, flame failure etc. Instead of 14 days, the trial operation was conducted for 154 days in respect of Unit-I and 88 days in respect of Unit-II. Due to prolonged trial runs, fuel valuing Rs. 108.86 crore was consumed against the provision of Rupees four crore in the estimates. The revenue towards variable cost[#] earned on the power generated during trial run was only Rs. 59.96 crore. In the absence of any clause in the contract guaranteeing standard consumption during trial runs, the loss of Rs. 48.90 crore could not be recovered from REL.

[♥] Packages comprising of ash handling plant, coal handling plant, railway siding and marshaling Yard etc. excluding BTG packages.

[#] Provisional tariff of Rs. 1.68 per unit approved by HERC.

Further, for completion of the pending works and conducting PG test, the Company had to take various shutdowns for 1,959:33 hours during April 2008 to January 2009. Shutdowns of the Units immediately after start of the commercial operation (14 April 2008/24 June 2008) for completion of pending works and for PG test, resulted in loss of generation of 470.292 MUs[*].

In reply as well as during Exit conference, the Management did not explain (September 2009) any reasons for prolonged trial runs leading to excessive consumption of fuel and non completion of pending works. The Management, during Exit conference, stated that the provisional taking over has been done on 31 August 2009.

Excessive Cost of Generation

Due to excessive consumption of inputs as compared to contractor's guaranteed parameters, the Company suffered loss of Rs. 67.46 crore.

2.1.25 Haryana Electricity Regulatory Commission (HERC) while fixing the generation tariff for sale of power by the Company during 2008-09 provisionally approved Rs. 2.91 per unit for the power generated from both the Units which, *inter-alia*, included return on equity at the rate of 14 *per cent*. The actual cost of generation in respect of Unit-I (from 14 April 2008 to 31 March 2009) and Unit-II (from 24 June 2008 to 31 March 2009) was Rs. 3.19 and Rs. 3.07 per unit respectively. The higher cost was mainly due to increase in variable cost which was Rs. 1.88 and Rs. 1.84 per unit for Unit–I and II respectively against the norm of Rs. 1.68 per unit approved by HERC for both the Units. During this period, the total cost for generating 3,146.97 MUs of power was Rs. 895.05 crore as against the revenue realisation of Rs. 827.59 crore resulting in loss of Rs. 67.46 crore. High cost of generation as analysed in audit, was due to excessive consumption of inputs as compared to the parameters guaranteed by REL and norms approved by HERC and low PLF. These have been discussed in the succeeding paragraphs 2.1.26-2.1.30.

Excess consumption of coal

There was excess consumption of coal valuing Rs. 45.22 crore compared to contractor's guaranteed parameters.

2.1.26 The actual consumption of coal for both the Units during April 2008 to March 2009 was 2.06 lakh MT higher than the guaranteed as per the technical parameters by REL. This has resulted in excess consumption of Rs. 45.22 crore and consequent higher environmental degrading.

The Management stated (March 2009) that Boilers of the Units were designed for 4,000 Kcal/Kg Gross Calorific Value (GCV). But the availability of coal from the linked collieries was less than the design GCV of coal. The Company had no other option but to accept the coal from the linked collieries. The reply is not convincing as the loss on account of excessive consumption of coal has been worked out taking into consideration the quality of coal actually consumed at the plant.

[*] at 80 *per cent* plant load factor approved by HERC for 2008-09.

Excessive consumption of fuel oil

Excess consumption of fuel oil valuing Rs. 47.99 crore with reference to HERC norms.

2.1.27 Fuel oil is used for start-up and flame stabilisation at low loads. HERC had approved a norm of 2 ml/kwh for use of fuel oil during 2008-09 for the plant. Compared with this norm, actual consumption of fuel oil during 14 April 2008 (Unit-I) and 24 June 2008 (Unit-II) to 31 March 2009 was 6.81 and 5.71 ml/kwh respectively and thus the Units consumed 13,589.44 KL excess oil valued at Rs. 47.99 crore.

The Management stated (March 2009) that the failure rate of oil guns are on higher side which results in inconsistency and instability of guns and results into excessive oil consumption. However, this aspect should have been considered at the time of their installation. This needs immediate action by the Company to avoid excess consumption of oil.

Auxiliary consumption

There was Excess auxiliary consumption of 30.202 MUs valuing at Rs. 9.50 crore as compared to contractor's guaranteed parameters.

2.1.28 Auxiliary consumption denotes the power consumed by plant and equipments for generation of power. Thus a part of energy generated is consumed for auxiliary purpose. It was observed that the auxiliary consumption in respect of Unit I and II during the period was 9.34 and 9.32 *per cent*, which was in excess of HERC norm of 9 *per cent* and guaranteed norm of 8.37 *per cent* of REL. There was, thus, excess auxiliary consumption of 10.376 MUs and 30.202 MUs valued at Rs. 3.27 crore and Rs. 9.50 crore with reference to HERC and guaranteed norms of REL respectively.

The Management stated (March 2009) that the excess auxiliary consumption was due to keeping five coal mills into service as compared to four as per design of boilers. This was due to non availability of design quality coal for which the full load could not be achieved with four milling systems. However, the coal mills installed at the plant were as per the design approved by the Company.

Low plant load factor

2.1.29 Plant Load Factor (PLF) represents percentage of actual generation to generating capacity. The total hours available for generation of power, actual hours of operation and PLF achieved against the norms fixed by HERC from starting commercial operation to March 2009 was as follows:

Sl. No.	Particulars	Unit-I	Unit-II
1.	Days available for Generation	352	281
2.	Total hrs available for Generation (Sl.No.1 x 24hrs)	8,448	6,744
3.	Generation Capacity (MUs) (Sl.No.2 x 300MW)	2,534.40	2,023.20
4.	Outages (in hours)	1955:27	1508:15
5.	Actual hrs operated (Sl. No. 2 - 4)	6492:33	5235:45
6.	Expected Generation (MUs) as per HERC approved PLF (80 *per cent* of Sl.No.3)	2,027.520	1,618.560
7.	Actual generation (MUs)	1,740.165	1,406.806
8.	Shortfall in generation (MUs) (Sl. No. 6 – Sl. No.7)	287.355	211.754
		499.109	
9.	PLF (*per cent*)	68.66	69.53
10.	Loss of revenue (Rupees in crore) (net of fuel cost)	35.34	26.05
		61.39*	

* 499.129 MUs at the rate of Rs. 1.23 (2.91-1.68) = Rs. 61.39 crore.

HERC while approving the norm for the plant had recorded that even though the Units were capable of achieving higher PLF, but keeping in line with the national norms, the PLF of 80 *per cent* was fixed. The Plant could not meet even this norm as the PLF of Unit I & II was 68.66 and 69.53 *per cent*, respectively. This had resulted in shortfall in generation of 499.109 MUs. The Management stated (March 2009) that initially the Units could not perform consistently due to the design problems in the boiler and turbines, inadequate mill reject handling system, coal handling system and Electro Static Precipitator (ESP). To establish the performance of these equipments, REL asked for repeated shutdowns of the Units. The fact, however, remains that had the Company ensured completion of all pending works before start of commercial operations, this situation could have been avoided.

Forced outages

Forced outages after successful trial runs resulted in generation loss of 360.996 MUs.

2.1.30 During the period from start of commercial production (14 April 2008/ 24 June 2008) to March 2009, there were forced outages of 1504 hours mainly due to frequent trouble in boiler tube in Unit II (325 hours), fault in turbo generator (371 hours) Unit I, loss of flame (462 hours), interruption in coal flow in bunker (35 hours), grid failure (34 hours), drum failure (128 hours) and miscellaneous reasons (149 hours). Forced outages after successful trial runs had resulted in generation loss of 360.996 MUs. Some of these cases where there were major outages are given below in the table:

<table>
<tr><th>Unit</th><th>Period of tripping (Dates)</th><th>Duration of tripping (hours)</th><th>Reasons of tripping</th><th>Generation loss (MUs)</th></tr>
<tr><td>Unit-I</td><td>6 September 2008 (16:12 Hrs) to 21 September 2008 (22:47 hrs)</td><td>366:35</td><td>loss of flames</td><td>87.98</td></tr>
<tr><td>Unit-I</td><td>19 January 2009 (9:18 hrs) to 4 February 2009 (4:10 hrs)</td><td>371:00</td><td>loss of flame and high vibration in turbine</td><td>89.04</td></tr>
<tr><td>Unit-II</td><td>29 August 2008 (19:08 hrs) to 3 September 2008 (5:38 hrs)</td><td>107:00</td><td>boiler tube failure</td><td rowspan="2">78.00</td></tr>
<tr><td>Unit-II</td><td>12 September 2008 (18:36 hrs) to 16 September 2008 (7:45 hrs) and from 21 February 2009 at 6:30 hrs to 26 February 2009 (at 20:11 hrs)</td><td>218:00</td><td>boiler tube failure</td></tr>
</table>

Environmental safeguards

Operation of plant without consent

The Company failed to adhere the environmental safeguards.

2.1.31 Haryana Pollution Control Board (HPCB) issued (July 2004) no objection certificate/consent for setting up the thermal power plant with the condition that the consent under section 25 and 26 of the Water (Prevention & Control of Pollution) Act, 1974 and under section 21 and 22 of the Air (Prevention & Control of Pollution) Act, 1981 as amended to date, should be obtained before starting the trial operation. Audit noticed that though the Unit I and Unit II were synchronised in November 2007 and March 2008 respectively, the application for obtaining consent to operate the plant under the Acts, *ibid*, was submitted to HPCB only on 10 April 2008. Due to non submission of adequacy report of ESP and effluent treatment plant, non installation of magnetic flow meters at the main source of water supply and electronic flow meters at the final outlet of the sewage treatment plant, the approval had not been received so far (March 2009). As a result, operations of the thermal power plant were being carried out without compliance of statutory requirements.

In reply the Management admitted (September 2009) the facts and stated that all out efforts had been made at various levels to make compliance. The fact however remained that the plant was being operated without compliance of statutory requirements.

Improper functioning of Electrostatic Precipitator

2.1.32 ESP is a large box having two series of Electrodes, which reduces dust concentration containing the SPM in flue gases from coal fired boilers in the thermal power plants. Control of fly ash (dust) generated by thermal power plants is dependent on effective and efficient functioning of ESPs. The ESPs had been installed in both the generating units. The Ministry of Environment and Forest (MOE&F) has prescribed SPM level for stack emission at 150 Mg/Nm^3 and for ambient air emission at 500 Mg/Nm^3 for thermal power plants.

Audit noticed (March 2009) that the stack emission was more than the prescribed limits due to frequent outages of ESPs. The SPM level in ambient air recorded twice in a week during February 2008 to March 2009 was more than standard limit during 63 days (510 Mg/Nm^3 to 633 Mg/Nm^3) out of total 114 days. The stack emission levels were not being recorded regularly.

During February 2008 to March 2009 the stack emission in respect of Unit-I was recorded on 14 days out of which the stack emission was more than the prescribed limit on six days and the stack emission in respect of Unit-II was recorded only on eight days, out of which the emission was more than the prescribed level on two days.

The Management stated (September 2009) that contractor had been impressed upon to give permanent solution and final outcome was awaited.

The above matters were referred to the Government in June 2009, their reply had not been received (September 2009).

Conclusion

The performance of the Company with regard to construction and operation of Unit-I and Unit- II was as follows:

- **delay in approval of the project by the State Government followed by delay in award of contract which was controllable;**

- **acceptance of REL as technically qualified EPC contractor though it was not a regular turnkey management and contracting agency;**
- **ineffective project monitoring resulting in non resolving of the pending issues in time and delay in completion of project;**
- **excess cost of generation due to consumption of inputs in excess of guaranteed parameters of REL as well as the norms of HERC;**
- **forced and planned shutdowns of the Units immediately after commercial operation resulting in substantial loss of generation of power; and**
- **non-compliance with the environmental safeguards.**

Recommendations

The Company may consider:

- **ensuring strict compliance with the provisions of notice inviting tenders for evaluation of bids;**
- **monitoring effectively the execution of the project so as to avoid time and cost overrun;**
- **taking measures to increase generation by increasing plant load factor;**
- **taking measures to reduce the cost of generation by reducing consumption of inputs;**
- **implementing environment safeguards to bring the various parameters of pollution control within prescribed limits; and**
- **ensuring preventive maintenance and up keep of the plant equipments to avoid forced shutdowns of generating Units.**

Haryana Tourism Corporation Limited

2.2 Working of Haryana Tourism Corporation Limited

Executive summary

The State Government established Haryana Tourism Corporation Limited (Company) with the main objective of promoting tourism in the State. In pursuance of its objectives, the Company has undertaken activities of operating tourist complexes with catering, bar and accommodation facilities, organising trade fairs and melas, running petrol pumps and undertaking construction and consultancy services. As on 31 March 2009 the Company had 43 tourist complexes, 14 petrol pumps and 2025 employees. The performance audit was conducted to ascertain the development of tourism in the State and viability of the operation of complexes.

