Chapter II

2. Performance Audits relating to Government companies

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

Executive Summary

The distribution network of power sector constitutes the final link between power sector and consumers. The efficiency of the power sector is judged by the consumers on the basis of performance of this segment. National Electricity Policy aims to bring out reforms in Power Distribution Sector with focus on system upgradation, controlling and reduction of transmission and distribution losses, power thefts and making the sector commercially viable besides financing strategy to generate adequate resources. The performance audit covering period from 1 April 2006 to 31 March 2011 was conducted to ascertain whether the aims and objectives stated in the National Electricity Policy were adhered to and how far the distribution reforms have been achieved.

Recovery of cost of operations

DISCOMs were not able to recover their cost of operations during 2006-07 to 2010-11 and revenue gap (after considering revenue subsidies and other income) increased from ₹ 403.32 crore in 2006-07 to ₹ 1,663.23 crore during 2009-10 and decreased to ₹ 405.38 crore during 2010-11.

Distribution network planning

The number of consumers increased from 41.46 lakh in 2006-07 to 47.88 lakh in 2010-11 and connected load also increased from 11,771 MW to 17,188 MW during this period. The transformation capacity of distribution transformers increased from 10,899 MVA to 16,786 MVA. However, as compared to connected load there was still a short fall of 4,699 MVA in capacity at the end of 2010-11.

Project and contract management

Delay in commissioning of 124 sub stations i.e. above two years in five cases, one to two years in 17 cases, six months to one year in 52 cases and less than six months in 50 cases during 2006-07 to 2010-11. The delays caused loss of envisaged benefits of ₹ 61.11 crore. Shared cost of ₹ 115.70 crore towards augmentation of power transformers in sub stations of urban estates developed by HUDA (Gurgaon city only) had not been recovered from HUDA.

Implementation of central schemes

The Rajiv Gandhi Grameen Vidyutikaran Yojna was launched in April 2005. In Haryana, DISCOMs received funds under this scheme for providing electricity connection to 'Below Poverty Line' households in rural areas. While UHBVNL incurred expenditure in excess of the funds received, DHBVNL could not fully utilise the funds. There were inordinate delays in completion of projects under this scheme. The Government of India launched (July 2008) Restructured Accelerated Power Development Reforms Programme. DISCOMs failed to utilise the funds of ₹ 49.68 crore under this scheme.

Operational efficiency

The damage rate of distribution

transformers was higher than norms prescribed by HERC. There were delays in repair of transformers by firms. Due to non installation of targeted addition of capacitors banks, the DISCOMs could not achieve energy saving of ₹ 103.31 crore. UHBVNL incurred extra expenditure of ₹ 539.81 crore on 89,969 tubewell connections under HVDS in comparison to Andhra Pradesh model. In case of DHBVNL ₹ 204 crore was incurred under HVDS and work was lying idle for want of connectivity.

Billing and collection efficiency

Balances remaining outstanding from consumers at the end of year increased in both the DISCOMs. Amount recoverable from consumers in case of UHBVNL and DHBVNL increased from ₹ 1,482.75 crore to ₹ 2,377.97 crore and ₹ 1,388.07 crore to ₹ 2,250.57 crore respectively during 2006-07 to 2010-11.

Financial management

The financial health of DISCOMs deteriorated during 2006-07 to 2010-11 as accumulated losses increased from ₹ 1,774.31 crore to ₹ 6,127.04 crore due to heavy burden of interest on borrowings, high Aggregate Technical and Commercial losses and increase in employees cost.

Subsidy and cross subsidisation

The State Government is providing subsidy with a view to ensure supply of power to Agricultural Pump set consumers at concessional rate of tariff. The subsidy support from the State Government to UHBVNL increased from 50.24 per cent to 68.97 per cent of revenue during 2006-07 and 2007-08. It again decreased to 33.86 per cent during 2010-11. Similarly, in case of DHBVNL the subsidy support increased from 24.04 per cent in 2006-07 to 31.37 per cent in 2009-10 which decreased to 26.65 per cent in 2010-11. Consumers of all the categories were getting power supply at tariff rates below average cost of supply and there was no cross subsidisation.

Tariff fixation

Due to deficient filing of Aggregate Revenue Requirement, there was delay in revision of tariff by HERC, resulting in loss of ₹ 163.32 crore (₹ 124.02 crore in UHBVNL and ₹ 39.30 crore in DHBVNL).

Energy conservation and energy audit

The DISCOMs failed to utilise the grant provided by State Government (₹ 35.80 lakh in UHBVNL and ₹ 40 lakh in DHBVNL). Energy audit in DISCOMs was not effective and expenditure of ₹ 183.28 crore remained unfruitful.

Conclusion and Recommendation

DISCOMs had to depend on borrowings to carry out their operations due to poor operational efficiency. DISCOMs could not get any tariff hike due to deficient filling of ARRs. There was delay in completion of projects. Huge expenditure on HVDS remained unfruitful. Energy audit was also not conducted and expenditure incurred remained unfruitful. The performance audit contains seven recommendations to improve the performance of DISCOMs.

Introduction

2.1.1 The distribution system of the power sector constitutes the final link between the power sector and the consumers. The efficiency of the power sector is judged by the consumers on the basis of performance of this segment. However, it constitutes the weakest part of the sector, which is incurring huge losses. In view of the above, the real challenge of reforms in the power sector lies in efficient management of distribution system. The National Electricity Policy in this regard, *inter-alia*, emphasises on restructuring of distribution utilities, efficiency improvements and recovery of cost of services provided to consumers to make power sector sustainable at reasonable and affordable prices besides others.

As part of power sector reforms, the erstwhile Haryana State Electricity Board (HSEB) was unbundled (14 August 1998) and two State owned companies *viz* Haryana Power Generation Corporation Limited (HPGCL) and Haryana Vidyut Prasaran Nigam Limited (HVPNL) were formed. HPGCL was made responsible for operation and maintenance of State owned power generating stations whereas HVPNL was entrusted with the power transmission and distribution functions. HVPNL was further reorganised (July 1999) and two Distribution Companies (DISCOMs), *viz.* Uttar Haryana Bijli Vitran Nigam Limited (UHBVNL) and Dakshin Haryana Bijli Vitran Nigam Limited (DHBVNL) were incorporated for distribution of power to various consumers. The Management of these Companies is vested with a Board of Directors (BOD) comprising Managing Director (MD), who is the Chief Executive of the Company and three whole time directors appointed by the State Government along with one Company Secretary. During 2006-07 DISCOMs sold 16,660.45 MUs of energy which increased to 24,204.39 MUs[*], registering an increase of 45.28 *per cent* during 2006-07 to 2010-11. As on 31 March 2011, the DISCOMs had distribution network of 2.17 lakh Kilometers (KMs), 425 sub stations and 3.48 lakh Distribution Transformers (DTs) of various categories. The number of consumers in the State was 47.88 lakh as on 31 March 2011. The turnover of the DISCOMs was ₹ 13,073.88 crore in 2010-11, which was equal to 63.96 *per cent* and 5.07 *per cent* of the State PSUs' turnover and State Gross Domestic Product respectively. DISCOMs employed 22,004 employees as on 31 March 2011.

National Electricity Policy aims to bring out reforms in the Power Distribution sector with focus on system upgradation, controlling and reducing of Transmission and Distribution (T&D) losses/power thefts and making the sector commercially viable besides financing strategy to generate adequate resources. It further aims to bring out conservation strategy to optimise utilisation of electricity with focus on demand side management and load management. In view of the above, a performance audit on the working of the DISCOMs in the State was conducted to ascertain whether they were able to adhere to the aims and objectives stated in the National Electricity Policy/Plan and how far the distribution reforms have been achieved.

Reviews on Tariff, Billing and Collection of revenue in DHBVNL and Implementation of Accelerated Power Development and Reforms Programme (APDRP) in UHBVNL and DHBVNL were included in the Report of the Comptroller and Auditor General of India (Commercial), Government of Haryana for the year ended 31 March 2007. The Report was discussed by Committee on Public Undertakings (COPU) during July 2010-February 2011. COPU gave (March 2011) its recommendations in its 57th Report.

[*] Figures for the year 2010-11 in respect of both the DISCOMs are provisional.

Scope and methodology of audit

2.1.2 The present performance audit conducted during November 2010 to April 2011 covers the performance of the DISCOMs during the period from 2006-07 to 2010-11. The performance audit mainly deals with network planning and execution, implementation of central schemes, operational efficiency, billing and collection efficiency, financial management, consumer satisfaction, energy conservation and monitoring. The field units of DISCOMs consisted of 16 Operation circles (10 UHBVNL; 6 DHBVNL), 54 Operation Divisions (30 UHBVNL; 24 DHBVNL), 227 Operation Sub Divisions (120 UHBVNL; 107 DHBVNL), 5 Construction circles (3 UHBVNL; 2 DHBVNL) 12 Construction Divisions (6 UHBVNL; 6 DHBVNL), 2 Metering and Protection (M&P) circles (1 each in both DISCOMs), 8 M&P Divisions (4 each in both DISCOMs). The audit examination involved scrutiny of records at Head Offices of DISCOMs and 5 Operation circles (3 UHBVNL; 2 DHBVNL), 10 Operation Divisions (6 UHBVNL; 4 DHBVNL), 22 Operation Sub Divisions (12 UHBVNL; 10 DHBVNL), 2 Construction circles (1 each in both DISCOMs) 4 Constructions Divisions (2 each in both DISCOMs), 2 M&P circles (1 each in both DISCOMs), 2 M&P Divisions (1 each in both DISCOMs). The units were selected on 'simple random sampling without replacement' method.

The methodology adopted for attaining the audit objectives with reference to audit criteria consisted of explaining audit objectives and audit criteria to top Management during entry conference held on 24 January 2011, scrutiny of records at Head Office and selected units, interaction with the auditee personnel, analysis of data with reference to audit criteria, raising of audit queries, issue of draft audit report to the Management for comments and discussion of audit findings with the Management during exit conference on 8 August 2011. The views of Management have been considered and included wherever necessary.

Audit objectives

2.1.3 The objectives of the performance audit were to assess:

- whether aims and objectives of National Electricity Policy/Plans were adhered to and distribution reforms achieved;
- adequacy and effectiveness of network planning and its execution;
- efficiency and effectiveness in implementation of the central schemes such as, Restructured Accelerated Power Development & Reform Programme (R-APDRP) and Rajiv Gandhi Grameen Vidyutikaran Yojna (RGGVY);
- operational efficiency in meeting the power demand of the consumers in the state;
- billing and collection efficiency of revenue from consumers;
- whether financial management was effective and surplus funds, if any, were

judiciously invested;

- whether a system was in place to assess consumer satisfaction and redressal of grievances;
- that energy conservation measures were undertaken; and
- that a monitoring system was in place and the same was utilised in review of overall working of DISCOMs.

Audit criteria

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

- provisions of Electricity Act 2003;
- National Electricity Plan, annual investment plans and norms concerning distribution network of DISCOMs and planning criteria fixed by the Haryana Electricity Regulatory Commission (HERC);
- terms and conditions contained in the central scheme documents;
- standard procedures for award of contract with reference to principles of economy, efficiency and effectiveness;
- norms prescribed by various agencies with regard to operational activities;
- norms of technical and non-technical losses;
- guidelines/instructions/directions of State Government/HERC; and
- best performance under various parameters in the regions/all India averages.

Financial position and working results

2.1.5 The financial position[†] and working results of UHBVNL and DHBVNL for the five years ending 2010-11 are given in ***Annexure 7***. An analysis of financial position of DISCOMs revealed that while increase in accumulated losses was 260 *per cent* during 2006-07 to 2010-11 in UHBVNL, the same was 228 *per cent* in DHBVNL during 2006-07 to 2010-11. Similarly, Debt-Equity Ratio increased from 2.26:1 to 7.16:1 and 1.32:1 to 3.83:1 during above period in UHBVNL and DHBVNL respectively. Increase in current assets, loan and advances was mainly on account of considering 'Fuel Surcharge Adjustment' (FSA) amounts pending approval from HERC, in other current assets since 2008-09.

We observed that no surplus was generated by the DISCOMs from operations and equity infusion by the State Government was also inadequate; resultantly DISCOMs were mainly dependent on borrowings for funding capital works and

[†] Source: Annual accounts of DISCOMs

their working capital needs.

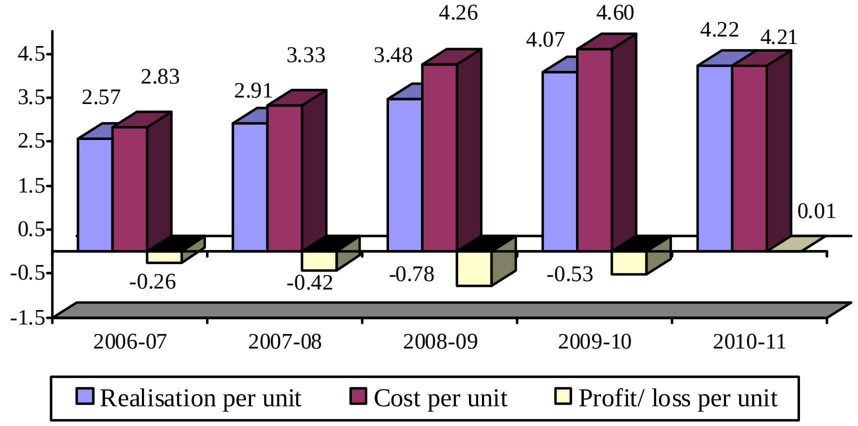
An analysis of working results of DISCOMs revealed the following:

- The figures of revenue and expenditure of DISCOMs were not comparable due to different accounting practices. During 2008-09 to 2010-11 UHBVNL treated regulatory assets[‡] and FSA not billed as 'income' whereas DHBVNL treated regulatory assets as income and FSA not billed as 'reduction in expenditure on purchase of power'.
- The quantum jump in contribution per unit (CPU) in 2010-11 as compared to 2008-09 and 2009-10 in UHBVNL was on account of accounting of revenue of ₹ 1,979.12 crore (₹ 1,238.75 crore on account of regulatory assets and ₹ 740.37 crore on account of unbilled FSA) during 2010-11 in comparison to ₹ 615.57 crore in 2008-09 and ₹ 1,515.58 crore in 2009-10. On the other hand decrease in CPU in DHBVNL during 2010-11 as compared to 2008-09 was due to increase in power purchase cost.
- The purchase of power, employee cost, interest and finance charges constituted the major elements of cost. On the other hand revenue from sale of power and subsidy constituted the major elements of revenue.
- Fixed cost in UHBVNL and DHBVNL increased during review period mainly due to sharp increase in interest and finance charges and employees cost. Similarly, variable cost increased mainly due to increase in power purchase cost as a result of increase in quantum and cost per unit.

Recovery of cost of operations

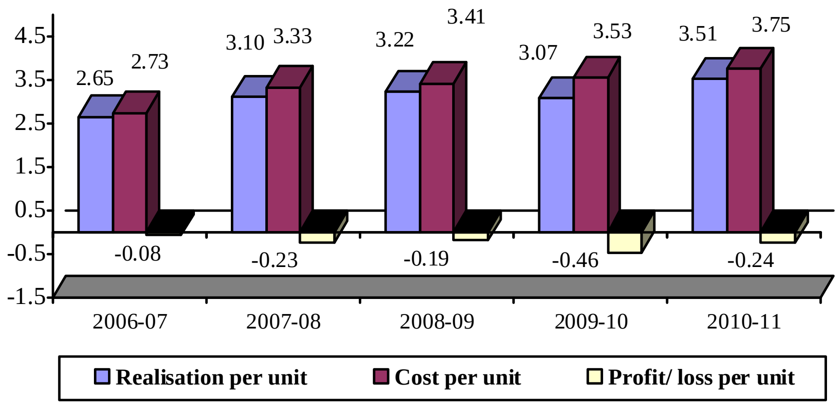
2.1.6 The DISCOMs were not able to recover their cost of operations during 2006-07 to 2010-11. During the last five years ending 2010-11, the loss per unit showed increasing trend except during 2010-11 in respect of UHBVNL as given in the bar chart below:

UHBVNL



‡ It is the amount of revenue gap for which no tariff increase is allowed by HERC but the amount is allowed to be carried forward in the next year's Annual Revenue Return.

DHBVNL



It may be seen from the working results (***Annexure 7***), that in UHBVNL revenue gap (after considering revenue subsidies and other income), increased from ₹ 301.05 crore to ₹ 884.21 crore during 2006-07 to 2009-10. Similarly, revenue gap in DHBVNL increased from ₹ 102.27 crore to ₹ 779.02 crore during the same period. However, during 2010-11, while UHBVNL earned surplus of ₹ 9.95 crore, revenue gap in DHBVNL decreased to ₹ 415.33 crore. Thus, the revenue gap increased from ₹ 403.32 crore in 2006-07 to ₹ 1,663.23 crore in 2009-10 which decreased to ₹ 405.38 crore in 2010-11, after considering surplus of ₹ 9.95 crore in UHBVNL. Our analysis revealed that the main reasons for high cost of sale of energy as compared to revenue from sale of power were as under:

Steep increase in revenue gap was mainly due to high AT&C losses, increase in interest and finance charges and employees cost

- DISCOMs could not bring down power purchase cost within limits fixed by HERC;
- DISCOMs could not control high AT&C losses due to non achievement of targets set by HERC;
- increase in interest and finance charges due to heavy dependence on borrowings;
- increase in employee cost due to implementation of 6th Pay Commission's recommendations; and
- DISCOMs could not get any tariff hike from HERC due to deficient tariff filing despite increase in cost of supply.

Audit findings

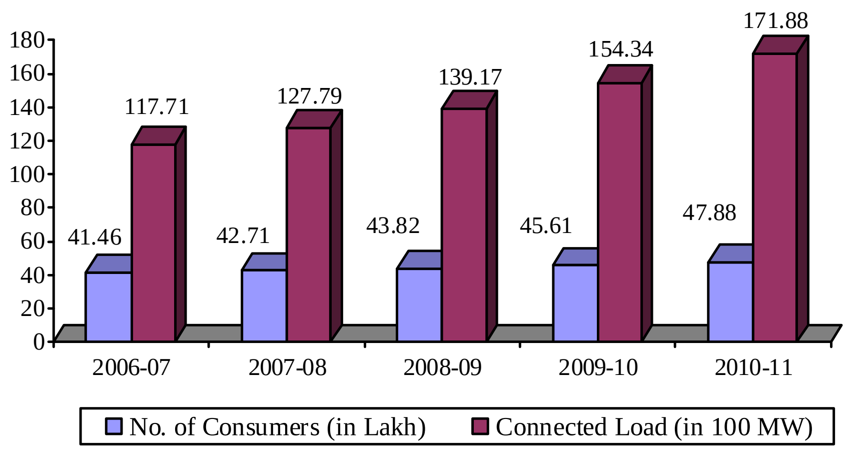
2.1.7 We explained the audit objectives to the DISCOMs during an 'Entry Conference' held on 24 January 2011. The audit findings were reported to State Government/Management in June 2011 and discussed in exit conference held on 8 August 2011 which was attended by Special Secretary, Government of Haryana, Power Department, MD, UHBVNL and Chief General Manager (Audit), DHBVNL. Views of the Management have been considered while finalising the Performance audit. The audit findings are discussed in subsequent paragraphs.

Distribution network planning

2.1.8 The DISCOMs in the State are required to prepare long term/annual plan for creation of infrastructural facilities for efficient distribution of electricity so as to cover maximum population in the State. Besides the upkeep of the existing distribution network, additions in distribution network are planned keeping in view the demand/connected load, anticipated new connections and growth in demand based on Electric Power Survey. Considering physical parameters, Capital Investment Plans are submitted to the State Government/HERC. The major components of the outlay include normal development and system improvement besides rural electrification and strengthening of IT enabled systems.

