# CHAPTER V

# COMMERCIAL ACTIVITIES

## 5.1 Overview of State Public Sector Undertakings

### Introduction

**5.1.1** The State Public Sector Undertakings (PSUs) consist of State Government companies and Statutory corporations. The State working PSUs are established to carry out activities of commercial nature while keeping in view the welfare of people. In Uttarakhand, the State PSUs occupy a moderate place in the state economy. The working State PSUs registered a turnover of ₹ 1,722.95 crore for 2009-10 as per their latest finalised accounts as of September 2010. This turnover was equal to 3.68 *per cent* of State Gross Domestic Product (GDP) for 2009-10. Major activities of Uttarakhand State PSUs are concentrated in power sector. The State working PSUs incurred a loss of ₹ 79.66 crore in aggregate for 2009-10 as per their latest finalised accounts as on 30 September, 2010. They had employed 0.16 lakh[1] employees as of 31 March 2010. The State PSUs do not include seven prominent Departmental Undertakings (DUs), which carry out commercial operations but are a part of Government departments. Audit findings of these DUs are incorporated in Chapter-II of this Audit Report.

**5.1.2** As on 31 March 2010, there were 24 PSUs as per the details given below. Of these, no company was listed on the stock exchange.

| Type of PSUs | Working PSUs | Non-working PSUs[2] | Total |
|---|---|---|---|
| Government Companies[3] | 18 | 04 | 22 |
| Statutory Corporations | 02 | - | 02 |
| **Total** | **20** | **04** | **24** |

### Audit Mandate

**5.1.3** Audit of Government companies is governed by Section 619 of the Companies Act, 1956. According to Section 617, a Government company is one in which not less than 51 *per cent* of the paid up capital is held by Government(s). A Government company includes a subsidiary of a Government company. Further, a company in which 51 *per cent* of the paid up capital is held in any combination by Government(s), Government companies and Corporations controlled by Government(s) is treated as if it were a Government company (deemed Government company) as per Section 619-B of the Companies Act.

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1 As per the details provided by 16 PSUs.
2 Non-working PSUs are those which have ceased to carry on their operations.
3 includes 619-B companies.

**5.1.4** The accounts of the State Government companies (as defined in Section 617 of the Companies Act, 1956) are audited by Statutory Auditors, who are appointed by the Comptroller & Auditor General of India (CAG) as per the provisions of Section 619(2) of the Companies Act, 1956. These accounts are also subject to supplementary audit conducted by CAG as per the provisions of Section 619 of the Companies Act, 1956.

**5.1.5** Audit of Statutory corporations is governed by their respective legislations. Out of two Statutory corporations, CAG is the sole auditor for Uttarakhand Parivahan Nigam. In respect of Uttarakhand Peyjal Sansadhan Vikas Evam Nirman Nigam, the audit was entrusted to CAG with effect from 2003-04 for six years upto 2008-09 under Section 20(1) of CAG (DPC) Act, 1971. Entrustment of audit for subsequent years was awaited.

## Investment in State PSUs

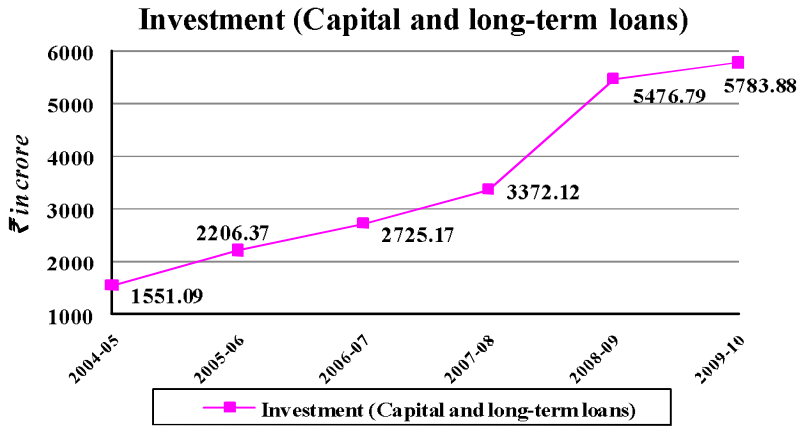
**5.1.6** As on 31 March 2010, the investment (capital and long-term loans) in 24 PSUs (including 619-B companies) was ₹ 5,783.88 crore as per details given below:

***(₹ in crore)***

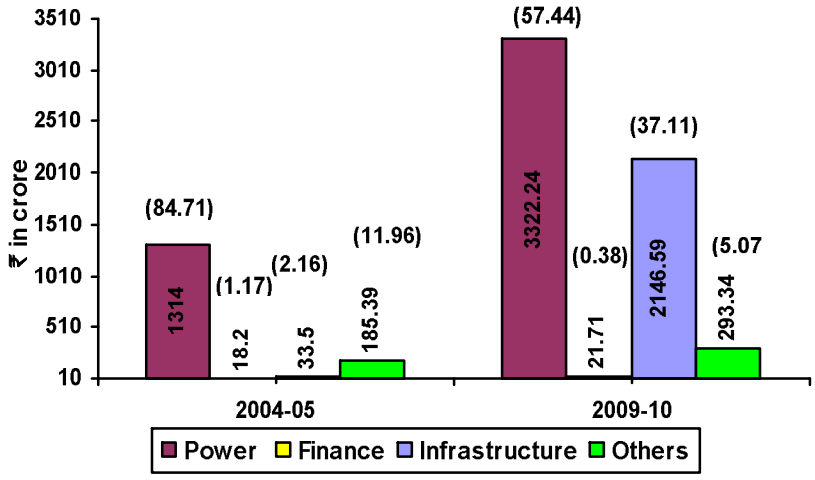
| Type of PSUs | Government Companies | | | Statutory Corporations | | | Grand Total |
|---|---|---|---|---|---|---|---|
| | Capital | Long Term Loans | Total | Capital | Long Term Loans | Total | |
| Working PSUs | 1,083.51 | 2,481.93 | 3,565.44 | 2,111.59 | 106.46 | 2,218.05 | 5,783.49 |
| Non-working PSUs | 0.39 | - | 0.39 | - | - | - | 0.39 |
| **Total** | **1,083.90** | **2,481.93** | **3,565.83** | **2,111.59** | **106.46** | **2,218.05** | **5,783.88** |

A summarised position of government investment in State PSUs is detailed in ***Appendix 5.1***.

**5.1.7** As on 31 March 2010, of the total investment in State PSUs, 99.99 *per cent* was in working PSUs and the remaining 0.01 *per cent* in non-working PSUs. This total investment consisted of 55.25 *per cent* towards capital and 44.75 *per cent* in long-term loans. The investment has grown by 272.89 *per cent* from ₹ 1,551.09 crore in 2004-05 to ₹ 5,783.88 crore in 2009-10 as shown in the graph below:




**5.1.8** The investment in various important sectors and percentage thereof at the end of 31 March 2005 and 31 March 2010 are indicated below in the bar chart. Though the major investment was in Power Sector (57.44 *per cent*), the thrust of PSU investment in the State was mainly in infrastructure sector which had seen its percentage share rising from 2.16 *per cen*t in 2004-05 to 37.11 *per cent* in 2009-10.




**(Figures in brackets show the percentage of total investment)**

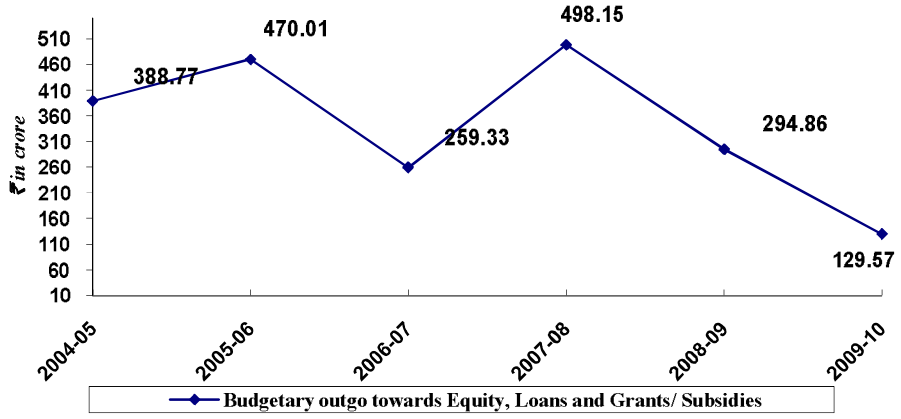
## Budgetary outgo, grants/subsidies, guarantees and loans

**5.1.9** The details regarding budgetary outgo towards equity, loans, grants/ subsidies, guarantees issued in respect of State PSUs are given in ***Appendix 5.3.*** The summarised details are given below for three years ended 2009-10.

*(₹ in crore)*

| Sl. No. | Particulars | 2007-08 | | 2008-09 | | 2009-10 | |
|---|---|---|---|---|---|---|---|
| | | No. of PSUs | Amount | No. of PSUs | Amount | No. of PSUs | Amount |
| 1. | Equity Capital outgo from budget | 4 | 307.27 | 5 | 256.14 | 3 | 104.01 |
| 2. | Loans given from budget | 6 | 162.19 | 5 | 36.55 | 2 | 24.32 |
| 3. | Grants/Subsidy received | 4 | 28.69 | 2 | 2.17 | 6 | 1.24 |
| 4. | Total Outgo (1+2+3) | - | 498.15 | - | 294.86 | | 129.57 |
| 5. | Guarantees issued | 2 | 211.05 | 1 | 3.15 | 2 | 277.54 |
| 6. | Guarantee Commitment | 1 | 1,200.00 | 2 | 1,143.15 | 3 | 1,428.81 |

**5.1.10** The details regarding budgetary outgo towards equity, loans and grants/subsidies for past five years are given in a graph below.




The budgetary outgo in state PSUs in the form of equity, loans and grants ranged between ₹ 498.15 crore to ₹ 129.57 crore during 2004-05 to 2009-10.

**5.1.11** The amount of guarantee commitment as on 31 March 2008 was ₹ 1,200 crore (one PSUs) which decreased to ₹ 1,143.15 crore (two PSUs) as on 31 March 2009 and again increased to ₹ 1,428.81 (three PSUs) as on 31 March 2010. The State Government charged guarantee fee at the rate of one *per cent* in case of all PSUs and two *per cent* in case of defaulting PSUs. Guarantee fee of ₹ 5.47 crore was paid to state government by only one PSU (Power Transmission Corporation of Uttarakhand Limited) during 2009-10.

## Reconciliation with Finance Accounts

**5.1.12** The figures in respect of equity, loans and guarantees outstanding as per records of State PSUs should agree with that of the figures appearing in the

Finance Accounts of the State. In case the figures do not agree, the concerned PSUs and the Finance Department should carry out reconciliation of differences. The position in this regard as on 31 March 2010 is stated below:

*(₹in crore)*

| Outstanding in respect of | Amount as per Finance Accounts | Amount as per records of PSUs | Difference |
|---|---|---|---|
| Equity | 1,276.04 | 3,170.99 | 1,894.95 |
| Loans | 511.98 | 736.98 | 225.00 |
| Guarantees | 1,309.00 | 1,428.81 | 119.81 |

**5.1.13** We observed that the differences occurred in respect of 20 PSUs and some of the differences were pending reconciliation since 2003. The Government and the PSUs should take concrete steps to reconcile the differences in a time-bound manner.

## Performance of PSUs

**5.1.14** The financial position and working results of PSUs are detailed in ***Appendix 5.2***. A ratio of PSUs turnover to State GDP shows the extent of PSU activities in the State economy. Table below provides the details of working PSUs turnover and State GDP for the period from 2004-05 to 2009-10.

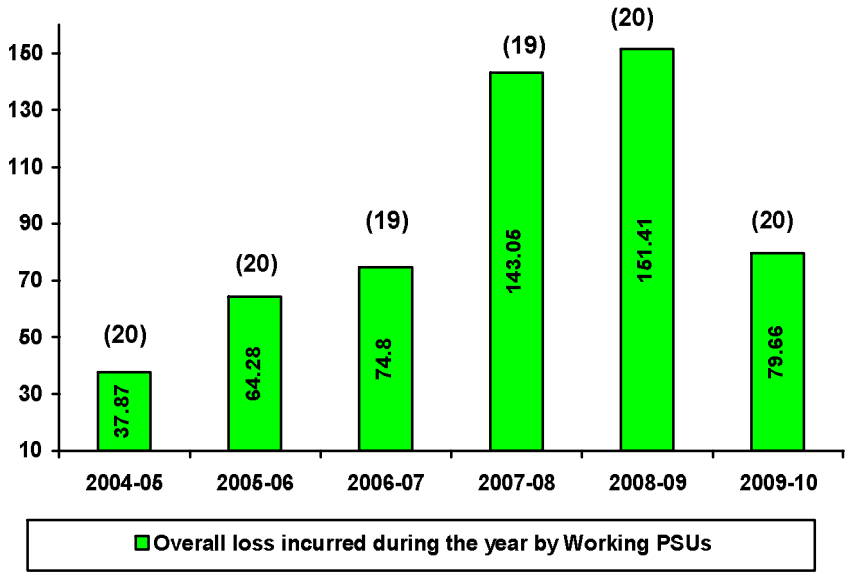
*(₹in crore)*

| Particulars | 2004-05 | 2005-06 | 2006-07 | 2007-08 | 2008-09 | 2009-10 |
|---|---|---|---|---|---|---|
| Turnover[4] | 486.46 | 1,293.01 | 1,366.26 | 1,481.94 | 1,527.06 | 1,722.95 |
| State GDP | 22,765.00 | 25,776.00 | 29,881.00 | 34,549.00 | 40,159.00 | 46,872.00 |
| Percentage of Turnover to State GDP | 2.14 | 5.02 | 4.57 | 4.29 | 3.80 | 3.68 |

The percentage of turnover to the State GDP after increasing from 2.14 in 2004-05 to 5.02 in 2005-06, had shown a declining trend in subsequent years and was at 3.68 *per cent* during 2009-10. This was because of disproportionate growth in the turnover figures of State PSUs in comparison with the State GDP figures during these years.