Finances and Performance

The provisional accounts figures are available up to 2007-08. During 2004-08, Company's income and expenditure were Rs. 615.61 crore and Rs. 603.57 crore respectively. The net profit of Rs. 12.04 crore included interest of Rs. 10.92 crore from fixed deposits. Thus, the Company has been operating on a very thin margin.

Tourist Arrivals

The tourist arrivals stagnated at about 60 lakh during 2004-09. However, in the absence of proper mechanism to ascertain tourist arrivals, the data is not considered reliable. Thus, the impact of activities of the Company on the development of tourism could not be ascertained. The Company did not prepare any action plan for development of tourism.

Operations

The revenue of Rs. 615.61 crore during 2004-08 was mainly contributed by sale of petroleum products (Rs. 438.42 crore), sale of food and liquor (Rs. 104.11 crore) and room rent (Rs. 35.17 crore). The petroleum business operated on a thin margin of 0.66 to 1.27 per cent during 2004-09 which points towards a need to monitor this business closely.

The Company succeeded in improving its occupancy from 65 per cent in 2004-05 to 77 per cent in 2008-09, which was well above desirable level of 60 per cent. However, this did not add much to profitability due to increase in overhead costs. The Company could not contain the food, fuel and electricity costs within norms, resulting in extra expenditure of Rs. 8.01 crore. Similarly, manpower cost was higher by Rs. 9.48 crore above the norms during 2004-08. The Company needs to analyse reasons for high cost of operations and take suitable remedial measures.

Execution of Projects

The Government of India and the State Government sanctioned Rs. 111.97 crore for 213 projects during 2004-09 and released Rs. 78.70 crore. The company had incurred an expenditure of Rs. 48.44 crore up to March 2009. A good number of projects were delayed. This is an area that requires greater attention of the Management.

Conclusion and Recommendations

The deficiencies in the Company's functioning are controllable and there is scope to improve the performance through better management of its operations. This review contains five recommendations which include analysing the reasons for high costs, devising measures to reduce costs and improving internal control procedures.

Introduction

2.2.1 The Company was incorporated on 1 May 1974 under the Companies Act, 1956 as a wholly owned Government Company with a view to promote tourism in the State. At the time of formation, the State Government transferred 27 commercial (restaurants, bars, petrol pumps and liquor shops etc.) and 13 non-commercial (rest houses, hotels and huts etc.) units to the Company. The Company operated 43 to 47 complexes during 2004-09 including a nursery at Meharauli. This was in addition to 14 petrol pumps operated by the Company. Against the authorised share capital of Rs. 25 crore, the paid up capital as on 31 March 2009 was Rs. 20.19 crore.

The management of the Company is vested in a Board of Directors (BOD) comprising not less than two and not more than 11 directors including a Chairman and a Managing Director (MD), who are nominated/appointed by the State Government. As on 31 March 2009 there were seven directors including Chairman and the MD. The MD is the Chief Executive of the Company and is assisted in day to day work at head office by two General Managers, a Chief Accounts Officer, a Chief Engineer and a Company Secretary. The complexes are managed by General Manager/Deputy General Manager/Divisional Manager/Additional Divisional Manager depending upon volume of work involved.

The working of the Company was last reviewed in the Report of the Comptroller and Auditor General of India for the year ended 31 March 2003 (Commercial)-Government of Haryana. The review was discussed by the Committee on Public Undertakings (COPU) and their recommendations are contained in the 53rd Report presented to the State Legislature on 22 March 2007.

Scope of Audit

2.2.2 The present performance review conducted during March to May 2009, covers performance of various complexes of the Company including nursery during 2004-09. Besides examining the records maintained at the head office of the Company, Audit test checked records of 19 out of 43 complexes, as given in ***Annexure 9***. The selection was made on the basis of geographical location and volume of work (48.26 *per cent* of turnover), to assess the functioning of the complexes.

Audit objectives

2.2.3 The audit objectives were to ascertain whether:

- the activities of the Company resulted in systematic development of tourism in consonance with its objectives and instructions of the State Government;
- the Company made proper planning for development of tourism and prepared action plan and implemented the same effectively;

- all the complexes were operating on financially viable basis;
- the level of services provided was up to the mark;
- proper financial management of the funds (including utilisation of grants) existed; and
- the Company had devised effective monitoring and internal control/audit system.

Audit Criteria

2.2.4 The following audit criteria were adopted:

- guidelines for development and operation of complexes issued by Government of India (GOI) and Department of Tourism of the State Government;
- agenda and minutes of the meetings of BOD and of Drawing and Disbursing Officers (DDO) of the Company;
- salary, food and fuel norms fixed by the Company;
- terms and conditions of the lease/purchase agreements;
- project reports, records of debtors and investment of funds at Head office and complexes; and
- internal audit and other control procedures adopted by the Management.

Audit Methodology

2.2.5 Audit used a mix of following methodologies to assess the audit objectives with reference to the audit criteria:

- review of directives issued by GOI/State Government;
- review of agenda notes and minutes of the BOD and DDO meetings and interaction/discussion with the personnel of the Company;
- review of records relating to grants received from GOI/State Government and their utilisation;
- review of periodic performance reports of complexes;
- review of investment of funds and debtors on periodical basis;
- review of MIS and various control procedures employed by the Company; and
- review of selection process of contractors for leasing out shops/sites and implementation of terms and conditions of agreements executed with them.

Audit Findings

2.2.6 The audit findings were reported to the Government/Management in June 2009 and discussed in the Exit conference held on 7 September 2009, which was attended by the Financial Commissioner and Secretary Tourism, Government of Haryana and Managing Director of the Company. Views of the Management have been considered while finalising the review. Audit findings are discussed in succeeding paragraphs.

Financial position and working results

2.2.7 The Company has divided its activities into core (accommodation, catering and liquor) and non-core (leasing, parking, gate entry, boating and petrol pumps). Core activities are directly related and non-core activities are ancillary to the tourism. The accounts of Company from the year 2006-07 were in arrears (August 2009). The financial position and working results of the Company for last four years up to 31 March 2008 are given in ***Annexure 10***. The summary position is stated below.

(**Rupees in crore)**

Particulars	2004-05	2005-06	2006-07*	2007-08*
Capital plus Reserves & Surplus	26.09	30.59	35.99	40.65
Liabilities	67.65	82.08	104.95	134.34
Assets	93.74	112.67	140.94	174.99
Income	123.90	149.56	162.24	179.91
Expenditure	122.49	146.39	159.02	175.67
Profit	1.41	3.17	3.22	4.24

The Company does not compile expenditure/profitability on the basis of core and non core activities separately. The revenue of the Company was Rs. 615.61 crore during 2004-08 against which it incurred expenditure of Rs. 603.57 crore resulting in aggregate net profit of Rs. 12.04 crore. The major revenue was from sale of petroleum products (Rs. 438.42 crore) and food, wine and mineral sale (Rs. 104.11 crore) whereas the major expenditure was on purchase of petroleum products (Rs. 428.07 crore) and administrative, marketing and other expenditure (Rs. 118.80 crore). The Company earned net profit of Rs. 12.04 crore which also included interest of Rs. 10.92 crore earned on fixed deposits mainly from unspent grants received from Government of India/State Government.

The COPU had recommended (March 2007) to improve the occupancy of the motels by providing powers to officers in charge of the complexes for flexible rates of rooms to compete with the private hotels and motels and introduction of schemes like happy hours in bars. These recommendations were, however, not implemented (August 2009).

The Company had been fixing tariff of rooms keeping in view the location and turnover of the respective complexes based on recommendations of the respective incharge. During 2004-09, the Company revised its tariff of complexes 1-3 times.

* Figures for 2006-07 and 2007-08 are provisional.

Performance of tourist complexes

2.2.8 One of the main objectives of the Company is to promote tourism by operating restaurants, bars, hotels, huts, motels, guest houses, petrol pumps and other places for tourists in the State and elsewhere. The Company operated 43 to 47 tourist complexes during 2004-09 of which 38 to 40 complexes were having both commercial and non-commercial activities. The Company closed four tourist complexes (including Haryana Bhawan Canteen) during 2004-09. The operational performance of tourist complexes (including non core activities) of the Company was as under:

Year	Number of complexes	Net operational surplus (excluding depreciation, overheads and profits from petrol[#] pumps) (Rs. in crore)	Tourist complexes earning profit			Tourist complexes incurring losses		
			Number	Percentage of total complexes	Profit (Rs. in crore)	Number	Percentage of total complexes	Loss (Rs. in crore)
2004-05	47	7.96	27	57.45	9.24	20	42.55	1.28
2005-06	45	10.07	24	53.33	11.55	21	46.67	1.48
2006-07	43	12.14	26	60.47	13.35	17	39.53	1.21
2007-08	43	15.11	26	60.47	16.45	17	39.53	1.34
2008-09	43	17.72	30	69.77	18.58	13	30.23	0.86
Total		**63.00**			**69.17**			**6.17**

It would be seen from the above that the complexes ranging between 24 and 30 earned profits aggregating Rs. 69.17 crore whereas complexes ranging between 13 and 21 suffered losses aggregating Rs. 6.17 crore during 2004-09. A review of loss making complexes revealed that 11[*] complexes had been consistently running in losses which accumulated to Rs. 4.01 crore during the last five years up to March 2009. Out of these only one complex has been closed in May 2008. The profit/loss stated above is without apportioning depreciation and overheads on individual complex as the data regarding the apportioned cost towards individual complex in respect of depreciation and overheads is not maintained by the Company. If depreciation and overheads are also considered for working out the profitability, the number of complexes incurring losses would further increase.

While reviewing half yearly working results ending 30 September 2006, the BOD desired (December 2006) that a Committee consisting of Managing Director, General Manager-Administration (GMA) and Chief Architect, Haryana should study the data/statistics of the tourist complexes to see as to whether loss making tourist complexes could be closed to avoid losses. The Committee recommended (April 2007) that complexes at Hansi, Fatehabad and Ottu be closed immediately as these were running in losses since inception and cannot be revived in the near future. The recommendations of the Committee were put up before the BOD (June 2007) which decided to close down the Hansi and Ottu tourist complexes and held without elaborating any reasons that it may be difficult to close the Fatehabad complex. Hansi tourist complex had not been closed so far (August 2009) as the formal approval of

[#] Discussed at para 2.2.32.

[*] Asakhera, Fatehabad, Hansi, Jind, Jyotisar, Morni Hills & Tikkar Taal, Ottu, Pehowa, Rewari, Samalkha and Sirsa. Loss includes expenditure on horticulture and infrastructure.

State Government was awaited though it had sustained losses of Rs. 72.45 lakh till March 2009 and Ottu complex was closed in May 2008 by which time it had sustained losses of Rs. 48.12 lakh. Further, decision of the BOD not to close Fatehabad complex was not justifiable as it had been running in losses since inception (1999-2000) and the loss had accumulated to Rs. 92.97 lakh up to March 2009. Of the above losses, the Company suffered loss of Rs. 51.43 lakh even after the decision of the BOD in these three complexes.

The Management stated (September 2009) that the number of Units suffering losses has been decreasing. However, the fact remains that eleven Units have consistently been in loss and only one Unit has been closed.

Activities for systematic development of tourism

Tourist arrivals

2.2.9 The Government of Haryana formulated Tourism Policy in 2008. As per the Policy, the Company was required to:

- use the services of event managers for marketing the areas set up by the Company and promotion of tourism potential of the State;
- introduce *panchkarma*[*] and spa facilities in its hotels to make them more tourist friendly;
- help public-private partnership projects as an agent of the State Government; and
- organise road shows jointly with private hoteliers and tour operators of the State to encourage foreign travellers.