Inadequate transformation capacity

2.1.9 The particulars of consumers and their connected load in both the DISCOMs during audit period are given below in bar chart.



The number of consumers increased from 41.46 lakh in 2006-07 to 47.88 lakh in 2010-11 with corresponding increase in connected load from 11,771 MW (14,713 MVA) to 17,188 MW (21,485 MVA) during the same period. This required an increase of 6,772 MVA in transformation capacity during 2006-07 to 2010-11. However, DISCOMs planned additions in power transformation capacity of 3,070 MVA (UHBVNL 1,684 MVA and DHBVNL 1,386 MVA) and did not have any detailed plan for increase in capacity of distribution transformers. Actual additions in power transformers capacity during 2006-07 to 2010-11 was 2,200 MVA (UHBVNL 1,137 MVA and DHBVNL 1,063 MVA). At the end of 2010-11, there was a shortfall of 7,875 MVA in power transformers capacity. Similarly, capacity of DTs increased from 10,899 MVA to 16,786 MVA during the same period as depicted in ***Annexure 8.*** The shortfall in DTs capacity with reference to connected load was 4,699 MVA (21,485 MVA -16,786 MVA) as on 31 March 2011.

Thus, the transformation capacity of power transformers and DTs transformers and DTs was not commensurate with the load growth. This led to overloading of network and consequential rotational cuts in distribution of electricity.

While the system improvement and rural electrification schemes have been dealt with separately under subsequent paragraphs, the particulars of distribution network planned *vis-à-vis* achievement there against in the State as a whole is depicted in ***Annexure 8***. It may be seen from the ***Annexure*** that against the planned addition of 303 sub stations (158 in UHBVNL and 145 in DHBVNL) during the performance audit period (up to March 2011), only 158 sub stations (87 in UHBVNL and 71 in DHBVNL) were actually added. The shortfall was due to non awarding the related works as well as delay in completion of awarded works as discussed in paragraph No.2.1.11 *infra*.

In reply, UHBVNL stated (September 2011) that load factor of domestic and industrial consumers was 25 *per cent* and 80 *per cent* respectively. Hence transformation capacity was enough to cater to the connected load. The reply is not convincing as there had been overloading of system and consequent rotational cuts in distribution of electricity.

Project and contract management

2.1.10 Due to delay in completion of the turnkey contracts, heavy investment made by the DISCOMs remained unutilised and the consumers also could not avail the benefits as envisaged in the Detailed Project Reports (DPRs). The instances are given below:

Delay in commissioning of 33 KV sub stations

2.1.11 During 2006-07 to 2009-10, UHBVNL awarded turnkey contracts for supply, erection, testing and commissioning of 111 sub stations of 33 KV capacity in all operation circles at a cost of ₹ 321.54 crore with commissioning period ranging from four to 12 months. All these sub stations were scheduled to be commissioned by 28 May 2010. No contract was awarded during 2010-11. Similarly, DHBVNL formulated (2006-07 to 2010-11) various schemes for capacity addition at a cost of ₹ 137.08 crore. Under these schemes construction of 71 new sub stations and new link lines was targeted to bring improvement in the existing system and reduce line losses as well as providing proper voltage and service to the consumers. In respect of 53 new sub stations the envisaged annual financial benefits were ₹ 45.05 crore on account of saving to be achieved by sale of additional power and reduction of losses on completion of the above works. The works in respect of balance 18 sub stations were to be created at a projected cost of ₹ 28.60 crore. However, no DPRs in this regard were prepared so far (August 2011) and no financial benefits were envisaged.

We observed that progress of works in both the DISCOMs was very slow. In UHBVNL, out 111 sub stations, only six[€] sub stations were completed and commissioned within scheduled time and 82 sub stations were completed with

€ Includes one sub station for revamping.

delays of different periods. The works of 23 sub stations were still in progress as on 31 March 2011. In DHBVNL all 71 sub stations were completed and commissioned. As many as 42 sub stations were completed with delays of different periods. The delays in respect of 29 remaining sub stations could not be worked out in audit as scheduled dates of completion of the sub stations were not available at Head Office of DHBVNL. The periods of delay in completion of sub stations in respect of DISCOMs are indicated below:

Period of delay	**Number of sub stations completed**		**Total**
	UHBVNL	**DHBVNL**	
Up to six months	34	16	50
More than six months to one year	30	22	52
More than one year to two years	16	1	17
More than two years	2	3	5
Total	**82**	**42**	**124**

Due to delay in commissioning of sub stations, the DISCOMs were deprived of the financial benefit[ϒ] of ₹ 38.06 crore (UHBVNL) and ₹ 23.05 crore (DHBVNL) totalling to ₹ 61.11 crore.

In respect of UHBVNL, it was further observed that though 16 sub stations were cleared between October 2008-May 2010 for energisation by Chief Electrical Inspector, commissioning of these sub stations was delayed for period up to six months in five cases, six months to one year in five cases and above one year in five cases due to non availability of feeding sub stations of HVPNL. In one case, it was delayed due to pending civil works, *i.e.*, approach road, gravelling and fencing of sub station. This indicated defective planning and lack of co-ordination.

In respect of DHBVNL, the delay in completion of the above works was attributable to various reasons *viz.* poor performance of firms, hindrance by farmers, right of way problem, arrangement of transformers and other material, non availability of feeding sub stations, delay in forest/railway clearance etc. which should have been sorted out well before time.

In the exit conference the Management agreed to the audit contention and assured to streamline the system for timely completion of projects.

Non recovery of negative price variation

2.1.12 In contracts having price variation clause, the contractors lodge their claims in case of upward trend in prices. However, the DISCOMs have not devised any system for recovery in case of downward trend in prices and statutory duties. Test check in audit revealed that recovery (as worked out in audit) amounting to ₹ 84.16 lakh in two contracts[*] (UHBVNL) and ₹ 1.53 crore in three

ϒ Worked out on the basis of benefits envisaged in DPRs of respective sub stations.

* Bid No. 125 and 161 is respect of UHBVNL.

contracts[§] (DHBVNL) on account of downward price variation had not been made from the contractors.

In the exit conference the Management accepted the contention of Audit and assured to work out the modalities to streamline the system.

In reply, UHBVNL stated (September 2011) that the instructions have been issued to the construction wing and field offices to review all contracts and make recoveries in case of negative price variation.

Non recovery of shared cost from Haryana Urban Development Authority (HUDA)

2.1.13 Due to increase in load, the DISCOMs are carrying out up-gradation/augmentation of substations regularly. As no surplus is generated from operations, the DISCOMs are spending borrowed funds on these works. With a view to improve funds position of the power utilities it was decided in a meeting (July 2007) of Financial Commissioner and Principal Secretary Power with the officials of HUDA and Country & Town Planning department that HUDA would bear 25 *per cent* of the cost of augmentation of power transformers in sub stations in urban estates developed by HUDA up to 1 October 1986 and thereafter would bear 75 *per cent* of the cost with retrospective effect.

The HVPNL requested (August 2007) DISCOMs to work out the details of amount recoverable and raise the bill on HUDA. However, the DISCOMs did not devise any system for recovery of dues from HUDA immediately after the completion of works. As such, the DISCOMs could not work out the amount to be recovered in this regard. However, in case of Gurgaon city DHBVNL worked out (March 2009) ₹ 115.70 crore, being 75 *per cent* share of HUDA in cost of augmentation of sub stations. In response, HUDA had sought (December 2010) certain clarification/information which had not been supplied by the operation circle, Gurgaon so far (August 2011) which shows lack of strenuous and sincere efforts on the part of DHBVNL. Recovery of this amount would have enabled the DISCOM to ease out its financial crisis to some extent.

In reply, DHBVNL stated (August 2011) that it was an inter departmental issue and shall be got resolved once the data is got consolidated by the Company and forwarded to HUDA. Reply is not convincing because the requisite data/information should have been obtained from field units and sent to HUDA at the time of submitting the claim. It reflects lack of control mechanism. In the exit conference the Management assured to look into the issue.

In reply, UHBVNL stated (September 2011) that the instructions have been issued to the construction and operation wing to take up the matter for recovery of dues from HUDA in respect of 33 KV sub stations.

§ Bid No. TED-78, 79 and 82 is respect of DHBVNL.

Implementation of centrally sponsored schemes

Rural electrification

2.1.14 The National Electricity Policy states that the key objective of development of the power sector is to supply electricity to all areas including rural areas for which the Government of India (GOI) and the State Governments would jointly endeavour to achieve this objective. Accordingly, RGGVY was launched in April 2005, which aimed at providing access to electricity for all households in five years for which the GOI provides 90 *per cent* capital subsidy. The remaining 10 *per cent* of approved outlay was to be provided by Rural Electrification Corporation (REC) as loan.

Besides, the GOI notified the Rural Electrification Policy (REP) in August 2006. The REP, *inter-alia*, aims at providing access to electricity for all households by 2009 and minimum lifeline consumption of one unit per household per day as a merit good by the year 2012. As per policy, a village would be classified as electrified based on a certificate issued by the Gram Panchayat certifying that basic infrastructure *viz*. DTs and lines are provided in the inhabitated locality; electricity is provided to public places like schools, health centers, community centers *etc*, and at least 10 *per cent* households are electrified in the village. The other Rural Electrification (RE) schemes *viz*., Accelerated Electrification of one lakh villages and one crore households, Minimum Needs Programme were merged into RGGVY. The features of the erstwhile 'Kutir Jyoti Programme' were also suitably integrated into this scheme. Hundred *per cent* electrification of villages in Haryana had already been completed long back in 1977 and met the criteria as stipulated in REP 2006.

Availability of power in electrified villages

2.1.15 NEP 2005 envisages that consumers, ready to pay tariff, have the right to get uninterrupted 24 hours supply of quality power and emphasised determined efforts to ensure electricity access to all households (including rural households) within five years time. To improve supply position in rural areas the DISCOMs had incurred huge expenditure on segregation of rural domestic and Agriculture Pump sets (AP) feeders. Despite that, there is not much improvement in supply of power to rural areas. The power supply per day in UHBVNL was 22:20 hours in urban areas, 12:23 hours in rural areas for domestic consumers and 7:28 hours for AP consumers during 2010-11. Similarly, the power supply in DHBVNL during 2010-11 was 22:20 hours, 12:11 hours and 7:06 hours in respect of urban areas, rural domestic and AP consumers respectively. Besides 6,833 *Dhanis*[ϒ] (3,351 in UHBVNL and 3,482 in DHBVNL) having population of more than ten were getting restricted supply of power through AP feeders.

In the exit conference, the Management stated that power supply to various categories of consumers was as per policy of the State Government. However, the

ϒ Cluster of houses.

fact remains that a large segment of the population of the State living in villages is still deprived of round the clock supply of electricity.

Utilisation of funds received under RGGVY.

2.1.16 In Haryana, the DISCOMs received funds under RGGVY for providing electricity connections to Below Poverty Line (BPL) Households in rural areas. The position of the funds available *vis-à-vis* utilised under this scheme during the last five years ending 31 March 2011 is depicted below:

(₹ in crore)

Year	DISCOMs	Opening balance	Funds received during the year	Total funds available	Funds utilised	Unspent funds at the end of the year
2006-07	UHBVNL	0	12.33	12.33	4.27	8.06
	DHBVNL	0	0	0	0	0
2007-08	UHBVNL	8.06	24.66	32.72	40.81	-8.09
	DHBVNL	0	0	0	0	0
2008-09	UHBVNL	-8.09	2.95	-5.14	50.80	-55.94
	DHBVNL	0	34.48	34.48	0.18	34.30
2009-10	UHBVNL	-55.94	56.13	0.19	14.47	-14.28
	DHBVNL	34.30	4.52	38.82	6.10	32.72
2010-11	UHBVNL	-14.28	0.00	-14.28	3.81	-18.09
	DHBVNL	32.72	24.90	57.62	43.61	14.01

Under RGGVY, UHBVNL incurred expenditure in excess of funds received and DHBVNL failed to fully utilise the funds received

It is evident from the above table that UHBVNL had incurred expenditure to the tune of ₹ 18.09 crore in excess of funds received, which has not been received from REC as the closure reports of works had not been submitted so far (August 2011). Since the Company met this extra expenditure from borrowed funds, it resulted into interest loss of ₹ 2.97 crore*.

In reply, UHBVNL stated (September 2011) that the final expenditure was still under reconciliation.

In DHBVNL ₹ 14.01 crore remained unutilised due to delay in completion of works by the contractors, though it did not receive any fund during 2006-07 and 2007-08 as the DPRs were approved in March 2008, as discussed in subsequent paragraphs. This indicated lack of coordination and monitoring. Delay in implementation of RGGVY works is discussed in succeeding paragraphs.

Delay in completion of RGGVY works

2.1.17 For providing electricity connections to BPL families in 11 districts of UHBVNL and 7 districts of DHBVNL, REC sanctioned (July 2005 to June 2009) ₹ 208.72 crore (₹ 115.67 crore in UHBVNL and ₹ 93.05 crore in DHBVNL), of which 90 *per cent* was to be provided by REC as financial assistance and balance 10 *per cent* as loan. All these works were awarded during March 2007 to January 2009. The scheduled dates of completion of the works were from March 2007 to October 2008 in case of UHBVNL and from December 2008 to September 2009, in case of DHBVNL. Out of target of releasing 1,10,159 connections to

* Worked out at minimum interest rate of nine *per cent per annum*.

beneficiaries upto October 2008, only 78,181 connections (70.97 *per cent)* were released by UHBVNL up to March 2011. Out of the target of releasing 1,17,611 connections to the beneficiaries up to September 2009 in DHBVNL, only 1,04,610 connections (88.95 *per cent*) had been released (up to March 2011). The works were lagging behind the schedule in both the DISCOMs due to slow progress of work by contractors (UHBVNL), delay in supply of list of beneficiaries to contractors and delay in testing in meters (DHBVNL). Thus, the BPL families could not avail the benefits envisaged in the scheme.

We observed that UHBVNL extended the scheduled date of completion of contracts without levy of penalty on the ground that there was delay in providing service connection orders and penalty amounting to ₹ 6.25 crore deducted from the contractors bills was refunded. However, we observed that there were delays on the part of contractors also for certain works *viz,* erection of HT/LT lines and installations of DTs for which penalty should have been recovered.

In reply, UHBVNL stated (September 2011) that delay was due to revision of BPL lists by the District Administration and time extension was granted. Reply is not convincing because the contractors failed to complete even those works where BPL lists were not involved for which penalty should have been recovered.

Segregation/bifurcation of rural domestic and AP feeders in DISCOMs.

2.1.18 For segregation/bifurcation of rural domestic and AP feeders the DISCOMs prepared schemes costing ₹ 503.58 crore as detailed in ***Annexure 9***. The DPRs envisaged financial benefits of ₹ 443.06 crore and on this basis, REC sanctioned loan of ₹ 483.35 crore. We observed that DPRs were unrealistic as the financial benefits were inflated (₹ 395.46 crore) on account of inclusion of additional sale of energy and not considering related interest, repair and maintenance cost. Despite these works being eligible for 90 *per cent* grant under RGGVY, DISCOMs did not avail the same and availed loan from REC incurring avoidable interest burden of ₹ 50.22 crore *per annum*. Besides, loan burden affected its financial position adversely. This, in turn, increased the cost of electricity, putting extra burden on consumers.

In reply, UHBVNL stated that RGGVY guidelines do not permit segregation/bifurcation of rural domestic and AP feeders and therefore expenditure on the same was not projected under financing in the RGGVY scheme. However, the fact remains that these works were covered under the scheme as per paragraph 4.2(b)(i) of the guidelines for project formulation. However, DHBVNL did not offer its comments on the issue of not availing the benefits under RGGVY.

Restructured Accelerated Power Development Reforms Programme (R-APDRP)

2.1.19 The GOI approved the APDRP to leverage the reforms in power sector through the State Government. This scheme was implemented by the DISCOMs with the objective of upgradation of sub transmission and distribution system including energy accounting and metering, for which financial support was provided by GOI.

In order to carry on the reforms further, GOI launched (July 2008) the R-APDRP as a Central Sector Scheme for 11th Plan. The R-APDRP scheme comprises Part A and B. Part A was dedicated to establishment of Information Technology (IT) enabled system for achieving reliable and verifiable baseline data system in all towns besides installation of SCADA[€]/Distribution Management System. The Part B of the scheme deals with strengthening of regular sub-transmission & distribution system and upgradation projects.

Part A- Establishment of IT enabled system

DISCOMs failed to utilise funds amounting to ₹49.68 crore received under R-APDRP

2.1.20 MoP, GOI sanctioned (February 2009) loan of ₹ 165.63 crore (₹ 75.16 crore for UHBVNL and ₹ 90.47 crore for DHBVNL) against project cost of ₹ 179.79 crore (₹ 87.16 crore for UHBVNL and ₹ 92.63 crore for DHBVNL) for implementation of the programme in 36 towns (20 in UHBVNL and 16 in DHBVNL). The loan was to be released through Power Finance Corporation Limited (PFC). As per terms and conditions of the sanction, 30 *per cent* of the project cost was to be released as loan upfront on approval of the project, 60 *per cent* against certified claims based on utilisation and balance 10 *per cent* after full utilisation. An amount of ₹ 49.68 crore (₹ 22.54 crore for UHBVNL and ₹ 27.14 crore for DHBVNL) being *30 per cent* of the project cost was released during 2008-09 and 2009-10 on approval of the project. As per scheme, the target date for appointment of Information Technology Implementing Agency (ITIA) was May 2009. However, action in this regard was initiated in March 2010 and due to procedural delays price bids had not been finalised so far (March 2011). Therefore, funds of ₹ 49.68 crore remained unutilised by the DISCOMs. The main reason for delay was that evaluation committees took undue long time in deciding the matter.

As per the scheme the entire loan along with interest was to be converted into grant once the establishment of the required system was adopted and verified by an independent agency appointed by the MoP. No conversion into grant was to be made, in case projects were not completed within three years from the date of sanction of the project. There are remote chances to complete the projects within overall time limit of three years i.e. up to January 2012 and the DISCOMs are not likely to get any benefits of grant available under the scheme. In the meantime, while UHBVNL kept the funds in Fixed Deposits (FDs), DHBVNL utilised the same for working capital requirement.

In reply, DHBVNL stated (August 2011) that there was no intentional delay. However, the fact remains that the Management has taken undue time in deciding a significant issue which is still pending (August 2011).

[€] Supervisory Control and Data Acquisition**:** It generally refers to industrial control systems, computer systems that monitor and control industrial, infrastructure, or facility-based processes.

Part-B Strengthening of sub transmission and distribution system

2.1.21 The focus in this part was on reduction of AT&C losses on sustainable basis. Twenty five *per cent* of the project cost is to be provided as loan by GOI and balance 75 *per cent* is to be arranged by DISCOMs through own sources or through Financial Institutions/Banks as loan. Up to 50 *per cent* of loan, provided by GOI is convertible into grant depending on the extent of maintaining AT&C loss level up to 15 *per cent* level continuously for five years.