**5.1.15** Losses incurred by State working PSUs during 2004-05 to 2009-10 are given below in a bar chart.

[4] Turnover as per the latest finalised accounts as of 30 September 2010.




**(Figures in brackets show the number of working PSUs in respective years)**

It can be seen from the bar chart that overall losses increased from ₹ 37.87 crore in 2004-05 to ₹ 79.66 crore in 2009-10. During the year 2009-10 out of 20 working PSUs, eight PSUs earned profit of ₹ 112.03 crore and 11 PSUs incurred loss of ₹ 191.69 crore as per their latest finalized accounts as on 30 September 2010. One PSU[5] which was incorporated in March 2008 had not furnished its first accounts. The major contributors to the profit were State Industrial Development Corporation of Uttarakhand Limited (₹ 56.49 crore) and Uttarakhand Jal Vidyut Nigam Limited (₹ 48.40 crore). The heavy losses were incurred by Uttarakhand Power Corporation Limited (₹ 144.02 crore), Power Transmission Corporation of Uttarakhand Limited (₹ 19.16 crore), Uttarakhand Parivahan Nigam (₹ 10.29 crore) and Doiwala Sugar Company Limited (₹ 9.17 crore).

**5.1.16** The losses of PSUs are mainly attributable to deficiencies in financial management, planning, implementation of project, running their operations and monitoring. A review of latest Audit Reports of CAG shows that the State PSUs incurred losses to the tune of ₹ 1,367.95 crore which was controllable with better management. Year wise details from Audit Reports are stated below.

***(₹ in crore)***

| Particulars | 2007-08 | 2008-09 | 2009-10 | Total |
|---|---|---|---|---|
| Net Profit (loss) | (-) 143.05 | (-) 151.41 | (-) 79.66 | (-) 374.12 |
| Controllable losses as per CAG's Audit Report | 4.52 | 80.11 | 1,283.32 | 1,367.95 |
| Infructuous Investment | 5.07 | 3.00 | - | 8.07 |

[5] Serial No. A.6 of ***Appendix 5.2***.

**5.1.17** The above losses pointed out by Audit Reports of CAG are based on test check of records of PSUs. The actual controllable losses would be much more. The above table shows that with better management, the losses can be minimised. The PSUs can discharge their role efficiently only if they are financially self-reliant. The above situation points towards a need for professionalism and accountability in the functioning of PSUs.

**5.1.18** Some other key parameters pertaining to State PSUs are given below.

***(₹ in crore)***

| Particulars | 2004-05 | 2005-06 | 2006-07 | 2007-08 | 2008-09 | 2009-10 |
|---|---|---|---|---|---|---|
| Return on Capital Employed (*Per cent*) | 1.31 | 6.42 | 11.40 | - | - | 0.96 |
| Debt | 1,275.73 | 1,644.05 | 1,950.91 | 2,356.08 | 2,387.65 | 2,588.39 |
| Turnover[6] | 486.40 | 1,293.01 | 1,366.26 | 1,481.91 | 1,527.06 | 1,722.95 |
| Debt/ Turnover Ratio | 2.62:1 | 1.27:1 | 1.43:1 | 1.59:1 | 1.56:1 | 1.50:1 |
| Interest Payments | 58.72 | 187.74 | 304.16 | 158.78 | 156.53 | 124.82 |
| Accumulated Profits (losses) | (-) 80.33 | (-) 146.43 | (-)168.20 | (-)291.71 | (-) 283.60 | (-) 420.39 |

*(Above figures pertain to all PSUs except for turnover which is for working PSUs).*

**5.1.19** It can be seen that though the Debt figures had shown increasing trend during 2004-05 to 2009-10, the debt-turnover ratio had decreased from 2.62:1 in 2004-05 to 1.50:1 in 2009-10 due to correspondingly higher growth in the turnover figures as compared to the debt figures. The percentage of consolidated return on capital employed of all PSUs varied between 1.31 in 2004-05 and 11.40 in 2006-07 and after registering negative returns during 2007-08 and 2008-09, it improved and registered the return of 0.96 *per cent* during 2009-10. The accumulated losses increased from ₹ 80.33 crore in 2004-05 to ₹ 420.39 crore in 2009-10.

**5.1.20** The State Government had not formulated any dividend policy for the PSUs under which PSUs would be required to pay a minimum return of dividend to the State Government. As per their latest finalised accounts, eight PSUs earned a profit of ₹ 112.03 crore but no dividend had been declared.

## Arrears in finalisation of accounts

**5.1.21** The accounts of the companies for every financial year are required to be finalised within six months from the end of the relevant financial year under Sections 166, 210, 230, 619 and 619-B of the Companies Act, 1956. Similarly, in case of statutory corporations, their accounts are finalised, audited and presented to the Legislature as per the provisions of their respective Acts. The table below provides the details of progress made by working PSUs in finalisation of accounts by September 2010.

[6] Turnover of working PSUs as per the latest finalised accounts as of 30 September 2010.

| Sl. No. | Particulars | 2005-06 | 2006-07 | 2007-08 | 2008-09 | 2009-10 |
|---|---|---|---|---|---|---|
| 1. | Number of Working PSUs | 20 | 19 | 19 | 20 | 20 |
| 2. | Number of accounts finalised during the year | 09 | 15 | 10 | 13 | 12 |
| 3. | Number of accounts in arrears | 115 | 119 | 128 | 135 | 143 |
| 4. | Average arrears per PSU (3/1) | 5.75 | 6.26 | 6.74 | 6.75 | 7.10 |
| 5. | Number of Working PSUs with arrears in accounts | 19 | 19 | 19 | 20 | 20 |
| 6. | Extent of arrears | 1 to 19 years | 1 to 20 years | 1 to 21 years | 1 to 22 years | 1 to 23 years |

**5.1.22** As may be seen from above, the arrear of finalisation of accounts increased from 115 during 2005-06 to 143 during 2009-10. It can be seen that the State PSUs even failed to clear average one account per PSU during any of preceding five years from 2005-06 to 2009-10. The main reason as stated by the PSUs for delay in finalization of accounts was lack of trained staff. The state PSUs need to take effective measures for early clearance of backlog and make the accounts up-to-date.

**5.1.23** In addition to above, there were arrears in finalisation of accounts by non-working PSUs also. Out of four non-working PSUs, one had gone into liquidation process, remaining three non-working PSUs had arrears of accounts for 20 to 23 years.

**5.1.24** The State Government had invested ₹ 655.93 crore (Equity: ₹ 475.31 crore, loans: ₹ 154.81 crore and grants/subsidy: ₹ 25.81 crore) in nine PSUs during the years for which accounts have not been finalised as detailed in ***Appendix 5.4.*** Delay in finalisation of accounts may result in risk of fraud and leakage of public money apart from violation of the provisions of the Companies Act, 1956.

**5.1.25** The administrative departments have the responsibility to oversee the activities of these entities and to ensure that the accounts are finalised and adopted by these PSUs within the prescribed period. Though we had informed of the arrears in finalisation of accounts to the concerned administrative departments and officials of the Government every quarter no remedial measures were taken. As a result of this the net worth of these PSUs could not be assessed in audit. We had also taken up the matter of arrears in accounts with the Chief Secretary/Secretary (Finance) to expedite the backlog of arrears in accounts in a time bound manner.

**5.1.26 In view of above state of arrears, it is recommended that:**

- **The Government may set up a cell to oversee the clearance of arrears and set the targets for individual companies which would be monitored by the cell.**

- **The Government may consider outsourcing the work relating to preparation of accounts wherever the staff is inadequate or lacks expertise.**

## Winding up of non-working PSUs

**5.1.27** There were four non-working PSUs as on 31 March 2010. Of these, one PSU has commenced liquidation process. The numbers of non-working companies at the end of each year during past five years are given below:

| Particulars | 2005-06 | 2006-07 | 2007-08 | 2008-09 | 2009-10 |
|---|---|---|---|---|---|
| No. of non-working companies | 04 | 04 | 04 | 04 | 04 |

The non-working PSUs are required to be closed down as their existence is not going to serve any purpose.

**5.1.28** The stages of closure in respect of non-working PSUs are given below.

| Sl. No. | Particulars | Companies | Statutory Corporations | Total |
|---|---|---|---|---|
| 1. | Total No. of non-working PSUs | 04 | - | 04 |
| 2. | Of (1) above, the No. under | - | - | - |
| (a) | liquidation by Court (liquidator appointed) | 01 | - | 01 |
| (b) | Voluntary winding up (liquidator appointed) | - | - | - |
| (c) | Closure, i.e. closing orders/ instructions issued but liquidation process not yet started. | 03 | - | 03 |

**5.1.29** During the year 2009-10, no company/corporation was finally wound up. The only Company which had taken the route of winding up by Court order was under liquidation for more than 19 years. The process of voluntary winding up under the Companies Act is much faster and needs to be adopted/pursued vigorously. The Government may take decision regarding winding up of three non-working PSUs where no decision about their continuation or otherwise has been taken after they became non-working. The Government may consider setting up a cell to expedite closing down its non-working companies.

## Accounts Comments and Internal Audit

**5.1.30** 12 working companies forwarded their audited 12 accounts to Accountant General (AG) during the year 2009-10. All these accounts were selected for supplementary audit. The audit reports of statutory auditors appointed by CAG and the supplementary audit of CAG indicate that the quality of maintenance of accounts needs to be improved substantially. The details of aggregate money value of comments of statutory auditors and CAG are given below.

*(₹ in crore)*

| Sl. No. | Particulars | 2007-08 | | 2008-09 | | 2009-10 | |
|---|---|---|---|---|---|---|---|
| | | No. of accounts | Amount | No. of accounts | Amount | No. of accounts | Amount |
| 1. | Decrease in profit | 2 | 13.07 | 5 | 93.50 | 4 | 168.70 |
| 2. | Increase in loss | 1 | 20.32 | 4 | 131.16 | 7 | 16.19 |
| 3. | Non-disclosure of material facts | - | - | 3 | 2.47 | 3 | 169.52 |

**5.1.31** During the year, the statutory auditors had given qualified certificates for all the 12 accounts. The compliance of companies with the Accounting Standards (AS) remained poor as there were four instances of non-compliance with AS in six accounts during the year.

**5.1.32** Some of the important comments in respect of accounts of companies are stated below:

***Uttarakhand Jal Vidyut Nigam Limited (2006-07)***

- Non provision of penal guarantee fee payable in case of non payment of guarantee fee has resulted in understatement of current liability and overstatement of profit for the year by ₹ 28.86 crore.
- Non provision of expenditure of ₹ 1.63 crore incurred on Sobla – II project which came under submergence area of NHPC Project has resulted overstatement of CWIP and profit by the same amount.
- The inter unit balances prior to formation of the company amounting to ₹ 21.74 crore have not been provided, which has resulted in over statement of current assets as well as profit for the year by ₹. 21.74 crore.
- Long pending electricity bills of ₹ 7.59 crore realizable from UP Irrigation Department, which were neither verified nor paid by the department and as such should have been provided for. Non-provision against these bills, has resulted in overstatement of Sundry Debtors & Profit by ₹ 7.59 crore.

***Uttarakhand Power Corporation Limited (2005-06)***

- Non provision of penal guarantee fee payable in case of non-payment of guarantee fee to the Government has resulted in under statement of loss and current liabilities by ₹ 4.13 crore each.
- Non accounting for the deferred tax assets of ₹ 7.02 crore has correspondingly resulted in overstatement of loss to the same extent.

***Power Transmission Corporation of Uttaranchal Limited (2005-06)***

- Non provision against surplus/obsolete inventory valuing ₹ 2.39 crore has resulted in understatement of loss and overstatement of inventories by the same amount.

- Non provision of salary payable for the month of March 2006 has resulted in understatement of current liabilities and loss by ₹ 1.07 crore each.

***Power Transmission Corporation of Uttaranchal Limited (2006-07)***

- The company has not provided guarantee fee and penalty amounting to ₹ 2.74 crore, which has resulted in understatement of loss & current liabilities by the same amount.
- Non provision of miscellaneous advances outstanding for more than five year has resulted in overstatement of loans & advances and under statement of loss by ₹ 3.10 crore.

**5.1.33** Similarly, one Statutory Corporation (Uttarakhand Pey Jal Sansadhan Vikas Evam Nirman Nigam), audit of which was entrusted to CAG under Section 20(1) of CAG (DPC) Act, 1971 had finalized one account (2002-03) during 2008-09 and forwarded the same during 2009-10 was audited. The details of aggregate money value of comments of CAG are given below:

***(₹ in crore)***

| Sl. No. | Particulars | 2007-08 | | 2008-09 | | 2009-10 | |
|---|---|---|---|---|---|---|---|
| | | No. of accounts | Amount | No. of accounts | Amount | No. of accounts | Amount |
| 1. | Decrease in profit | 1 | 0.70 | - | - | - | - |
| 2. | Increase in loss | - | - | 1 | 0.23 | 1 | 2.11 |
| 3. | Non-disclosure of material facts | - | - | - | - | - | - |
| 4. | Errors of classification | 1 | 0.86 | - | - | 1 | 370.30 |

**5.1.34** Important comment in respect of Statutory Corporation is stated below:

**Uttarakhand Peyjal Sansadhan Vikas Evam Nirman Nigam (2002-03)**

- Inventories included ₹ 2.11 crore unserviceable materials for which provision of obsolete material should have been made. This has resulted in overstatement of material and understatement of deficit by ₹ 2.11 crore.