It was observed that no projections for arrival of tourists were made in the policy. Further, the Company has introduced *panchkarma* and spa facilities only in Hotel Rajhans at Surajkund but not initiated any action for implementation of other aspects so far (July 2009). A summarised break-up of tourists visiting the complexes of the Company during 2004-09 is given below:

Year	Number of tourist visited in Company's complexes		
	Domestic	Foreigners	Total
	(Number in lakh)		
2004-05	60.14	0.73	60.87
2005-06	65.20	0.73	65.93
2006-07	59.62	0.72	60.34
2007-08	57.69	0.63	58.32
2008-09	59.45	0.79	60.24

(Source: The figures of tourist arrival were provided by the Tourism Department, Haryana Government)

The above table shows that the arrival of tourists ranged between 58.32 lakh and 65.93 lakh during 2004-09. Inflow of domestic tourists which was 65.20 lakh in 2005-06 declined to 59.45 lakh in 2008-09. Similarly, inflow of foreign tourists which was 0.73 lakh in 2004-05 started declining from 2006-07 onwards. However, it increased to 0.79 lakh during 2008-09. The Company had not analysed the reasons for declining trend in inflow of tourists after 2005-06 for taking remedial steps.

[*] Panchkarma is ayurvedic therapy for body rejuvenation.

During discussion in the Exit Conference, the Financial Commissioner (Tourism) intimated that figures given by the Tourism Department were not reliable and to arrive at correct data, some mechanism would be worked out.

Action plan and its implementation

2.2.10 The Company did not prepare any short or long term action plan for development of tourism in the State. In the absence of which the adequacy of achievement of the objectives of the Company could not be assessed. Further, activity wise physical and financial targets were not prepared before the commencement of financial year. However, the turnover targets in respect of only core activities were fixed by the Company on quarterly basis from August 2006 and during the year 2007-08, 32 complexes could not achieve the turnover targets.

Operations of the Company

2.2.11 The revenue of the Company of Rs. 615.61 crore during 2004-08 comprised sale of petroleum products (Rs. 438.42 crore), sale of food stuff and liquor (Rs. 104.11 crore), room rent (Rs. 35.17 crore), lease money (Rs. 10.40 crore), interest (Rs. 10.93 crore) and other income (Rs. 16.58 crore). Against this the expenditure of the Company was Rs. 603.57 crore during 2004-08 which consisted of purchase of petroleum products (Rs. 428.07 crore), consumption of catering, liquor and other purchases (Rs. 48.72 crore), administrative, marketing and other expenditure (Rs. 118.80 crore) and depreciation (Rs. 7.98 crore). The Company, thus, earned profit aggregating Rs. 12.04 crore which included interest of Rs. 10.92 crore earned on fixed deposit. Though, the Company earned profit aggregating Rs. 1.12 crore during 2004-08 from its operational activities, there is immense potential for improvement in the activities of the company as evident from analysis in the succeeding paragraphs.

Occupancy of the complexes

2.2.12 The Company was operating (March 2009) 41 motels with total room capacity of 768. The Company had neither fixed any targets for occupancy nor worked out break even level in running its motels. As per hotel industry, average occupancy of 60 *per cent* was considered desirable. A summarised break-up of average annual occupancy of the Company during 2004-09 is given below:

Year	Occupancy		
	Room days available	Room days let out	Percentage
2004-05	259837	168921	65
2005-06	260221	184956	71
2006-07	262885	200281	76
2007-08	273782	212490	78
2008-09	280360	216097	77

The Company had been able to improve its occupancy position from 65 *per cent* during 2004-05 to 77 *per cent* during 2008-09. The average tariff also increased from Rs. 971 per room day during 2004-05 to Rs. 1,299 per room day during 2007-08. There was increase in tariff by 33.78 *per cent* during 2004-05 to 2007-08. However, the increase in occupancy and tariff did not substantially add to overall profitability of the Company as administrative marketing and other expenditure[*] also increased by 51.93 *per cent* during the period. An analysis of occupancy of individual complexes revealed that the occupancy in 11 to 25 complexes was below the hotel industry norm of 60 *per cent* as detailed below:

Sl. No.	Occupancy percentage	Number of motels				
		2004-05	**2005-06**	**2006-07**	**2007-08**	**2008-09**
1	Less than 20	4	1	2	2	2
2	Between 20 and 39	4	5	6	4	5
3	Between 40 and 59	17	14	11	9	4
	Total (below 60)	**25**	**20**	**19**	**15**	**11**
4	Between 60 and 79	10	12	10	12	15
5	80 and above	8	9	12	14	15
	Total (above 60)	**18**	**21**	**22**	**26**	**30**
	Total	**43**	**41**	**41**	**41**	**41**

Out of these, the occupancy of nine[•] motels was consistently less than the norm of 60 *per cent* in all the five years ended 31 March 2009. The low occupancy was due to lack of adequate publicity, lack of adequate tourist facilities, non providing of powers to the officers/incharge of the tourist complexes for flexible rates of rooms to compete with the private hotels and motels. Further, frequent changes[♦] of Managing Directors resulted in lack of continuity at the top level to formulate and implement long term action plan for improvement in the working of the Company. Audit also observed that 4 to 9 motels where occupancy was more than the desirable norm of 60 *per cent* were incurring losses during 2004-09 indicating immense scope of improvement in operation of these motels.

The Management stated (September 2009) that occupancy of the complexes depends on their location and type of clientage. However, targets of occupancy for each Unit have been fixed in July 2009.

Food cost

2.2.13 The Company had fixed (August 2003) complex wise food cost norms ranging between 25 and 35 *per cent* of catering turnover for various complexes keeping in view the location and sale. These were revised to 20 to 30 *per cent* of catering turnover in August 2008. Based on the norms fixed, the actual food cost was more in 13 complexes in 2004-05, 16 complexes in 2005-06, 18 complexes in 2006-07, 24 complexes in 2007-08 and 36 complexes in 2008-09. The actual cost in excess of norms during 2004-09 resulted in extra expenditure of Rs. 1.81 crore. Excessive food cost was mainly due to low catering turnover and higher overheads.

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[*] The administrative, marketing and other expenditure are in respect of overall Company as separate expenditure details in respect of motels are not prepared by the Company.

[•] Damdama, Fatehabad, Hansi, Morni Hills & Tikkar Taal, Ottu, Pehowa, Rewari, Sirsa and Yamunanagar.

[♦] The post of MD was held by four incumbents during 2004-09 with the tenure ranging from 4 to 33 months.

The Management stated (September 2009) that monitoring of loss making Units is made regularly and effective steps are being taken for improvement. However, Audit observes that this is not reflected in the results.

Food and fuel cost in excess of norms resulted in extra expenditure of Rs. 2.92 crore.

Fuel cost

2.2.14 The percentage of fuel cost to catering turnover was fixed (August 2003) between 4 and 14 *per cent* for various complexes whereas fuel cost norms in Orissa Tourism Development Corporation Limited, Rajasthan Tourism Development Corporation Limited and Punjab Tourism Development Corporation Limited (PTDC) were three, three and six *per cent* respectively. The Company revised norms (August 2008) which ranged between 5 and 12 *per cent*. The actual fuel cost was in excess of norms (ranging between 4.01 to 33.33 *per cent)* in 29 complexes in 2004-05, 36 complexes in 2005-06, 36 complexes in 2006-07, 37 complexes in 2007-08 and 21 complexes in 2008-09 which indicates poor performance. The fuel cost in excess of norms during 2004-09 resulted in extra expenditure of Rs. 1.11 crore.

The Management stated (September 2009) that increase in price of fuel, non match with the food rates and low sales of food contributed for higher cost. Efforts were being made to keep it at desired levels.

Cost of electricity

2.2.15 The Company had not fixed any norms for consumption of electricity in its tourist complexes whereas PTDC had fixed a norm of five *per cent* of the turnover in its complexes. The complexes having turnover of Rs. 168.84 crore, incurred electricity expenditure of Rs. 13.54 crore against the norms of Rs. 8.44 crore (based on PTDC norm) resulting in excess consumption of electricity to the extent of Rs. 5.10 crore during 2004-09.

The Management stated (September 2009) that attempt would be made to fix the norm in near future.

Uneconomic fast food counters

Two fast food counters incurred loss of Rs. 83.03 lakh.

2.2.16 As per guidelines issued (January 1999) by the GOI, fast food counters should be constructed at a distance of 50 KM from any tourist centre/existing complex of the Company to meet the requirement of tourists travelling to the tourist destinations by Road. In contravention of the guidelines, the Company constructed seven[#] fast food counters around its existing complexes without feasibility survey. The Company leased out two[*] fast food counters during 2004-09 to private parties due to poor sale. No separate accounts have been maintained in three[♣] fast food counters in the absence of which their working could not be reviewed. In the remaining two[♦] fast food counters, where separate accounts were maintained, the Company suffered a loss of Rs. 83.03 lakh during 2004-09 due to excess food, fuel, electricity and salary cost.

The Management stated (September 2009) that the losses were due to

[#] Daruhera, Hodal, Karnal, Panipat, Pinjore, Pipli and Rohtak.

[*] Daruhera and Hodal.

[♣] Karnal, Panipat and Pipli.

[♦] Pinjore and Rohtak.

excessive administrative overheads. However, with control on food, fuel and salary cost, these counters could be made viable.

Performance of liquor activities

2.2.17 The Company operated 36 to 39 bars in its various complexes during 2004-09. No separate accounts were maintained for these bars. Out of 15 bars test checked, 8 to 10 bars had been incurring losses during 2004-09 as detailed below:

Year	Bars running in losses	Income	Expenditure	Loss
	(number)	(Rupees in crore)		
2004-05	10	1.11	1.38	0.27
2005-06	8	1.01	1.23	0.22
2006-07	8	0.84	1.20	0.36
2007-08	10	1.08	1.54	0.46
2008-09	8	0.76	0.88	0.12
Total		**4.80**	**6.23**	**1.43**

The Company had suffered a loss of Rs. 1.43 crore[♠] in 8 to 10 bars during 2004-09. Four[ϒ] bars had consistently been running in losses during this period and incurred loss aggregating to Rs. 81.51 lakh during 2004-09. The Management attributed the losses to low sale of liquor; non availability of popular brands of liquor/beer; old infrastructure and higher rates as compared with private bars. However, no remedial measures were taken to increase to sale.

The Management stated (September 2009) that the figures of loss were not authentic as no separate account of the bars were maintained. The reply is not acceptable as the figures of losses were provided by the complexes.

Development of unviable project

Ottu complex undertaken despite adverse report and resulted in unfruitful expenditure of Rs. 47.65 lakh.

2.2.18 The feasibility report conducted for development of Ottu complex stated (July 2001) that due to locational disadvantage and low occupancy rate, there would be loss of Rs. 8.74 lakh *per annum*. Despite these findings, and without recording any reasons, the Company got sanctioned (December 2003) grant of Rs. 1.48 crore from GOI for construction of this complex. The GOI released Rs. 1.15 crore in two installments during 2003-05. As per terms and conditions of the sanction, the unutilised funds were to be surrendered to GOI or formal approval was to be taken to transfer/adjust the amount against other projects. The Company incurred an expenditure of Rs. 47.65 lakh up to October 2005 and has abandoned this project since May 2008 on its closure. Thus, decision of the Company to go in for this project, despite adverse feasibility report, lacked justification which had resulted in unfruitful expenditure of Rs. 47.65 lakh. The Company had also not taken any action to transfer/adjust the unutilised amount of Rs. 67.58 lakh.

The Management stated (September 2009) that the unutilised grant would be refunded on getting approval of closure from the State Government.

♠ Worked out on the basis of income on sales and expenditure on permit fee paid, salary and electricity.

ϒ Pehowa, Jind, Morni Hills and Oasis-Karnal.