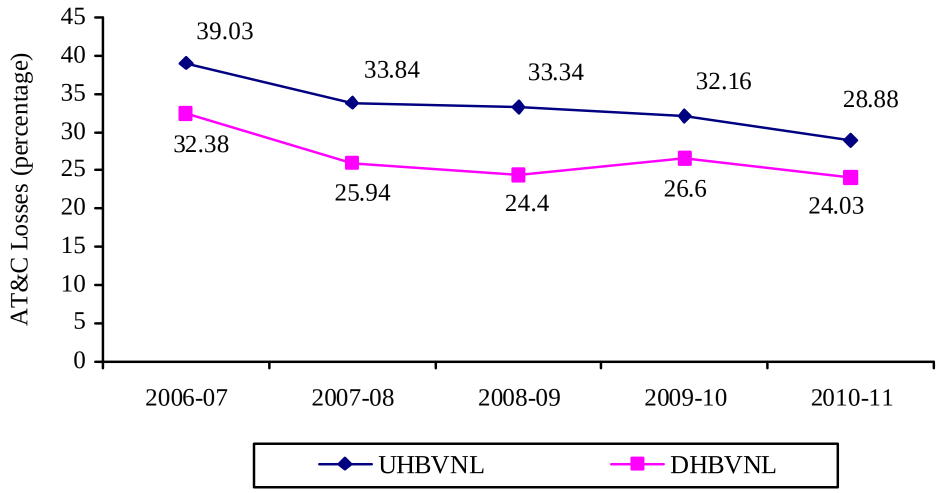
The scheme is applicable to same 36 towns (20 in UHBVNL and 16 in DHBVNL) which were covered under Part-A. The Distribution Reforms Committee (DRC) of the State Government approved DPRs amounting to ₹ 529.78 crore of 25 towns (₹ 236.81 crore for 12 in UHBVNL and ₹ 292.97 crore for 13 in DHBVNL) which were sent (January 2011) to MoP for approval. The DPRs of UHBVNL were approved for ₹ 230.69 crore by the MoP in March 2011. Further developments were awaited (March 2011).

In reply, UHBVNL stated (September 2011) that remaining eight DPRs with total cost of ₹ 299.31 crore have been approved (April 2011) by DRC and submitted to PFC for approval of MoP.

Aggregate Technical & Commercial losses

2.1.22 One of the prime objectives of R-APDRP scheme was to strengthen the distribution system with the focus on reduction of AT&C losses on sustainable basis. HERC had been fixing targets for sub transmission and distribution (T&D) losses up to 2008-09 and did not fix targets separately for AT&C losses. HERC fixed targets of AT&C losses for the year 2009-10 and 2010-11 at 28 and 24 *per cent* respectively. However, DISCOMs had been working out AT&C losses during entire audit period.

The graph below depicts the AT&C losses during 2006-07 to 2010-11, in the DISCOMs.



Both the DISCOMs could not achieve the targets of 28 *per cent* in 2009-10 and 24 *per cent* in 2010-11 as fixed by HERC except during 2009-10 in DHBVNL. We observed that in UHBVNL AT&C losses were very high in three operation circles namely Jind (68.79 *per cent*), Rohtak (61.35 *per cent)* and Jhajjar (43.30 *per cent*) due to high T&D losses and low collection efficiency**.**

The main reasons for high AT&C losses, as analysed by us, were overloading of the network due to deficient capacity addition, imbalance in HT/LT ratio, shortfall in addition of capacitors, large number of DTs under High Voltage Distribution System (HVDS) adding to losses, under billing due to defective meters and non-replacement of electro-mechanical meters and pilferage/theft of power.

HERC had expressed concern for the losses from time to time while finalising ARR of the DISCOMs and has been directing them to bring down the AT&C losses to a reasonable level. The measures suggested (August 2008) by the HERC included:

- identification of highly critical feeder in each sub division for reduction of losses in six months period one by one;
- identification of one 33 KV/66 KV sub station for critical examination for taking corrective measures; and
- time bound action plan for replacement of defective meters.

During the test check of records of operation circles, we observed that field offices had not taken any action on the directions of HERC for controlling the feeder wise losses.

In March 2011, in UHBVNL; line losses of 333 feeders ranged between 25 to 50 *per cent*, whereas in 125 feeders the same were above 75 *per cent*.

In March 2011, out of 2,737 outgoing 11 KV feeders in operation circles of DHBVNL there were 40.65 *per cent* feeders (950) reporting line losses above 25 *per cent*. Out of these 683 feeders reported line losses ranging between 25 to 50 *per cent* and 267 feeders were having line losses of more than 50 *per cent*. Due to high losses on these feeders DISCOMs were incurring heavy revenue loss which could have been reduced considerably by adopting measures as suggested by HERC.

In reply, UHBVNL stated (September 2011) that steps and initiatives are being taken to meet the loss level standards prescribed by HERC. In reply, DHBVNL stated (August 2011) that AT&C losses have come down from abnormal 40 *per cent* in 2000-01 to 26.6 *per cent* in 2009-10.

The fact remains that the achievement was below the targets in both the DISCOMs.

Consumer metering

2.1.23 For accurate energy accounting and audit, 100 *per cent* consumer metering is a pre requisite. National Electricity Policy 2005 has set a target of two years for 100 *per cent* metering by the DISCOMs. Though the percentage of unmetered consumers have decreased during 2007-11, DISCOMs have not yet achieved the target of 100 *per cent* metering as is evident from the following table.

(in lakh)

Year	UHBVNL			DHBVNL		
	Total connections	Unmetered connections	Percentage	Total connection	Unmetered connections	Percentage
2006-07	22.48	1.84	8.19	18.98	0.87	4.58
2007-08	23.06	1.84	7.98	19.65	0.86	4.38
2008-09	23.48	1.83	7.79	20.25	0.85	4.2
2009-10	24.29	1.78	7.33	21.21	0.84	3.97
2010-11	25.19	1.69	6.71	22.69	0.81	3.6

We observed that:

- All unmetered connections were related to flat rate AP consumers, who do not opt for the metering mode of supply;
- As on 31 March 2011, 2.67 lakh (1.31 lakh in UHBVNL and 1.36 lakh in DHBVNL) meters were defective, which constituted 5.88 *per cent* of metered connections against the norm of one *per cent* fixed by HERC; and
- As on 31 March 2011, there were 15.39 lakh electro mechanical meters (9.83 lakh UHBVNL and 5.56 lakh in DHBVNL) which were yet to be replaced. These were adding to the pilferage/ theft of power.

In the exit conference, Special Secretary, Power stated that there were practical problems in 100 *per cent* consumers metering.

In reply, UHBVNL agreed to our contention stating (September 2011) that they have purchased new meters and the same will be installed after testing. Further, action has been initiated for replacement of electro mechanical meters and the bids for replacement in rural areas of Ambala and Yamunanagar are under evaluation.

Operational efficiency

2.1.24 The operational performance of the DISCOMs is judged on the basis of availability of adequate power for distribution, adequacy and reliability of distribution network, minimising line losses and detection of theft of electricity, *etc.* These aspects have been discussed below.

Purchase of power

2.1.25 The subject matter of purchase of power was discussed in the paragraph 2.2.14 of the Report (No.4) of Comptroller and Auditor General of India for the year ended 31 March 2010 (Commercial)-Government of Haryana. Therefore, it is not being discussed again.

Sub transmission & distribution losses

2.1.26 The distribution system is an important and essential link between the power generation source and the ultimate consumer of electricity. For efficient functioning of the system, it must be ensured that there are minimum losses in sub-transmission and distribution of power. While energy is carried from the generation source to the consumer, some energy is lost in the network. The losses at 33 KV stage are termed as sub-transmission losses while those at 11 KV and below are termed as distribution losses. These are based on the difference between energy received (paid for) by DISCOMs and energy billed to consumers. The percentage of losses to available power indicates the effectiveness of distribution system. The losses occur mainly on two counts, *i.e.*, technical and commercial. Technical losses (T&D) occur due to inherent character of equipment used for transmitting and distributing power and resistance in conductors through which the energy is carried from one place to another. On the other hand, commercial losses occur due to theft of energy, defective meters and drawal of unmetered supply, etc.

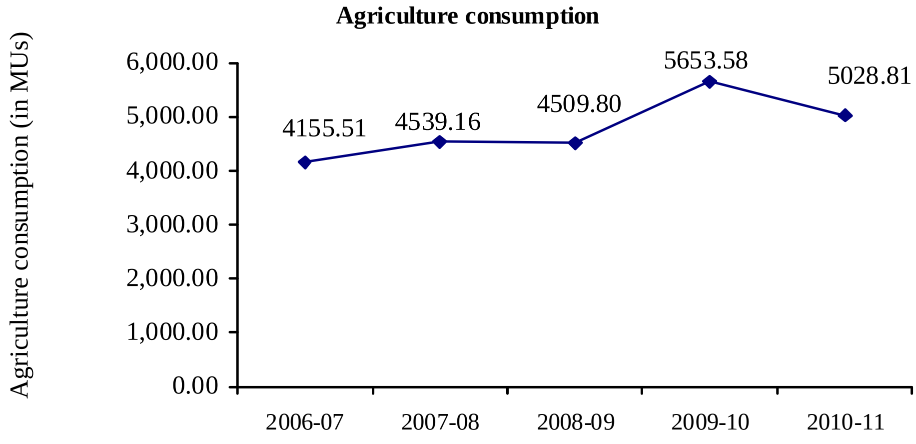
The tables below indicate the line losses for both the DISCOMs in the State for last five years up to 2010-11.

UHBVNL

(in Million units)

Sl. No.	Particulars	2006-07	2007-08	2008-09	2009-10	2010-11
1	Energy available for sale to consumers	11,873.03	12,911.04	12,964.05	15,210.85	15,253.95
2	Energy sold to consumers	8,469.32	9,223.47	9,461.36	11,267.44	11,592.29
3	Line losses (1 – 2)	3,403.71	3,687.57	3,502.69	3,943.41	3,661.66
4	Percentage of line losses {(3 / 1) x 100}	28.67	28.56	27.02	25.92	24.00
5	Percentage of losses allowed by HERC	30.50	26.00	25.00	24.00	23.00
6	Excess losses (in MUs)	--	330.52	261.87	292.05	152.54
7	Average realisation rate per unit (in ₹)	2.57	2.91	3.48	4.07	NA
8	Value of excess losses (₹ in crore)	--	96.18	91.13	118.86	NA
9	Agricultural consumption (in MUs)	4,155.51	4,539.16	4,509.80	5,653.58	5,028.81
10	Percentage of agriculture consumption to energy sold to consumers	49.00	49.00	48.00	50.00	43.38

The pattern of agricultural consumption during the audit period is depicted in the graph below:



It would be seen from the above table that in case of UHBVNL, the losses though decreased from 28.67 *per cent* in 2006-07 to 24 *per cent* in 2010-11 were still higher as compared to HERC norm except during 2006-07. The above losses were worked out by the Company after considering consumption of Agricultural Pumpset (AP) consumers as stated above in Column 9.

We observed that agriculture consumption during 2010-11 projected at 5,028.81 MUs was on higher side because as per feeder meters readings the same worked out to 3,421.63 MUs. Thus, agriculture consumption was overstated by 1,607.18 MUs. Resultantly, line losses were understated by 10.54 *per cent* during 2010-11. Therefore, possibility of showing inflated agriculture consumption during earlier years also could not be ruled out. Thus, the Company had been showing the T&D losses on lower side. The Company had not initiated any action against the officials responsible for furnishing wrong data.

In reply, UHBVNL stated (September 2011) that line losses were getting lower year after year though reduction was not up to the HERC targets.

DHBVNL

(In Million units)

Sl. No.	Particulars	2006-07	2007-08	2008-09	2009-10	2010-11
1	Energy available for sale to consumers	11,643.26	12,468.36	13,180.89	15,883.84	16,153.20
2	Energy sold to consumers	8,191.13	9,034.27	9,859.99	11,600.64	12,612.10
3	Line losses (1 – 2)	3,452.13	3,434.09	3,320.90	4,283.20	3,541.10
4	Percentage of line losses {(3 / 1) x 100}	29.65	27.54	25.19	26.97	21.92
5	Percentage of losses allowed by HERC	30.50	26.00	25.00	24.00	23.00
6	Excess losses (in MUs)	–	192.01	25.04	471.75	-
7	Average realisation rate per unit (in ₹)	2.65	3.10	3.52	3.31	-
8	Value of excess losses (6 x 7) (₹ in crore)	–	59.52	8.81	156.15	-

In case of DHBVNL, the losses decreased from 29.65 *per cent* in 2006-07 to 21.92 *per cent* in 2010-11 which was within the norm of HERC for the year 2010-11.

Reduction in T&D losses is the most significant step towards making the DISCOMs financially self-sustaining. The importance of reducing losses can be gauged from the fact that one *per cent* decrease in losses could have added ₹ 61.91 crore[ℜ] to the revenue of UHBVNL. The main reasons for such high energy losses were insufficient transformation capacity, inadequate working capacity of capacitor banks, low power factor, heavy quantum of unmetered consumers and theft of electricity etc.

Performance of distribution transformers

2.1.27 The HERC in its regulation had fixed (August 2004) the norm of failure of DTs at 10 *per cent* for rural and 5 *per cent* for urban areas. The position of damage rate of DTs in both the DISCOMs during 2006-07 to 2010-11 is given in ***Annexure 10***. We observed that in UHBVNL the damage rate of DTs in urban and rural areas decreased from 15.84 *per cent* and 25.46 *per cent* respectively in 2006-07 to 13.67 *per cent* and 11.96 *per cent* respectively in 2010-11. In DHBVNL, the damage rate of DTs in urban and rural areas decreased from 14.97 *per cent* and 30.34 *per cent* in 2006-07 to 3.86 *per cent* and 7.63 *per cent* respectively in 2010-11. The damage rate in UHBVNL remained above the norms of the HERC and in DHBVNL it remained above the norms during 2006-07 and 2007-08 in rural and urban areas. During 2008-09 and 2009-10 the damage rate was higher than norms in rural areas only. However, during 2010-11 the damage rate remained within the norm under both categories. Due to excessive damage rate, the DISCOMs incurred extra expenditure of ₹ 32.98 crore (UHBVNL) and ₹ 6.87 crore (DHBVNL) during audit period on repair of DTs. The main reason for decrease in damage rate was induction of new transformers in the system under HVDS and other improvement schemes. Failure of DTs could be further minimised by preventive maintenance and avoiding over-loading of the same.

Preventive maintenance of DTs is conducted with a view to avoid chances of damage to the DTs. The targets of preventive maintenance of DTs in DHBVNL were fixed at 20 DTs per sub division per month. We observed that there was shortfall of preventive maintenance ranging from 19.35 *per cent* in 2008-09 to 23.22 *per cent* in 2010-11 in DHBVNL which contributed towards excessive damaged rate of DTs. In case of UHBVNL no targets for preventive maintenance were fixed. In exit conference the Management of both the DISCOMs assured to streamline the system for analysis of reasons for damage of DTs.

In reply, UHBVNL stated (September 2011) that there was significant reduction in damage rate in the year 2010-11 and was highest ever since formation of UHBVNL. The fact, however, remains that while damage rate significantly decreased during 2010-11 in rural areas, the same increased in urban areas as

ℜ Based on Average realisation rate of UHBVNL for the year 2009-10.

compared to 2009-10.

Delay in repair of distribution transformers

2.1.28 In accordance with the terms & condition of purchase order, the suppliers are required to lift the DTs at their own cost if these are damaged within the warranty period and would be returned back in 45 days.

We observed that DISCOMs did not have effective mechanism for timely repair/return of DTs as 438* DTs damaged within warranty period and lifted by suppliers were not returned back even after one year and no action was taken by DISCOMs in this regard. Abnormal delay in repair and return of DTs by suppliers is detrimental to the financial interest of the DISCOMs as the DTs remained out of use for longer period and warranty period is reduced to that extent.

2.1.29 We further observed in UHBVNL that 385 DTs (72 DTs of 25 KVA, one of 40 KVA, 80 of 63 KVA and 232 of 100 KVA) were damaged within warranty period during March 2002 to September 2007 and were lying in the Divisional Store, Sonepat. The suppliers of these transformers did not lift these within prescribed period of 45 days as per terms and conditions of the purchase orders. The Company also failed to get the transformers repaired at risk and cost of the suppliers. These transformers were destroyed in a fire on 7 October 2007. This caused loss of ₹ 1.85 crore to the Company.

In reply, UHBVNL stated (September 2011) that due to unfortunate fire incident the DTs were got burnt and BOD had decided to write off the loss.

Capacitor banks

Due to short fall in addition of capacitor banks, targeted energy saving of 332.86 MUs valued at ₹ 103.31 crore could not be achieved

2.1.30 Capacitor bank improves power factor by regulating the current flow and voltage regulation. In the event of voltage falling below normal, the situation can be set right by providing sufficient capacity of capacitor banks to the system as it improves the voltage profile and reduces dissipation of energy to a great extent thereby saving loss of energy. The position of capacitor banks in DISCOMs is shown in the ***Annexure 11***. It may be seen from the ***Annexure*** that against the targeted addition of capacitor bank of 1,147.20 MVAR• (439.20 UHBVNL and 708 DHBVNL) during the review period, the actual addition was only 566 MVAR (251.20 UHBVNL and 314.80 DHBVNL). Thus, there was significant shortfall of 581.20 MVAR (188 UHBVNL and 393.20 DHBVNL) in addition of capacitor banks. The shortfall was 42.81 *per cent* in UHBVNL and 55.54 *per cent* in DHBVNL which led to loss of targeted energy saving of 332.86 MUs (141.31 MUs in UHBVNL and 191.55 MUs in DHBVNL) valued at ₹ 103.31 crore (₹ 35.43 crore UHBVNL and ₹ 67.88 crore DHBVNL).

In reply, UHBVNL stated (September 2011) that capacitor banks had been erected and commissioned as per requirement and there was no short fall. The

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* 184 in UHBVNL and 254 in DHBVNL.

• Mega Volt Ampere Reactive Power.

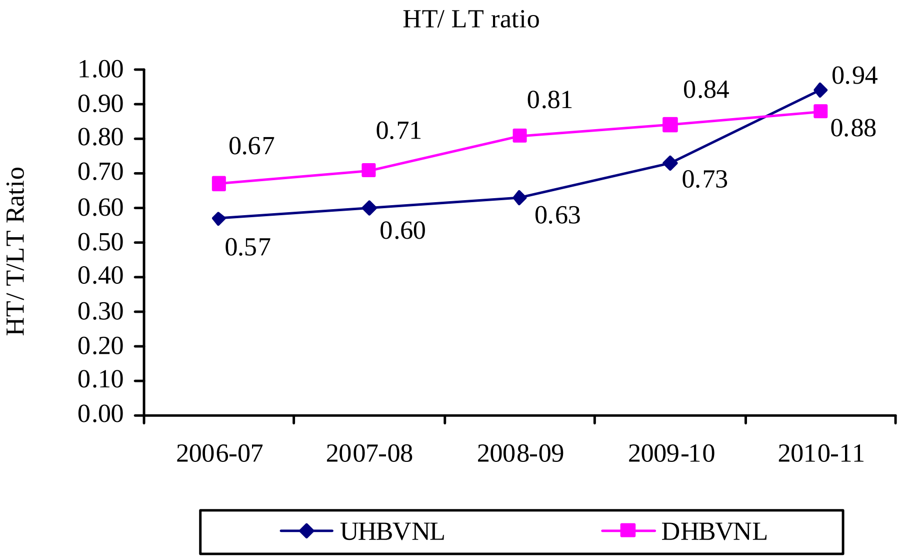
fact, however, remains that the capacity addition in capacitor bank was below the planned addition.

Commercial losses

2.1.31 The majority of commercial losses relate to consumer metering and billing besides pilferage of energy. While the metering and billing aspects have been covered under implementation of R-APDRP scheme and billing efficiency respectively, the other observations relating to commercial losses are discussed below.