**5.1.35** The Statutory Auditors (Chartered Accountants) are required to furnish a detailed report upon various aspects including internal control/internal audit systems in the companies audited in accordance with the directions issued by the CAG to them under Section 619(3) (a) of the Companies Act, 1956 and to identify areas which needed improvement. An illustrative resume of major comments made by the Statutory Auditors on possible improvement in the internal audit/internal control system in respect of seven Companies, for the year 2009-10 are given below.

| Sl. No. | Nature of comments made by Statutory Auditors | Number of companies where recommendations were made | Reference to serial number of the companies as per *Appendix 5.2* |
|---|---|---|---|
| 1. | Non-fixation of minimum/ maximum limits of store and spares | 3 | A 14, 15 & 16 |
| 2. | Absence of internal audit system commensurate with the nature and size of business of the company | 4 | A 1, 12, 15 & 17 |
| 3. | Non maintenance of cost record | 2 | A 12 & 16 |
| 4. | Non maintenance of proper records showing full particulars including quantitative details, situations, identity number, date of acquisitions, depreciated value of fixed assets and their locations | 4 | A 12, 13, 16 & 18 |
| 5 | Lack of internal control over sale of Power | 1 | A14 |

## Status of placement of Separate Audit Reports

**5.1.36** The following table shows the status of placement of various Separate Audit Reports (SARs) issued by the CAG on the accounts of Statutory corporations in the Legislature by the Government.

| Sl. No. | Name of Statutory corporation | Year up to which SARs placed in Legislature | Year for which SARs not placed in Legislature | | |
|---|---|---|---|---|---|
| | | | Year of SAR | Date of issue to the Government | Reasons for delay in placement in Legislature |
| 1. | Uttarakhand Parivahan Nigam | 2004-05 | 2005-06 | 17 July 2009 | Accounts are under printing |
| 2. | Uttarakhand Peyjal Sansadhan Vikas Evam Nirman Nigam | - | 2002-03 | 22 January 2010 | -do- |

Delay in placement of SARs weakens the legislative control over Statutory corporations and dilutes the latter's financial accountability. The Government should ensure prompt placement of SARs in the legislature(s).

## Disinvestment, Privatisation and Restructuring of PSUs

**5.1.37** The State Government had no plan of disinvestment, privatisation or restructuring of any of the PSUs.

## Reforms in Power Sector

**5.1.38** The State has Uttarakhand Electricity Regulatory Commission (UERC) formed in September 2002 under Section 17 of the Electricity Regulatory Commission Act 1998 with the objective of rationalisation of electricity tariff, advising in matters relating to electricity generation, transmission and distribution in the State and issue of licences. During 2009-10, two orders were issued by UERC on annual revenue requirements and nine on other matters.

# PERFORMANCE REVIEW RELATING TO A GOVERNMENT COMPANY

## 5.2 UTTARAKHAND JAL VIDYUT NIGAM LIMITED- POWER GENERATING ACTIVITIES

### *Executive summary*

*Power is an essential requirement for all facets of life and has been recognized as a basic requirement. In Uttarakhand, generation of power is managed by Uttarakhand Jal Vidyut Nigam Ltd (Company). As on 31 March 2010, Company has 13 large hydro generation stations and 21 small hydro generation stations with installed capacity of 1,284.85 MW and 21.05 MW respectively.*

***Capacity Addition***

*Though 720 MW of capacity was planned to be added by Company during the five year ending March 2010, the actual addition was only 306 MW leaving a deficit of 414 MW. The State was not in a position to meet the demand as the power generated as well as power purchase fell short to the extent of 106.73 MUs to ,1433.24 MUs during 2006-07 to 2009-10.*

***Project Management***

*MB-II (304 MW) LHP which got commissioned during review period, was scheduled to be completed by October 2005 involving a cost of ₹ 1,249.18 crore but the project was completed in February 2008 at a cost of ₹ 2,323.33 crore. Thus, time overrun of around two year and four months led to cost overrun of ₹,1074.15 crore.*

*Due to deficient preparation of DPR of Asiganga-II SHP, there was time over run of over four years.*

***Contract Management***

*The Company failed to recover liquidated damages of ₹ 18.40 crore being the penalty for the delay in execution of civil works of the projects.*

*Interest free mobilisation advances of ₹ 31.83 crore were given to contractors in violation of principal agreements involved in construction of MB-II project which resulted in loss of interest of ₹ 5.92 crore to the company.*

***Manpower Management***

*The Company was able to contain its surplus manpower from 976 in 2005-06 to 141 in 2009-10.*

***Plant Load Factor***

*Plant Load Factor of the company remained higher than national average during review period excepting 2009-10.*

***Outages***

*The total number of hours lost due to planned outages increased from 46,226 hours in 2005-06 to 57,890 hours in 2009-10 i.e. from 14.66 per cent to 16.52 per cent of the total available hours in respective years due to increase in days involved in maintenance schedule. The forced outages remained less than the norm of 10 per cent fixed by CEA in all the five years and were indicative of proper preventive maintenance.*

*Company incurred avoidable expenditure of ₹ 10 crore on removal of accumulated silt and also suffered a generation loss of ₹ 43.04 crore due to negligence and incautious approach in operation of Joshiyara Barrage for Maneri Bhali-II hydro electric project during August 2008.*

***Renovation & Modernization***

*Inordinate delay in taking up R & M work in respect of Pathri hydro power plant resulted in cost overrun of ₹ 11.58 crore.*

***Operation & Maintenance***

*The O & M expenses amounting to ₹ 74.79 crore were disallowed by the UERC, which was incurred over and above the norms of UERC during the period 2006-07 to 2009-10.*

***Tariff Fixation***

*The UERC sets performance targets for each year of the Control Period for the parameters that are deemed to be "controllable" any financial loss on account of underperformance on targets for parameters is not recoverable through tariff. Company suffered a loss of ₹ 545 crore during 2006-07 to 2009-10 due to underperformance against the parameters fixed by the UERC.*

***Environmental Issues***

*Company did not take any initiative for registration of its ten power stations having installed capacity of 313.70 MW which commenced operation after 1st January 2000 and generated the electricity 2,455.99 MU, under Clean Development Mechanism for sale of Certified Emission Reduction. Consequently company was deprived to obtain the revenue against the saving of 24,24,062.13 tonne $CO_2$.*

***Conclusion and Recommendation***

*The Company failed to meet the growth in peak demand due to delay in planning and implementation of capacity addition programmes. The existing generating units were ageing and there were abnormal delays in taking up/execution of the renovation and modernisation works of these units. The Company has consistently not been able to achieve the performance parameters and targets set by UERC, which led to disallowance of expenses of ₹ 545 crore which could not be realised through tariff and in turn affected the financial health of the company. The review contains seven recommendations which include intensification of its capacity addition programmes by exploring all resources of energy, improve plant load factor and capacity utilization, achieve the performance parameters set by the UERC, carry out R/M activities as per schedule and incorporate an interest bearing clause for mobilization advance in construction agreements*

## Introduction

**5.2.1.** Power is an essential requirement for all facets of life and has been recognized as a basic human need. The availability of reliable and quality power at competitive rates is very crucial to sustain growth of all sectors of the economy. The Electricity Act 2003 provides a framework conducive to development of the Power Sector, promote transparency and competition and protect the interest of the consumers. In compliance with Section 3 of the Act, the Government of India (GOI) prepared the National Electricity Policy (NEP) in February 2005 in consultation with the State Governments and Central Electricity Authority (CEA) for development of the Power Sector based on optimal utilisation of resources like coal, gas, nuclear material, hydro and renewable sources of energy. The Policy aims at, *inter alia*, laying guidelines for accelerated development of the Power Sector. It also requires CEA to frame National Electricity Plan once in five years. The Plan would be short term framework of five years and give a 15 years' perspective.

During the year 2005-06, electricity requirement in Uttarakhand was assessed as 5,157 Million Units (MU) of which 5,426 MU were available with surplus of 269 MU. The total installed power generation capacity in the State of Uttarakhand was 1,123.50 Mega Watt (MW), of which 999.90 MW pertained to the Company. The effective available capacity of the Company was 405.90[7] MW against the peak demand of 825 MW. As of March 2010, the comparative figures of requirement and availability of electricity were 8,936 MU and 7,503 MU with a shortfall of 1,433 MU. There was a growth in demand of 3,779 MU during review period and capacity addition in the state was 2,041.25 MW of which 306 MW was added by

[7] Worked out on the basis of PLF.

the company. However, despite adequate available capacity, the demand could not be met owing to under utilization (36.07 *per cent*) of available capacity, resulting into deficit of 5,160.64 MU.

In Uttarakhand, generation of power is carried out by Uttarakhand Jal Vidyut Nigam Ltd. (Company), which was incorporated on 12th February 2001 under the Companies Act 1956 as a wholly owned Company of Government of Uttarakhand. It came into being under UP Electricity Reform Act 1999 and UP State Electricity Reform Transfer Scheme 2000, under the administrative control of the Power Department of the Government of Uttarakhand. The Management of the Company is vested with a Board of Directors comprising a Chairman, a Managing Director, two whole time Directors and eight part time Directors appointed by the State Government. The day-to-day operations are carried out by the Managing Director, who is the Chief Executive of the Company with the assistance of whole time Directors and General Managers. The Company has 13 large hydro generation stations and 21 small hydro generation stations with the installed capacity of 1,284.85 MW and 21.05 MW respectively. The turnover of the Company was ₹ 504.32 crore in 2009-2010, which was equal to 29.27 *per cent* and 1.08 *per cent* of the State PSUs turnover (₹ 1,722.95 crore) and State Gross Domestic Product (₹ 46,872 crore), respectively. It employed 2,479 employees as on 31 March 2010.

## Scope and Methodology of Audit

**5.2.2** The present review conducted during February 2010 to July 2010 covers the performance of the Company during the period 2005-06 to 2009-10. The review mainly deals with Planning, Project Management, Financial Management, Operational Performance, Environmental Issues and Monitoring by Top Management. The audit examination involved scrutiny of records at the Head Office, GM office of Small Hydro Projects (SHPs) and four out of 13 large hydro generating stations. Out of the total installed capacity of 1,305.90 MW, four large hydro generating stations (*viz* Maneri Bhali-II- 304 MW, Chibro- 240 MW, Chilla -144 MW and Khodri -120 MW aggregating to 808 MW which is 61.87 *per cent* of the total installed capacity) had been selected for audit examination.

The methodology adopted for attaining the audit objectives with reference to audit criteria consisted of explaining audit objectives to top managements, 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, discussion of audit findings with the Management and requesting comments of Management on draft review.

## Audit Objectives

The objectives of the performance audit were:

### 5.2.3 Planning and Project Management

- To assess whether capacity addition programme taken up/to be taken up to meet the shortage of power in the State is in line with the National Policy of Power for All by 2012;
- To assess whether a plan of action is in place for optimization of generation from the existing capacity;
- To ascertain whether the contracts were awarded with due regard to economy and in transparent manner;
- To ascertain whether the execution of projects were managed economically, effectively and efficiently;and
- To ascertain whether hydro projects were planned and formulated after taking into consideration the optimum design to get the maximum power, dam design and safety aspects.

### 5.2.4 Financial Management

- To assess the soundness of financial health of the Company; and
- To assess whether all claims including energy bills and subsidy claims were properly raised and recovered in an efficient manner.

### 5.2.5 Operational Performance

- To assess whether the power plants operated efficiently and preventive maintenance as prescribed was carried out minimising the forced outages;
- To assess whether the manpower requirement was realistic and its utilisation optimal;
- To assess whether the life extension (renovation and modernization) programme were ascertained and carried out in an economic, effective and efficient manner; and
- To assess the impact of R&M activity on the operating performance of the Unit.

### 5.2.6 Environmental Issues

- To assess whether environment management system required to meet the environmental obligations has been formulated and adhered to.
- To assess whether environmental audit reports were submitted to the Pollution Control Board and scrutinized by the environmental auditor.
- To assess whether green belt for pollution control by planting more plantation had been created.

- To assess whether hydro electric projects have been registered under Clean Development Mechanism (CDM)

### 5.2.7 Monitoring and Evaluation by Top management

- To ascertain whether adequate MIS existed in the entity to monitor and assess the impact and utilize the feedback for preparation of future schemes.

## Audit Criteria

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

- National Electricity Plan, norms/guidelines of Central Electricity Authority (CEA) regarding planning and implementation of the projects;
- Standard procedures for award of contract with reference to principles of economy, efficiency and effectiveness;
- Targets fixed for generation of power ;
- Parameters fixed for plant availability, Plant Load Factor (PLF) etc;
- Performers of best achievers in the regions/all India averages;
- Prescribed norms for planned outages; and
- Acts relating to Environmental laws.

## Financial Position and Working Results

**5.2.9** The financial position of the Company for the five years ending 2009-10 is given below:

*(₹ in crore)*

| Particulars | 2005-06 | 2006-07 | 2007-08 | 2008-09 | 2009-10 |
|---|---|---|---|---|---|
| **A. Liabilities** | | | | | |
| Paid up Capital | 370.1 | 469.57 | 659.98 | 712.31 | 788.69 |
| Reserve & Surplus (including Capital Grants but excluding Depreciation Reserve) | 777.92 | 824.26 | 745.51 | 762.76 | 842.88 |
| **Borrowings (Loan Funds)** | | | | | |
| Secured | - | - | - | - | - |
| Unsecured | 855.47 | 1103.3 | 1,388.73 | 1,373.21 | 1,355.43 |
| Current Liabilities & Provisions[8] | 221.18 | 204.45 | 370.01 | 438.03 | 441.13 |
| **Total** | **2,224.67** | **2,601.58** | **3,164.23** | **3,286.31** | **3,428.13** |
| **B. Assets** | | | | | |
| Gross Block | 748.49 | 772.47 | 2,549.2 | 2,561.78 | 2,576.78 |
| Less: Depreciation | 528.19 | 540.95 | 550.91 | 619.58 | 704.52 |

[8] Current liabilities & Provisions includes deferred tax liability.

| | | | | | |
|---|---|---|---|---|---|
| Net Fixed Assets | 220.3 | 231.52 | 1,998.29 | 1,942.2 | 1,872.26 |
| Capital works-in-progress | 1,417.02 | 1,801.77 | 394.74 | 409.82 | 424.82 |
| Investments | | | | | |
| Current Assets, Loans and Advances[9] | 587.35 | 568.29 | 771.20 | 934.29 | 1,131.05 |
| Accumulated losses | - | - | - | - | - |
| **Total** | **2,224.67** | **2,601.58** | **3,164.23** | **3,286.31** | **3,428.13** |
| **Debts Equity Ratio** | **1:1.33** | **1:1.17** | **1:1** | **1:1.08** | **1:1.22** |

*(Source: Information compiled from the balance sheet &the data available with the Company)*

The accounts of the company for the years 2008-09 and 2009-10 were in arrear. Therefore, the figures shown in the above table for the period from 2008-09 and 2009-10 are provisional.