Loss in running of Haryana Bhawan canteen at Delhi

2.2.19 The Haryana Bhawan canteen at Delhi run by the private contractor was transferred by the State Government to the Company in June 2002. As per conditions of transfer the canteen was to be run on no profit no loss basis and rates of food and beverages items, which were subsidised, were to be fixed by the State Government and the Company had no authority to revise the same. As per conditions, any losses in running of canteen were to be reimbursed by the State Government. The Company suffered a loss of Rs. 66.78 lakh in operation of canteen during 2002 to 2005 and the canteen was later on handed over to the Hospitality Department, Haryana in October 2005. The State Government, however, had reimbursed only Rs. 10 lakh in July 2005. The Company has not taken up the matter with the State Government for re-imbursement of the remaining amount resulting, thereby, in loss of Rs. 56.78 lakh.

Construction activities

2.2.20 The Company has its own construction wing headed by a Chief Engineer with 57 employees (March 2009). It undertakes construction work of tourist complexes on behalf of State Tourism Department against the funds received from Government of India and State Government.

The Government of India and State Government sanctioned Rs. 111.97 crore (Government of India: Rs. 70.95 crore and State Government: Rs. 41.02 crore) for 213 projects during 2004-09. Against this the Company received Rs. 78.70 crore (Government of India: Rs. 37.68 crore and State Government: Rs. 41.02 crore) and incurred expenditure of Rs. 48.44 crore up to March 2009.

Execution of Central assisted projects

2.2.21 GOI has been granting financial assistance through the State Government for augmentation of tourist infrastructure facilities like addition, alteration and renovation etc. The assistance was provided every year on the specific proposals from the State Government. The State Government was required to provide developed land free of cost with facilities like electricity, water supply, sewerage and approved roads. The Company received Rs. 37.68 crore from GOI against sanctioned amount of Rs. 70.95 crore for development of 16 projects during 2004-09. The Company incurred expenditure of Rs. 19.35 crore up to March 2009 and unutilised grant of Rs. 18.33 crore was lying with the Company as on 31 March 2009.

Grant of Rs. 18.33 crore received from GOI remained unutilised.

Table below indicates the status of projects sanctioned during the last five years ended March 2009.

Year	Projects					Rupees in crore			
	Sanctioned	Completed	In progress	Dropped	Yet to be taken up	Sanctioned	Received	Yet to be received	Expenditure incurred
2004-05	3	1	1	1	-	6.32	5.05	1.27	2.82
2005-06	2	1	1	-		6.00	4.80	1.20	5.39
2006-07	3	-	3	-	-	21.78	10.64	11.14	10.16
2007-08	4	-	4	-	-	12.35	9.95	2.40	0.98
2008-09	4	-	-	-	4	24.50	7.24	17.26	-
Total	**16**	**2**	**9**	**1**	**4**	**70.95**	**37.68**	**33.27***	**19.35**
Dropped				**1**		**1.46**	**1.17**	**-**	**0.03**

* This includes Rs. 0.29 crore for the dropped project.

Out of 16 projects sanctioned by GOI during 2004-09, only two projects• were completed after a delay of 8 and 36 months against time schedule of 30 and 6 months respectively. One project♦ was dropped on feasibility grounds and out of Rs. 1.17 crore received for this project, the unutilised amount of Rs. 1.14 crore has been got adjusted by the Company against another work during September 2008. The Company was yet to receive Rs. 32.98 crore♈ from GOI due to delay in implementation of the projects. The projects were delayed due to reasons like change/increase in scope of work, delay in planning and finalisation, delay in supply of cement and steel and delay in execution of works.

Execution of State assisted projects

2.2.22 The State Government sanctioned Rs. 41.02 crore for 197 projects during 2004-09 for repair and maintenance, renovation, addition and alteration of complexes against which the Company could complete 96 projects up to March 2009 by spending Rs. 29.09 crore and the remaining amount of Rs. 11.93 crore was kept in term deposits. As of March 2009, 90 projects were in progress and nine projects were yet to be taken up. The Company dropped two projects♣ due to unviability. The projects were delayed due to reasons like change/increase in scope of work, delay in planning and finalisation, delay in supply of cement and steel and delay in execution of works with consequential delayed addition of facilities to the complexes. The Company, thus, could not fully utilise funds for promotion of tourism in the State.

The Management stated (September 2009) that statement prepared by audit is not proper and funds sanctioned by the State Government have been properly and timely utilised. The reply is not acceptable as the data was provided by the Company itself and funds were not utilised timely since 90 projects relating to 2005-06 to 2008-09 are still in progress and nine works are yet to be taken up (August 2009).

Convention centre

2.2.23 The GOI and State Government sanctioned (March 2004) funds amounting to Rs. 4.22 crore for construction of convention centre at Surajkund, Faridabad. The work was completed by the contractor in July 2008 against the scheduled completion date of July 2005. The contractor attributed the delay in completion of work to delayed supply of cement and steel, change in original layout plan and non release of payment of running bills in time. The Company received Rs. 1.16 crore from GOI (April 2004 and May 2007) and Rs. 3.83 crore from State Government (May 2004 to March 2008). The expenditure on the centre amounted to Rs. 5.11 crore which exceeded the original cost estimated by Rs. 0.89 crore (Rs. 0.79 crore due to change in original layout plan and Rs. 0.10 crore due to cost over run).

• Development of Surajkund, Faridabad and Tilyar, Rohtak.
♦ Development of Badkal lake, Faridabad.
♈ excluding Rs. 0.29 crore in respect of dropped project.
♣ Jyotisar fast food and Blue bird, Hissar.

Office Building

2.2.24 The Company planned to construct its office building at Panchkula at an estimated cost of Rs. 2.74 crore. The civil work for construction of the office building was allotted (March 2005) to a contractor at a cost of Rupees two crore with a time limit of 15 months i.e by June 2006. With the increase in scope of work the estimates were increased (October 2007) to Rs. 4.20 crore. The building was, however, completed in April 2008 at a total cost of Rs. 4.66 crore (excluding final bill). The delay in construction occurred due to delay in providing cement, steel, frequent changes in original layout plan and increase in scope of work. Thus, the work of building was delayed due to improper planning which caused cost overrun of Rs. 0.46 crore (Rs. 4.66 crore minus Rs. 4.20 crore).

Due to delayed completion of office building, cost overrun was Rs. 0.46 crore and loss of revenue towards rent was Rs. 0.80 crore.

The Company decided in July 2008 to let out the whole building instead of self occupation. Accordingly, the building was rented out to four departments at the rate of Rs. 8.93 lakh per month from May 2009. Due to lack of planning the Company took a time of one year to rent out the building from the date of completion. Had the Company rented out the building from August 2008 after decision taken in July 2008 for renting it out, it could have earned revenue of Rs. 80.37 lakh at the rate of Rs. 8.93 lakh *per* month up to April 2009.

The Management stated (September 2009) that delay in letting out the building was due to delay in finalising the departments to be accommodated. The reply is not convincing since the issue should have been sorted out immediately after the decision (July 2008) to rent out the building.

Inadequate marketing

2.2.25 Adequate marketing is essential for any business to attract customers. To attract steady inflow of tourists, the tourism industry offers various attractive sight seeing packages to different groups of customers which *inter alia* include catering, transportation, tourist guide etc. Such packages are widely advertised through press, electronic media etc. Besides, commission agents are also engaged to attract more tourists. It was noticed in audit that the Company had not resorted to such marketing practices and the expenditure on advertisement/publicity during 2004-09 ranged between Rs. 20.73 lakh and Rs. 50 lakh which worked out to 0.14 and 0.24 *per cent* respectively of the turnover during these years.

The expenditure on advertisement and publicity was negligible ranging between 0.14 and 0.24 *per cent* of the turnover.

The Company was not fully utilising the financial assistance received on year to year basis from the State Government for advertisement and publicity as per demands submitted by it through Tourism Department. During 2004-09 against demand of Rs. 2.40 crore, the Company received Rs. 1.65 crore and utilised Rs. 1.55 crore. Due to delay in submitting demand (July 2004) for publicity and advertisement to the State Government for the year 2004-05 and non pursuance of the case, the Company could not get an amount of Rs. 55.40 lakh from State Government. The State Government also released Rs. 46.89 lakh for participation in fair at Berlin (Rs. 23.20 lakh in 2006-07) and for participation in World Trade Mart, London (Rs. 23.69 lakh in 2007-08) in addition to above assistance. The Company incurred expenditure of

Rs. 42.30 lakh but unutilised amount of Rs. 4.59 lakh had not been surrendered to the State Government (August 2009).

The Management stated (September 2009) that expenditure on publicity/marketing should be with reference to necessity and not with reference to percentage of turnover. However, the Company spent on an average only Rs. 31 lakh per annum and even did not appoint any event manager for promotion of tourism as contained in the tourism policy.

Quality of services

Inadequate essential services

2.2.26 Providing services to the satisfaction of the customer is benchmark for success in hospitability business. However, the Company has not fixed any benchmarks to assess the quality of services provided to tourists. A review of services and other amenities available in the complexes test checked in audit revealed:

- non maintenance of records pertaining to the visits of public health authorities and their findings with regard to maintenance of hygiene in the complexes;
- absence of any system of periodical medical check up of the cooks and bearers;
- non availability of test reports of food inspectors on the quality of food provided in the complexes;
- the Company had not entered into any contract for maintenance of fire fighting equipments in the complexes;
- non display of information regarding availability of items (room inventory) in the rooms of the complexes except Yamunanagar complex; and
- non display of information at the reception counters regarding availability of medical facilities.

The Management stated (September 2009) that steps are being taken to improve quality of services at the complexes.

Assessment of customer satisfaction

2.2.27 With a view to assess the degree of satisfaction of customers, with regard to accommodation facilities and quality of food served, the complexes are required to maintain suggestion/complaint register. The Company issued (August 2004) instructions to all field offices to place the suggestion book on the counter. It was, however, observed that out of 19 complexes visited; the suggestion books were not made available to the customers in 10* complexes

* Hotel Rajhans, Sunbird Motel, Hermitage Huts, Yamunanagar, Morni Hills, Pehowa, Jind, Tilyar Lake, Magpie and Ottu.

for getting their comments and suggestions for taking remedial measures. Suggestion/complaints made by the customers in other complexes were not being regularly forwarded to head office for taking timely action. In respect of complaints received at head office, no follow up action was taken. Against 50 complaints received from the complexes at head office during 2004-09, charge sheet was issued only in one case. There was lack of proper feed back system like customers satisfaction response sheet, standard service norms; postage pre paid feed back forms etc. in the absence of which the adequacy of customers' satisfaction could not be assessed in audit.

The Management stated (September 2009) that corrective measures are being taken to further improve customers' satisfaction.

Leasing of shops/sites

2.2.28 The Company has been leasing out its 190 shops/sites located within its tourist complexes to private parties through public auction/open tenders process. The Company earned lease rent of Rs. 10.44 crore from leasing during 2004-08. The Company has been timely leasing out its shops/sites. However, the following irregularities were noticed in auction of shops/sites.

Non-recovery of license fee

2.2.29 The Company allotted (July 2006) on lease a fast food counter to a contractor[#] on a license fee of Rs. 7.50 lakh from 01 July 2006 to 30 June 2009 at Dharuhera. The contractor deposited Rs. 1.12 lakh (15 *per cent* of bid amount) as security and Rs. 0.75 lakh (1/10th of the bid amount) as the first installment at the fall of hammer. As per terms of the agreement, contractor was required to deposit remaining amount of license fee in nine equal installments along with the electricity charges, House tax, Service tax and all other taxes from October 2006 to April 2009. In case of default, interest at the rate of 12 *per cent* per day for the defaulted amount for a maximum period of 15 days was to be charged. Thereafter, the Company was to take over possession of the site along with goods of the licensee, if any, to recover the outstanding amount. The cheque for Rs. 0.84 lakh, issued in October 2006, being the second installment, was dishonoured due to insufficient funds.

Audit observed that the Company did not take possession of the site as per terms of the agreement but moved (August 2007) the court for recovery. The decision was still pending (July 2009). The site was still in the possession of the licensee (July 2009). Thus, inaction on the part of the Company to take possession of the site as per terms and conditions of the agreement resulted in loss of revenue of Rs. 9.60 lakh up to May 2009 on account of lease money (Rs. 6.75 lakh), electricity charges (Rs. 0.73 lakh), and water charges (Rs. 0.26 lakh) and interest (Rs. 1.86 lakh). No action has been taken by the Company against the defaulting official for the lapse.