Implementation of LT less system

2.1.32 High Voltage Distribution System (HVDS) is an effective method of reduction of technical losses, prevention of theft, improved voltage profile and better consumer service. GOI had also stressed (February 2001) the need to adopt LT less system of distribution through replacement of existing LT lines by HT lines to reduce the distribution losses. National Electricity Policy 2005 recommended that HVDS should be promoted to improve HT/LT ratio keeping in view the techno-economic considerations. The HT/LT ratio of the DISCOMs over the audit period is depicted in the graph below:



It may be seen from the above graph that there was an improvement in HT/LT ratio during 2009-10 and 2010-11 mainly due to implementation of HVDS in four operation circles namely Kurukshetra, Karnal, Kaithal and Rohtak in UHBVNL and three operation circles namely Hisar, Sirsa and Narnaul in DHBVNL. We observed that the improvement in HT/LT ratio was not balanced among the 30 divisions of UHBVNL as there were wide variations in divisions and the HT/LT ratio varied between 0.34:1 and 2.95:1 among the divisions. Resultantly, the reduction in T&D losses could not be achieved as intended.

In exit conference, the Special Secretary, Power accepted the audit contention and agreed that imbalance in HT/LT ratio would be looked into.

In reply, UHBVNL stated (September 2011) that implementation of HVDS requires ample utilization of space thereby making it difficult proposition in dense urban areas. This was the primary reason for higher focus of HVDS in rural areas. The Company further stated that after completion of HVDS system in three circles *viz.* Kurukshetra, Karnal and Rohtak the T&D losses had been reduced from 18.17, 18.97 and 48.42 *per cent* respectively in 2008-09 to 14.82, 16.64 and 40.50 *per cent* respectively in 2010-11. The fact remains that the applicability of HT/LT ratio of 1:1 should be uniform for effective loss reduction programme. Moreover, the reduction in T&D losses in circles where HVDS was implemented with heavy investment was insignificant as compared to loss reduction in other circles.

Massive investment on HVDS without cost benefit analysis

2.1.33 The DISCOMs resorted to massive investment on HVDS without cost benefit analysis and feasibility study as discussed below:

UHBVNL

Unfruitful expenditure on HVDS in Nuna Majra village

2.1.34 The Company implemented (October 2009) HVDS in Nuna Majra village under sub division Bahadurgarh at a cost of ₹ 3.61 crore by installing 245 DTs of 16 KVAs and 7 DTs of 25 KVA (total capacity 4,095 KVA) against previously installed one DT of 200 KVA, six DTs of 100 KVA and two DTs of 25 KVA (total capacity 850 KVA). However, the benefits of the scheme in the shape of reduced losses could not be availed as the operation wing could neither relocate the consumer meters outside the premises of consumers nor could replace the sluggish electro mechanical meters with electronic meters due to resistance from consumers. Energy losses even after introduction of HVDS were above 70 *per cent*. Thus, investment of ₹ 3.61 crore was rendered unfruitful.

In reply, UHBVNL stated (September 2011) that the project had not succeeded because the Company did not want to aggravate the law and order situation due to consumers agitation. Reply is not convincing because the work relating to replacement/relocation of meters should have been completed before incurring heavy expenditure on HVDS.

Unrealistic detailed project reports

2.1.35 The Company decided to implement the HVDS scheme on rural agriculture feeders in four circles viz Karnal, Kurukshetra, Kaithal and Rohtak. As per the DPRs prepared with the help of the consultant, the schemes for providing HVDS envisaged financial benefits of ₹ 313.61 crore *per annum* on account of reduction in T&D losses (₹ 294.42 crore) and savings on account of reduction in transformer damage rate (₹ 19.19 crore). During March 2009 to

September 2009, 34 turnkey contracts valuing ₹ 1,295.92 crore for 1,22,091 AP connections on 743 feeders were awarded.

HVDS at massive scale was implemented without proper cost benefit analysis

We observed that before going for implementation of HVDS at massive scale the Company did not wait for the results of HVDS at Nuna Majra Village. The Company neither conducted any study of practices being followed by other States nor carried out proper cost benefit analysis. The approval of BOD was also not obtained before launching HVDS. The envisaged benefits of ₹ 313.61 crore were inflated by ₹ 312.47 crore because the Company did not consider related interest cost (₹ 145.23 crore), repair and maintenance cost (₹ 37.89 crore). Further the benefits of ₹ 294.42 crore on account of reduction in T&D losses were inflated by ₹ 129.35 crore because these has been worked out by multiplying with a factor of 2.155 keeping in view the load growth of 7.98 *per cent* per annum. However, this was not possible without further investment in the system. In response to audit query, the Company agreed to audit contention.

It is pertinent to mention that Chairman of Power Utilities observed (February 2010) that the scheme had been a failure in Delhi and the number of DTs would go up to seven to eight fold which would add on their own losses into the system. Therefore, it was imprudent to go for huge investment with small gains. In view of this, the Financial Commissioner & Principal Secretary, Power directed (February 2010) that no fresh expenditure be incurred on HVDS until the benefits of such projects were clearly demonstrated and recognised. However, UHBVNL continued to incur expenditure on the HVDS. Subsequently, DISCOMs also constituted (July 2010) two Committees, one at Director level and another at MD level (MDs of HVPNL, UHBVNL and DHBVNL) to look into the financial implication in releasing tubewell connections on HVDS. The Committees found (October 2010) that the cost per tubewell connection in UHBVNL was very high at ₹ 1.06 lakh as compared to ₹ 0.46 lakh per connection in Andhra Pradesh where two or three connections were allowed from one transformer as compared to single connection in Haryana. It recommended to explore possibility of reduction in investment on lines of Andhra Pradesh and change in technical specifications.

Extra expenditure of ₹ 539.81 crore on HVDS works was incurred as compared to Andhra Pardesh model

The works were still in progress and HVDS on 89,969 tubewell connections have been completed up to March 2011 at an extra expenditure of ₹ 539.81 crore. However, the Company introduced (May 2011) the HVDS on AP connections as per Andhra Pradesh model. This expenditure would increase to ₹ 732.54 crore by the time all works are completed since the revised policy was to be implemented on new tubewell connections.

In reply, UHBVNL stated (September 2011) that it was too early to raise a question mark on HVDS and the Company had decided to get a cost benefit analysis through a third party. Reply is not convincing as the Company should have considered its financial health, techno-economic viability and cost benefit analysis of the scheme before making massive investment.

Extra expenditure

2.1.36 For conversion of 56,070 AP connections on HVDS in 16 sub divisions of Karnal operation circle, UHBVNL invited tenders in June/July 2009. As per the instructions for comparison of bids, in case any bidder quoting for more than one package, these bids were to be evaluated together by the Company in order to avail any discount or price benefit quoted by the bidder.

Contracts awarded at different rates for the same items resulted in extra expenditure of ₹ 31.14 crore in Karnal operation circle

Out of 14 work orders placed in Karnal operation circle, 10 work orders were placed on one firm** for conversion of 41,892 AP connections on HVDS in 11 sub divisions on different rates. The rates of 35 individual identical items in the work orders varied from 9.12 to 182.88 *per cent*. Due to non-evaluation of bids by the Company on minimum rates of various bids of the same party, the work orders were placed at higher rates resulting into extra expenditure of ₹ 31.14 crore.

In reply, UHBVNL stated (September 2011) that the contract was awarded at the lowest possible rates and there was no financial loss. Reply is not convincing as the bids were not evaluated as per instruction *ibid*.

DHBVNL

Extra expenditure

2.1.37 As per instructions (May 2007), the DTs to be installed for release of AP connections should commensurate with load of the respective AP connections. As per rating of motors of respective tubewells, the Company was required to install 86 DTs of 5 KVA, 325 DTs of 10 KVA 152 DTs of 16 KVA and 7 DTs of 25 KVA capacities for releasing connections to AP consumers in Narnaul operation circle.

We observed that the Company placed order (August 2007) on turnkey basis for supply and erection of 575 DTs of different ratings[µ] for the release of AP connections on a firm* at a cost of ₹ 6.90 crore without assessing the actual requirement. The firm supplied and installed (January 2008) 570 DTs. The DTs installed were of higher capacity and did not commensurate with the load of respective AP connections. Since the higher capacity DTs were costlier than those of the required capacity, the Company incurred extra expenditure of ₹ 1.17 crore.

In reply, the Company stated that field offices have been instructed to re-verify the current AP load fed from such DTs.

Idle works

2.1.38 The Company awarded (January 2008 to August 2009) eight work orders in Hisar, Sirsa, Narnaul, Faridabad and Gurgaon operation circles for providing

** M/s. A2Z Maintenance and Engineering Services Private Limited, Gurgaon.

µ 105 DTs (10 KVA)+160 DTs (16 KVA) + 310 DTs (25 KVA).

* M/s A2Z Maintenance and Engineering Services Private Limited, Gurgaon.

HVDS on urban and rural feeders at a total cost of ₹ 394.36 crore. Out of these, only one work had been completed (March 2009) at a cost of ₹ 204 crore and was lying unused for want of connectivity. Further another work on which ₹ 29.25 crore was incurred (March 2009) was held up for want of clearance from National Highway Authority of India. The remaining six works were still incomplete (March 2011).

High incidence of theft

2.1.39 Substantial commercial losses are caused due to theft of energy by tampering of meters by the consumers and unauthorised tapping/hooking by the non-consumers. As per Section 135 of Electricity Act 2003, theft of energy is an offence punishable under the Act. The particulars of checking carried out, theft cases noticed, assessed amount and amount realised there against are given in ***Annexure 12***. An analysis of the ***Annexure*** revealed that percentage of checking of connections had decreased in UHBVNL from 10.38 (2006-07) to 5.80 (2010-11) and in DHBVNL from 6.62 (2006-07) to 5.29 (2010-11).

In the exit conference, the Management of UHBVNL stated that shortage of manpower was one of the reasons for low checking. The Special Secretary, Power stated that the Government was in the process of deciding to set up special police stations to tackle the problems of power theft and recovery of dues.

In reply, UHBVNL stated (September 2011) that the Company faces extremely hostile conditions during theft detection drives. The plea of the Company is not convincing because on an average three to four such incidents occur against average of 12,000 connections checked in a month. In this regard, DHBVNL stated (August 2011) that recovery of dues was effected in view of court orders and financial position of consumers.

In one case, test checked by audit, it was noticed that seals of Meter Cup Board of a consumer[€] were found false/duplicate and UHBVNL served notice to the consumer to deposit ₹ 14.53 lakh on account of theft of energy. The consumer challenged it in the court (February 1998) at Ambala Cantt. The Company failed to prove on record during 1999-2005 that seals were fake and could not produce witnesses who were its employees. Accordingly, the court dismissed the case (April 2008). Thus, ineffective pursuance of the case led to dismissal of the case.

Performance of raid teams

2.1.40 In order to minimise the cases of pilferage/loss of energy and to save the DISCOMs from sustaining heavy financial losses on this account, Section 163 of Electricity Act 2003, provides that the licensee may enter in the premises of a consumer for inspection and testing the apparatus. Vigilance teams of DISCOMs under the control of Additional Director General of Police were entrusted with the work of conducting raids by checking the premises of the consumers with the assistance of departmental officers of the DISCOMs concerned. Executive

[€] M/s Amar Rice Mills-A/c no MS-25 under sub division Babyal (Ambala Cantt).

Engineers of the divisions concerned were to prepare work plan to conduct raids by identifying such consumers/areas where large scale theft was suspected. Due to lack of coordination between the vigilance wing and the divisions concerned, raids did not yield the desired results.

Following is the position of raids conducted during 2006-07 to 2010-11.

Year	Number of consumers		Assessed amount	Realised amount	Unrealised amount	Percentage of checking to total number of consumers
	Total as on 31 March	Consumers checked	(₹ in crore)			
UHBVNL						
2006-07	22,48,297	3,231	8.99	3.05	5.94	0.14
2007-08	23,05,898	5,634	7.35	3.21	4.14	0.24
2008-09	23,48,109	3,751	8.64	3.17	5.47	0.16
2009-10	24,29,038	4,739	13.50	5.23	8.27	0.20
2010-11	25,18,624	7,387	19.74	8.32	11.42	0.29
DHBVNL						
2006-07	18,97,989	1,203	4.11	1.36	2.75	0.06
2007-08	19,64,704	1,832	3.59	1.43	2.16	0.09
2008-09	20,33,935	1,392	5.84	2.89	2.95	0.07
2009-10	21,32,020	1,419	5.51	1.12	4.39	0.07
2010-11	22,69,298	1,312	8.11	1.29	6.82	0.06

The checking of consumers remained dismally low and ranged from 0.14 to 0.29 *per cent* and 0.06 to 0.09 *per cent* of total number of consumers in UHBVNL and DHBVNL respectively. While the unrealised amount against the amount assessed during the raids decreased from 66.07 *per cent* in 2006-07 to 57.85 *per cent* in 2010-11 in UHBVNL, it increased from 66.91 *per cent* to 84.09 *per cent* in DHBVNL during the same period. There is a need to conduct more raids in order to reduce theft of energy.

Billing efficiency

2.1.41 As per procedure prescribed in the Commercial and Revenue Manual, the DISCOMs are required to take the reading of energy consumption of each consumer at the end of the notified billing cycle. After obtaining the meter readings, the DISCOMs issue bill to the consumers for consumption of energy. Sale of energy to metered categories consists of two parts *viz.* metered and assessed units. The assessed units refer to the units billed to consumers in case meter reading is not available due to meter defects, door lock *etc.* The billing of the consumers was being done at sub division level. Domestic and non domestic consumers were being billed on bimonthly basis, while other consumers were being billed on monthly basis.

The efficiency of billing of energy lies in raising the bills timely for the energy consumed by consumers.

The particulars of energy available for sale *viz a viz* energy billed as metered and unmetered supply *etc.* in respect of DISCOMs are given below in the table.

(In MUs)

Sl. No.	**Particulars**	**2006-07**	**2007-08**	**2008-09**	**2009-10**	**2010-11** ††
UHBVNL						
1	Energy available for sale	11,873.03	12,911.04	12,964.10	15,210.85	15,253.95
2	Energy billed to consumers	8,469.32	9,223.47	9,461.36	11,267.44	11,592.29
3	Un metered supply	3,271.35	3,527.89	3,405.07	4,103.13	3,306.84
4	Metered supply	5,197.97	5,695.58	6,056.29	7,164.31	8,285.45
5	Assessed sales (unmetered supply) as percentage of energy billed (3/2x100)	38.63	38.25	35.99	36.42	28.53
DHBVNL						
1	Energy available for sale	11,643.26	12,468.36	13,180.89	15,883.84	16,153.21
2	Energy billed to consumers	8,191.13	9,034.27	9,859.99	11,600.64	12,612.10
3	Un metered supply	1,516.89	1,437.63	1,339.49	1,700.57	1,316.00
4	Metered supply	6,674.24	7,596.64	8,520.50	9.900.07	11,296.10
5	Assessed sales (unmetered supply)as percentage of energy billed (3/2x100)	18.52	15.91	13.59	14.66	10.43

Assessed sales due to defective meters, premises locked *etc.* are not being compiled separately by the DISCOMs. However, the sales at flat rate to (unmetered) AP consumers on assessed basis have been taken as assessed sales. It would be seen from the above table that assessed sales (unmetered) as compared to energy billed decreased from 38.63 *per cent* in 2006-07 to 28.53 *per cent* in 2010-11 in UHBVNL and from 18.52 *per cent* in 2006-07 to 10.43 *per cent* in 2010-11 in DHBVNL.

Non levy of cross subsidy surcharge on open access consumers

2.1.42 HERC Regulations 2008, governing (terms & conditions for determination of wheeling tariff and distribution & retail supply tariff), provide that cross subsidy surcharge shall be payable by all inter-state open access consumers.

HERC in its notification (May 2005) allowed the consumers to bring power through open access. Accordingly, consumers having one MW or above Contract Demand (CD) were allowed by the DHBVNL to bring power through open access from within/outside State from January 2008. However, State Government decided from time to time not to levy any surcharge keeping in view the power scenario and to promote open access. We observed that in operation circles Hisar and Gurgaon three consumers[ϒ] availed open access facility during October 2009 to November 2010 and due to non levy of cross subsidy surcharge as per HERC's orders, the DHBVNL suffered a loss of ₹ 27.77 crore. As the financial interest of the DISCOMs was not safeguarded, the matter was again reviewed and the State Government decided (November 2010) to levy cross subsidy surcharge. Since DHBVNL was already sustaining losses, decision of non levy of cross subsidy was injudicious.

†† Figures for the year 2010-11 in respect of DHBVNL are provisional.

ϒ M/s Jindal Steel Limited, Hisar; M/s DCM Ltd, Hisar and M/s RICO, Manesar.

In reply, DHBVNL stated (August 2011) that State Government has been requested to pay the losses sustained on waiver of cross subsidy surcharge. Final outcome is awaited (September 2011).

Revenue collection efficiency

2.1.43 As revenue from sale of energy is the main source of income of DISCOMs, prompt collection of revenue assumes great significance. The salient features of the collection mechanism being followed by the DISCOMs are as follows:

- consumers may make payments of the bills by cash, cheques or by demand draft;
- revenue billed in respect of HT services is collected at respective sub divisions;
- in respect of LT services, electricity bills are generally collected by the revenue cashiers at sub division except in some areas where collection work is entrusted to certain private collection agencies; and
- domestic and non domestic consumers being billed bi-monthly are required to pay current charges within 17 days from the date of bill and all other consumers being billed monthly are required to pay their current charges with in 10 days, failing which consumers are liable to payment of additional charges of five *per cent* per billing cycle in case of bi-monthly billings and two *per cent* per billing cycle in case of monthly billing.

The table below indicates the balance outstanding at the beginning of the year, revenue assessed during the year, revenue collected and the balance outstanding at the end of the year during last five years ending 2010-11.

(₹ in crore)

Sl.No.	Particulars	2006-07	2007-08	2008-09	2009-10	2010-11
UHBVNL						
1	Balance outstanding at the beginning of the year	1,725.85	1,482.75	1,556.35	1,875.21	2,094.44
2	Revenue assessed/ billed during the year•	1,986.35	2,282.60	2,744.53	2,877.71	3,387.57
3	Total amount due for realisation (1+2)	3,712.20	3,765.35	4,300.88	4,752.92	5,482.01
4	Amount realised during the year	2,019.88	2,164.10	2,421.29	2,647.64	3,104.04
5	Amount written off during the year	209.57	44.90	4.38	10.84	0
6	Balance outstanding at the end of the year	1,482.75	1,556.35	1,875.21	2,094.44	2,377.97
7	Percentage of amount realised to total dues (4/3x100)	54.41	57.47	56.30	55.71	57.39
8	Arrears in terms of No. of months assessment	8.96	8.18	8.20	8.73	8.42

• The figures would not tally with working results as it includes here electricity duty and municipal tax assessed to consumers and does not include amount of unbilled FSA.