It may be seen from the above table that unsecured loan increased from ₹ 855.47 crore to ₹ 1,355.43 crore during review period. Debt Equity Ratio of the company deteriorated from 1:1.33 to 1:1.22 during this period.

We observed the followings:

- Unsecured loans increased by ₹ 499.96 crore as the company could not recover its dues of ₹ 502 crore from debtors.
- Gross block increased from ₹ 748.49 crore in 2005-06 to ₹ 2,549.20 crore in 2007-08 due to commissioning of Maneri Bhali –II hydro project.
- Current assets, loan & advances increased by ₹ 543.70 crore due to increase in short term deposits (FDs), Sundry Debtors and advances.
- The debts equity ratio remained in good position and publicized the soundness of the company.

The details of working results like cost of generation of electricity, revenue realisation, net surplus/loss and earnings and cost per unit of operation are given below:

*(₹ in crore)*

| Sl. No | Description | 2005-06 | 2006-07 | 2007-08 | 2008-09 | 2009-10 |
|---|---|---|---|---|---|---|
| **1.** | **Income** | | | | | |
| | Generation Revenue | 138.2 | 113.48 | 276.19 | 454.45 | 504.32 |
| | Other income including interest/subsidy | 7.34 | 15.63 | 6.35 | 22.42 | 20.00 |
| | ***Total Income*** | ***145.54*** | ***129.11*** | ***282.54*** | ***476.87*** | ***524.32*** |
| **2.** | **Generation** | | | | | |
| | Total generation (In MUs) | 3,543.86 | 3,316.15 | 3,603.17 | 4,613.23 | 4,126.54 |
| | Less: Auxiliary consumption (In MUs) | 9.28 | 14.22 | 9.25 | 12.55 | 12.07 |
| | **Total generation available for Transmission and Distribution (In MUs)** | **3,534.58** | **3,301.93** | **3,593.92** | **4,600.68** | **4,114.47** |

[9] Current Assets, Loans & Advances includes Misc. Expenses(to the extent not written off).

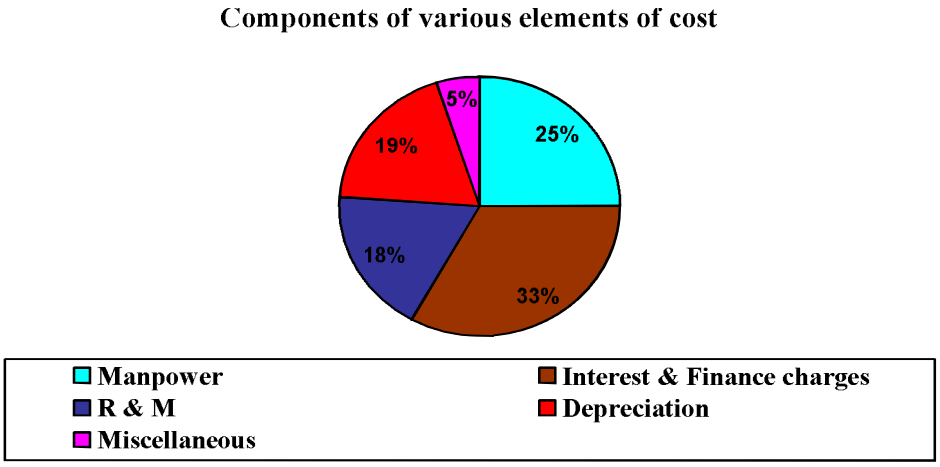
| | | | | | | |
|---|---|---|---|---|---|---|
| **3.** | **Expenditure** | | | | | |
| **(a)** | **Fixed cost** | | | | | |
| (i) | Employees cost | 54.66 | 76.73 | 64.69 | 99.57 | 109.06 |
| (ii) | Administrative and General expenses | 10.54 | 13.07 | 9.54 | 14.47 | 20.40 |
| (iii) | Depreciation | 10.35 | 10.45 | 10.14 | 66.11 | 84.94 |
| (iv) | Interest and finance charges | 8.63 | 8.29 | 15.51 | 169.08 | 148.13 |
| | **Total fixed cost** | **84.18** | **108.54** | **99.89** | **349.23** | **362.53** |
| **(b)** | **Variable cost** | | | | | |
| (i) | Lubricants and consumables | 0.81 | 0.68 | 1.29 | 1.24 | 2.82 |
| (ii) | Depreciation and maintenance | 27.33 | 33.85 | 39.94 | 54.90 | 78.85 |
| | **Total variable cost** | **28.14** | **34.53** | **41.23** | **56.14** | **81.67** |
| **(c)** | **Total cost 3(a) + (b)** | **112.32** | **143.07** | **141.12** | **405.37** | **444.20** |
| 4. | Realisation (per unit) | 0.39 | 0.34 | 0.80 | 1.00 | 1.13 |
| 5. | Fixed cost (per unit) | 0.24 | 0.33 | 0.29 | 0.77 | 0.82 |
| 6. | Variable cost (per unit) | 0.08 | 0.10 | 0.12 | 0.12 | 0.18 |
| 7. | Total cost per unit (5+6) | 0.32 | 0.43 | 0.41 | 0.89 | 1.00 |
| 8. | Contribution (4-6) (per unit) | 0.31 | 0.24 | 0.68 | 0.87 | 0.95 |
| **9.** | **Profit (+)/Loss(-) (4-7)** | **0.07** | **-0.09** | **0.39** | **0.11** | **0.13** |

*(Source: Information compiled from the data available with the Company)*

It would be seen from the above that the total cost per unit increased from ₹ 0.32 to ₹ 1 from 2005-06 to 2009-10.Correspondingly, realization per unit also increased from ₹ 0.39 to ₹ 1.13 during the same period. The employee cost of the company increased by ₹ 54.40 crore during review period mainly due to implementation of the Sixth Pay Commission report during 2008-09. Interest & finance charges of the company increased exponentially by ₹ 139.50 crore during review period due to interest paid against PFC loans. However, the resultant effect, in terms of profit/loss witnessed fluctuations; the company registered highest profit of 39 paise per unit, during 2007-08. For the ensuing years, though the company was able to derive profit per unit, it went down substantially to 13 paise per unit during 2009-10.

### *5.2.10 Elements of cost*

Interest & Finance Charges and employee cost constitute the major elements of costs. The percentage break-up of costs for 2009-10 is given below in the pie-chart:

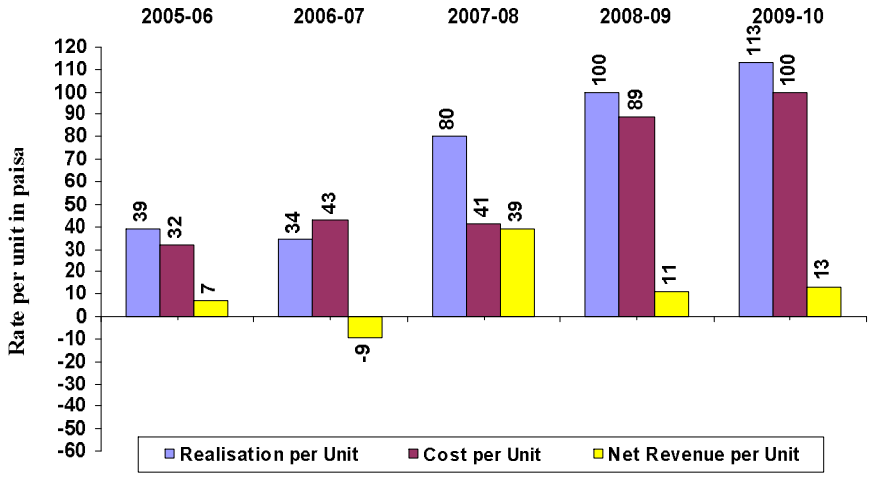



### *5.2.11 Elements of revenue*

Sale of Power constituted 99 *per cent* of the total elements of revenue.

### *5.2.12 Recovery of cost of operations*

The recovery position of cost of operations of the Company during the last five years ending 2009-10, the net revenue showed a fluctuating trend as given in the graph below:




The total revenue earned by Company was sufficient to cover the cost and an additional amount of ₹ 240.56 crore was available with the Company for capacity addition/life extension programmes during review period. The main reason for low cost of generation was negligible cost of input as entire power generation was based on hydro resources.

## Audit Findings

**5.2.13** Audit explained the audit objectives to the Company during an 'entry conference' held in February 2010. Subsequently, audit findings were reported to the Company and the State Government in July 2010 and discussed in an 'exit conference' held in November 2010, which was attended by Managing Director, Director (Project), Director (Operation), Director (Finance) and General Manager (SHP) of the Company. The Company/Government have not furnished the replies to the audit findings separately. However, the views expressed by them in exit conference have been considered while finalising this review. The audit findings are discussed below:

## Operational Performance

**5.2.14** The operational performance of the Company for the five years ending 2009-10 is given in ***Appendix 5.5***. The operational performance of the Company was evaluated on various operational parameters as described below. It was also seen whether the Company was able to maintain pace in terms of capacity addition with the growing demand for power in the State. Audit findings in this regard are discussed in the subsequent paragraphs. These audit findings show that the losses were controllable and there was scope for improvement in performance.

## Planning

**5.2.15** National Electricity Policy aims to provide over 1,000 units of per capita electricity by 2012, for which it was estimated that need based capacity addition of more than 1, 00,000 MW would be required during 2002-2012 in the country. The Government has laid emphasis on the full development of hydro potential being cheaper source of energy as compared to thermal. The Central Government would support the State Government for expeditious development of hydro power projects by offering the services of Central Public Sector Undertakings like NHPC, NTPC and NEEPCO. Besides, environmental concerns would have to be suitably addressed through appropriate advance actions. The power availability scenario in the state indicating own generation, purchase of power, peak demand and net deficit was as under:

During the period 2005-10, the actual generation by the Company was substantially less than the peak as well as average demand as shown below:

| Year | Generation (MW) | Peak Demand (MW) | Average Demand (MW) | Percentage of actual generation to Peak Demand | Percentage of actual generation to Average Demand |
|---|---|---|---|---|---|
| 2005-06 | 405 | 825 | 589 | 49.04 | 68.68 |
| 2006-07 | 379 | 948 | 677 | 39.93 | 55.92 |
| 2007-08 | 403 | 1,199 | 805 | 33.57 | 50.00 |
| 2008-09 | 527 | 1,251 | 896 | 42.10 | 58.77 |
| 2009-10 | 471 | 1,339 | 1,009 | 35.18 | 46.68 |

*(Source: Information compiled from the data of the Distribution Company)*

As may be seen from the above, the actual generation could meet average demand to the extent of 68.68 *per cent* in 2005-06 which was lowered up to 46.68 *per cent* in 2009-10. Similarly peak demand was met to the extent of 49.04 *per cent* in 2005-06 and was reduced to 35.18 *per cent* in 2009-10. Therefore, the gap increased substantially during review period.

However, the total supply even after import was not sufficient to meet the peak demand during 2005-06, 2006-07 and 2009-10, as shown below:

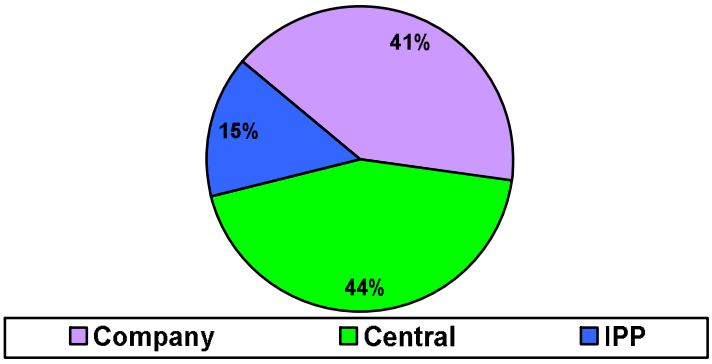
| Year | Peak Demand (MW) | Peak Demand met (MW) | Sources of meeting peak demand | | | | | Shortfall in peak demand (MW) | Peak Deficit (percentage of Peak Demand) |
|---|---|---|---|---|---|---|---|---|---|
| | | | Own | Central Share | Overdraw | Banking | Purchase | | |
| 2005-06 | 825 | 803 | 525 | 278 | - | - | - | 22 | 2.66 |
| 2006-07 | 948 | 903 | 560 | 343 | - | - | - | 45 | 4.74 |
| 2007-08 | 1,199 | 1,199 | 576 | 477 | 76 | 70 | - | - | - |
| 2008-09 | 1,251 | 1,251 | 672 | 482 | 97 | - | - | - | - |
| 2009-10 | 1,339 | 1,159 | 373 | 593 | 74 | 75 | 44 | 180 | 13.44 |

*(Source: Information compiled from the data of the Distribution Company)*

There remained a shortfall of 180 MW (about 13.44 *per cent* of the peak demand) even after import during 2009-10. Consequently, rotational load shedding was enforced.

### *5.2.16 Capacity Additions*

The State had total installed capacity of 1,123.50 MW[10] at the beginning of 2005-06 and increased to 3,164.75 MW[11] at the end of 2009-10.The break up of generating capacities, as on 31 March 2010, under Company, Central Government and IPP is shown in the pie chart below:




To meet the deficit of 5,160.64 MUs in the State as at the end of 2009-10, a capacity addition of about 589.12 MW was required during 2005-06 to 2009-10. According to NEP, capacity addition of 919 MW for the projects categorised as 'Projects under Construction' (PUC) and 2,041.25 MW for the

[10] Central Government 120 MW, Company 999.90 MW and IPP 3.60 MW.
[11] Central Government 1400MW, Company 1,305.90 MW and IPP 458.85 MW.

'Committed Projects[12] (CP) were earmarked during review period; all of which were based on hydro resources.

The two projects namely Pala Maneri (480 MW), which was under construction and Bharoghati (381 MW), which was a committed project, had been suspended (2008-09) due to environmental concerns. The expenditure incurred on the Pala Maneri project was ₹ 95.26 crore till the deferment.