Loss in running of golf course

2.2.30 The Aravali golf course, Faridabad set up in 1966, was taken over by the Company in 1988. The club's revenue included entry fee, monthly subscription

[#] Shri Om Prakash Sharma.

from members, green fee from non members and equipments hiring charges etc. Audit noticed that monthly subscription fee of Rs. 33.75 lakh was recoverable from 585 members of the club as on 31 March 2009 including Rs. 13.40 lakh from 78 defaulting members whose default amount exceeded Rs. 0.10 lakh as on 31 March 2009 and issuing of bills to them had been discontinued with effect from April 2008 by the Company though they are still members of the club. Besides, annual membership fee of Rs. 71.86 lakh recoverable from 268 members since October 1997 to March 2008 had not been recovered as their membership was terminated by the in-charge of the complex who was not competent to do so. In the absence of specified rules and regulations, no legal action/remedy could be taken by the Company to recover the outstanding dues from defaulting members. In view of this, the amount of Rs. 1.06 crore remained unrecovered as on 31 March 2009.

The Management stated (September 2009) that the members whose membership has been terminated are not required to pay subscription and arrears before/after their termination. Membership of the defaulters would be terminated and amount recoverable written off.

Loss in running of horticulture nursery

Due to running of unviable horticulture nursery, the Company suffered a loss of Rs. 42.83 lakh.

2.2.31 The Company had been running horticulture nursery in Mehrauli, Delhi since 1975. The Company mainly made purchases from outside agencies (Rs. 88.59 lakh) and had only negligible plantation activity inside the nursery. Out of total sales of Rs. 1.16 crore, sale to its complexes and outside agencies during 2004-09 were Rs. 18.14 lakh and Rs. 98.22 lakh respectively.

The Company sustained a loss of Rs. 42.83 lakh during 2004-09 on running of the nursery due to high cost on salary and wages (51.80 *per cent* of sale). Further, the Company did not follow its purchase procedure requiring calling of press tenders for purchase of materials exceeding Rs. 0.25 lakh and placed 96 orders exceeding Rs. 0.25 lakh aggregating to Rs. 82.11 lakh during 2004-09 without inviting tenders. Due to non following of purchase procedure, the payment of extra expenditure, if any, on this account could not be ascertained. The Company did not review the performance of nursery to operate it economically or to decide on its closure.

The Management stated (September 2009) that efforts are being made to get the change of land use for setting up recreational/amusement centre.

Operation of petrol pumps

2.2.32 The Company operated 13 petrol pumps in 2004-05 and 14 in 2005-06 to 2008-09. No sales targets of petrol pumps had been fixed by the Company. The profitability from this activity remained stagnated which ranged between 0.66 to 1.27 *per cent* of turnover during 2004-09. Two petrol pumps (Pehowa and Narwana) suffered losses aggregating Rs. 10.90 lakh during 2004-09 due to less sales and higher cost of staff salary. The loss of petrol and diesel worth Rs. 7.14 lakh at Rohtak and Narwana petrol pumps was unauthorisedly adjusted against evaporation/handling losses. Considering the thin margin, the Management needs to monitor this activity closely.

The Management stated (September 2009) that department action is being taken against the defaulters.

Unfruitful investment

The investment of Rs. 1.72 crore made on urban haat proved partially unfruitful in providing benefit to handicraft persons/weavers.

2.2.33 The Company set up (September 2002) an urban haat at Oasis Tourist Complex, Karnal. Forty eight shops for crafts persons, two exhibition halls, dormitory, kiosk for ethnic fast food, public toilet, office and store were constructed at a cost of Rs. 1.67 crore against sanctioned cost (March 2000) of Rs. 1.23 crore revised to Rs. 1.72 crore (July 2004). Funds amounting to Rs. 1.72 crore were contributed by GOI (Rs. 0.86 crore) and State Government (Rs. 0.86 crore). The urban haat was to operate round the year with a change in craft persons and festivities every 15 days. As per the project report, annual income and expenditure of Rs. 16.50 lakh was projected. This work/project was a promotional activity of Tourism Department under which the crafts persons/weavers of the area were to be benefited in a big way and the project was to be a source of great attraction for tourists. Audit observed that the Company organised only five melas/festivals for total 50 days against projection of 120 melas round the year during 2004-09 and sustained loss of Rs. 40.04 lakh due to less income and more expenditure on organising of melas/festivals and on salary and wages of staff. Thus, the object of giving direct benefit to handicraft persons/weavers by creating platform for selling their products at urban haat had been defeated despite investment of Rs. 1.72 crore.

The Management stated (September 2009) that all possible efforts have been made and being made to keep the shops/huts occupied throughout the year but, craftsmen/artisans were not willing to stay for longer period.

Financial management

Doubtful recovery of sale on credit

2.2.34. The Company had not laid down any credit policy for sale. In various meetings of Drawing and Disbursement Officers (DDOs) held under the chairmanship of Chairman/MD, the DDOs were directed to ensure that outstanding dues be recovered immediately from the debtors and it was made clear that no credit facility be extended to any individual, commission, organisation, office etc. except functions organised by Raj Bhawan, Hospitality Department and Deputy Commissioners concerned and in these cases also the credit bill must be got verified from their representatives and DDO must follow up these cases for early recovery.

The position of the sundry debtors during five years up to March 2009 was as under:

Year ending	Government	Semi Government	Private parties	Court cases	Lease money	Total
	(Rupees in lakh)					
March 2005	24.15	32.68	27.21	7.38	18.00	109.42
March 2006	20.53	26.97	42.71	22.83	24.55	137.59
March 2007	24.82	10.62	83.70	23.50	22.29	164.93
March 2008	22.82	14.72	60.23	23.24	8.95	129.96
March 2009	27.23	10.80	121.94	17.75	26.76	204.48

The outstanding from private parties increased from Rs. 0.27 crore to Rs. 1.22 crore despite directions of BOD.

It would be seen from the above that due to credit facilities allowed for accommodation and catering, the debtors increased substantially from Rs. 1.09 crore in March 2005 to Rs. 2.04 crore in March 2009. Further, out of Rs. 1.30 crore sundry debtors as on 31 March 2008, Rs. 70.45 lakh were outstanding for more than three years and Rs. 55.32 lakh for more than five years which were doubtful of recovery. The outstandings from private parties increased from Rs. 27.21 lakh during 2004-05 to Rs. 1.22 crore up to March 2009 despite directions of the BOD for not extending the credit facility.

The Management stated (September 2009) that credit sales are totally prohibited by the Company. Efforts are being made to recover the outstandings by fixing responsibility of the concerned officials/officers.

Monitoring by top management

Management information system

Due to slow implementation of project, Rs. 32.92 lakh could not be received from GOI/State Government.

2.2.35 For updation of information system and computerisation of various complexes and linking through network, the Company formulated (1999-2000) a project costing Rs. 96.22 lakh. The cost was to be shared equally by GOI and State Government. The GOI and State Government released funds amounting to Rs. 43.30 lakh (in three installments up to 2005) and Rs. 20 lakh (March 2008) respectively. The Company utilised the funds of Rs. 48.29 lakh and the balance amount of Rs. 15.01 lakh remained unutilised. Due to slow pace in implementation, the Company could not get balance amount of Rs. 32.92 lakh (GOI: Rs. 4.81 lakh, State Government: Rs. 28.11 lakh) and the benefit of effective MIS like compilation of data, analysis of business activities including realisation of revenue and matching of expenses, control over funds receivable/payable, effective managerial control in key areas of the business etc., could not be achieved.

The Management stated (September 2009) that due to closure of scheme in 2006 by Government of India balance amount was not released. The reply is not convincing since the scheme was formulated in 1999-2000 and due to slow implementation of the project, the Company could not avail the benefit of the scheme.

Manpower

2.2.36 As on 31 March 2008, the Company was having 2,045 employees. During 2004-08, the aggregate turnover of the complexes (excluding the turnover from petroleum products) was Rs. 198.60 crore and the expenditure towards pay and allowances of staff deployed in the complexes was Rs. 53.33 crore (26.85 *per cent* of turnover). The Company decided in March 1989 that the salary cost should not exceed 20 to 25 *per cent* of the total turnover of the respective complexes. The Tamil Nadu Tourism Development Corporation Limited had fixed uniform salary norm at 10 *per cent* of the turnover for all the complexes. Audit scrutiny revealed that actual salary cost was more than the norm (ranging between 25.48 and 111.94 *per cent*) in 35 complexes in 2004-05, 33 complexes in 2005-06, 31 complexes in 2006-07

Salary cost in excess of norms resulted in extra expenditure of Rs. 9.48 crore.

and 32 complexes in 2007-08. This has resulted in extra expenditure of Rs. 9.48 crore during 2004-08♦ on the salary component taking the highest norm of 25 *per cent* for all the complexes. As the company's overall occupancy is well above desirable 60 *per cent* norm, the manpower cost should have been maintained within the specified norms. No analysis of excess manpower cost was done by the Management. As this cost affects the profitability, the Management needs to look into rationalisation of manpower.

The Management stated (September 2009) that efforts are being made to reduce the salary cost.

Internal control

2.2.37 Internal control is a management tool used to provide reasonable assurance that the management objectives are being adhered to in an efficient and effective manner. A good system of internal control should comprise, *inter alia*, proper allocation of functional responsibilities within the organisation, proper operating and accounting procedure to ensure accuracy and reliability and accounting data, efficiency in operation and safeguarding of assets. A review of the internal control procedures adopted by the Company revealed the following deficiencies:

Annual accounts of the Company have not been finalised since 2006-07.

- Annual accounts were not finalised by the Company in time and were in arrears since 2006-07. This was fraught with the risk of embezzlement/misappropriation, if any, remaining undetected.

The Management stated (September 2009) that efforts are being made to clear the backlog of the accounts.

- The Company has not evolved any system for preparing annual budget/action plan to promote tourism and monitor the activities in an effective manner. Activity wise physical and financial targets were not fixed before the commencement of financial year. Sales targets in respect of only core activities were fixed by the Company on quarterly basis from August 2006.

- There was no adequate Management Information System (MIS) as segment wise matching of income and expenditure was not compiled for effective control by the Management.

- The fixed assets registers showing full details of quantity, location and cost etc. had not been maintained by the field offices.

- Fixed assets register for the assets created out of grants received from the State Government/GOI has not been maintained at head office of the Company. The project wise and contractor wise registers were not maintained.

- There was no system of conducting reconciliation of accounts relating to grants received, between construction wing and head office. The

♦ Figures of salary for the year 2008-09 not available.

Company had accumulated unutilised grants of Rs. 91.35 crore as on 31 March 2008[♦] but year wise details of the same were not available.

Internal audit

2.2.38 The Company had not prepared internal audit manual prescribing the scope and extent of internal audit checks. Internal audit of only seven to nine field units of the Company was got conducted from the firms of Chartered Accountants during 2003-04 to 2005-06. Internal audit reports of Chartered Accountants contained points of routine nature and did not point out any system lapses/deficiencies. For the local audit of 13 units for the year 2006-08, the Company appointed (March 2008) three firms of Chartered Accountants but their reports were still awaited (August 2009). The Audit Committee had expressed (September 2008) concern regarding inadequate internal audit system as the present system of conducting internal audit was not commensurate with the nature and size of the business of the Company. It was further noticed that internal audit of head office, where major expenditure/decisions were taken, had not been conducted since inception. The internal audit reports were not put up to the BOD for taking corrective action as per guidelines (November 2002) of Bureau of Public Enterprises. Neither the head office nor the field offices kept record of internal audit observations for monitoring the pursuance.

The Management stated (September 2009) that Chartered Accountant firms are being appointed for conducting internal audit.

The above matters were referred to the Government in June 2009, their reply had not been received (September 2009).

Conclusion

- **The data showed a decline in inflow of tourists from 65.93 lakh in 2005-06 to 60.20 lakh in 2008-09. However, this data is not reliable and, therefore, it is not possible to offer comment on promotion/development of tourism in the State during 2004-09.**

- **There was no system of preparing the annual budget and no short term/long term action plans were prepared to improve the performance of the complexes and for their upgradation and renovation.**

- **The Company was earning negligible profits from its operations inspite of increase in occupancy and tariff due to low sale in catering/bar and high food, fuel, electricity and establishment costs in its complexes. Its petroleum business operated on a thin margin.**

♦ Figures for 31 March 2009 were not available.