Sl.No.	Particulars	2006-07	2007-08	2008-09	2009-10	2010-11[µ]
DHBVNL						
1	Balance outstanding at the beginning of the year	1,772.13	1,388.07	1,563.16	1,846.75	1,902.21
2	Revenue assessed/ billed during the year	2,815.64	3,329.52	3,919.90	4,404.98	5,304.71
3	Total amount due for realisation (1+2)	4,587.77	4,717.59	5,483.06	6,251.73	7,206.92
4	Amount realised during the year	2,498.87	3,154.43	3,636.31	4,349.52	4,956.35
5	Amount written off during the year	700.83	--	--	--	-
6	Balance outstanding at the end of the year	1,388.07	1,563.16	1,846.75	1,902.21	2,250.57
7	Percentage of amount realised to total dues (4/3x100)	54.47	66.87	66.32	69.57	68.77
8	Arrears in terms of No. of months assessment	5.92	5.54	5.65	5.18	5.09

We observed the following from the above details:

- The balance outstanding at the end of the year increased from ₹ 1,482.75 crore in 2006-07 to ₹ 2377.97 crore in 2010-11 in UHBVNL and from ₹ 1,388.07 crore to ₹ 2,250.57 crore in DHBVNL during the same period.
- Out of balance outstanding at the end of 2010-11, ₹ 67 crore and ₹ 286 crore were recoverable from Government Departments in UHBVNL and DHBVNL respectively.
- Age-wise analysis of above dues as on 31 March 2011 indicated that amounts of ₹ 681.53 crore and ₹ 556.17 crore remained outstanding for more than three years in UHBVNL and DHBVNL respectively.

In reply, UHBVNL stated (September 2011) that most of the outstanding dues pertain to rural domestic category consumers who hold back the bill payments hoping for arrear waiver schemes.

Non disconnection of supply of consumers with heavy arrears

2.1.44 As per Electricity Supply Code 2004, in case the electricity dues are not paid by the consumer by the due date, the supply shall be disconnected temporarily. We observed that in DHBVNL (operation circle, Hisar) 11,003 consumers were having arrears (March 2011) of more than ₹ one lakh each amounting to ₹ 271.17 crore but their supply was not disconnected even temporarily. Further, there were 5,482 temporarily disconnected consumers (January 2011) in operation circle, Hisar with recoverable amount of ₹ 134.45 crore which were outstanding for more than one year. The Company has not disconnected supply of these consumers permanently.

Financial management

2.1.45 Efficient fund management serves as a tool for decision making, for optimum utilisation of available resources and borrowings at favourable terms at

µ Figures for the year 2010-11 in respect of DHBVNL are provisional.

appropriate time. The financial management of the Company includes revenue collection, billing, borrowings, grants, transfer of funds, interest recovery/payments, restructuring of loans, security deposits, bank reconciliations and other related transactions. While the revenue and billing aspects have been dealt in the preceding paragraphs, the other areas are discussed below.

We observed that in UHBVNL the accumulated losses increased from ₹ 1,059.97 crore (2006-07) to ₹ 3,819.86 crore (2010-11) during audit period. To meet the operating expenses the Company mainly depended on increased borrowings in the form of cash credit/loans from commercial banks/financial institutions. The dependence on borrowed funds increased as borrowings increased from ₹ 1,782.44 crore in 2006-07 to ₹ 10,194.51 crore (471.94 *per cent*) in 2010-11.

Similarly, in DHBVNL the accumulated losses increased from ₹ 714.34 crore (2006-07) to ₹ 2,307.18 crore (2010-11) during audit period and depended on increased borrowings in the form of cash credit/loans from commercial banks/financial institutions. The dependence on borrowed funds increased during audit period as borrowings increased from ₹ 887.58 crore in 2006-07 to ₹ 4,821.76 crore (443.25 *per cent*) in 2010-11. Therefore, there is an urgent need to optimize internal resource generation by improving billing and collection efficiency and vigorous follow up of outstanding Government dues, *etc*.

In reply, UHBVNL agreed to our contention while stating (September 2011) that the Company had to resort to loans in order to cover its operating expenses in view of significant accumulated losses which were due to increase in employee cost, power purchase cost, increase in receivables from consumers and non revision of tariff for nine years.

High cash and bank balance

2.1.46 The HERC directed (April 2005) the DISCOMs to restrict their cash and bank balances to a level of seven days of collection by the end of 2005-06. However, the cash and bank balances of DHBVNL during 2006-07 to 2010-11 ranged between 18 days (2010-11) and 29 days (2006-07). Had the Company been able to reduce the cash and bank balances to seven days of collection as directed by HERC it could have reduced interest burden considerably which in turn would have eased the financial position and helped in keeping the sale rates of electricity on lower side thus providing some relief to the consumers.

Non reconciliation of bank accounts

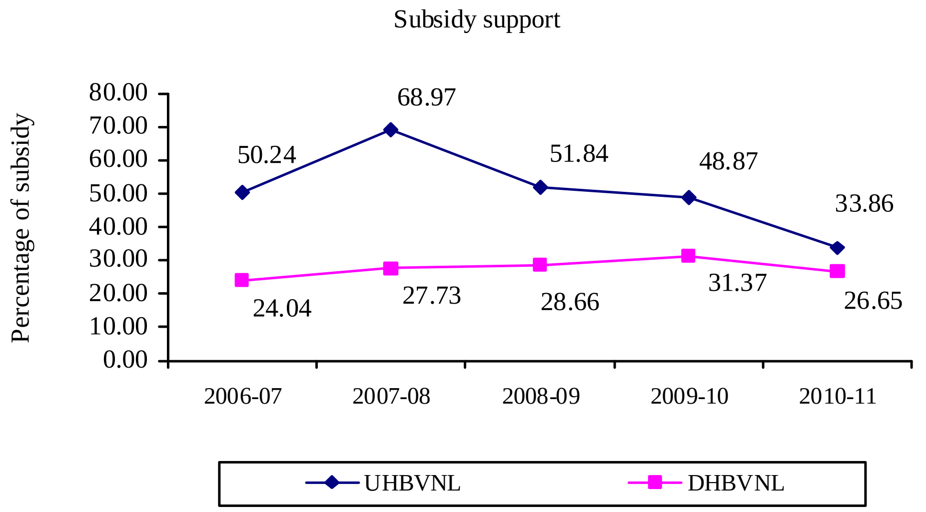
2.1.47 DHBVNL had a revenue collection of ₹ 11,962 crore during 2008-09 to 2010-11 which was lying unreconciled. The Company decided (December 2010) to place order on a firm for carrying out the reconciliation work but the same was yet to commence (March 2011).

Subsidy support and cross subsidisation

2.1.48 There is an urgent need for ensuring recovery of cost of service from consumers to make the DISCOMs sustainable. The State Government is providing subsidy with a view to ensure supply of power to specific category of consumers at concessional rates of tariff. Section 65 of the Electricity Act 2003 provides for requiring the State Government to pay the subsidy in advance. As the DISCOMs were dependent on borrowings and as such had to pay interest on loans, advance receipt of subsidy could have reduced the interest burden on loans.

Subsidy support

2.1.49 The graph below indicates revenue subsidy support from the State Government (against concessional tariff) as a percentage of sales for the last five years ending 31 March 2011.



It is evident from the above that subsidy support from the State Government increased from 50.24 *per cent* in 2006-07 to 68.97 *per cent* of revenue in 2007-08 and again decreased to 33.86 *per cent* in 2010-11 in UHBVNL. During 2007-08, an additional subsidy of ₹ 336 crore was received for system improvement. In DHBVNL, subsidy support increased from 24.04 *per cent* (2006-07) to 26.65 *per cent* (2010-11). This percentage was very high in Haryana as compared to national average of 11.17, 14.11, and 19.09 *per cent* during 2006-07 to 2008-09. HERC observed from the data of AP consumers from segregated feeders for the year 2010-11 that the DISCOMs had been inflating agriculture consumption to claim more subsidy from the State Government. Further, in UHBVNL against the subsidy claim of ₹ 8,143.39 crore for 2006-07 to 2010-11, only ₹ 7,398.06 crore has been received from the State Government and in DHBVNL against the claim of ₹ 4,856.83 crore only ₹ 4,649.28 crore has been received from the State Government. Though subsidy was received in time during 2006-07 to 2008-09, the shortfall in receipt in subsidy from State Government was observed during

2009-10 and 2010-11.

In reply, UHBVNL stated (September 2011) that subsidy support in Haryana was high because it is agriculture dominated State and tariff for agriculture category is one of the lowest in the country. It further stated that a third party was conducting a study on behalf of Government of Haryana and HERC for estimating agriculture consumption.

Cross subsidisation

2.1.50 Section 61 of Electricity Act 2003 stipulates that the tariff should progressively reflect the average cost of supply (ACOS) of electricity and also reduce cross subsidy in a phased manner as specified by the HERC. The tariff policy 2006 stipulates that cross subsidisation should be +/- 20 *per cent* of ACOS by 2010-11. HERC determined (August 2001) the retail supply tariff for sale of power to various categories of consumers. These tariff rates were revised for first time by HERC in September 2010. While revising the tariff rates, the HERC worked out ACOS at ₹ 4.93 per unit for the year 2010-11 for both DISCOMs. The average rate of revised tariff for various categories of consumers ranged between ₹ 3.96 and ₹ 4.50 per unit[ϒ] and was below the ACOS. The consumers of all categories were getting power supply at subsidised rates and there was no cross subsidisation among various categories of consumers. This led to the losses of DISCOMs.

Tariff fixation

2.1.51 The financial viability of the DISCOMs depends upon generation of surplus (including fair returns) from the operations to finance their operating needs and future capital expansion programmes by adopting prudent financial practices. Sale of power and revenue collection is the main source of generation of funds for the DISCOMs. While other aspects relating to revenue collection have been discussed in preceding paragraphs, the issues relating to tariff are discussed here under.

Deficient ARR filing

2.1.52 As per HERC's tariff regulations, the DISCOMs are required to file the ARR for each year with a written explanation of the rationale for the proposed changes in tariff and other charges, 120 days before the commencement of the respective year.

We observed that DHBVNL submitted their ARR in time every year whereas some marginal delays were noticed in respect of UHBVNL during 2006-07 and 2007-08. Though during 2006-07 to 2010-11 there was shortfall in revenue of ₹ 2,021.42 crore (UHBVNL) and ₹ 1,111.17 crore (DHBVNL) in comparison to

ϒ Domestic: ₹ 3.96, Commercial: ₹ 4.50, Industrial HT: ₹ 3.98, Industrial LT: ₹ 4.30, Agriculture: ₹ 0.30, and others: ₹ 4.15

expenditure, DISCOMs did not seek any hike in tariff. The ARR for 2010-11 by DISCOMs was also filed without any justification for tariff hike. However, HERC on its own called for certain information and passed order for increased tariff on 13 September 2010 (effective date 1 October 2010). Delay in passing the order due to deficient ARR for 2010-11 resulted into loss of ₹ 124.02 crore in UHBVNL and ₹ 39.30 crore in DHBVNL.

Due to filing of deficient ARR, the DISCOMs suffered revenue loss of ₹ 163.32 crore

DHBVNL, in reply, stated (March 2011) that delay in revision has not caused any loss to it. The reply is not acceptable as had the tariff been revised from 1 April 2010, the Company could have earned more revenue to the extent of ₹ 39.30 crore (April to September 2010).

We observed that the tariff was lower than breakeven level. The revenue from sale of power at the present level of operations and efficiency for the last five years ending 31 March 2011 is shown in the table below:

(₹ in crore)

Year	Sales (including subsidy)	Variable costs	Fixed costs	Contribution	Deficit in recovery of fixed costs	Deficit as percentage of sales
1	2	3	4	5 = (2–3)	6 = (4– 5)	7=(6/2)x100
UHBVNL						
2006-07	2,852.50	2,857.08	495.41	-4.58	499.99	17.53
2007-08	3,545.26	3,687.55	605.54	-142.29	747.83	21.09
2008-09	4,779.09	4,613.85	1,406.60	165.24	1,241.36	25.97
2009-10	6,360.56	6,129.77	1,432.66	230.79	1,201.87	18.90
2010-11	6,972.46	5,662.34	1,406.25	1,310.12	96.13	1.38
DHBVNL						
2006-07	3,046.31	2,810.31	374.28	236.00	138.27	4.54
2007-08	3,819.64	3,676.12	477.26	143.52	333.74	8.74
2008-09	4,513.12	4,027.56	871.98	485.56	386.42	8.56
2009-10	5,028.62	4,712.43	1,330.52	316.19	1,014.33	20.17
2010-11	6,101.42	5,634.89	1,023.53	466.53	557.00	9.13

It could be seen from the above that in UHBVNL the deficit as percentage of sales increased from 17.53 in 2006-07 to 25.97 *per cent* in 2008-09 and decreased to 1.38 *per cent* in 2010-11. In DHBVNL the deficit increased from 4.54 *per cent* in 2006-07 to 20.17 *per cent* in 2009-10 and decreased to 9.13 *per cent* in 2010-11. The decrease in deficit was due to accounting of unbilled FSA and revenue gap as income in UHBVNL and accounting revenue gap as income and unbilled FSA as reduction in expenditure of purchase of power in DHBVNL as mentioned in paragraph 2.1.5 *supra*.

The average realisation of revenue from all categories of consumers was less than ACOS in both the DISCOMs as discussed in previous paragraph. The tariff was on lower side and needs to be revised for recovery of the costs. Alternatively, the gap between cost and revenue may be bridged by improving operational efficiency *viz.* reduction/control of AT & C losses, conversion of LT lines to HT lines, metering of unmetered connections/defective meters, improving billing and collection efficiency, *etc.*, which have been discussed separately in the preceding paragraphs.

In reply, UHBVNL stated (September 2011) that in case any need for tariff revision is felt HERC is empowered to either direct the licensee to file a tariff proposal or take *suo moto* action on tariff revision. Reply is not convincing in view of HERC tariff regulations which require the DISCOMS to file ARR with tariff proposal to bridge the revenue gap along with justification for such proposal.

Consumer satisfaction

2.1.53 One of the key elements of the Power Sector Reforms was to protect the interest of the consumers and to ensure better quality of service to them. The consumers often face problems relating to supply of power such as non availability of the distribution system for the release of new connections or extension of connected load, frequent tripping on lines or transformers and improper metering and billing.

The DISCOMs were required to introduce consumer friendly actions like introduction of computerised billing, online bill payment, establishment of customer care centres, *etc.* to enhance satisfaction of consumers and reduce the advent of grievances among them. The redressal of grievances is discussed below.

Redressal of grievances

2.1.54 HERC specified the mode and time frame for redressal of grievances in its regulations 2004 namely Guidelines for Establishment of Forum for Redressal of Grievances of Consumers and Electricity Ombudsman in pursuance of the Electricity Act 2003. HERC had also prescribed the Standards of Performance for DISCOMs in which the time limit for rendering services to the consumers and compensation payable for not adhering to the same has been specified. The nature of services contained in the Standards, *inter-alia,* include line breakdowns, DTs failures, period of load shedding/scheduled outages, voltage variations, meter complaints, installation of new meters/ connections or shifting thereof, etc. The DISCOMs were required to register and computerise every complaint of the consumer. The DISCOMs shall furnish the level of performance achieved in respect of services specified in the Standards of Performance on quarterly basis to HERC.

We observed that the DISCOMs did not computerise the complaints of consumers to watch their redressal within time schedule as per Standards of Performance prescribed by HERC. Resultantly, data regarding complaints received in all units of UHBVNL, complaints redressed in time and level of performance in respect of each service was not being compiled and furnished to HERC, despite being reminded by HERC from time to time. In the absence of year wise data, the level of consumer satisfaction could not be assessed in audit. The overall position as regards to receipts of complaints and their clearance by DHBVNL is depicted in the table below:

Sl. No.	Particulars	2006-07	2007-08	2008-09	2009-10	2010-11
1.	Total number of consumers	18,97,989	19,64,704	20,33,935	21,32,020	22,69,298
2.	Total complaints received	1,47,348	1,68,081	1,92,419	2,09,598	2,20,124
3.	Complaints redressed within time	1,42,385	1,63,302	1,88,135	2,05,089	2,15,312
4.	Complaints redressed beyond time	4,295	4,364	3,809	3,705	3,508
5.	Pending complaints	668	415	475	804	1,304
6.	Percentage of complaints received to total consumers	7.76	8.56	9.46	9.83	9.70
7.	Percentage of complaints redressed beyond time to total complaints	2.91	2.60	1.98	1.77	1.59

We noticed that there was increase in complaints ranging between 7.76 to 9.83 *per cent* with reference to number of consumers during 2006-07 to 2010-11, which indicates increase in deficient service to the consumers. The position as regards to receipt of complaints and their redressal by Consumer Grievances Redressal Forum (CGRF) in both the DISCOMs is discussed below:

During 2006-07 to 2010-11, 469 complaints were received in CGRF in UHBVNL. Out of these 288 (61.40 *per cent*) were redressed beyond time, only 150 (31.98 *per cent*) complaints were redressed in time and 31 complaints were pending as on 31 March 2011. The number of complaints received by CGRF in UHBVNL has increased from 24 in 2006-07 to 103 in 2010-11. The percentage of complaints redressed beyond time has also increased from 33.33 in 2006-07 to 60.19 in 2010-11. Increase in number of complaints received by CGRF is an indication of consumer dissatisfaction.

The redressal of complaints received in CGRF in DHBVNL was satisfactory. Out of 488 complaints received during 2006-07 to 2010-11, only seven complaints were redressed beyond time and only seven complaints were pending as on 31 March 2011

Energy conservation

2.1.55 Recognising the fact that efficient use of energy and its conservation is the least cost option to mitigate the gap between demand and supply, GOI enacted the Energy Conservation Act, 2001. The conservation of energy being a multi-faceted activity, the Act provides both promotional and regulatory roles on the part of various organisations. The promotional role includes awareness campaigns, education and training, demonstration projects, Research and Development and feasibility studies. The regulatory role includes framing rules for mandatory audits for large energy consumers, devising norms of energy consumption for various sectors, implementation of standards and provision of fiscal and financial incentives.

The instructions for energy conservation, issued by DISCOMs provide that for getting new connections, the AP consumers had to install an ISI mark and four star rated motors on pump sets for which financial assistance of ₹ 400 per BHP up to maximum of ₹ 5,000 per pump set was to be provided by the State Government.

We observed that though the DISCOMs had been issuing new connections, it still failed to utilise the State Government grant fully. Out of grant of ₹ 52.50 lakh in 2009-10, UHBVNL could utilise only ₹ 16.70 lakh (31.81 *per cent*) up to March 2011 and in DHBVNL grant of ₹ 40 lakh provided by the State Government for the year 2009-10 had not been utilised till date (March 2011). The DISCOMs had not analysed the reasons for non utilisation of grant.

Remote monitoring and control of rural agricultural pump sets

2.1.56 Power supply to AP consumers is supplied with 3 phase power from DTs as per predetermined time from sub station. It was observed by the DHBVNL that irrigation load was being used during single phase hours by using converters, thereby harming transformers as well as contributing towards increase in losses. To control the AP supply, it was decided (August 2007) to provide Remote Load Management System (RLMS).

Accordingly, DHBVNL entered (October 2007) into a contract for supply of material for RLMS with M/s Zoom Developers Limited, New Delhi on turnkey basis at a cost of ₹ 10.02 crore for 540 units. The work was to be completed within six months from the date of award.

We observed that a sum of ₹ 4.80 crore had been incurred and the work was still incomplete (March 2011) even after a lapse of three years.

Energy audit

2.1.57 A concept of comprehensive energy audit was put in place with the objective to identifying the areas of energy losses and take steps to reduce the same through system improvements besides accurately accounting for the units purchased/sold and losses at each level. The main objectives of energy audit are as follows:

- better and more accurate monitoring of the consumption of electricity by consumers;
- elimination of wastages;
- reduction of downtime of equipment; and
- massive savings in operational costs and increase in revenue, *etc.*

Due to ill planning, expenditure of ₹ 183.28 crore on purchase of DT meters remained unfruitful

We observed that energy audit in DISCOMs was not effective. Energy audit cell at the Head Office of DISCOMs prepared feeder wise losses from the data furnished by the field units. The initiatives taken by the DISCOMs for making energy audit effective through segregation of technical and commercial losses and pin point areas of high losses on the feeders did not succeed due to ill planning. Consumer indexing for maintaining data base of consumers connected to each DT and centralised software system is a pre requisite for energy audit. However, DISCOMs purchased large number of DT meters without consumers indexing and centralised software system. Resultantly, expenditure of ₹ 183.28 crore aimed at effective energy audit has been rendered unfruitful as discussed in succeeding para.