The particulars of capacity additions envisaged, actual additions and peak demand *vis-a-vis* energy supplied during review period are given below.

| Sl.No | Description | 2005-06 | 2006-07 | 2007-08 | 2008-09 | 2009-10 | Total |
|---|---|---|---|---|---|---|---|
| 1. | Capacity at the beginning of the year (MW) | 1,123.50 | 1,408.45 | 2,809.25 | 3,123.05 | 3,124.25 | - |
| 2. | Additions Planned for the year as per National Electricity Plan (MW) | - | 704 | - | - | - | - |
| 3. | Additions planned by the Company (MW) | 304 | - | - | - | 416 | - |
| 4. | Additions planned by the State (MW) | 684.95 | 1005 | 4.80 | 156.50 | 20.20 | 1,871.45 |
| 5. | Actual Additions (MW) | 284.95 | 1,400.80 | 313.80 | 1.20 | 40.50 | 2,041.25 |
| 6. | Capacity at the end of the year (MW) (1 + 5) | 1,408.45 | 2,809.25 | 3,123.05 | 3,124.25 | 3,164.75 | - |
| **7.** | **Shortfall in capacity addition (MW) (5 – 4)** | **-400** | **-** | **-** | **-155.30** | **-** | **-** |
| 8. | Demand during the year (MUs) | 5,157 | 5,997 | 7,049 | 7,847 | 8,936 | - |
| 9. | Energy supplied (MUs) | | | | | | |
| | a) Energy produced | 3,166.34 | 3,106.63 | 3,255.38 | 4,254.01 | 3,775.36 | - |
| | b) Central Share | 2,259.28 | 2,260.69 | 3,393.09 | 3,486.26 | 3,613.57 | |
| | c) energy purchased | - | - | - | - | 113.83 | - |
| 10. | Shortfall in meeting demand (MUs) | - | -629.68 | -400.53 | -106.73 | 1,433.24 | |

*(Source: Information compiled from the data available with the Company and Distribution Company)*

We observed from the above table that during review period actual capacity addition was 2,041.25 MW against 1,871.45 MW planned by the State; major part

[12] National Electricity Plan defines Committed Projects as Projects for which the formal approval to take up the same has been granted by the CEA.

of this achievement came from the Central Government (1,280 MW) followed by IPP (455.25 MW). The Company's contribution was only 306 MW as against planned addition of 720 MW. The particulars of the capacity as on 1 April 2005, additions during review period and capacity at the end of 2009-10 are given below:

| Sl.No | Description | Installed capacity as on 1.4.2005 | Additions | Installed capacity at the end of 2009-10 |
|---|---|---|---|---|
| | | (In MW) | | |
| 1. | Company | 999.90 | 306.00 | 1,305.90 |
| 2 | Central Share | 120.00 | 1,280.00 | 1,400.00 |
| 3. | IPP | 3.60 | 455.25 | 458.85 |
| **Total** | | **1,123.50** | **2,041.25** | **3,164.75** |

Despite maintaining pace with the demand in terms of capacity addition, the State was not in a position to meet the demand as the power generated as well as power purchased fell short during review period excepting 2005-06. The State met the demand partially through receipt of 15,012.89 MU from Central share during review period. Only 113.83 MU was purchased during 2009-10 for meeting the demand and shortfall remained to the extent of 1,433.24 MW.

The major reasons for the gap between demand and availability of power were:

- Insufficient capacity addition by the Company;
- Due to heavy dependence on water availability, power projects remained under utilised for almost two thirds part of a year, resulting into low generation;
- Delay in commissioning of Green side projects[13]; and
- Low Plant Load Factor as discussed in **paragraph 5.2.32**

### *5.2.17 Optimum Utilisation of existing facilities*

In order to cope with the rising demand for power, not only the additional capacity need to be created as discussed above, the plan needs to be in place for optimal utilisation of existing facilities and also undertaking life extension programme/replacement of the existing facilities which are near completion of their age besides timely repair/maintenance. The details of the power generating units, which fell due for Renovation and Modernisation/Life extension programmes (as per CEA norms) during the five years ending 2009-2010 *vis-à-vis* actually taken are indicated in the Table below:

[13] Environmental friendly Projects which are under construction.

| Sl. No. | Name of the Plant | No. of Units due for Renovation and Modernisation /LEP | Installed Capacity (MW) | Due date of completion of Renovation (as per CEA norms) | Date when actual renovation taken up | Date when actually completed/ expected to be completed |
|---|---|---|---|---|---|---|
| 1. | Chibro | 4 | 240 | March 07 | 2003-04 | May 07 |
| 2. | Khodri | 4 | 120 | March 07 | 2003-04 | April 09 |
| 3. | Chilla | 4 | 144 | March 07 | 2003-04 | April 09 |
| 4. | Khatima | 3 | 41.40 | March 10 | Not yet taken up | - |
| 5. | Pathri | 3 | 20.40 | March 10 | Agreement entered on March 10, but work was not started | March 13 |
| 6. | Ramganga | 3 | 198 | March 10 | Not yet taken up | - |

*(Source: Information compiled from the data available with the Company)*

From the above, it may be seen that the 12 units of Chibro, Khodri and Chilla due for being taken up for Renovation and Modernisation/Life extension programmes in 2002-2007 were actually taken up (2003-04) under 10th Plan period, but only 68 to 97 *per cent* work could be completed and remaining work spilled over to 11th Plan period. It was also noticed that nine units of Khatima, Pathri and Ramganga power plants were due for renovation, modernisation and life extension programme by March 2010 ( under 11th plan) but the same could not be taken up (March 2010). Besides, the facilities which fell due during the past five years, audit examination of the existing facilities which are ageing and may need replacement/ refurbishment within the next five years revealed that out of 13 Large Hydro Projects (LHP), the Company had planned for R&M of only six LHPs. There were four[14] other LHPs, which were more than 35 years old, essentially requiring R&M, for which the Company had no plans for the near future.

## Project Management

**5.2.18** Preparation of an accurate and realistic Draft Project Report (DPR) after a detailed feasibility study, considering factors like creation of infrastructure facility, addressing bottlenecks likely to be encountered in various stages of project planning are critical activities in planning stage of the project.

Project management includes timely acquisition of land, effective actions to resolve bottlenecks, obtain necessary clearances from Ministry of Forest and Environment and other authorities, rehabilitation of displaced families, proper scheduling of various activities using PERT/ CPM technique, adequate budget provisions, etc. Notwithstanding, time and cost over runs and other deficiencies

[14] Dhakrani (1965), Dhalipur (1965), Kulhal ( 1975) and Mohd.pur (1952).

were noticed throughout the implementation of the projects during review period as discussed in succeeding paragraphs.

### *5.2.19 Time and Cost Overruns*

The following table indicates the scheduled and actual dates of completion of the power stations, date of start of transmission, date of commissioning of power stations and the time overrun.

**Time overrun**

***(In months)***

| Sl No. | Phase-wise name of the Unit | Details | As per DPR | Actual date of completion | Time overrun |
|---|---|---|---|---|---|
| 1. | Maneri Bhali-II Unit 1 | Date of completion of unit | October 2005 | 17.2.08 | 27 months |
| | | Date of start of transmission | | 17.2.08 | 27 months |
| | | Date of commercial operation/ commissioning of unit | | 15.3.08 | 28 months |
| 2. | Unit -2 | Date of completion of unit | November 2005 | 10.3.08 | 27 months |
| | | Date of start of transmission | | 10.3.08 | 27 months |
| | | Date of commercial operation/ commissioning of unit | | 15.3.08 | 27months |
| 3. | Unit-3 | Date of completion of unit | December 2005 | 23.2.08 | 25 months |
| | | Date of start of transmission | | 23.2.08 | 25 months |
| | | Date of commercial operation/ commissioning of unit | | 15.3.08 | 26 months |
| 4. | Unit 4 | Date of completion of unit | January 2006 | 16.2.2008 | 24 months |
| | | Date of start of transmission | | 16.2.2008 | 24 months |
| | | Date of commercial operation/ commissioning of unit | | 15.3.2008 | 25 months |

*(Source: Information compiled from the data available with the Company)*

It would be seen from above that the units of Maneri Bhali-II (304 MW) LHP got commissioned during review period after time overrun of 28 months to 24 months. The slippages in time schedule were avoidable at various stages of implementation, as discussed below:

***5.2.20*** The development of the project was initiated in 1984; erstwhile Government of Uttar Pradesh (GoUP) awarded contracts for civil works to four agencies. The construction work came to standstill in 1991-92 due to paucity of funds. After formation of the State of Uttarakhand in November 2000 and the Company in February 2001, it was decided (November 2001) to complete the left over works of the aforesaid project. For civil works, Department of Irrigation (DoI) was nominated as the executing agency. Accordingly, DoI of the GOU entered into supplementary agreements (July 2002) with the four construction agencies, who were initially employed by the GoUP. As per the terms of the

agreements, project was scheduled to be completed by October 2005 at a cost of ₹ 1,249.18 crore.

Scrutiny of the records revealed that as the project could not be completed within scheduled time and the cost of the project was revised (December 2005) to ₹ 1,714.41 crore with extended target date of November 2006. However, the project work could not be concluded in this extended period as well and the cost escalated to ₹ 2,131.01 crore with the deadline of March 2007. However, the Company failed to adhere even to the amended targets and the project work was finally completed in February 2008 at a cost of ₹ 2,323.33 crore. The reasons analysed by us were as under:

- In order to complete the left over civil work, it was decided (February 2001) by GOU to complete these work through DoI but the works were awarded in June 2002 by DoI. Thus, there was a delay of one year and four months in awarding of civil works.
- Due to poor control/monitoring by the company the works were delayed by one year and three months.
- Change in scope of work.

***Delay in execution of project led to extra expenditure of ₹ 1,074.15 crore and time overrun of over two years***

Thus, time overrun of around two and half years led to cost overrun of ₹ 1,074.15 crore (85.9 *per cent*), adding to the cost of generation from the envisaged 30 paise to 55 paise per unit and from ₹ 4.11 crore per MW in 2005-06 to ₹ 7.64 crore per MW in 2007-08.

**5.2.21** Jummagad Project, having installed capacity of 1.2 MW was approved in February 1993 by erstwhile GoUP. The initial estimated cost of the project was ₹ 3.12 crore and it was to be completed by 31 March 1995. The construction of Jummagad project was executed by Steel Industrial Kerala Ltd (SIKL). As per terms of contract, project was to be commissioned by January 1994. However, the contractor could not complete the project in stipulated period and work was continued till February, 2001. Thereafter, the project was transferred to the Company. But no action was taken either by the contractor or by the Company till January 2006. The notice for rescinding the contract was issued to the contractor in February 2006 and tenders were re floated to complete the balance works. The work was awarded (December 2006) to M/s Alps Power Technology Pvt. Ltd. As per terms of the contract, balance works were to be completed and project was to be commissioned within three months from the date of commencement. However, the project was completed only in May 2008 at a cost of ₹ 7.50 crore, registering a cost escalation of 140 *per cent,* however Power Generation from the Project could not be commissioned till March 2010 for want of 11KV grid supply. This resulted in a generation loss of 8.4 MU (0.4 MU each month) amounting to ₹ 2.35 crore at the rate of ₹ 2.80 per unit. Thus delay of five year in completion of project is attributed to the company.

The cost overruns are tabulated below:

**Cost Overrun**

*(₹ in crore)*

| Phase-wise name of the Unit | Estimated/ Amended cost as per DPR | Actual expenditure as on completion | Expenditure over and above estimate (3 – 2) | Percentage increase as compared to cost |
|---|---|---|---|---|
| (1) | (2) | (3) | (4) | (5) |
| Maneri Bhali (MB-II) | 1,249.18 | 2,323.33 | 1,074.15 | 85.99 |
| Jummagad | 3.12 | 7.50 | 4.38 | 140.38 |

*(Source: Information compiled from the data of the Company)*

### 5.2.22 *Non-adherence to the time schedule*

Government of India (GOI) introduced (March 2003) '*Accelerated Generation & Supply Programme (AG & SP) Interest Subsidy Scheme'* for hydro-electric projects with the aim to reduce the gap between costs incurred per unit and revenue realised per unit. The scheme was applicable on the projects to be developed and commissioned in the 10th Plan period. As a condition, it was stipulated that if the projects slip in their completion schedule, the entire amount of interest subsidy along with interest thereon will have to be refunded by the Hydro Power Generating Company.

***Company suffered a loss of ₹ 74.66 crore due to non-adherence to the given schedule.***

In Uttarakhand, MB – II was included under this scheme, scheduled to be completed in the 10th Plan period (2002-07). Accordingly, GoI granted subsidy of ₹ 63.50 crore on loan taken from Power Finance Corporation, for development of the aforesaid project. However, as the project could not be completed even by the end of the 10$^{th}$ Plan period, the entire subsidy amount of ₹ 63.50 crore along with interest of ₹ 11.16 crore was recovered (August 2009) by GOI. Thus, due to non-adherence to the given time schedule, the Company suffered loss of ₹ 74.66 crore, defeating the purpose of the scheme.

## Ongoing Projects

### *5.2.23 Delay in execution of the project due to incorrect input data*

In order to develop a small hydro project (SHP) at Madhyamaheshwar Ganga, a DPR was got prepared (August 2005) from Indian Institute of Technology (IIT), Roorkee. Based on the discharge data furnished by the Company, DPR proposed the potential of the project at 10 MW. The contract to build the project was awarded (November 2007) involving a financial implication of ₹ 49.10 crore. Further, an interest free mobilisation advance of ₹ 4.73 crore was given (February 2008) to the contractor and the project was expected to be completed within 24 months, i.e., by February 2010.

However, based on the water discharge data collected from Central Water Commission (CWC) for five years, the contractor proposed augmentation of the project capacity by 50 *per cent*, from 10 to 15 MW, with a revised estimate of ₹ 76.50 crore. The proposal was also found technically correct by IIT, Roorkee with regard to the amended discharge data. Hence, a renewed agreement was

entered into (March 2010) by the Company with the same contractor for developing a 15 MW hydro project with the completion date of August 2011.