- **Services provided to the customers were found inadequate and there was lack of proper feedback system to assess the adequacy of customers' satisfaction.**

- **Utilisation of grants received for creating/developing tourism infrastructure was very slow due to which there was delay in creation of projected facilities and unutilised amounts remained parked in fixed deposits. Further, the instructions of not allowing sale on credit to private parties were not strictly followed.**

- **The governance of the Company was poor due to ineffective MIS, internal control, internal audit, inadequate size of the BOD and frequent changes of Managing Directors.**

The deficiencies in the Company's functioning are controllable and there is immense scope to improve the performance through better management of its operations.

Recommendations

- **The Company should prepare annual budget and long term plan to promote and monitor the activities in a planned manner.**

- **The Company should analyse the reasons for high costs and devise measures to reduce cost on various overheads to improve its profitability from main operations. The Management should closely monitor Company's petroleum business which operates on a thin margin.**

- **The Management should take effective steps for properly sensitizing the staff to provide high level of services as required in hospitality sector. The feedback system should be strengthened to assess and improve quality of services rendered.**

- **Suitable monitoring system should be devised to ensure that the Government grants are drawn and utilised as per terms and conditions for release of grants so that the complexes are upgraded and renovated within stipulated time in order to tap the full tourist potential.**

- **The Company should improve its internal control procedures including MIS and internal audit for achieving its objectives.**

Uttar Haryana Bijli Vitran Nigam Limited and Dakshin Haryana Bijli Vitran Nigam Limited

2.3 Computerised billing of Domestic Supply (DS) and Non-Domestic Supply (NDS) consumers of UHBVNL and DHBVNL by HARTRON

Executive summary

The performance IT Review of computerised billing by Haryana State Electronics Development Corporation Limited (HARTRON) in five operation circles namely Ambala (except Panchkula Division), Panipat and Sonepat of Uttar Haryana Bijli Vitran Nigam Limited (UHBVNL) and Faridabad and Gurgaon of Dakshin Haryana Bijli Vitran Nigam Limited (DHBVNL) was conducted to evaluate the application and general controls of the computerised set-up.

Input Controls

There were inadequate controls over input resulting into short recovery of meter rent, non-posting and non-realisation of sundry charges, excess allowances to consumers, non-availability of date of connection, in the absence of which timely issue of first bill could not be ascertained and non-availability of amount of security deposit resulting in non-compliance of provision of Electricity Supply code.

Output Controls

There were inadequate controls over outputs. Either various Management Information System (MIS) reports were not obtained or the same were not analysed and acted upon by Distribution Companies (DISCOMs') staff to address loss of revenue due to defaulting consumers and systemic delays in realisation of revenue. There were abnormal delays in issue of bills in case of large number of consumers involving huge amount of revenue. In a number of cases, supply of electricity to defaulting consumers was not disconnected which adversely affected ways and means position of DISCOMs besides loss of interest due to default.

In case of sizeable number of consumers, consumption of electricity was more than the maximum units that they could consume on the basis of their sanctioned load which indicated unauthorised usage of load resulting in recurring losses due to average charges, short levy of consumption security etc.

General Controls

The general controls were largely inadequate as no documented user requirement specifications (URS), software requirement specifications (SRS) and other system design documents were found to exist. There was no documentation of change management policy, business continuity, disaster recovery and security policies.

Introduction

2.3.1 The erstwhile Haryana State Electricity Board (Board) had outsourced the work of computerised revenue billing of its domestic supply (DS-power supplied for domestic use/purpose) and non-domestic supply (NDS-power supplied for commercial use/purpose) consumers since 1986-87. The Board was unbundled in August 1998 into two companies namely Haryana Vidyut Prasaran Nigam Limited (HVPNL-for transmission and distribution of power) and Haryana Power Generation Corporation Limited (HPGCL-for power generation). The distribution of power was further transferred to two newly incorporated DISCOMs namely Uttar Haryana Bijli Vitran Nigam Limited (UHBVNL) and Dakshin Haryana Bijli Vitran Nigam Limited (DHBVNL) from 1 July 1999. UHBVNL and DHBVNL are the subsidiaries of HVPNL and are engaged in distribution of power in the northern and southern regions of the state respectively. The two DISCOMs consist of 16 operation circles (UHBVNL: 10 and DHBVNL: 6). As on 31 March 2006, out of 76.32 lakh consumers in the state, there were 37.89 lakh DS and NDS consumers. They accounted for revenue to the tune of Rs. 1,352.86 crore out of total revenue of Rs. 3,683.12 crore during the year 2005-06.

Revenue billing of DS and NDS consumers continued to be outsourced and since June 2003, two billing agencies namely HARTRON and DOEACC (formerly Regional Computer Centre) executed this work as per work orders issued (June 2003) to them. Both the billing agencies were generating bills on a recurring bill preparation charge of 84 paise per bill. Bill format was revised as per Electricity Supply Code of Haryana Electricity Regulatory Commission (HERC) and bill preparation charge was revised (April 2007) to Rs. 2.44 per bill. In addition to bill preparation charge, one time master file creation charges were fixed at 76 paise per new connection. Terms of the work orders inter-alia included cost of billing, related outputs[*], checking of correctness of punched data by generating checklists of input data, stub lists, reading records and changes required in the software etc.

During the period of review (2006-09), in 10[ϒ] out of 16 operation circles, billing was primarily being done by HARTRON on behalf of UHBVNL (four circles) and DHBVNL (six circles). In the remaining six circles, billing was being done by DOEACC. Billing in respect of urban areas of Faridabad was withdrawn from HARTRON and outsourced to Telecommunication Consultants India Limited (TCIL) in February 2008.

Organisational set-up

2.3.2 The operation work of the two DISCOMs is taken care of by the Managing Directors who are assisted by Chief Engineers (Operation),

[*] Bills, consumer ledger, various exception lists, assessment summary, defaulter consumer statement, stub-checklist etc.

[ϒ] Ambala (except Panchkula division), Bhiwani, Faridabad (up to January 2008), Gurgaon, Hisar, Karnal, Narnaul, Panipat, Sirsa, Sonepat (from April 2007).

Superintending Engineers (Operation), Executive Engineers (Operation) and Assistant Executive Engineers/Sub Divisional Officers (Operation). Assistant Executive Engineers/Sub Divisional Officers (Operation) are the executing agencies involved in receiving application from consumers, release of connection, billing and collection of revenue for sale of energy. Tariff is fixed by Haryana Electricity Regulatory Commission (HERC) based on Annual Revenue Requirement Reports (ARR) submitted by the two distribution companies. Deputy General Manager, Information Technology (DGM IT) in DHBVNL and the Chief Engineer, Commercial in UHBVNL look after the computerised billing work/process. Inputs like Master data relating to change of static information, meter details, connected load, average units and service rentals, permanent disconnection order, reconnection order and temporary disconnection order, requests for change of meter, sundry charges/sundry allowances, cash receipt stubs along with details of stub packets are submitted to billing agencies for punching, processing and finally preparation of bills and consumer ledgers. Meter reading is taken by departmental staff (Meter Readers) and personnel of Haryana Ex-Services League (HESL). Outputs like bills, consumer ledgers, assessment summary and exception lists are generated by billing agencies as per scheduled dates of billing prescribed by the management of the companies.

Audit objectives

2.3.3 To assess whether

- the DISCOMs undertook effective measures to ensure that the IT application of the billing agency had in-built controls to ensure that the data input was accurate, valid and complete;
- the DISCOMs had an effective system in place to ensure that the errors and exceptions in the output generated by the billing agency were properly investigated and acted upon and
- the DISCOMs had adequate general IT controls in place so as to ensure smooth operation of the computerised system.

Scope and methodology of Audit

2.3.4 Out of 10 operation circles (UHBVNL: four and DHBVNL: six) where billing was outsourced to HARTRON during 2006-09, five operation circles (UHBVNL: three and DHBVNL: two) namely Ambala* (except Panchkula division), Panipat, Sonepat♣, Faridabad# and Gurgaon•, respectively were

* Panchkula division outsourced to DOEACC.

♣ Data for the period 2007-09 only as the work here was done by DOEACC in 2006-07.

\# Data for the period April 2006 to January 2008 as work outsourced to TCIL from February 2008.

• Some data of the year 2007-08 of eight sub-divisions was not available.

selected for audit.

Data generated by computerised billing software (FOXPRO based) in selected circles for the period from April 2006 to March 2009 was analysed (28 May 2009 to 27 July 2009) using a computer assisted audit technique called IDEA Version 7. The Information Technology (IT.) controls were evaluated to ascertain compliance to the provisions of sales circulars, sales instructions, Electricity Supply Code issued by HERC and concerned provisions of the Electricity Act, 2003.

Methodologies and procedures followed by the two distribution companies (DISCOMs – UHBVNL and DHBVNL) were evaluated against best practices of I.T. governance and various rules. The evaluation was carried out by scrutiny of records maintained at headquarters of the two DISCOMs and five selected operation circles.

Audit findings

2.3.5 Although the DISCOMs had outsourced the work of computerised billing of their DS and NDS consumers in the five audited operation circles to HARTRON, it was their responsibility to ensure that all business rules pertaining to tariff of these consumers were correctly followed in the computerised set-up. Further, in order to avail full benefits of computerisation, it was imperative on the part of DISCOMs to clearly define their reporting requirements and then analyse and take appropriate action on the various MIS reports generated by the IT. application. Audit noticed absence of certain key validation checks in the billing software that had an adverse impact on revenue realisation. Further, it was noticed that certain reports were either not sought for from the billing agency or if available, were not acted upon, leading again to an adverse impact on revenue realisation. The audit findings, discussed in the succeeding paragraphs, were communicated to the DISCOMs/ State Government in August 2009. Replies of the UHBVNL had been received (3 September 2009) but replies of the State Government and DHBVNL were awaited. An Exit conference was held on 3 September 2009, which was attended by the Special Secretary Power, Government of Haryana, Managing Director of the UHBVNL and Chief Auditor of the DHBVNL wherein all the audit observations were accepted by them.

Inadequate controls over input

2.3.6 Input controls in an IT application ensure that the data received for processing is genuine, complete, valid, accurate and properly authorised. It was the primary responsibility of the DISCOMs to ensure that adequate input controls were in place and that the IT application used by HARTRON had in-built controls which automatically check that data input is accurate and valid. Analysis of data revealed various instances of absence of input controls and lack of validation checks in the billing software as discussed in the subsequent paragraphs:

Short Recovery of Meter Rent

2.3.7 As per standing instructions of the UHBVNL and DHBVNL, single phase meters were to be installed where connected load of the consumer was less than 5 KW and three phase meters were to be installed for loads above that limit. DHBVNL issued instructions (December 2005) that new DS and NDS connections with load of 10 KW and above be released on three phase meters. The monthly meter rent for single phase meter and three phase meter was Rs. 9 and Rs. 20 respectively.

Analysis of available billing data of Ambala, Panipat and Sonepat circles of UHBVNL revealed that in case of 6,382 out of 6.39 lakh consumers (Ambala: 3,886 out of 2.19 lakh, Panipat: 990 out of 1.72 lakh and Sonepat: 1,506 out of 2.48 lakh consumers), the connected load was more than 5 KW but single phase meters were shown as installed. This may be either due to incorrect entries in the database or three phase meters were not installed by the operation staff of the Company. In these cases, meter rent was charged at the rate of Rupees nine per month instead of being charged at the rate of Rs. 20 per month. This resulted in loss of Rs. 15.85 lakh[*] to UHBVNL due to short recovery of meter rent.

Lack of validation check in the software so as not to allow single phase meter where connected load is above 5 KW (for UHBVNL) and 10 KW (for DHBVNL) resulted in short recovery of Rs. 17.16 lakh.