UHBVNL

2.1.58 The Company purchased 25,735 DT Meters having GSM modem during 2007-08 at a total cost of ₹ 44.49 crore. For the purpose of energy audit reading of the DT meters showing outflow of the energy was required to be compared with the consumer billing who were getting energy from the particular DT. Neither centralised software for receipt of data regarding consumption of electricity was installed at Head Office nor the SIM cards had been provided for each DT meter, as such, the system could not become operational. Further, the Company continued to incur expenditure on DT meters by placing further purchase orders ignoring the financial position of the Company.

We further observed that:

- The Company got installed 89,240 DT meters under HVDS up to December 2010, and reading of these meters was required to be taken manually. Due to shortage of trained man power, the Company could take reading of 5,751 DT meters only. Thus, the investment of ₹ 69.16 crore (89,240 x ₹ 7,750 cost of DT meter) largely remained unfruitful.

- Similarly, under RGGVY projects, the Company had installed 1,590 DT meters (costing ₹ 2.02 crore) of various capacity against contracted quantity of 3,980 DT meters. Reading of these meters was not being taken, as such, intended purpose was not being served rendering the investment unfruitful.

In reply, UHBVNL agreed to our contention while stating (September 2011) that initiative has not been implemented completely and energy audit would be taken up after completion of consumer indexing.

DHBVNL

2.1.59 The Company procured 18,908 DT meters costing ₹ 29.54 crore along with DTs during June 2007 to January 2009. It was observed (October 2008) by the Company that these transformers with DT meters had been installed in scattered areas and were of no use for energy auditing of the feeders and so the MD of the Company directed that the DT meters installed on these transformers be dismantled and installed on high loss feeders in rural areas. It was also directed that in future DTs should be purchased without DT meters even for turnkey works for HT tubewell connections, except in case of HVDS works.

We observed that there was no indexing of the consumers and in the absence of which, energy audit was not possible even in case of HVDS works. As such, the purchase of DTs with meters at cost of ₹ 29.54 crore, before October 2008 and purchase of 20,979 transformers with DT meters at a cost of ₹ 35.33 crore on HVDS works, resulted in unfruitful expenditure. Further, since SIM cards required for transmitting the reading to control room were also not provided on these DT meters so there was no utilisation of these DT meters. Thus, expenditure of ₹ 64.87 crore was rendered unfruitful.

The Company installed 526 DT meters valuing ₹ 1.01 crore during August 2008 to January 2009 in Gurgaon city for carrying out energy audit and further incurred ₹ 11.52 lakh on rental for SIM cards on these meters and paid ₹ 1.61 crore to Haryana Ex Servicemen League (HESL) for analysis of reports. However, HESL did not attempt any analysis in this regard. Since the Company failed to derive any fruitful results, the expenditure to the extent of ₹ 2.74 crore was rendered unfruitful.

From the above it is evident that DISCOMs were interested in incurring huge expenditure on purchase of DT meters and did not intend to do energy accounting and auditing through utilisation of DT meters.

Monitoring by top Management

2.1.60 The DISCOMs play an important role in the State economy. For such a giant organisation to succeed in operating economically, efficiently and effectively, there has to be a Management Information System (MIS) for monitoring by top Management. We observed that there existed an MIS to monitor and review the operational and financial performance of DISCOMs. Our review of the system in this regard revealed the following:

- There was no system to analyse deviations from plans and suggest remedial measures.
- Though position of damage rate of DTs was being reported to the BOD monthly, the cause wise analysis of damage to DTs was not being done and reported to the BOD for review;
- The level of performance against standards of performance prescribed by HERC was not being reported to the BOD;
- Load growth and adequacy of distribution network was not being reported to the BOD;
- Cases of misappropriation and embezzlement of revenue and theft of material/DTs were not reported to BOD for review; and
- The position of defective meters and their replacement was not being reported to the BOD for monitoring and review.

In reply, UHBVNL stated (September 2011) that suggestion has been noted for future compliance.

The matter was referred to the Government in June 2011; the reply had not been received (September 2011).

Conclusion

- **Plans for capacity additions and loss reduction were not prepared keeping in view load growth.**
- **Abnormal delays in completion of projects aimed at capacity additions resulted in restricting the consumers from intended benefits for the periods of delay.**
- **Non availing grant under RGGVY adversely affected the financial position of DISCOMs.**
- **Despite huge capital investment on loss reduction projects, the DISCOMs could not bring down AT&C losses to the desired level.**
- **Huge expenditure on HVDS incurred, without taking into account techno economic considerations, caused undue financial burden on DISCOMs and consumers.**
- **The DISCOMs failed to adhere to Standards of Performance fixed by HERC for providing uninterrupted and quality power supply to consumers.**
- **Due to improper planning, huge expenditure on DT metering aimed at energy audit was rendered unfruitful.**

Recommendations

The DISCOMs may consider:

- **planning capacity addition and loss reduction schemes properly keeping in view load growth;**
- **improving contract management so that projects are completed timely;**
- **implementing centrally sponsored scheme efficiently and effectively to avail benefits of grants;**
- **techno-economic aspects and adopt least cost options before incurring of capital expenditure like bifurcation/segregation of agricultural feeders and avoid undue financial burden.**

- **reducing AT&C losses by focussing on high loss incurring circles and feeders, by improving HT/ LT ratio and billing and collection efficiency besides timely replacement of defective meters;**
- **adhering to standards of performance prescribed by HERC to improve consumer satisfaction; and**
- **implementing the schemes for energy conservation and energy audit after proper planning to achieve the desired results.**

2.2 Haryana State Roads and Bridges Development Corporation Limited

Executive Summary

Haryana State Roads and Bridges Development Corporation Limited was established in May 1999 as a wholly owned Government Company with the objects to construct, repair, manage highways/ roads/bridges/tunnels, on Build-operate and Transfer (BOT)/Build-Own-Operate and Transfer (BOOT)/Build-Operate-lease and Transfer (BOLT) or any other scheme besides 29 ancillary and three other objects. The Company has not undertaken any activity mentioned in its main and ancillary objects. It is presently engaged only in construction of works on deposit work basis, which is part of its other objects. Besides, the Company was assigned the job of toll collection on toll points notified by State Government. It had seven field units to carry out its construction activities and running 35 points for toll operations. As on 31 March 2011, while the paid up capital of the Company was ₹ 122.04 crore, the turnover was ₹ 79.64 crore which included interest income of ₹ 11.91 crore.

Financial Management

The Company suffered losses of ₹ 25.03 crore and ₹ 9.79 crore during 2006-07 and 2007-08 respectively due to heavy burden of interest and it started earning profit from 2008-09 onwards due to increase in service charges on construction activity and reduced interest burden. Due to shortfall in toll collection, the State Government provided budgetary support of ₹ 275.51 crore to the Company up to 31 March 2010 to repay its loans. The Company manages funds of Government departments who deposit their funds with the Company till they are utilised by PWD (B&R) for repair/construction of roads/ buildings. During 2006-07 to 2010-11, the Company received ₹ 1,148.66 crore and transferred ₹ 1,070.87 crore on this account. However, interest earned of ₹ 75.45 crore on these funds was not made part of the project funds. The Company has not been able to discharge its liabilities of ₹ 397.55 crore financed by the State Government to meet shortfall in repayment in its loans.

Operational performance

The Company executes works on deposit work basis. It did not have its own design cell and was dependent on consultants for preparation of Detailed Project Reports (DPRs). The DPRs were deficient as the same were not prepared keeping in view the site conditions and scope of work. There was escalation of ₹ 73.47 crore (9.66 per cent) in five cases test checked, as those were prepared without considering site conditions which resulted in time and cost over-run. Out of 25 NCR road works undertaken during 2006-07 to 2010-11, no work was completed in time. Five works valuing ₹ 312.46 crore were completed with delay ranging from 10 to 16 months. Fourteen ongoing works valuing ₹ 1,249.48 crore were behind schedule by five to 15 months as at the end of 31 March 2011. Reasons for delay in completion of works were poor planning in deployment of resources, inadequate supervising staff of contractors, delay in shifting of utilities and changes in DPRs. The cost overruns were ultimately borne by the client departments thereby putting extra burden on State Exchequer. Time overruns also resulted in delayed utilisation of budgets and non achievements of intended benefits besides affecting the Company's ability to get more works from the State Government agencies. The Company also executed works of other State owned organisations. Eighteen works valuing ₹ 140.13 crore were completed and 17 works valuing ₹ 293.66 crore were in progress (March 2011).

Toll Activities

The Company failed to achieve the collection targets as the percentage of shortfall ranged between 65.08 and 75.05 per cent during 2006-07 to 2010-11 due to delay in award of

toll contracts, delay in initiating cases for notification for new toll points etc. The share of departmental collection increased from 4.55 per cent in 2007-08 to 34.97 per cent in 2010-11. Delay/non-award of toll contracts attributed to non-achievement of collection targets.

Manpower

The manpower with the Company was not adequate in view of the works undertaken by the Company. The dependence of the Company on supervision consultants has increased as expenditure thereon increased from ₹ 11.60 lakh in 2007-08 to ₹ 10.25 crore in 2009-10. Majority of the manpower was on contract basis who cannot be held accountable for their lapses.

Conclusion and Recommendations

The deficiencies in the Company's functioning were controllable and there is immense scope for improvement of performance through better management of its operations. This performance audit contains six recommendations to improve the Company's performance.

Introduction

2.2.1 Haryana State Roads and Bridges Development Corporation Limited (Company) was incorporated on 13 May 1999 as a wholly owned Government Company with the main objects to construct, repair, manage highways/roads/bridges/ tunnels or any other structural work, on Build-Operate and Transfer (BOT)/Build-Own-Operate and Transfer (BOOT)/Build Operate-Lease and Transfer (BOLT) or any other scheme besides managing collection of toll/service charges on vehicles using highways/roads. The paid up capital of the Company was ₹ 122.04 crore as on 31 March 2011.

Presently, the Company is engaged in construction of buildings, roads, up gradation of State Highways and construction of buildings of Government Departments/ Agencies on deposit work basis on which the Company receives service charges. The Company is collecting toll at 35 toll points (as on 31 March 2011) on highways/roads as per terms and conditions of toll collection policy of the State.

Organisational set up

2.2.2 The Management of the Company is vested with the Board of Directors (BOD). As on 31 March 2011, there were four directors including the Chairman. The Financial Commissioner and Principal Secretary (FC&PS) to the Government of Haryana PWD (B&R) was the Chairman during the period covered under Performance Audit. The Engineer in Chief of PWD (B&R) is presently ex-officio Managing Director (MD). He is assisted by an Executive Director (ED), two Deputy General Managers (DGMs) at Headquarters and seven DGMs in the field. The Directors including Chairman and Managing Director are appointed by the State Government. The State Government has not so far nominated two directors from financial institutions and one from National Highway Authority of India as required under Articles of Association of the Company.

Scope of audit

2.2.3 The present performance audit conducted during November 2010 to March 2011 covers the period from 2006-07 to 2010-11. The records of the Head office of the Company and four, out of seven, Project Implementation Units[ϒ] (PIUs) were examined. The selection of units was made as per 'Probability Proportional to Size' method and the selected units executed works valuing 80 *per cent* of the total works cost.

Audit objectives

2.2.4 The performance audit of the Company was carried out to ascertain whether:

- it made proper planning for execution of works under various schemes *viz.* BOT/BOLT/BOOT and deposit works;
- the funds were managed in an effective manner and suitable accounting system existed;
- the operations of the Company were economical and efficient; and
- the internal control and monitoring mechanism were adequate.

Audit criteria

2.2.5 The performance of the Company was assessed against the following audit criteria:

- State Government policies, directives, plan documents and targets of the Company for infrastructural development in the State;
- Provisions of Haryana PWD Code;
- Policy of the State Government as regards investment and borrowings; and
- Standard operational guidelines and manuals of the Company.

Audit methodology

2.2.6 Audit methodology included the review of the following:

- agenda notes and minutes of the BOD meetings and interaction/discussion with the personnel of the Company;
- accounts, movement of funds, repayment of loans and investment of surplus funds on periodical basis;

ϒ DGM I and DGM II Gurgaon, DGM Sonepat and DGM Yamunanagar

- works estimates, award of contracts and their execution; and
- Management Information System (MIS) and various control procedures adopted by the Company.

Audit findings

2.2.7 The entry conference was held on 1 February 2011 with the FC & PS and Management of the Company to explain the audit objectives, criteria and methodology to be adopted in the course of audit. The Audit findings were reported to the Government/Management in June 2011 and discussed in the Exit Conference held on 21 July 2011, which was attended by the FC&PS to Government of Haryana PWD, MD and the ED of the Company. Views of the Management have been duly considered while finalising the report.

Financial position and working results

2.2.8 The financial position and working results of the Company during the period from 2006-07 to 2010-11 are given below:

Financial position

(₹ in crore)

Particulars	2006-07	2007-08	2008-09	2009-10	2010-11 (Provisional)
Liabilities					
Paid up capital	50.00	50.00	122.04	122.04	122.04
Share application money	63.70	72.04	-	*	-
Government Grants	75.74	1.76	1.17	0.74	0.68
Unsecured loans	259.46	203.32	155.49	99.83	60.46
Current Liabilities	264.62	565.27	940.29	1,701.93	2,287.25
Total liabilities	**713.52**	**892.39**	**1,218.99**	**1,924.54**	**2,470.43**
Assets					
Fixed Assets					
Gross Block	585.75	588.15	587.97	588.16	588.34
Less: Depreciation	109.65	167.17	210.00	252.84	295.68
Net Fixed Assets	476.10	420.98	377.97	335.32	292.66
Current Assets, Loan & Advances					
Deposit Works In Progress	-	45.88	309.09	1,107.86	1,657.14
Others (including cash & bank, debtors and loans & advances)	170.70	322.79	435.56	413.64	468.63
Miscellaneous Expenditure	66.72	102.74	96.37	67.72	52.00
Total assets	**713.52**	**892.39**	**1,218.99**	**1,924.54**	**2,470.43**
Capital employed†	**382.18**	**224.38**	**182.33**	**154.89**	**131.18**
Net worth‡	**46.98**	**19.30**	**25.67**	**54.32**	**70.04**
Working Capital	**(-)93.92**	**(-)196.60**	**(-)195.64**	**(-)180.43**	**(-)161.48**

* ₹ 23,000 only.

† Capital employed represents net fixed assets plus working capital.

‡ Net worth represents paid up capital plus free reserves less intangible assets.

Working Results

(₹ in crore)

Particulars	2006-07	2007-08	2008-09	2009-10	2010-11 (Provisional)
Income					
Toll receipts	37.11	41.36	46.23	58.03	57.57
Service charges	-	2.29	7.01	13.16	8.94
Interest on deposits	8.71	13.22	21.90	19.71	11.91
Other Interest	0.10	0.36	1.26	8.26	0.33
Other income	0.57	0.84	0.62	0.80	0.89
Total	**46.49**	**58.07**	**77.02**	**99.96**	**79.64**
Expenditure					
Administrative expenses	0.24	0.51	4.98	11.51	6.54
Financial expenses	28.47	24.12	20.04	15.03	8.45
Depreciation	42.79	42.79	42.83	42.84	42.84
Other Expenses	0.02	0.44	2.84	2.52	2.88
Total	**71.52**	**67.86**	**70.69**	**71.90**	**60.71**
Profit (+)/ Loss (-) for the year	**(-)25.03**	**(-)9.79**	**(+)6.33**	**(+)28.06**	**(+)18.93**
Less: Prior Period Adjustments	0.01	22.10	0.12	(-)3.14	**(-)**0.02
Provision for taxation	-	-	0.84	3.53	3.78
Profit (+)/ Loss (-) after Tax	**(-)25.04**	**(-)31.89**	**(+)5.37**	**(+)27.67**	**(+)15.17**

We observed the following:

- The losses during 2006-07 and 2007-08 were on account of incidence of heavy burden of interest on Housing and Urban Development Corporation (HUDCO) loans amounting to ₹ 28.47 crore and ₹ 24.12 crore respectively. Subsequently, the Company started earning profits mainly due to increase in service charges from ₹ 2.29 crore in 2007-08 to ₹ 13.16 crore in 2009-10 on construction activity and reduced interest burden (₹ 24.12 crore to ₹ 15.03 crore) due to decrease in long term borrowings.
- The working capital remained negative and ranged from ₹ 93.92 crore to ₹ 196.60 crore during the audit period.
- The Company has not maintained proper books of accounts♦ and there was lack of internal control system with regard to reconciliation and confirmation of bank balances, sundry debtors and loans and advances. Thus, the system is prone to misappropriation and frauds. The matter has also been reported by the Statutory Auditors.

♦ Receipt books of departmental toll collection, interest from toll contractor, fixed assets records, age-wise classification of debtors and confirmation of balances.

Non achievement of main/ancillary objects

2.2.9 The Company was incorporated with the main objects to construct and maintain highways/roads on BOT/BOOT/BOLT or any other basis, 29 ancillary objects and three other objects. However, the Company has not taken up any work under its main objects and ancillary objects but has taken up works of other departments/agencies as deposit works which is part of other objects. The Company had also not participated in any tenders for infrastructural works undertaken by other departments of the Government. Therefore, the main and ancillary objects of the Company were not undertaken. The Company neither channelised its resources for undertaking main and ancillary objects nor reviewed whether its activities had facilitated achievement of these objects.

Financial management

2.2.10 The State Government decided (July 2005) that the Company would do the financial management of funds deposited with the Company by various State Government departments on the pattern of Pardhan Mantri Gramin Sadak Yojana (PMGSY). The funds are released by the Company to PWD (B&R) Department as per their demand for execution of works. The terms of the PMGSY, *inter-alia*, stipulated that the interest earned on the scheme funds would be part of the fund and credited to the same account. The Company was required to render full account of the funds to the concerned department. Besides, the Company also received funds from the State Government to meet the shortfall in repayment of loans from HUDCO and for deposit works. It also managed the funds received under PMGSY (up to 2007-08). Surplus funds were invested in fixed deposits (FDs) with the banks as per investment policy (June 1997) of the State Government.

The inflow and outflow of funds managed by the Company broadly during 2006-07 to 2010-11 were as under:

(₹ in crore)

Sl. No.	Particulars	Inflow	Outflow
1	Funds received from Government departments for management	1,148.66	1,070.87
2	Toll collection	240.30	-
3	Balance loan drawl and contribution from State Government for repayment of loans of HUDCO	234.45	334.11
4	Funds received for execution of deposit/NCR works	1,634.27	1,657.14
5	PMGSY	416.64	428.79
	Total	**3,674.32**	**3,490.91**

Interest of ₹ 75.45 crore earned on project funds during 2006-07 to 2010-11 was treated as its own income instead of crediting to the project funds

We observed the following deficiencies in financial management:

- The Company kept these funds in various banks as FDs and earned interest of ₹ 75.45 crore during 2006-07 to 2010-11 and treated the same as its own income instead of crediting it to the project funds as it was accretion to the funds of the concerned department. The Company did not render full account to the concerned department.