Thus if the water discharge data for five years was collected from CWC at the time of preparation of DPR then delay in execution of project for two years could have been avoided. Also, interest free amount forwarded as mobilisation advance was blocked with the Contractor for two years.

### *5.2.24 Delay in taking up rehabilitation work of damaged project*

Sobla I, a SHP situated in district Pithoragarh, having installed capacity of 2 x 2000 KW got damaged in June 2000. In order to rehabilitate the project, a DPR was got prepared (May 2004).

The rehabilitation of the project was to be completed by December 2006 at a cost of ₹ 16.11 crore; the annual energy generation was envisaged at 33.55 MU per annum with 60 *per cent* PLF. However, no action on this DPR was taken by the Company. In May 2009, after almost five years, a fresh DPR for rehabilitation of project was prepared by the Company itself. As per the revised DPR, the scheduled date of completion of the project has been estimated as September 2011, with financial implication of ₹ 36.26 crore.

Thus, the delay in taking up the project resulted in avoidable cost escalation to the extent of ₹ 20.15 crore.

### *5.2.25 Deficient preparation of DPR*

In order to construct Asiganga II, SHP, a DPR was prepared by U.P. Jal Vidyut Nigam Ltd (UPJVNL) and approved by Public Investment Board of erstwhile Uttar Pradesh in September 1999 for ₹ 12.54 crore. After approval of the DPR, tenders for various works of the project were invited (October 1999) by UPJVNL. After creation of the State of Uttarakhand these works were transferred to the company in February 2002.

On transfer of the project to company, DPR of the project was reviewed and revised. As per the revised DPR, cost of the project was revised to ₹ 11.57 crore in March 2004. However, no action was taken on this DPR till July 2005. The Company again revised the DPR due to change in drawings of the project. In the meantime, rates of equipments and material had increased. As a result, the cost of DPR was revised to ₹ 21 crore, in August 2005. However, DPR was not approved by the BOD on the ground that cost per MW was too high i.e. ₹ 7 crore per MW. The Company decided (July 2007) to increase the capacity of the project for reducing the cost per MW. Accordingly, capacity of the project was increased from 3 MW to 4.5 MW. The revised DPR was finalized in September 2008 with the condition that the project was to be commissioned by May 2010. However, the contract was awarded in January 2009 to M/s Avantica Contractors-JV for ₹ 26.40 crore with the scheduled date of completion is September 2011.

Further, progress of the work was 14 *per cent* only, thus progress of the works was far behind the schedule.

***Deficient preparation of DPR of the project led to delay of over four years.***

Audit noticed that had the DPR of the project been prepared considering all the aspects of drawings and increase in the capacity in March 2004 itself, the project would have been commissioned by March 2007. Thus, due to deficient preparation of DPR the implementation of the project has been delayed by over four years.

## Contract Management

**5.2.26** Contract management is the process of efficiently managing contract (including inviting bids and award of work) and execution of work in an effective and economic manner. The work is generally awarded on turn key (Composite) basis to a single party involving civil construction, supplies of machines and ancillary works.

During review period, contracts valuing ₹ 499.16 crore were executed. The agreements related to civil works, supply of equipment and other miscellaneous works.

The instances of poor contract management in various projects undertaken during review period are given below:

### *5.2.27 Inefficiencies in contract management*

Scrutiny of records relating to Maneri Bhali-II hydro electric project (discussed earlier in para *5.2.19 and 20*) revealed that:

***Extra expenditure of ₹ 40.39 crore due to entering into the contract at higher rate.***

- DoI, GoU entered into supplementary agreement (July 2002) with four contractors, initially employed by GoUP, to complete the left over works. The rates of items were fixed on the basis of whole sale price index as on December 2001 except in case of M/s Srink Construction Company (SCC). Moreover, the rates of items among remaining three contractors could not be uniformly applied, resultantly, price of increase of balance works awarded to M/s NPCC, M/s CCC and M/s HCL was higher by 6.37, 7.82 and 10.25 times respectively. Award of work to M/s HCL at higher rate was not justified, as it was higher by 31.07[15] *per cent* in comparison to M/s CCC; hence, M/s HCL was allowed undue benefit of ₹ 40.39[16] crore.

***Company failed to recover liquidated damages of ₹ 18.40 crore.***

- In case of delays, agreements also stipulated clauses regarding liquidated damages. We observed that the project could not be completed in the scheduled time period and extension was granted from time to time up to March 2007 stating that no further extension would be granted and penalty

[15] (10.25 – 7.82 = 2.43/7.82 x 100 = 31.07 *per cent*).
[16] ₹ 129.99 crore x 31.07/100 = ₹ 40.39 crore.

would be levied. The project could be completed only in February 2008. Thus, as per terms and conditions of the agreements, all three construction agencies were liable to pay liquidated damages aggregating to ₹ 18.40 crore. However, no damages were recovered, allowing undue benefit to these agencies.

***Company suffered loss of interest of ₹ 5.92 crore due to violation of principal agreements.***

- The principal agreements (March 1981) provided for mobilization advances to contractors at an annual interest of 14 *per cent*. However, the supplementary agreements contained modified clause regarding interest free mobilization advance, in supercession of principal agreements. As per clause of supplementary agreements mobilization advances of ₹ 31.83 crore[17] were given to the contractors. This resulted in undue benefit to contractors involved in the construction of Maneri Bhali hydro project and company suffered a loss of interest to the tune of ₹ 5.92 crore[18].

### *5.2.28 Undue favour to contractor companies*

As mentioned in para 5.2.23 an interest free mobilisation advance of ₹ 4.73 crore was given (February 2008) to the contractor though the agreement did not provide for the same categorically. Moreover, the guidelines issued by Central Vigilance Commission (CVC) in this regard indicate that mobilisation advance given to the contractors has to be interest bearing. Further, as the work could not take off till March 2010, the amount given as mobilisation advance remained blocked with the contractor. This invites all the more concern as on one hand the Company had to resort to taking loans from the Power Finance Corporation (PFC) at the rate of 11.5 *per cent* per annum to fulfill its liquidity requirements and on the other it provided interest free mobilisation advance to the contractors. Consequently, the Company faced an avoidable outflow as interest of ₹ 1.13 crore on loan of ₹ 4.73 crore.

The same contractor was also awarded the work to develop another SHP, Kaliganga-I, where an amount of ₹ 2.40 crore was given (February 2008) to him as interest free mobilisation advance and the project was expected to be completed by February 2010. But, due to tardy progress, the project work was mid way (as of March 2010) and only ₹ 0.89 crore of mobilisation advances could be adjusted till March 2010 and balance of ₹ 1.51 crore was with the contractor. Thus, the Company lost ₹ 0.36 crore by way of interest on ₹ 1.51 crore at the rate of 11.5 *per cent* per annum for its liquidity requirement (from February 2008 to March 2010).

[17] M/s HCL – ₹ 13 crore, M/s NPCC – ₹ 5.11 crore and M/s CCC- ₹ 13.72 crore.
[18] M/s HCL – ₹ 2.69 crore, M/s NPCC – ₹ 0.74 crore and M/s CCC- ₹ 2.49 crore.

## Input Efficiency

### Manpower Management

**5.2.29** The CEA in its report (April 2007) recommended 1.79 person per mega watt of the installed capacity. The position of actual manpower, sanctioned strength & manpower as per CEA recommendation is given below:

| Sl. No. | Particulars. | 2005-06 | 2006-07 | 2007-08 | 2008-09 | 2009-10 |
|---|---|---|---|---|---|---|
| 1. | Sanctioned strength | 3,584 | 3,584 | 3,584 | 3,783 | 3,783 |
| 2. | Manpower as per the CEA recommendations | 1,784 | 1,785 | 2,329 | 2,337 | 2,338 |
| 3. | Actual manpower | 2,760 | 2,742 | 2,659 | 2,562 | 2,479 |
| 4. | Excess manpower with reference to CEA norms | 976 | 957 | 330 | 225 | 141 |
| 5. | Expenditure on salaries (₹ in crore) | 43.59 | 63.90 | 67.08 | 83.98 | 123.39 |
| 6. | Extra expenditure with reference to CEA norms ( ₹ in crore) [(5/3) x (3–2)] | 15.41 | 22.30 | 8.33 | 7.38 | 7.02 |

*(Source: Information compiled with the data of the Company)*

The table above shows that actual manpower was higher than CEA norms, incurring extra expenditure of ₹ 60.44 crore during review period. Besides, overtime was observed as a regular feature. The overtime wages paid by generating stations during the period of review, worked out to ₹ 11.09 crore. However, excess manpower was reduced from 976 in 2005-06 to 141 in 2009-10.

## Output Efficiency

**5.2.30** The output efficiency of the company during review period showing the shortfall in generation, low plant load factor and its reasons, plant availability, low capacity utilization and auxiliary consumption of power, has been discussed below:

### *5.2.31 Shortfall in generation*

The targets for generation of power for each year are fixed by the Company and approved by the Central Electricity Authority. We observed that LHPs of the Company exceeded the targets in generating 14,901 MU during 2005-06 to 2008-09 against target of 14,433 MU. However, during 2009-10 the LHPs registered a shortfall of 311.56 MU. In respect of SHPs, the Company generated 219.79 MU against the target of 331.86 MU during the review period. The position is shown in the following table:

| Year | Category of project | Target (MUs) | Actual (MUs) | Shortfall (MUs) |
|---|---|---|---|---|
| 2005-06 | LHP | 3,373 | 3,497.64 | - |
| | SHP | 67.40 | 46.22 | 21.18 |
| 2006-07 | LHP | 3,265 | 3,273.71 | - |
| | SHP | 70 | 42.84 | 27.18 |
| 2007-08 | LHP | 3,365 | 3,560.89 | - |
| | SHP | 70 | 42.29 | 27.71 |
| 2008-09 | LHP | 4,430 | 4,568.89 | - |
| | SHP | 81.09 | 44.34 | 36.75 |
| 2009-10 | LHP | 4,394 | 4,082.44 | 311.56 |
| | SHP | 43.37 | 44.10 | - |

*(Source: Information compiled from the data of the Company)*

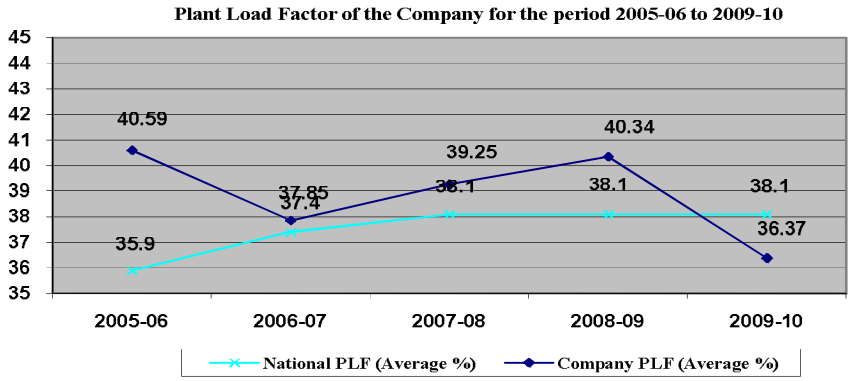
The year-wise details of energy to be generated as per design, actual generation, plant load factor (PLF) as per design and actual plant load factor in respect of the power Projects commissioned up to March 2010 are given in ***Appendix 5.6***.

We observed from the Appendix that:

- The actual generation and actual PLF achieved were far below the energy to be generated and PLF as per design during the five years upto 2009-10.
- As against the total designed generation of 21,654.04 MU of energy during the five years ended 2009-10, the actual generation was 19,092.03 MU leading to the shortfall of 2,562.01 MU (11.83 *per cent*), which could have been technically produced.
- As the PLF had been designed considering the availability of inputs the loss of generation of 2,562.01 MU during the period 2005-06 to 2009-10 indicated that resources and capacity were not being utilized to the optimum level due to design deficiencies, frequent breakdown of units and delay in timely rectification of defects as discussed subsequently.

### *5.2.32 Low Plant Load Factor (PLF)*

Plant load factor (PLF) refers to the ratio between the actual generation and the maximum possible generation at installed capacity. According to norms fixed by Central Electricity Regulatory Commission (CERC), the PLF for hydro power generating stations should be 80 *per cent,* against which the national average was 35.9 to 38.1 *per cent* during 2005-06 to 2009-10. The PLF achieved by the Company remained higher than national average during 2005-06 to 2008-09. In 2009-10, the PLF was lower by 1.73 *per cent* only as indicated below:




The details of maximum possible generation at installed capacity, actual generation and corresponding Plant Load Factor achieved in respect of each generating unit for the five years up to 2009-2010 are given in ***Appendix 5.6.*** The main reasons for the low PLF as compared to CERC norms, as observed in audit were:

- Low capacity utilization;
- Major shut downs and delays in repairs and maintenance;
- Availability of water; and
- Closure of plants for 7,145 hours during rainy season.

These are discussed in the following paragraphs:

### *5.2.33 Plant availability*

Plant availability means the ratio of actual hours operated to maximum possible hours available during certain period. As against the CERC norm of 80 *per cent,* plant availability during 2004-2009 and 85 *per cent* during 2010-2014, the average plant availability of power stations was 82.54 *per cent* during the five years up to 2009-10.