During analysis of available data of Faridabad and Gurgaon circles of DHBVNL, audit noticed that in 3.20 lakh out of 4.19 lakh and in 2.38 lakh out of 3.23 lakh consumers respectively, date of connection was not recorded in the database. Further, in 322 out of 4.19 lakh consumers in Faridabad and in 533 out of 3.23 lakh consumers in Gurgaon, the connected load was more than 10 KW[♠] but single phase meters were shown as installed. This may be either due to incorrect entries in the database or three phase meters were not installed by the operation staff of the Company. In these cases, meter rent was charged at the rate of Rupees nine per month instead of being charged at the rate of Rs. 20 per month. This resulted in a loss of atleast Rs. 1.31 lakh (Faridabad: Rs. 0.55 lakh and Gurgaon: Rs. 0.76 lakh) to DHBVNL.

The short recovery of meter rent was primarily attributable to lack of a compulsory validation check that should be in-built in the software so as not to allow single phase meter status in cases where the connected load was above 5 KW and above 10KW in UHBVNL and DHBVNL respectively. Managing Director, UHBVNL, *inter alia*, stated (September 2009) that software of both the billing agencies (DOEACC and HARTRON) would be got amended to incorporate the validation checks pointed out by the audit and the amount would be got recovered.

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[*] Ambala: Rs. 10.63 lakh; Panipat: Rs. 2.40 lakh and Sonepat: Rs. 2.82 lakh.

[♠] For records where date of connection was not available, audit has taken a conservative load limit of 10 KW for the purpose of calculating short recovery of meter rent.

Loss of revenue due to erroneous posting of 'Sundry Charges and Allowances'

2.3.8 As per procedure in vogue, the bills for consumption of energy are issued on the basis of consumption recorded by the meters. In case of defective meter or where the bill is found to be incorrectly prepared, the account of the consumer is overhauled by preparing sundry charges/sundry allowances as the case may be which are recorded in Sundry Charges and Allowances Register. Sundry charges and allowances are sent to billing agency through Advice No. 75 by various sub-divisions for entering them into the database so as to incorporate these amounts in the bills and ledgers of consumers. Audit noticed that sundry charges in a number of cases were not entered and sundry allowances were entered/allowed more than once in the database resulting in loss to the DISCOMs in the form of short recovery of sundry charges and excess allowance of sundry allowance as discussed below:

Short recovery of sundry charges

There was short recovery of Rs. 92.51 lakh due to incorrect posting of sundry charges and allowances.

2.3.9 Comparison of data in the database with that in Advice No. 75 revealed that in Sonepat (UHBVNL), Faridabad and Gurgaon (DHBVNL), 58 items, 104 items and 29 items respectively involving a sum of Rs. 17.52 lakh (Sonepat: Rs. 1.18 lakh; Faridabad: Rs. 11.47 lakh and Gurgaon: Rs. 4.87 lakh) were not posted by the HARTRON staff with the results that the items remained un-posted and caused loss of Rs. 17.52 lakh to UHBVNL (Rs. 1.18 lakh) and DHBVNL (Rs. 16.34 lakh).

Excess Allowances to Consumers

2.3.10 Analysis of electronic data of Ambala, Panipat, and Sonepat circles of UHBVNL and Gurgaon and Faridabad circles of DHBVNL revealed that allowances were posted twice or more for a single item. This had resulted in excess allowances in 822 cases (Ambala: 69, Panipat: 85, Sonepat: 241, Gurgaon: 267 and Faridabad: 160) to the extent of Rs. 74.99 lakh (Ambala: Rs. 1.56 lakh, Panipat: Rs. 6.48 lakh, Sonepat: Rs. 26.56 lakh, Gurgaon: Rs. 25.51 lakh and Faridbad: Rs. 14.88 lakh). This had resulted in loss of Rs. 34.60 lakh to UHBVNL and Rs. 40.39 lakh to DHBVNL.

Analysis of reasons of the above discrepancies by Audit revealed that while sending items of sundry charges and allowances through Advice No.75, the sub-division staff did not prepare a summary regarding total number of items and total amounts of 'Sundry Charges & Allowances' in the advice. Due to absence of these control totals, the billing agencies could not work out the difference, if any, in the items posted in the computerised ledger and the amount sent by the sub-divisions through Advice No. 75. Further, the sub-division staff of the DISCOMs also did not reconcile the amount of sundry charges and allowances posted by the data entry operators of HARTRON with those sent by them.

Chief Auditor, DHBVNL, Hisar stated (September 2009) that some of these cases of non-posting of sundry charges might be due to mentioning of wrong account numbers in advice 75. However, these cases would be got checked and the outstanding sundry charges as well as excess allowances allowed would be recovered.

'Date of Connection' of consumers not available

2.3.11 For creation/updating of master data file, basic data was provided through Advice No. 71 which, *inter alia,* contained name, address, date of connection, ledger number, account number, amount of security, sanctioned load, etc. of new consumers. 'Date of connection' is a key field and is mandatory in nature. During analysis of data it was found that the software accepted 'Null' value in this field. Analysis of data for the year 2008-09 revealed that in case of 1.23 lakh out of 5.57 lakh consumers of three operation circles of UHBVNL (Ambala: 11,543 out of 1,71,285; Panipat: 1,10,718 out of 1,49,637 and Sonepat: 1,086 out of 2,36,272 consumers), date of connection was not entered. Similarly in Faridabad and Gurgaon Operation Circles of DHBVNL, date of connection was not entered in 3.20 lakh out of 4.19 lakh and 2.38 lakh out 3.23 lakh consumers respectively. Presence of incomplete data in an important field like 'date of connection' undermined the reliability of the computerised system particularly in cases where this field is required.

Chief Auditor, DHBVNL, Hisar stated (September 2009) that date of connection in respect of cases prior to the implementation of the computerisation was not available in some cases and some cases might be due to transfer of billing work from one entity to another. He informed that no new connection was now being released without entering the date of connection.

'Amount of Security Deposit' of consumers not available

2.3.12 As per Haryana Electricity Regulatory Commission (Electricity Supply Code) Regulation, 2004 notified on 10 August 2004, the licensee companies were to print on bills the amount of security deposited and interest thereon (once in a year in the month of April). Analysis of data for 2008-09 in respect of operation circles Ambala, Panipat and Sonepat in UHBVNL and for 2006-08 (up to January 2008) in respect of Operation Circle Faridabad and for 2006-09 in respect of operation circle, Gurgaon revealed that although provision for entering/recording the amount of security deposited existed in the software, the amount of security deposited was not entered in 10.64 lakh out of 12.99 lakh consumers (Ambala: 1.17 lakh out of 1.71 lakh, Panipat: 1.27 lakh out of 1.50 lakh and Sonepat: 2.08 lakh out of 2.36 lakh consumers in UHBVNL and Faridbad: 3.12 lakh out of 4.19 lakh and Gurgaon: 3.00 lakh out of 3.23 lakh consumers in DHBVNL). Due to capture of incomplete data, the DISCOMs could not calculate the amount of interest electronically to abide by the provisions of Electricity Supply Code. DISCOMs also could not adjust the amount of interest for the year in the bills of consumers issued in April/May of 2008 and 2009. This discrepancy was primarily attributable to the absence of a mandatory validation check in the software that disallows entering 'Null' in the 'Amount of Security Deposit' field.

Chief Auditor, DHBVNL, Hisar stated (September 2009) that work of data entry of security deposit field had been allotted to a third party and would be got completed.

Data pertaining to 'Meter readings' not reliable

2.3.13 Data analysis revealed that the data in the fields 'Current Reading', 'Previous Reading' and 'Date of meter reading' failed to satisfy certain basic validation checks, thereby casting doubt over its accuracy, validity and reliability as discussed below:

Acceptance of Current Reading less than the Previous Reading

Current reading of 1.51 lakh consumers was less than the previous reading due to absence of validation check.

2.3.14 Current reading of a meter should not be lesser than its previous reading unless a full cycle is completed by the meter. There should be a validation check to ensure that current reading is not less than the previous reading. Audit noticed that this validation check was absent in the software. As a result, the software accepted current reading lesser than the previous reading. Analysis of data of Operation Circles, Ambala, Panipat and Sonepat for the year 2008-09 in UHBVNL revealed that current reading was lesser than the previous reading in 0.16 lakh out of 5.57 lakh consumers (Ambala: 0.06 lakh out of 1.71 lakh; Panipat: 0.05 lakh out of 1.50 lakh; Sonepat: 0.05 lakh out of 2.36 lakh consumers). Similarly, in Operation Circles, Faridabad and Gurgaon for the years 2006-08 (up to January 2008) and 2006-09 respectively in DHBVNL revealed that current reading was lesser than the previous reading in 1.35 lakh out of 7.42 lakh consumers (Faridabad: 0.65 lakh out of 4.19 lakh and Gurgaon: 0.70 lakh out of 3.23 lakh consumers). Presence of invalid data undermined the integrity of the computerised system.

Chief Auditor, DHBVNL, Hisar stated (September 2009) that these cases might be due to manipulation of meters. Necessary modifications in the software would be made so that correct bills are issued to the consumers.

Date of previous meter readings greater than the System Date

2.3.15 Billing software should not accept a date of previous reading or current reading which is greater than the system date. During test check it was noticed that an input validation check in field relating to date of previous reading or current reading should not be a date later than system date was not provided in the billing software. Due to absence of this validation check in the software, the date of current reading/previous reading in the database was accepted even beyond July 2009. Analysis of data of Operation Circles, Ambala, Panipat and Sonepat in UHBVNL for the year 2008-09 revealed that in case of 7, 1 and 11 consumers dates of previous readings were beyond the system date (July 2009). Similarly in Operation Circles, Faridabad for the years 2006-08 (up to January 2008) and Gurgaon for the years 2006-09 in DHBVNL revealed that in case of 3 and 49 consumers dates of previous readings were beyond the system date (July 2009).

In respect of date of readings beyond system date, Managing Director, UHBVNL informed (September 2009) that this might be due to defect in BIOS batteries and these batteries were being replaced.

Meter readings taken by HESL not cross-checked

2.3.16 The companies had outsourced meter reading, bill distribution and cash collection activities to HESL. As per agreement, 10 *per cent* of the meter readings taken by HESL staff were required to be cross-checked by companies' officers/officials to ensure that authorised persons of HESL had taken the meter readings correctly and lapses, if any, would be reported to a Committee of Chief Engineer Operation and President, HESL or his nominee.

During test check of records of the selected operation circles, audit noticed that in 28 Sub-divisions[*] (Sonepat:7; Faridabad:11 and Gurgaon:10) the operation staff did not cross-check 10 *per cent* of the meter readings taken by the personnel of HESL. Due to by-passing the contractual provision, the correctness of readings taken by HESL personnel could not be ascertained. Thus, possibility of incorrect generation of energy bills could not be ruled out. Managing Director, UHBVNL stated (September 2009) that a system to ensure mandatory cross-checking of readings would be put in place.

Inadequate control over outputs

2.3.17 Output controls ensure that errors and exceptions in the output are properly investigated and acted upon. It was the primary responsibility of the DISCOMs to ensure that the billing agency generates such MIS reports so that issues like loss of revenue due to defaulting consumers and systemic delays in realisation of revenue could be addressed. Audit noticed that although sufficient data was available in the database, either such reports were not sought for or if available, were not acted upon by the DISCOMs as brought out in the following paragraphs.

Delay in issue of bills to consumers

2.3.18 As per instructions of the DISCOMs, the energy bills of DS and NDS supply consumers were to be issued bi-monthly. Further, paragraph 4(4) of the HERC (Electricity Supply Code) Regulation 2004 notified on 10 August 2004 provided that the DISCOMs should issue the first bill for all services energised during a billing cycle before the end of the next billing cycle. Audit noticed that there were abnormal delays in issue of first bills and subsequent bills leading to delay in realisation of revenue.

First Bill

There were delays ranging between 3 to 186 months in issue of first bill involving Rs. 33.47 crore.