- The State Government has not issued any specific instructions with respect to management of its funds. The Company also did not prepare any scheme/policy for managing funds.
- The instructions of the State Government of July 2005 were not in line with the spirit of the Rule 2.10 and 2.14 of Punjab Financial Rules, also applicable to Haryana, which provide that no funds should be kept out of the Government account. Belatedly, the State Government has directed (March 2011) the Fund Management Companies for payment of interest at six *per cent* per annum to the department concerned computed on half-yearly basis on such funds till the actual utilisation of the fund.
- The Company paid ₹ 3.32 crore (May 2007) on non eligible works under PMGSY. Further, the funds received in PMGSY were invested in FDs till their release to the PWD (B&R). We observed that the Company did not intimate the bank about the status of these funds as it belonged to Government of India scheme and income tax was not deductible therefrom. Resultantly, the banks deducted ₹ 1.52 crore as tax at source from the interest earned during 2001 to 2007 and it was avoidable. This resulted in diversion as well as reduction in scheme funds.

While admitting the facts, that such interest was taken as income, the Management stated (September 2011) that on being pointed by audit, the matter was under consideration for keeping deposit funds separately and crediting the interest to the concerned department. Further, the Management stated that the expenditure was incurred from PMGSY funds as per approval of competent authority. The reply was not convincing as the expenditure made from PMGSY were in respect of ineligible items.

Irregular utilisation of Haryana Government grants

2.2.11 The State Government (PWD-B&R department) sanctioned (October 2005) grant of ₹ 1.80 crore to the Company for setting up of design cell, preparation of project reports/feasibility studies, strengthening of quality control system and training. As per the terms and conditions governing the grant, the Company was not permitted to draw the entire amount but to draw as per its immediate requirements. However, the Company drew entire amount on 25 October 2005 and placed the same in its main account. We observed that the Company could spend ₹ 1.12 crore only (mainly on purchase of computers) up to 2010-11 leaving an unspent balance of ₹ 67.70 lakh. Since the Company did not undertake the setting up of design cell and provide training to the staff, the purpose for which grant has been given, had not been fully achieved. Thus, it not only violated the conditions of the sanction but also could not utilise the entire grant.

The Management stated (September 2011) that the balance amount would be spent during current financial year.

Repayment of State Government funds

2.2.12 For development of roads in the State, the Company availed (2001-02 to 2005-06) loans of ₹ 560.78 crore from HUDCO which financed 80 *per cent* of the project cost. Remaining 20 *per cent* was financed by the State Government as counterpart funding. The State Government formulated (September 2002) its toll policy and authorised the Company to set up 32 toll points on the roads so developed to meet the quarterly repayment installments of HUDCO loans. It was envisaged in the policy that if sufficient funds could not be generated by the Company to repay the HUDCO loans and interest thereon, the State Government would provide budgetary support for repayment. We observed that there had always been shortfall in toll collection to meet the quarterly repayment of HUDCO loan and accordingly the State Government provided ₹ 275.51 crore from 2003-04 to 2009-10 to the Company to repay the installments in time. This amount was not repaid to the State Government. Further, the Company also could not repay the counterpart funding of ₹ 122.04 crore. The deficiencies in toll collection have been discussed subsequently.

The Management stated (September 2011) that the Company has started collecting sufficient amount of toll collection which would be utilised for repayment of its liabilities towards State Government.

Operational performance

2.2.13 The Company undertakes construction/upgradation of road works including Road Over Bridges (ROBs) on deposit work basis on behalf of the Haryana PWD (B&R) Department. The works are allotted to the Company keeping in the view the work load with the PWD (B&R) Department. The State Government transfers funds for these works to the Company from time to time as per the progress of the works. The Company also undertakes building works at the instance of other State Government Agencies *viz*. Education and Power Departments, on deposit work basis. The funds for such works are also received by the Company as per the progress made in the works. For execution of works, the Company charges service charge on percentage basis which are fixed by the Company from time to time. The operational performance of the Company with regard to creation of technical competence in preparation of estimates and DPRs, award and execution of works *etc*, is discussed below in the succeeding paragraphs.

Non-existence of planning system

2.2.14 The action plan setting out the priorities is a prerequisite for successful completion of the operations and achievement of objectives. The Company however, did not prepare any perspective plan or set yearly targets to carry out its activities. However, the activities were taken up by the Company on *ad-hoc* basis as entrusted.

Lack of design cell

2.2.15 Para 10.1.3 of the Haryana PWD Code requires that while preparing the estimates, the site should be inspected to ascertain field conditions so as to make cost effective and accurate proposal for the intended purpose. However, the Company has not set-up well-equipped design cell for preparation of estimates and DPRs for the projects. The Company was dependent on the consultants appointed on *ad-hoc* basis. The Company, however, did not maintain any data bank of the consultants indicating the particulars of works allotted, amount paid, period of the contract *etc*.

We found that in many cases the DPRs prepared by the consultants were defective and revised substantially which resulted in time and cost over-run. However, the Company did not take any action against them. The Company had neither considered appointing technical staff on permanent basis nor created its own design cell to exercise economy in expenditure.

During exit conference, the FC&PS stated that deployment cost of manpower on regular basis would be very high. However, though dependence of the Company on outside consultants was leading to revision of DPRs resulting in time and cost over-run, it failed to devise any alternative strategy to safeguard its interest.

Preparation of Detailed Project Reports

2.2.16 On the allotment of work to the Company by the PWD (B&R) Department/other Government agencies, the Company prepares rough cost estimates and forwards the same to the concerned Department for Administrative Approval. Upon receipt of Administrative Approval, the consultants appointed by the Company prepare Detailed Project Reports (DPRs) for execution of works. The DPRs *inter-alia*, consist of background of the work, funding arrangements, time schedule, details of item wise cost of work, payback period and social and financial benefits envisaged from the project. Consequential impact of preparation of defective/unrealistic DPRs are discussed below:

Incorrect preparation of Detailed Project Reports (DPRs)

2.2.17 We noticed that the DPRs were not prepared by the consultants keeping in view the actual site conditions, scope of work *etc*, which, *inter-alia*, resulted in time and cost over-run.

The table below indicates the deviations involved in execution of works in respect of selected works:

(₹ in crore)

Sl No.	Name of work	Original Agreement cost	Revised cost	Escalation	Percentage of escalation	Reasons of escalation
1.	Gurgaon- Nuh Alwar Road	338.06	373.78	35.72	10.57	Service lane and drain not provided in original DPR
2.	Hodel Nuh Pataudi Patauda Road	239.80	254.51	14.71	6.13	Change in scope of work and Bill of Quantity (BOQ)
3.	Four laning and construction of various roads in Rewari	109.19	116.47	7.28	6.67	Increase in scope of work and variations in BOQ
4.	Sampla Jhajjar Road	33.99	42.28	8.29	24.39	DPR not as per site conditions
5.	Jhajjar Dadri Road	39.37	46.84	7.47	18.97	
Total		**760.41**	**833.88**	**73.47**	**9.66**	

We noticed following deficiencies in preparation of DPRs which resulted in increase in projects cost due to cost overrun and higher service charges to the Company by the client department.

- The service lane and drain were not provided in the DPR of Gurgaon-Nuh-Alwar road. During execution of the work, it came to notice that service lane was essential in certain stretches but the Company did not revise the estimates to accommodate the revised requirement. The Company, however, had taken up the work of service lane and additional drain separately at an estimated cost of ₹ 35.72 crore (including additional drain at an estimated cost of ₹ 11.87 crore). This represents planning failure as though the necessity of the same was felt during execution of main work, the Company did not consider to add the service lane with the main work so that the original drain would be adjusted for service lane also. Thus, cost of additional drain (₹ 11.87 crore) could have been avoided. We noticed that the Company finally decided (December 2010) to drain out the rain water of service lane in the original drain and additional drain would not be put to use. However, the Company did not stop (August 2011) the construction of additional drain and had spent ₹ 3.37 crore so far (August 2011).

Preparation of DPR without considering site conditions resulted in cost overrun of ₹ 14.71 crore besides time overrun of 11 months

- For Hodal-Nuh-Pataudi road (contract price ₹ 239.80 crore) the DPR was defective as elements of excavation in hard rocks, reconstruction length, coating of road, excess width of hill area *etc*., were not envisaged as per site conditions. This led to subsequent changes. The consultant submitted (February 2011) revised estimate of ₹ 254.51 crore for this project. The net cost over-run due to variations was ₹ 14.71 crore (₹ 55.64 crore excess and ₹ 40.93 crore saving). The excess expenditure was, *inter-alia*, due to change in scope of work, escalation and supervision charges. The savings were on account of not taking up some BOQ items originally provided in DPR.

Thus, preparation of DPR without considering actual site conditions resulted in cost overrun of ₹ 14.71 crore besides time over-run of 11 months.

- The original estimate for construction of various road works in Rewari Town was ₹ 109.19 crore which was subsequently revised to ₹ 116.47 crore due to change in number of culverts and length of rigid pavement as per site requirement.
- The work of Sampla-Jhajjar Road and Jhajjar-Dadri Road with estimated cost of ₹ 33.99 crore and ₹ 39.37 crore respectively was awarded in May 2008. We found that the original estimates of these works were not framed keeping in view the actual site conditions and provision of Permanent Quality Concrete in habitation area was made in revised DPR in place of flexible pavement. In respect of only one item of each work, the cost escalation of both the works amounted to ₹ 6.72 crore. The works were completed in December 2010 at a total cost of ₹ 42.28 crore and ₹ 46.84 crore respectively with cost overrun of ₹ 15.76 crore.
- The work of Hodal-Punhana-Nagina Road and Bori Kothi Road was to be completed by August 2010. However, till March 2011, only 35 *per cent* of the work was executed and the same was running behind schedule by seven months. We found that the delay was due to change in scope of work including additional drainage costing ₹ 1.84 crore which was not provided in the original DPR.

The cost overruns were ultimately borne by the client departments thereby putting extra burden on State Exchequer. Time overruns also resulted in delayed utilisation of projects and non achievement of intended benefits besides affecting Company's ability to get more works from the State Government agencies.

The Management stated (September 2011) that the DPRs were prepared well in advance as per existing site conditions, whereas actual works were undertaken subsequently, as a result certain changes became inevitable. Also, in DPRs, there were some omissions of items essentially required for the work. The reply was, however, not acceptable as proper planning and survey work was not done which led to omission of items, change in scope of work with consequential time and cost overrun.

Deployment of supervision consultants

2.2.18 Due to inadequate manpower to supervise the works, the Company engages consultants for supervision of construction works being carried out by the contractors to ensure that these works were carried out according to the approved engineering design, technical specification and other contract conditions and to ensure timely completion. The Company engaged supervision consultants on lump sum (fixed price) contract basis for the period of the construction, but released payments to the consultants on monthly basis even beyond the contractual amount in the event of time over-run.

Due to delay in completion of projects, the Company made excess payment of ₹ 6.94 crore to seven consultants

A test check of records of four units of the Company revealed that due to delay in completion of the projects, the Company made payments of ₹ 16.94 crore to seven consultants engaged in these units which was more than the contractual value of ₹ 10 crore leading to excess payment of ₹ 6.94 crore. This also resulted in increase in cost of various projects. This could have been avoided had the Company linked the payments with the progress of work.

The Management stated (September 2011) that excess expenditure was inevitable in view of various constraints and unforeseen happenings faced during execution of the works. Reply is not acceptable as the consultants quote the rate considering all such exigencies and the same could have been avoided, had the Company linked the payments with the progress of work.

Execution of works

National Capital Region works

2.2.19 The National Capital Region Planning Board (NCRPB), coordinating agency for development of National Capital Region (NCR), provides loan up to 75 *per cent* of the cost of the Project and balance 25 *per cent* is provided by the State Government. After approval from the State Government for up-gradation/ construction of new roads, the Company prepares DPRs and submits the same to the State Government for approval who in turn submit the case to NCRPB for funding the projects. The NCRPB, after considering the DPR and viability of the projects, sanction loan to the State Government. The State Government allots some works on deposit work basis to the Company. The NCR works were allotted to the Company from the year 2006-07.

The table below indicates the number of works allotted, completed and pending along with their value for the last five years ending 2010-11.

(Value ₹ in crore)

Year	Works at the start of the year		Works allotted during the year		Works completed during the year		Works at the end of year	
	Nos.	Value	Nos.	Value	Nos.	Value	Nos.	Value
2006-07	0	0	2	61.21	0	0	2	61.21
2007-08	2	61.21	2	49.86	0	0	4	111.07
2008-09	4	111.07	11	1,022.60	0	0	15	1,133.67
2009-10	15	1,133.67	12	701.15	0	0	27	1,834.82
2010-11	27	1,834.82	4	171.54	9	423.53	22	1,582.83
Total			**31**	**2,006.36**	**9**	**423.53**		

It would be seen from the above that the Company was allotted 31 works valuing ₹ 2,006.36 crore, of which 25 road works valuing ₹ 1,854.58 crore were undertaken by the Company. We scrutinized the execution of 16 works valuing ₹ 1,272.45 crore. Audit findings are discussed below:

Time over-run and cost over-run

Five road works valuing ₹ 312.46 crore were completed with delay ranging from 10 to 16 months and 14 ongoing works valuing ₹ 1,249.48 crore were behind schedule

2.2.20 Out of total 25 road works valuing ₹ 1,854.58 crore undertaken during 2007-08 to 2010-11 as detailed in ***Annexure 13***, no work was completed in time. Five road works valuing ₹ 312.46 crore were completed with delay ranging from 10 to 16 months. Out of five completed works, cost over-run was ₹ 12.02 crore in two works. Fourteen ongoing works valuing ₹ 1,249.48 crore were behind scheduled date of completion by 5 to 15 months as at the end of 31 March 2011. Scheduled dates of completion of balance six works were not due as on 31 March 2011. Similarly, out of six Road over Bridges (ROBs) valuing ₹ 151.79 crore, as detailed in ***Annexure 14***, only four works valuing ₹ 111.07 crore (project cost) were completed with delays ranging from 21 to 37 months. Remaining two ROBs were behind scheduled date of completion by ten months each (31 March 2011). The Company has not analysed the reasons for delay in completion of works.

However, we analysed the reasons for delays as under:

- Poor planning in deployment of manpower and machinery on the work sites by the contractors besides financial crunch (cases at Serial No. 1 to 4, 8 to 11, 15 to 17 of ***Annexure 13***);
- Delay in shifting of utilities[ϒ] and non-providing of hindrance free sites to the contractors (cases at serial No. 1 to 4 , 8, 10 and 11 of ***Annexure 13***);
- Inadequate supervisory staff by the contractors (cases at serial No 8, 9, 15 to 17 of ***Annexure 13***);
- Change in DPRs, as the same were not as per site conditions (cases at serial No. 1 to 4 and 8 of ***Annexure 13***); and
- Inadequate and temporary manpower.

The delay in completion of works resulted in corresponding delay in providing smooth traffic to the public as envisaged.

During exit conference, the FC&PS stated that the delay was mainly due to taking clearance from Forest Department for cutting of trees and shifting of lines by power utilities. The fact, however, remained that the Company did not pursue the matter effectively with concerned departments for early clearance/shifting.

Non levy of liquidated damages

2.2.21 The Company awarded (May 2008/January 2009) three contracts for widening and strengthening of five roads (Sl. No. 8, 9, 15, 16 and 17 of ***Annexure 13***) at a total contract price of ₹ 713.07 crore.

We noticed that the Company had granted extension of time to these contractors without levy of Liquidated Damages (LD) amounting to ₹ 39.89 crore, though the delays were on the part of the contractors on account of poor planning, financial

ϒ Electric transmission lines, water and sewerage lines and removal of trees.

crunch, non-mobilisation of adequate resources including deficiencies in procurement of machinery/material and insufficient/incompetent staff.

In one contract awarded in January 2009 (four laning of Rewari roads) for ₹ 98.04 crore, the delay of 10 months was attributable both to the Company and the contractor. But the Company did not assess the period of delay on the part of the contractor so the LD leviable could not be worked out. It resulted in undue benefit to the contractor.

The Management stated (September 2011) that the main purpose of the Company was to get the work executed from the agency in reasonable time and not to collect LD, which is normally recovered when the agency completely stops the work and it is a tool in their hand to get the work expedited. The reply of the Management is not acceptable as the Company could not get the works expedited which called for levy of LD as per contracts.

Execution of works without receipt of funds

2.2.22 The work of improvement of two[ℜ] roads was allotted (August 2009) to M/s Gawar Construction Limited, Hisar (GCL) for ₹ 30.59 crore. These works were started without obtaining the approval of NCRPB. However, the approval of Chief Minister (CM) was taken on *ex-post facto* basis in September 2009. Subsequently, the Company sought (June 2010) the sanction of the State Government under State Budget Plan. Though the Company had incurred an expenditure of ₹ 26.93 crore (March 2011) on these works from own sources, no funds were released by the State Government so far (August 2011). The Company should not have commenced the works without receipt of funds from the State Government.

The Management stated (September 2011) that these works were approved (November 2010) by the State Government and Company would receive the amount shortly.

Delayed execution of work of two lane ROB at Samalkha-Chuklana

2.2.23 The work of two lane ROB at Samalkha-Chuklana was allotted in September 2008 for ₹ 18.57 crore to M/s Gawar Construction Company Limited (GCCL). At the time of starting the work, General Arrangement Drawings (GAD) were prepared by the consultant without considering the site conditions due to which, the work was started late by more than seven months. The GCCL was also granted (November 2008) interest free advance of ₹ 92.86 lakh. The GCCL could not execute the work as per schedule and attributed the delay to non providing hindrance free site, delay in shifting of sewer line, electrical poles, and unprecedented rains. The scheduled date of completion of work was extended from May 2010 to June 2011. Due to delay on the part of the GCCL on account of improper planning, it could complete only 56 *per cent* work up to June 2011. Thus, the work was delayed on account of defective DPR and failure of the

ℜ Sahlawas-Amboli-Dhakla SH-22 and Chhuchakwas-Achej-Satipur road in Jhajjar district.

Company in providing hindrance free site.

The Management stated (September 2011) that delay occurred due to delay in shifting of utilities and some laxity on the part of the contractor. The reply was not acceptable as the Company provided hindrance free site to the contractor by June 2010 and subsequent delay was due to improper planning by the contractor for which the Company did not levy any LD as per contract.

Non-revision of administrative approval

2.2.24 The Haryana PWD Code, applicable to the Company, stipulates that the rough cost estimates would be sent to the State Government for approval. In case of revision of estimates, the Head of Department should submit the revised estimates to the State Government for approval. The Code further requires that revised administrative approval should be obtained in case the estimates exceed by more than 10 *per cent* of the project cost. We noticed that the revised estimates were approved by the MD of the Company and approval of the State Government was not obtained. During the period of audit, it was noticed that in three[€] cases the actual cost (₹ 107.69 crore) exceeded the cost indicated in the administrative approval (₹ 89.36 crore) by ₹ 18.33 crore (20.51 *per cent*). It reflected the procedural deficiencies and lack of transparency leading to ineffective control mechanism at State Government level. During exit conference, the MD assured that the requisite approval would be obtained.

Revised administrative approvals were not obtained in three cases

The Management stated (September 2011) that two road works were part of package consisting of five roads and there was likelihood that expenditure on this package would remain within sanctioned amount. Regarding one ROB, the actual expenditure was still within the sanctioned amount. The reply was not convincing as separate amount is considered for each road and accordingly each road should be considered separately for revised sanction.

Execution of other works

2.2.25 The Company also executes works other than NCR works on behalf of the client departments since 2007-08 on deposit work basis. The table below indicates the number of other works allotted, completed and pending along with their value for the last four years ending 2010-11.