The details of total hours available, total hours operated, planned outages, forced outages and overall plant availability in respect of LHPs are shown below:

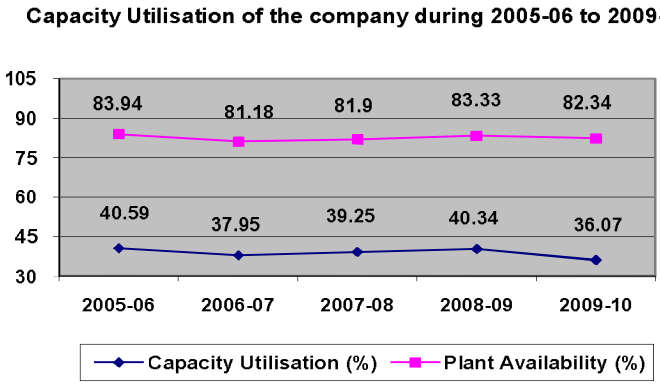
| S.No. | Particulars | 2005-06 | 2006-07 | 2007-08 | 2008-09 | 2009-10 |
|---|---|---|---|---|---|---|
| 1. | Total hours available | 3,15,360 | 3,15,360 | 3,16,224 | 3,50,400 | 3,50,400 |
| 2. | Operated hours | 1,85,484 | 1,78,970 | 1,87,216 | 2,11,453 | 1,88,883 |
| 3. | Planned outages (in hours) | 46,226 | 55,698 | 50,507 | 51,394 | 57,890 |
| 4. | Forced outages (in hours) | 5,467 | 4,293 | 6,700 | 8,298 | 5,028 |
| 5. | Plant availability (per cent) | 83.94 | 81.18 | 81.90 | 83.33 | 82.34 |

*(Source: Information compiled from the data of the Company)*

It could be seen from above table that the plant availability of LHPs of Company was above norm of CERC (80 *percent)* during review period.

### *5.2.34 Low Capacity Utilization*

Capacity utilization means the ratio of actual generation to possible generation during actual hours of operation. Based on national average PLF and plant availability norm, standard capacity utilization factor works out to be 38.84 *per cent* for power plants. Audit analysis revealed that 62.69 *per cent* of the installed capacity remained unutilized.




The main reasons for the low utilisation of available capacity during 2005-10 analysed in audit were:

- Running of units with partial load;
- Old and depreciated plant & machinery;
- Sharp variations in water availability and
- Capacity of Chibro and Khodri power stations was restricted to 185 MW and 83 MW from 2004-05 onwards against the original capacity of 240 MW and 120 MW respectively, due to tunnel discharge limitations.

### *5.2.35 Outages*

Outages refer to the period for which the plant remained closed for attending planned/forced maintenance. Audit observed following deficiencies in planned and forced outages:

- The total number of hours lost due to planned outages increased from 46,226 hours in 2005-06 to 57,890 hours in 2009-10 i.e. from 14.66 *per cent* to 16.52 *per cent* of the total available hours in the respective years due to increase in days involved in maintenance schedules.

- The forced outages in power stations decreased from 5,467 hours in 2005-06 to 5,028 hours in 2009-10 i.e. from 1.73 to 1.44 *per cent* of the total available hours in the respective years. The forced outages remained less than the norm of 10 *per cent* fixed by CEA in all the five years ending 31 March 2010 and was indicative of proper maintenance.

One instance of forced outage due to negligence in operation of Joshiyara barrage is given below:

### *5.2.36 Negligence in barrage operations*

Joshiyara Barrage for Maneri Bhali – II hydro electric project for controlling floods and maintaining adequate water supply to the power house was got constructed (February 2008) by M/s Continental Construction Ltd at a cost of ₹ 137.19 crore. The 97 sedimentation chambers/hoppers (69 in all weather and 28 in fair weather) in the barrage were meant for de-silting the river waters.

The project started power generation in February 2008 and the barrage also had become functional at the same time. However, after five months, the generation had to be stopped (August 2008) due to huge accumulation of silt since the hoppers failed to wash out the silt. Silt was accumulated due to improper operation of barrage and sedimentation gallery by Irrigation Department resultantly generation was stopped in the month of August 2008.

In order to remove the accumulated silt from sedimentation chambers of the project, an agreement was entered into (October 2008) between the Company and M/s N.K.G. Bharat Infrastructure for ₹ 9.12 crore. As per terms of the agreement the works were to be completed within 89 days. After completion, some problem remained in fair weather sedimentation Chamber and additional work for cleaning of the same and work for providing of pressure were given to the contractor as these works were not envisaged in the initial agreement. Accordingly, cost of the agreement was revised (June 2009) to ₹ 10 crore and works were also completed in June 2009.

***Negligent and incautious operation of the barrage led to loss of ₹ 53.04 crore.***

Thus, due to negligent and incautious approach in operating, the hoppers failed only after five months of their commissioning and power generation had to be stopped in August 2008, while water availability in that period was ample due to rainy season. As a consequence, the Company suffered a loss of ₹ 43.04 crore[19] as generation was stopped in the Month of August 2008. Besides an expenditure of ₹ 10 crore, which was incurred on removal of accumulated silt could have been avoided.

[19] (Average generation of the month of August 2008 =160 MU X 10,00,000 X ₹2.69= ₹ 43,04,00,000).

### *5.2.37 Availability of water*

The projects (LHPs) of the company depend on the water of five rivers to generate the electricity. Five[20] projects depend on the water of Tons and Yamuna rivers, six[21] projects depend on the water of Bhagirathi, Ganga and Sharda rivers. To achieve the maximum possible generation, the different design discharge[22] of water for each project in cumecs[23] was required.

We observed that sharp variation of water discharge in respect of all rivers was registered in the range of 33 cumecs to 457 cumecs during seven months (i.e. April, May, November to March of 2005-06 to 2009-10). In remaining five months (June to October of 2005-06 to 2009-10); though, availability of water was in the range of 524 cumecs to 2,374 cumecs , over and above the required quantity, however, the envisaged generation could not be achieved.

### *5.2.38 Auxiliary consumption of power*

Energy consumed by power stations themselves for running their equipments and common services is called Auxiliary Consumption. Uttarakhand Electricity Regulatory Commission (UERC) allowed (December 2004) 0.20 *per cent* of the power generated to be used as auxiliary consumption. However, the actual auxiliary consumption of power stations increased from 0.30 *per cent* in 2005-06 to 0.44 *per cent* in 2009-10 resulting in excess consumption of 9.41 MU which could not be dispatched to the grid. The units lost in excessive auxiliary consumption were sufficient to meet the energy requirement of 3,136 households, consuming an average of 3,000 units per year.

## Repairs & Maintenance

**5.2.39** To ensure long term sustainable levels of performance, it is important to adhere to periodic maintenance schedules. The efficiency and availability of equipment is dependent on the strict adherence to annual maintenance and equipment overhauling schedules. Non adherence to schedule carries a higher risk of forced outages which necessitate undertaking R&M works. These factors lead to increase in the cost of power generation due to reduced availability of equipment which affects the total power generated.

Audit observed that annual maintenance of units of majority of large power stations was done after considerable delay (details given in the ***Appendix 5.7***).

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[20] Chibro, Khodri, Dhakrani, Dhalipur & Kulhal.

[21] Tiloth, MB-II, Chilla, Pathri, M.Pur & Khatima.

[22] Chibro- 200 Cumecs, Khodri- 200 Cumecs, Dhakrani – 199.2 cumecs, Dhalipur – 199.2 cumecs, Kulhal – 198 cumecs , Tiloth– 71.4 cumecs , MB-II– 142 cumecs, Chilla – 560 cumecs , Pathri – 253 cumecs M.Pur – 255 cumecs, Ram ganga – 285 cumecs & Khatima – 269 cumecs.

[23] 1 cumecs = 1 metre$^3$/second.

The delayed maintenance caused continuous deterioration in the condition of machines causing forced outages[24] and loss of generation of power, discussed as under:

- During the review period, annual maintenance of unit no.03 of Tiloth, LHP (90 MW) was due in 2007-08; as it was not taken up well in time, major faults developed (June 2008) and it had to undergo major repairs in the subsequent year (2009-10), as a result an expenditure of ₹ 0.97 crore was incurred on major repair. This indicates poor planning of the company.
- Major repair work of unit no. 01 of the same project continued for four years from 2006-07 to 2009-10 and a sum of ₹ 3.33 crore was incurred on these repair works, due to which, the generation targets could not be achieved; the short fall of generation ranged from 3.5 MU to 61.2MU for the said period.
- A total of 7,536 hours were spent on carrying interim repairs of three units (unit 1, 2 & 3) of Tiloth project, which were shown as planned outages, though they should have been shown as forced outages as the repairs were short term.
- The SHPs did not have any annual maintenance plan leading to deterioration of machines which finally resulted in low PLF.

**Renovation & Modernisation**

**5.2.40** R&M activities are aimed at overcoming problems in operating units caused due to generic defects, design deficiency and ageing by re-equipping, modifying, augmenting them with latest technology/systems. R&M activities are undertaken in hydro power operating at Low Plant Load Factor (PLF) and frequent break down after assessing the performance and requirement of the units.

Refurbishment activities are aimed at extending economic life of the units by 15 to 20 years which have served for more than 35 years or are operating at Low PLF. Necessary permission and clearance for R&M and Refurbishment activities from State Electricity Regulatory Commission (SERC)/CEA/State Government are obtained. Residual Life Assessment (RLA) study is also conducted for all Refurbishment activities and in major R&M works. For Refurbishment and R&M activities, Power Finance Corporation, GOI, sanctions loan equal to 70 *per cent* of the estimated cost of the activity against guarantee furnished by the State Government and rest of the fund is met through internal sources or loan from State Government.

[24] Forced outages are closure of plant in excess of prescribed limit due to break down in the system.

### *5.2.41 Inordinate delays in taking up R&M*

*Extra expenditure of ₹ 11.58 crore due to failure of the Company in taking up R & M and LE work in time.*

Pathri hydro power plant (20.4 MW) almost 55 years old, was selected (April 2007) for R&M and LE by CEA; at an estimated cost of at ₹ 60 crore. We observed that in order to carry out R&M and LE works tender specifications were prepared (February 2008) but no action was taken and company decided (July 2008) to carryout these works through Lease, Renovate, Operate and Transfer (LROT) ; which was not approved (August 2008) by the Board. Consequently the Company decided (January 2009) for taking up these works through its own resources for which an agreement was entered into between the Company and M/s Andritz Hydro Private Limited in March 2010 involving financial implication of ₹ 71.58 crore. As per terms of the agreement, the work was to be completed (March 2013) within 36 months from the date of commencement of the works. Thus due to indecision, works had been delayed inordinately. Consequently, there was a cost over run of ₹ 11.58 crore.

Khatima power house and Ramganga power house having installed capacity of 41.4 MW and 198 MW respectively were also planned for R&M and LE by March 2010. However, no action in this regard has still been initiated by the Company as of March 2010.

### *5.2.42 Operation &Maintenance*

The operation and maintenance (O&M) cost includes expenditure on the employees, repair & maintenance including stores and consumables, consumption of capital spares not part of capital cost, security expenses, administrative expenses etc. of the generating stations besides corporate expenses apportioned to each generating stations.

We observed that O&M expenses incurred were higher than the norms fixed by UERC in this regard. Consequently, expenses amounting to ₹ 74.79 crore incurred over and above the norms of UERC during the period 2006-07 to 2009-10 added to the loss of the Company as per following details:

*(₹ in crore)*

| Year | O&M expenses incurred | O&M expenses allowed | O&M expenses disallowed |
|---|---|---|---|
| 2006-07 | 113.34 | 80.09 | 33.25 |
| 2007-08 | 116.70 | 96.12 | 20.58 |
| 2008-09 | 124.21 | 104.98 | 19.23 |
| 2009-10 | 32.05 | 30.32 | 1.73 |
| **Total** | **386.30** | **311.51** | **74.79** |

*(Source: Information compiled from the data of the Company)*

As may be seen from the above, the O&M expenditure during 2006-07 to 2009-10 amounting to ₹ 74.79 crore pertaining to various project of the company was disallowed by the UERC for tariff fixation as the company failed to justify this expenditure.

## Financial Management

**5.2.43** Efficient fund management is the need of the hour in any organisation. This also serves as a tool for decision making, for optimum utilisation of available resources and borrowings at favourable terms at appropriate time.

The power sector companies should, therefore, streamline their systems and procedures to ensure that:

- Funds in idle inventory are not invested;
- Outstanding advances are adjusted/recovered promptly;
- Funds are not borrowed in advance of actual need; and
- Swapping high cost debt with low cost debt is availed expeditiously.

The main sources of funds were realisations from sale of power, subsidy from State/Central Governments, loans from State Government/Banks/Financial Institutions (FI), etc. These funds were mainly utilized to meet payment of debt servicing, employee, other operational expenses on maintenance and consumables, system improvement works of capital and revenue nature and capacity addition programmes.

Details of cash inflow and outflow of resources on actual basis for the Company during the years 2005-06 to 2008-09 are given below:

*(₹ in crore)*

| Sl No. | Particulars | 2005-06 | 2006-07 | 2007-08 | 2008-09 |
|---|---|---|---|---|---|
| **Cash inflow** | | | | | |
| 1. | Net Profit/(loss) | 30.1 | (21.27) | 50.57 | (16.87) |
| 2. | Add: Adjustments | 45.09 | 108.27 | 145.87 | 166.62 |
| 3. | Operating activities (1+2) | 75.19 | 87.00 | 196.44 | 149.75 |
| 4. | Investing activities | 6.75 | - | 1,540.57 | 21.18 |
| 5. | Financing activities | 395.76 | 347.30 | 478.10 | 54.66 |
| | **Total** | **477.70** | **434.30** | **2,215.02** | **225.59** |
| **Cash outflow** | | | | | |
| 6. | Operating activities | 23.64 | 78.47 | 189.50 | 120.47 |
| 7. | Investing activities | 367.37 | 368.73 | 1,910.88 | 57.71 |
| 8. | Financing activities | - | - | - | 15.66 |
| | **Total** | **391.01** | **447.20** | **2,100.38** | **193.84** |
| | **Net increase/decrease in cash and cash equivalent** | **86.69** | **(12.90)** | **114.64** | **31.75** |

*(Source: Information compiled with the data of the Company)*

It would be seen from the above that the cash deficit during 2006-07 was on account of increased outflow on operating activities as compared to inflow.

The instances of poor financial management are given below:

### *5.2.44 Non recovery of advances*

According to power purchase agreement with the J.P. Power Venture Ltd assets of ₹ 5.59 crore in respect of Hyrdo Electric Project at Bishnu Prayag were transferred as loan amount and repayment alongwith interest was to commence from the date of starting generation by the first unit of power plant. Power generation from the first unit of the project was started from June 2006. However, the company did not pursue for recovery till March, 2010.