2.3.19 Analysis of electronic data of Ambala, Panipat and Sonepat circles of UHBVNL and Faridabad and Gurgaon circles of DHBVNL revealed that for records where date of connection was available, there was a delay in issue of first bills of 1.31 lakh consumers involving Rs. 33.47 crore. The delay ranged between 3 to 186 months from the date of connections contrary to the instructions of the Companies and Electricity Supply Code issued by HERC

[*] Operation Sub-divisions Rai, Gannaur, Kathura, Kundli, City Sonepat, Industrial Area Sonepat and Model Town Sonepat of Operation Circle, Sonepat; Operation Sub-divisions, Kheri Kalan,Sub-Urban Ballabgarh,Badrola, pali, Chhainsa, City-2 Ballabgarh, Sub-Urban Palwal, Hodal, Deeghot, Hathin and Hasanpur of Operation Circle, Faridabad; and Operation Sub-divisions Pataudi, Farukhnagar, Bhora Kalan, Badshahpur, Sohna, Taurou, Nuh, Ferozpur Zhirka, Punhana and Nagina of Operation Circle, Gurgaon,

as per details given below:

Operation Circle	Period	No. of records	No. of consumers	Revenue (Rs. in crore)	First bill issued after (period in months)
Ambala	2006-09	16,078	14,656	3.06	3-86
Panipat	2006-09	18,648	18,328	4.59	3-77
Sonepat	2007-09	17,273	16,663	3.10	3-108
Faridabad	2006-08 (up to January 2008)	37,031	34,973	8.34	3-186
Gurgaon	2006-09	47,854	45,930	14.38	3-149
Total		**1,36,884**	**1,30,550**	**33.47**	

Reasons for difference in records over number of consumers as analysed by Audit were that more than one first bill were issued to the consumers and in some cases more than one record existed for first bill in the database. Further, the difference of 6,334 records over the number of consumers was due to existence of two or more records against 5,580 consumers as elaborated in the following table:

Periodicity of records	Operation Circle					Total number of consumers	Excess records
	Ambala	Panipat	Sonepat	Faridabad	Gurgaon		
Twice	1,290	179	492	1,639	1,341	4,941	4,941
Thrice	52	66	49	95	275	537	1,074
Four times	8	3	4	67	11	93	279
Five times	1	0	2	2	0	5	20
Six times	0	0	0	4	0	4	20
Total	**1,351**	**248**	**547**	**1,807**	**1,627**	**5,580**	**6,334**

Subsequent Bills

There were delays ranging between 3 to 204 months in issue of bills other than first bill involving Rs. 126.80 crore.

2.3.20 Audit further noticed that in some cases consumers were not billed regularly and bills after issue of first bill were issued with a delay of 3 months or more. Analysis of data of the above circles for the same period revealed that in case of 3.74 lakh consumers, bills were issued with a delay ranging between 3 to 204 months involving revenue of Rs. 126.80 crore as detailed below:

Operation Circle	Period	No. of records	No. of consumers	Revenue (Rs. in crore)	Subsequent bills issued with a delay of (period in months)
Ambala	2006-09	60,733	40,618	9.24	3-101
Panipat	2006-09	82,855	57,072	16.16	3-153
Sonepat	2007-09	65,879	52,254	9.84	3-197
Faridabad	2006-08 (up to 1/08)	1,42,044	1,13,227	36.27	3-186
Gurgaon	2006-09	1,53,263	1,10,809	55.29	3-204
Total		**5,04,774**	**3,73,980**	**126.80**	

Reasons for difference in records over number of consumers as analysed in Audit were that more than one subsequent bill were issued to the consumers and in some cases more than one record existed for subsequent bill in the database. The difference of 1,30,794 records over the number of consumers was due to existence of two or more records against 96,610 consumers as tabulated below:

Periodicity of records	Operation Circle					Total number of consumers	Excess records
	Ambala	Panipat	Sonepat	Faridabad	Gurgaon		
Twice	8,388	12,464	8,024	18,361	22,916	70,153	70,153
Thrice	3,308	4,119	2,181	3,735	6,873	20,216	40,432
Four times	1,084	1,185	367	817	1,582	5,035	15,105
Five times	342	293	32	63	233	963	3,852
Six times	85	60	2	47	18	212	1,060
Seven times	11	9	0	2	4	26	156
Eight times	-	-	-	4	-	4	28
Nine Times	-	-	-	1	-	1	8
Total	**13,218**	**18,130**	**10,606**	**23,030**	**31,626**	**96,610**	**1,30,794**

Thus, delay in issue of first bills and non-issue of subsequent bills within the prescribed billing period of 2 months had resulted in loss of interest due to delay in collection of revenue. No effort was made by the DISCOMs to extract data regarding delayed issue of bills from the database and take necessary action to rectify the situation. Further, in cases where bills are re-issued, the software creates new record for the same consumer instead of updating the existing record leading to duplicacy and voluminous database.

Chief Auditor stated (September 2009) that these cases might belong to the period when internal audit was in arrear. These cases would be got investigated and action would be taken accordingly.

Non Recovery of Energy Charges

2.3.21 As per terms of Supply and HERC (Electricity Supply Code) Regulation, 2004, every consumer is required to pay his energy bill along with other dues by due date mentioned in the bill. Where a consumer neglects to pay any consumption charges for electricity or any other amount due from him to the DISCOMs by the due date, after giving not less than 15 clear days' notice in writing to such person and without prejudice to right to recover such charge or other sum by suit, the DISCOMs may cut off the supply of electricity from the supply line and may discontinue the supply until such charges or other sum together with any expenses incurred by the DISCOMs in cutting off and reconnecting the supply, are paid by the consumer.

Analysis of data revealed that in many cases, supply of electricity to defaulting consumers, where the default in payment was for more than six billing cycles, was not disconnected. Since billing cycle of DS and NDS consumers is bi-monthly, Audit had taken into account the number of live consumers who were defaulters even in the month of February and March 2009. Analysis of data for the year 2008-09 in respect of Ambala, Panipat, Sonepat and Gurgaon circles and data for the years 2006-08 (up to Jan 2008) for Faridabad circle revealed that in case of 15,261 defaulting consumers (Ambala: 449; Panipat: 3,178; Sonepat 2,703 consumers in UHBVNL and Gurgaon: 2,606 and Faridabad: 6,325 consumers in DHBVNL) where default was for more than Rs. 25,000, bills were being issued regularly and payments were not being received by the companies from these consumers. Supply of electricity to their premises was not disconnected. This had resulted in lock up of revenue of Rs. 99.00 crore

(Ambala: Rs. 1.85 crore; Panipat: Rs. 19.34 crore; Sonepat: Rs. 14.33 crore, Faridabad: Rs. 49.02 crore and Gurgaon: Rs. 14.46 crore).

No effort was made by the DISCOMs to review these cases to avoid recurring loss to the companies.

Managing Director, UHBVNL admitted (September 2009) that such cases exist. In case of urban connections, he assured that action to disconnect defaulting consumers would be taken within 4 months.

Consumption of electricity beyond sanctioned load

2.3.22 Consumption of units shown in a bill denotes the difference between current and previous readings. The units consumed should not be more than the number of hours in a billing period multiplied by the sanctioned load. Units consumed in excess of this limit indicate unauthorised usage of load by the consumers.

Analysis of electronic data for the years 2006-09 in respect of Operation Circles, Ambala and Panipat and for the years 2007-09 in respect of Operation Circle, Sonepat of UHBVNL and for the years 2006-08 (Up to January 2008) in respect of operation circle Faridabad and for the years 2006-09 in respect of Operation Circle, Gurgaon of DHBVNL revealed that the actual number of units of electricity consumed in case of 43,840 out of 13.81 lakh consumers (Ambala: 10,823 out of 2.19 lakh; Panipat: 3,740 out of 1.72 lakh; Sonepat: 5,497 out of 2.48 lakh; Faridabad: 9,542 out of 4.19 lakh and Gurgaon: 14,238 out of 3.23 lakh consumers) was more than the maximum units[*] that they could consume on the basis of their sanctioned load. These consumers consumed 8.74 crore (Ambala: 1.02 crore, Panipat: 0.91 crore, Sonepat: 0.98 crore, Faridabad: 2.16 crore and Gurgaon: 3.67 crore) excess units valued at Rs. 37.27 crore (Ambala: Rs. 4.35 crore, Panipat: Rs. 3.89 crore, Sonepat: Rs. 4.18 crore, Faridabad: Rs. 9.21 crore and Gurgaon: Rs. 15.64 crore) over and above the maximum units they could consume for their sanctioned load. DISCOMs did not review these cases in order to avoid recurring losses despite availability of data in the database. Impact of excess usage of load on transformer damage, short-levy of consumption security, average charges etc. could not be ruled out.

Managing Director, UHBVNL stated (September 2009) that extension in connected load was not being declared by the consumers. He further stated that the option of introducing latest technology to detect un-authorised extension of load was being explored.

General controls

2.3.23 General controls are the policies, procedures and working practices that create the environment in which the I.T. application works. Management

[*] Assuming they consumed electricity for 24 hours a day during the entire billing cycle (two months).

has the ultimate responsibility to ensure that an adequate system of general controls is in place. Scrutiny of records of DISCOMs revealed lack of involvement of management in development, operation and maintenance of the computerised system as brought out in the following paragraphs.

2.3.24 Lack of proper documentation

- Before developing any computer system, URS and SRS, which give the complete description of the system to be developed, should be approved by the higher management so that the vendor understands the needs of the organisation. Also, documentation such as URS, SRS, detail design, data flow diagram, data dictionary, relationship between tables etc. is crucial for continuity of the computerisation project as the work of billing of DS and NDS consumers was fully outsourced. If there is a change in the billing agency, subsequent vendor who is awarded the contract needs to have proper documentation to understand the existing application and effectively discharge the functions. Audit noticed that the DISCOMs had none of the documents mentioned above.

- There was no system in the DISCOMs to test and formally accept the IT application developed by the vendor before they were implemented. Also, there was no change management policy or acceptable formal procedure for making changes to the software. The DISCOMs did not formally authorise the changes that were to be carried out in the software by the vendor. The details of amendments made indicating the reasons for changes, nature of changes, details of testing conducted, version of the software and date of approval by the competent authority were not documented and maintained.

- The DISCOMs as well as billing agencies were required to have a business continuity and disaster recovery plan[*] to ensure uninterrupted continuity of business in the event of any temporary or permanent disaster leading to loss of data. Provisions related to this could have easily been specified in the contract with the billing agencies. Data backups were also required to be checked up regularly after certain intervals. Audit observed that though the data backups were taken by billing agencies regularly and were kept at a place other than that where the same were maintained yet these were not checked up regularly after certain intervals to ensure uninterrupted continuity of business in the event of any disaster. The work orders placed on the billing agencies by the DISCOMs were silent about these issues. Audit further observed that complete data could not be provided by the billing agency (HARTRON) at Operation Circle, Gurgaon as data files relating to various groups/cycles for the month of January 2008 in respect of Operation Sub-divisions, Kadipur (G-14), Maruti (G-24) and Udyog Vihar (G-25) was found corrupted as confirmed by System Analyst, HARTRON, Gurgaon.

[*] A plan of an organisation to continue to function even after a disastrous event occurred.

Managing Director, UHBVNL stated that the required documents would now be got prepared as pointed out by audit.

The above matters were reported to the Government and the Companies in August 2009, replies of the Government and DHBVNL were awaited (September 2009).

Conclusion

DHBVNL and UHBVNL had outsourced computerised billing of DS and NDS consumers. It was, however, the primary responsibility of the management of these companies to ensure that adequate IT application and general controls were in place to safeguard the interests of the companies and consumers. Audit noticed lack of involvement of the DISCOMs in ensuring adequacy of input controls, validation checks and output controls which rendered the data unreliable and led to instances of loss of revenue due to short recovery of meter rent, erroneous posting of sundry charges and allowances, delay in issue of bills, inaction against defaulting consumers and consumption beyond sanctioned load. Audit revealed absence of well documented system documents, business continuity and disaster recovery plans and change management policy which adversely impacted the environment in which the computerised system operated.

Recommendations

The Managements of UHBVNL and DHBVNL should:

- **Incorporate input controls and key validation checks in the IT application so as to eliminate instances of short recovery of meter rent, erroneous posting of sundry charges and allowances and null values in mandatory fields like 'date of connection' and 'security deposit';**

- **Ensure adequate monitoring of HESL and introduce validation checks on the fields related to meter readings so that correct bills are issued to the consumers;**

- **Ensure timely/regular issue of bills to the consumers, timely disconnection of consumers who default on payments and periodic review of cases where consumption is in excess of sanctioned load; and**

- **Formulate, document and implement a comprehensive IT policy enumerating security policy, change management policy, business continuity and disaster recovery plans etc and incorporate the same in its contract with the billing agencies so as to ensure smooth operation of computerised system.**