(Value ₹ in crore)

Year	Works at the start of the year		Works allotted during the year		Works completed during the year		Works at the end of year	
	Nos.	Value	Nos.	Value	Nos.	Value	Nos.	Value
2007-08	0	0	12	156.92	0	0	12	156.92
2008-09	12	156.92	14	101.26	8	18.55	18	239.63
2009-10	18	239.63	8	174.62	8	112.54	18	301.71
2010-11	18	301.71	1	0.99	2	9.04	17	293.66
Total			**35**	**433.79**	**18**	**140.13**		

[€] Sampla-Jhajar road, Jhajar-Chhuchhakwas Dadri road and ROB Samalkha.

It would be seen from the above table that the Company allotted 35 other works valuing ₹ 433.79 crore, out of which 18 works valuing ₹ 140.13 crore were completed during 2007-08 and 2010-11. We scrutinised 16 works including ongoing works valuing ₹ 151.21 crore during test check of records. Irregularities noticed in these works are discussed below:

Irregular and extra expenditure in grant of contracts

The purpose of allotment of eight works at extra cost of ₹ 14.83 crore was not fulfilled as the same were completed with delay ranging from six to 14 months

2.2.26 The CM Haryana decided (April/May 2007) that construction work of Bhagat Phool Singh Mahila Vishvavidyalaya (BPSMV) and residential complex at Sonepat would be taken up on turnkey basis by PWD (B&R) and progress of the work was to be reported to him on monthly basis. The various related works were to be completed by 30 May 2008 so that academic courses of June 2008 could be started. PWD (B&R), in turn, asked the Company to execute this work. The Company invited (May 2007) tenders for such 10 works with estimated cost of ₹ 73.69 crore and received nine single tenders for nine works. The Company issued (June 2007) letter of acceptance of ₹ 53.61 crore to the four contractors for eight works. The date of completion was 14 June 2008. Remaining two works were awarded for ₹ 8.18 crore to a single contractor with completion date of 12 May 2008. The Company awarded eight works on single rate basis in view of time bound nature of work at 38 to 42 *per cent* above the present day rates* involving extra cost of ₹ 14.83 crore. We observed that these works were finally completed (July 2009) after a delay ranging from six to 14 months. Thus, purpose of allotment of eight works on single tender basis at higher rate has not been fulfilled.

We further observed that the Company reduced LD of ₹ 2.85 crore on five works to ₹ 16.15 lakh and did not levy LD of ₹ 2.99 crore on four works. The BOD desired (September 2010) that the authority deciding these cases of reduction of LD needs to give detailed reasons for such reductions. However, no action has been taken in this regard (June 2011). Further, the Company has to bear labour welfare cess of ₹ 87.97 lakh on these works in the absence of enabling provisions in the contracts.

The Management stated (September 2011) that the work was delayed due to increase in foundation work, but the academic session was started in time by handing over part building.

Deenbandhu Chhotu Ram Power Project Colony Yamunanagar

2.2.27 The Company was allotted work for construction of residential colony at Deenbandhu Chhotu Ram Thermal Power Project (DCRTPP) Yamunanagar by Haryana Power Generation Corporation Limited (HPGCL) at an administrative approval of ₹ 50.16 crore. Accordingly, the Company awarded (September 2007) nine works to various contractors. The works were to be completed by March 2008 to

* Rates worked out by the Company by adding the prevailing premium in the Haryana Schedule of Rates.

March 2009. However, none of the works could be completed within the scheduled time. There was time over-run in all the works which ranged from one to 32 months (up to March 2011). There was cost over run also of ₹ 5.15 crore in five works[§] (up to March 2011). We observed that reasons for time and cost over-run were change in scope of work, wrong estimates and lack of oversight by the Company as the supervision of the Project was left only to a consultant.

We observed the following irregularities in execution of the Project:

- Despite unsatisfactory work performance since the beginning, the Company allowed M/s Starco Engineer and Contractor (SEC) extensions from time to time and last extension was given up to 30 June 2009. In view of failure of SEC to complete the work as per schedule, the contract was terminated (June 2009). We observed that though the performance of the SEC was unsatisfactory from the very beginning, the Company did not recover LD amounting to ₹ 3.44 crore from SEC as per provisions of contract. After adjustment of performance guarantee and final bill, the balance amount of ₹ 2.81 crore was recoverable from the contractor, the chances of recovery of which were very remote.
- The Company awarded (March/April 2008 and August 2009) four other related works to two contractors[∞] at a total contract price of ₹ 16.71 crore. As the delay ranged between seven and 28 months, the Company granted extension of time on various occasions to the contractors without levy of LD of ₹ 1.67 crore, though the delay was due to poor planning and inadequate deployment of resources by the contractors.

The Management stated (September 2011) that increase in cost was due to change in scope of work as some additional items of works were added by the client.

Non recovery of funds

2.2.28 For construction of township at Rajiv Gandhi Thermal Power Project (RGTPP) Khedar (Hisar) on behalf of HPGCL, the Company awarded 11 contracts valuing ₹ 87.14 crore to various contractors during September 2008 and March 2009 to be completed by May 2010. Due to numerous changes in the scope of work, the Project cost increased to ₹ 158.42 crore. The Company executed works of ₹ 114.55 crore (October 2010) against which it received only ₹ 100 crore from HPGCL resulting in use of funds of ₹ 14.55 crore pertaining to other projects. This balance amount and service charges of ₹ 5.73 crore had not been claimed (March 2011).

§ Construction works of CISF colony, non-residential buildings, electric sub-station and providing 11 KV sub-station & meter supply *etc.*

∞ M/s Tech Sphere Infrastructure, New Delhi and M/s Savvy Contractor Private Limited, New Delhi.

Toll activities

2.2.29 The State Government decided (September 2002) to levy toll tax at 32 toll points on the vehicles plying on roads improved/upgraded under HUDCO loan projects and authorised the Company for collection of toll in the State. During 2010-11, seven more toll points were allotted to the Company. The table below indicates toll collection targets and toll collected on various toll points operated by the Company during 2006-07 to 2010-11:

(₹ in crore)

Particulars	2006-07	2007-08	2008-09	2009-10	2010-11
Tolls operated (Nos.)	28	28	28	27	35
Targets	106.26	165.77	172.40	179.29	186.46
Actual receipt from toll contractor	32.14	39.48	41.10	51.11	37.44
Departmental	4.97	1.88	5.13	6.92	20.13
Total	**37.11**	**41.36**	**46.23**	**58.03**	**57.57**
Shortfall	69.15	124.41	126.17	121.26	128.89
Shortfall in percentage	65.08	75.05	73.18	67.63	69.12

It would be seen from the above table that there was shortfall in achievement of targets which ranged between 65.08 and 75.05 *per cent.* The share of departmental collection increased from 4.55 *per cent* in 2007-08 to 34.97 *per cent* in 2010-11. Delay/non-award of toll contracts mainly attributed to non-achievement of collection targets. The Company has neither analysed the reasons for shortfall nor reported the same to the BOD. We further noticed the following reasons for shortfall in toll collection:

The collection targets could not be achieved due to delay/non-award of toll contracts, reduction in toll points and delay in moving cases for notification for toll collection *etc*

- delay in award of toll contracts resulting in resorting to departmental collection which was always less than the amount received from toll contractors;
- reduction in toll points due to public resentment and delay in repair of roads;
- non collection of toll due to delay in moving the cases for notification for toll collection: and
- non award of toll contracts to the highest bidders in some cases;

During exit conference, the FC&PS stated that delays have taken place in issue of toll notifications and efforts were being made to improve the toll collections, including calling of fresh tenders well in time.

The above deficiencies have been discussed below in detail:

Delay in initiating notification process

2.2.30 As per decision taken in the meeting (25 August 2008) under the Chairmanship of CM and as per Government notification (January 2009), toll was to be levied on certain roads after their improvement. We noticed that there was no system in the Company for timely initiation of notification process in respect of levy of new tolls. Following cases were noticed where the Company delayed the notification process:

- Firozpur-Jhirka-Biwani Road was completed in March 2009, but the proposal for its notification was sent to the State Government in April-May 2010 and toll collection could start only in October 2010. Had the Company started the toll collection from April 2009, it could have earned additional revenue of ₹ 8.06 crore (April 2009 to October 2010) on the basis of contract awarded thereafter.

The delays in initiating notification process for levy of toll led to revenue loss of ₹ 9.40 crore

- The case for notification to impose toll on Hansi-Tosham–Sodhiwas Road (Toll No. 20) was sent to Government in May 2010 after completion of road in May 2009. The Company started departmental collection from August 2010 after notification. Had the Company started the toll collection immediately from June 2009, it would have earned additional revenue of ₹ 80.36 lakh up to July 2010 (for 14 months at ₹ 5.74 lakh per month).
- The improvement work of the Smalkha to Hathwala Road (T-34) was completed in November 2007. The Company took more than 19 months (September 2008 to March 2010) to initiate the case for toll notification which was taken up in April 2010. Had the Company initiated the case immediately after the Government decision, it would have earned additional revenue of ₹ 53.58 lakh at the rate of departmental collection (₹ 2.82 lakh per month).

The Management stated (September 2011) that the Company did not receive any reference of the CM's meeting held in August 2008. The reply is not convincing as the minutes of the meeting on record with the Company were circulated to all the administrative secretaries. Further, the Company is a nodal agency for toll collections, the ignorance of CM's decisions could not be considered as reason for not taking action which resulted in loss to the Company.

Loss due to acceptance of fake securities

2.2.31 As per agreement, contractor is required to furnish Bank Guarantee (BG) of 15 *per cent* of the contract value which could be encashed/ adjusted for non-performance. The contractor had deposited FDs as BG. The Company should verify the genuineness of such FDs from the authority higher than the issuing branch immediately. We observed that there was no system in the Company to verify the genuineness of the BGs/FDs so received. In two cases the contractor provided (October 2007 and January 2008) fake FDs of ₹ 1.73 crore in respect of toll points no.12 and 24. Initially, the issuing branch had confirmed the genuineness of the FDs. However, the Zonal Office of the issuing branch found in October 2008 that the FDs were fake. As such, the Company terminated (November 2008) the contracts with the contractor. The contractor also failed to deposit the toll collections for the months of September and October 2008. Thus, an amount of ₹ 1.50 crore could not be recovered from the contractor. The contractor had also defaulted in payment of monthly installments during the operations of previous toll contracts granted to him which was not considered at the time of award of the contract. Delayed and improper action by the Company resulted in non-realisation of ₹ 1.50 crore and the chances of recovery of the same were remote. This also indicates faulty toll collection policy to the extent that it did not forbid grant of tolls

₹ 1.50 crore

of very high value (₹ 11.27 crore in this case) to an individual.

The Management stated (September 2011) that recovery suit was being filed in the Court for recovery of its dues and action against officers/officials responsible was in process.

Rejection of higher bid

The Company rejected the highest bidders in two cases being below the traffic census, which resulted in loss of revenue of ₹ 5.36 crore

2.2.32 The Company received (February 2010) three bids for toll collection in respect of toll point No.2-Gurgaon-Pataudi-Rewari Road. The bid amount of ₹ 4.42 crore of M/s Marshal Construction was highest and was 18.82 *per cent* above the contract amount of ₹ 3.72 crore of existing contractor. However, the Company did not accept (March 2010) this bid being below the traffic census and decided to recall the tender. It started departmental collection from 1 April 2010. On re-invitation of tenders (June 2010), the highest bid of ₹ 4.27 crore was accepted (July 2010). The contractor started collection from 11 September 2010. We observed that due to rejection of initial offer of M/s Marshal Construction which was 18.82 *per cent* above the previous contract amount, the Company suffered loss of ₹ 97.80 lakh.

Similarly, the Company invited bids (February 2010) for awarding toll collection contract of Yamunanagar-Radaur-Ladwa-Thanesar Road and received only one bid of M/s SMS Infrastructure Limited for a sum of ₹ 9.75 crore for one year which was 6.33 *per cent* higher than existing contract value. The Company, however, did not accept the same being below the traffic census and re-invited tenders. We observed that the Company rejected the first bid and this resulted in loss of revenue of ₹ 4.38 crore (March 2011).

Non-monitoring of toll points

2.2.33 After the award of toll points to contractors, monitoring of the same is essential to ensure that the toll contracts are being executed as per State Government Notification and terms of contracts. The Company had not evolved any monitoring system to ensure that toll plaza was being maintained as per terms of contracts by the contractors. In case of toll point at Gurgaon-Pataudi Road (Toll No. 2), the toll point has been fixed at 24 Kms, from Gurgaon by the State Government while the Company kept on operating the toll at 7-8 Kms and the contractor shifted the same to 8-9 Kms. This was in violation of the Government directions. On being pointed out in audit, the Company terminated the contract in July 2011 and forfeited the performance security of ₹ 64.05 lakh.

Similarly at Narnaul–Singhana Road (Toll No. 19) there were complaints (29 April 2010) of overcharging and same were found correct along with other irregularities (non-installation of retro-refractive boards at site, non-display of fee collection charges and toll booth not as per specifications) during investigation (May and August 2010). But the contract was allowed to continue and was terminated only on 28 December 2010 at the fag end. While terminating the contract, the Government decided that excess collection be estimated and recovered from the contractor. But the Company did not work out the amount over charged. Thus, ED of the Company failed to implement the decision of the State Government.

Non compliance of provisions of the Companies Act, 1956

2.2.34 Section 619A of the Companies Act, 1956 requires that a Government Company shall prepare its annual report within three months of its Annual General Meeting and lay before the State Legislature along with a copy of the audit report and supplementary comments of the CAG of India. The Company did not prepare its annual reports since inception for placing the same before the State Legislature.

In pursuant to Section 292A of the Companies Act, 1956, the BOD had constituted (August 2001) an Audit Committee. We observed that the constitution of the Audit Committee was not as per the provisions of the Act as all the four members of the BOD were the members of the Audit Committee whereas two third directors should be independent. The meetings of the Audit Committee were not being held regularly as the Committee held only three meetings (December 2008, September 2010 and December 2010) during the period under audit.

The Company has paid up capital of more than ₹ five crore but had not employed any Company Secretary as per requirements of Section 383 A of the Act, despite the fact that the post had been sanctioned by the State Government since its inception.

Manpower policy

2.2.35 Keeping in view the increased work load from 2007-08, the Company requested (August 2008) the State Government to sanction 127 posts of various categories on temporary and 14 posts on regular basis. The Public Works Minister observed (September 2008) that the staff recruited on contract or *ad-hoc* basis generally does not work responsibly and they can not be held responsible for lapses. The CM therefore asked (November 2008) the Company to identify the requirement of minimum permanent staff. However, the Company did not work out such requirement. Subsequently, the Financial Commissioner, Finance Department decided (May 2009) that the Company would not keep any staff on permanent basis and 31 posts were sanctioned (June 2009) for the Company in addition to requirements of field units (PIUs). The State Government further stated that the posts would be filled from the deputation or through the contract basis only. We observed that the Company deployed 101 personnel, of these 39 persons were on deputation from PWD (B&R) and 62 on contract basis as on 31 March 2011. However, the present strength was not adequate in view of the works undertaken by the Company. Resultantly, the dependence of the Company on the supervision consultants has increased year by year as expenditure thereon increased from ₹ 11.60 lakh in 2007-08 to ₹ 10.25 crore in 2009-10. The Company has, however, not worked out its requirement of staff on permanent basis to comply with the directions of the CM. Thus, majority of the manpower in the Company was on contract basis and could not be held responsible for their lapses. This ultimately resulted in time and cost over run in completion of works.

During exit conference, the FC&PS agreed that there was shortfall in manpower and the Company would take appropriate action to hire qualified/trained personnel.

Internal control

2.2.36 Internal control is a management tool used to provide reasonable assurance that the Management objectives are being achieved in an economic, efficient and effective manner and comprise, *inter-alia*, proper allocation of functional responsibilities within the organisation, proper operating and accounting procedures to ensure accuracy and reliability of accounting data, efficiency in operation and safeguarding of assets. We observed following deficiencies in this regard:

- The Company has neither established its internal audit department nor got the same done from independent internal auditor. This leaves scope for chances of errors and omissions in accounts and embezzlements/ misappropriation of funds also cannot be ruled out.
- The Company had not prepared its Works Manual and Accounts Manual to clearly define the system and duties and responsibilities of the staff at each level.
- The basic records like Cash book, Bank book, Journal and Ledger *etc.* were incomplete and not properly maintained. Also the Company has not maintained separate accounts for each project to verify the receipt and utilisation of funds despite being pointed out earlier through Inspection Reports.
- The Company had not maintained proper records of investments giving details of each FDs.
- The Company did not have an effective monitoring system in operation which provided for periodical inspection and review meetings for physical and financial monitoring to facilitate adherence to cost and time schedule in execution of construction contacts. There was no system for regular monitoring and surprise checks to ensure smooth running of toll points.
- Para 13.14.1 of the Haryana PWD Code stipulates that mobilisation advance should be recovered from running bills of the contractor within 80 *per cent* of scheduled time for completion of the contract. However, the Company entered into the contract agreements providing for recovery of mobilisation advance up to 80 *per cent* of contract price. We observed that in case completion of project is delayed, the mobilisation advance was not recovered fully on achieving 80 *per cent* of the time schedule. In view of

the above, the Company should adhere to the provision of Haryana PWD Code.

- The Company has not developed an effective MIS for the purpose of monitoring at the top level to safeguard its financial interests and imposition of LD on contractors due to delay in execution on their part.
- The Company failed to collect toll on new toll points on the plea of non-receipt of intimation from State Government. This indicated lack of control mechanism in the Company.

The matter was referred to the Government in June 2011; the reply had not been received (September 2011).

Conclusion

- **The Company had not undertaken any activity envisaged under its main and ancillary objects and had taken up only deposit works which fall under its 'other objects'.**
- **The Company manage, on behalf of the State Government, huge funds received from various departments and treated the income from interest on these funds as its own income instead of crediting to the fund account.**
- **Wide variations were noticed in the DPRs as the same were prepared without taking into account the actual site conditions and change in scope of work resulting in delays in completion of projects and cost over-run.**
- **Avoidable time and cost over-runs in execution of works were observed. The controllable factors were ill planning, inadequate supervision, non-mobilisation of resources by the contractors and non-shifting of utilities in time and changes in the DPRs by the Company.**
- **Liquidated damages were not recovered from the contractors as per terms and conditions of the agreements for delay in completion of works.**
- **Toll collection targets were not achieved mainly due to delay in award of toll contracts, delay in moving the cases for notification for toll collection and non-award of toll contracts to the highest bidders in some cases.**
- **The Company's organisational set up was not sufficient and effective for smooth operation of its activities.**
- **Internal control system was deficient in many aspects like non-conducting of internal audit, non-maintenance of proper records of FDs and non- evolving of effective monitoring system in its operations *etc*.**

Recommendations

The Government/Company should frame suitable guidelines for management of funds placed at the disposal of the Company. The Company may further consider:

- **diversifying its activities and take up works as per its main and ancillary objectives;**
- **chalking out proper planning for execution of works after proper site survey, preparation of accurate DPRs;**
- **strengthening its follow up mechanism with various authorities/agencies for reducing time lag in shifting of utilities to facilitate early handing over of hindrance free site to the contractors;**
- **recovering liquidated damages as per the terms and conditions of the agreements and avoid extending undue favour to the contractors;**
- **strengthening its organisational set up by inducting permanent staff to facilitate better operational performance and proper accountability; and**
- **strengthening internal control system to enhance its operational efficiency and exercise adequate controls on the activities of the Company.**