Advances of ₹ 4.98 crore were given to the various contractors/firms against material/repair works (₹ 3.74 crore during the period April 2002 to September 2009 and ₹ 1.24 crore prior to 2001) but the same were neither recovered nor adjusted till March 2010. Thus, funds to the extent of ₹ 4.98 crore were lying blocked.

### *5.2.45 Failure to recover dues*

The contractors for Maneri Bhali – II were given access to the generated electricity for construction purposes by way of releasing electric connections. We observed that electricity dues of ₹ 4.83 crore were not paid by the contractors nor recovered by the Company from the bills of ₹ 391.91 crore received from them (June 2009).

### *5.2.46 Non lodging of claim with NHPC*

The BoD decided (May 2007) to lodge the claim of ₹ 4.09 crore with NHPC as compensation of the Shobla II SHP as the same has come into submergence in upcoming project of NHPC. We observed that the Company failed to lodge the claim with NHPC till March 2010.

## Claims and Dues

**5.2.47** The Company sells energy to Uttarakhand Power Corporation Limited (UPCL) and Himachal Pradesh State Electricity Board (HPSEB) as per provisions of Power Purchase Agreement (PPA) approved by UERC. We observed that dues receivable from UPCL increased from ₹ 102.02 crore to ₹ 490.67 crore during review period, as UPCL did not make payment on due dates. Out of which ₹ 151.83 crore pertaining to capacity charges, capacity index incentive and deemed generation during 2005-06 to 2009-10 were not admitted by UPCL as amounts were not verified by State Load Dispatch Centre (SLDC). In this connection, various meetings were also held but the outcome of the same was still awaited (March 2010). The HPSEB also did not admit billing claim of ₹ 13.70 crore during review period as the company raised the energy bills at revised rate as directed by UERC. Accordingly, the company filed an appeal (No.183 of 2009) before Tribunal for Electricity, New Delhi to get the payment. However, the

judgment on the same was awaited till March 2010. This also forced the Company to take interest bearing loans for financing its expansion activities.

## Tariff Fixation

**5.2.48** The Company is required to file the application for approval of Generation Tariff for each year 120 days before the commencement of the respective year or such other date as may be directed by the Commission (UERC). The Commission accepts the application filed by Company with such modifications/conditions as may be deemed just and appropriate and after considering all suggestions and objections from public and other stakeholders, issue an order containing targets for controllable items and the generation tariffs for the year within 120 days of the receipt of the application.

The Commission sets performance targets for each year of the Control Period for the items or parameters that are deemed to be "controllable" and which include:

(a) Operation and Maintenance Expenses;

(b) Financing Cost which includes cost of debt (interest), cost of equity (return);

(c) Depreciation; and

(d) Interest on working capital.

Any financial loss on account of underperformance on targets for parameters specified in Clause (a) to (d) is not recoverable through tariffs. We noticed that the Commission did not allow various amounts of expenditure on account of above mentioned items, amounting to ₹ 545 crore[25] during 2006-07 to 2009-10 on account of lack of proper justification for the expenditure. Therefore, this expenditure was controllable and could have been avoided.

## Environment Issues

**5.2.49** In order to minimize the adverse impact on the environment, the GOI had enacted various Acts and statutes. At the State level, Uttarakhand Environment Protection Pollution Control Board (UEPPCB) is the regulating agency to ensure compliance with the provisions of these Acts and statutes. Ministry of Environment and Forests (MoEF), GOI and Central Pollution Control Board (CPCB) are also vested with powers under various statutes.

In this regard, we observed that the Company has no documented Environment Policy to ensure sustainable development and optimal use of natural resources and

[25] ₹ 162.26 crore pertaining to interest of loan return on equity, depreciation, O&M and interest on working capital in respect of various project and ₹ 382.74 crore pertaining to operation cost, subsidy withdrawal, capital cost, depreciation and return on equity in respect of MB-II project.

environmental considerations. A few important concerns have been discussed as under:

### *5.2.50 Downstream flow*

In order to maintain and sustain aquatic ecosystem in the downstream stretch of a river, sufficient amount of discharge during the lean period has to be ensured. The policy on hydro-power projects is silent on this vital issue. Further, there are no clear directions from the UEPPCB relating to downstream flow. However in this regard, Himachal Pradesh has notified (September, 2008) a minimum flow of 15 *per cent* of the lean season to be maintained by Hydro Electric Projects. No such norm has been stipulated by Uttarakhand. Even the Company had no documented policy governing mandatory discharge in the downstream stretch. As such, injudicious proliferation of hydro projects and their cumulative impact may well result into drying up of river beds or reducing the river flow to a trickle, adversely affecting the ecology of the nearby areas.

### *5.2.51 Non achievement of afforestation*

Though run-of-river projects do not involve submergence of vast areas of land and vegetation yet, construction of project facilities, access roads to the project site, and transmission systems and lines would involve deforestation. There are thus risks of soil erosion, disruption to local flora and fauna and disturbance to hill slopes in run-of-river projects. However, these can be moderated through plantation and needs to be protected till they attain a height, which is above grazing level. Afforestation is considered necessary to avoid soil erosion and for rehabilitation of degraded forest areas, habitat improvement and structural stabilisation in landslide prone areas.

We observed that during execution of Pela Maneri project 3703 trees were cut down involving 53.53 ha forest land. As compensatory afforestation, as directed by Forest Department, 2.14 lakh saplings were to be planted. However, the company did not plant any sapling so far (March 2010).

### *5.2.52 Environmental Management Plan*

Hydro-power projects carry direct and indirect impact on various environmental elements mainly aquatic, terrestrial, geophysical and human, both during the construction and operational phase. The impact due to the construction of hydro-power projects commences right from the start of exploration activities, construction of tunnels, head race tunnels and approach roads and may continue up to the stage of commercial operation of the project.

The construction activity may cause some adverse impacts on the surrounding environment. Therefore, the company should have adopted proper environmental management plan with regard to air, noise, and water pollutions, after evaluation

of magnitudes of impacts of a project, specifying protective and mitigation measures.

We noticed that only MB-II project was constructed and commissioned during review period, however, the company did not formulate the EMP of the project, hence in the absence of EMP, audit is unable to assess the loss to the environment and its monetary value.

### *5.2.53 Disposal of Muck in an unplanned manner*

The directions of the MoEF, GOI relating to muck disposal state that muck generated from excavation in course of construction activity, must be disposed in a planned manner so that it takes the least space, is not hazardous to the environment and does not contaminate any land or water source. With special reference to hilly areas, muck-disposal should be carried in such a way that usable terraces are developed with suitable retaining walls. The terraces should ultimately be covered with fertile soil and suitable plants. Muck generated from construction activities like tunnel etc., should be used for construction of the project to the maximum possible extent of 50 *per cent*. Rest of the muck is required to be disposed off in a planned manner.

We observed that during implementation of Maneri Bhali-II a 16 kilometer long with 06 metre dia of horse shoes shape tunnel was constructed and quantity of muck generated was 5,49,328.32$M^3$ of which Only 10 *per cent* muck was used for construction works by the Company; rest was not used due to lesser strength. The remaining muck was disposed off in an un-planned manner.

### *5.2.54 Loss due to flash flood*

Flash floods may occur due to cloud bursts, incessant heavy rains and bursting of glacial lakes. The adverse consequences of such floods are acute as they can not only damage the project structures but can cause loss of live in low-lying down stream areas. Civil construction in projects is required to factor in this natural threat. Also the bigger the project, the greater should be the efficacy of the preventive measures.

We observed that two SHPs, *viz.* Urgam and Pilangad faced this threat. Consequently, Urgam SHP remained damaged for almost four years from August 2004 to May 2008, leading to huge generation and revenue loss. Pilangad SHP, in absence of specific remedial measure, got repeatedly damaged thrice in 2005, 2007 and 2009. It is pertinent to mention here that the two projects mentioned above were of low capacity and local community was not adversely impacted during floods. However, the large projects need to be more vigilant and meticulous in designing and erecting the civil structure, so as to avoid mass disruption in case of any mishap.

### *5.2.55 Non registration of Hydro Electric Projects under CDM*

The Clean Development Mechanism (CDM) set under Kyoto Protocol provides for booking and sale/purchase of '*reduction of green house gas emissions'* as Certified Emission Reduction (CER), commonly known as Carbon Credits. For sale of CER, registration of the power plant is required as a CDM project with United Nations Framework Convention on Climate Change (UNFCCC). The power plants that commenced operations on or after 1st January 2000 are eligible for registration by submitting the request with Designated National Authority (DNA). In India, the Ministry of Environment and Forest (MOEF), Government of India has been nominated as DNA.

As per the report of the international agency "Benign Energy" the Environmental implication of Renewable (1998), 987 gram carbon dioxide ($CO_2$) is emitted during generation of 1kwh energy through thermal power stations.

We observed that the Company did not take any initiative for registration of its plants having installed capacity of 313.70 MW which commenced operation after 1 January 2000 for sale of CER, the following projects of the company generated 2,455.99 MUs during the period from its commissioning to March 2010 and avoided 24,24,062.13 tonne $CO_2$, which could have spread in the environment.

| Name of project | Year of Commissioning | Capacity in MW | Total Generation since commencement to March 2010 (MU) | $CO_2$ reduction in MT |
|---|---|---|---|---|
| Harsil SHP | 2001 | 0.2 | 3.98 | 3,928.26 |
| Tharali SHP | 2002 | 0.4 | 10.07 | 9,939.09 |
| Sone Prayag SHP | 2002 | 0.5 | 7.52 | 7,422.24 |
| Tilwara SHP | 2003 | 0.2 | 0.85 | 838.95 |
| Pilangad SHP | 2004 | 2.2 | 75.12 | 74,143.44 |
| Badri Nath-II SHP | 2004 | 1.2 | 8.94 | 8,823.78 |
| Relagad SHP | 2004 | 3 | 26.43 | 26,086.41 |
| Tapoban SHP | 2006 | 0.8 | 2.89 | 2852.43 |
| Jumagad SHP | 2008 | 1.2 | 0.18 | 177.66 |
| M.B.II, LHP | 2008 | 304 | 2,320.01 | 22,89,849.87 |
| **Total** | | **313.70** | **2,455.99** | **24,24,062.13** |

*(Source: Information compiled from the data of the Company)*

As seen from the above, the company was deprived to obtain the revenue against the saving of 24,24,062.13 MT $CO_2$.

Further, we observed that environmental audit report had not been prepared and submitted to the Pollution Control Board as required under CEA guidelines and Environmental Protection Rule, 1986.

## Monitoring by Top Management

### MIS data and monitoring of service parameters

The Company plays an important role in the State economy. For such a giant organisation to succeed in operating economically, efficiently and effectively, there should be documented management systems of operations, service standards and targets. Further, there has to be a Management Information System (MIS) to report on achievement of targets and norms. The achievements need to be reviewed to address deficiencies and also to set targets for subsequent years. The targets should generally be such that the achievement of which would make an organisation self-reliant. Audit review of the system existing in this regard revealed the following:

- The Company did not set plant wise targets for important operational parameters like Plant Load Factor and plant availability.
- The Company did not devise a proper MIS to compile data in respect of total hours available, operated hours, planned outages, forced outages and plant availability in respect of SHPs for effective monitoring.
- The Company did not formulate any annual maintenance plan for SHPs.
- The BOD did not discuss the operational or financial performance of the Company as a whole.
- The Company did not generate reports to identify the recurring maintenance problem at project.

## Conclusion

- The Company failed to meet the growth in peak demand by 514 MW, as the capacity addition was only 306 MW against additional planed capacity of 720 MW during 2005-10, due to delay in planning and implementation of capacity addition programmes,
- The Company was able to contain its surplus manpower from 976 in 2005-06 to 141 in 2009-10,
- While planned outages remained above the norms, forced outages were very well within the norms and ranged from 1.73 to 1.44 *per cent* of the total available hours during the review period. This was indicative of proper preventive maintenance,

- The existing generating units were ageing and there were abnormal delays in taking up/execution of the renovation and modernisation works of these units,
- The Company has consistently not been able to achieve the performance parameters and targets set by UERC, which led to disallowance of huge expenses of ₹ 545 crore which could not be realised through tariff, which in turn affected the financial health of the company, and
- The company failed to address the environmental issues at the power generation stations.

## Recommendations

***The Company needs to:***

- ***Intensify its capacity addition programmes by exploiting all resources of energy by involving government entrepreneurs and by close monitoring the programmes for timely execution so as to meet the national objective of power for all by 2012;***
- ***Improve plant load factor and capacity utilisation by containing the break down;***
- ***Maintain data of auxiliary consumption of power in respect of SHPs for better monitoring;***
- ***Carry out the scheduled maintenance of its power stations and undertake renovation & modernisation of the power plants in time;***
- ***Achieve the performance parameters set by the Commission failing which accountability should be fixed against the persons concerned in the Company;***
- ***Insist on a interest bearing clause for mobilisation advance in all construction agreement; and***
- ***Address the environmental issues in proper prospective.***

The matter was referred to the Company and Government (July 2010); their replies had not been received (November 2010).

## Audit of Transactions

### GARHWAL MANDAL VIKAS NIGAM LIMITED

### 5.3 Loss due to deficit planning

**Nigam suffered a loss of ₹ 1.39 crore due to improper planning and lack of strategy in sale of rosin and Turpentine oil.**

The Rosin & Turpentine Factory, Uttarkashi (Factory) of Garhwal Mandal Vikas Nigam Limited (Nigam) had not been in operation since 2004 due to high cost of input material i.e. Lisa. With a view to revive the operations of defunct factory, Nigam procured (February 2006) 460 MT of Lisa (a forest produce) at a cost of ₹ 2.13 crore from Forest Department for processing into rosin and turpentine oil in the Factory. Quantity for procurement of Lisa was assessed on expected ensuing business, as there was no pending supply order with the Nigam. However, no feasible study was carried out by the Nigam taking into account the market rates, demand of the product, cost benefit analysis, etc. on scientific basis before taking up the operation. The cost of processing the entire quantity of Lisa procured into rosin and Turpentine Oil was ₹ 17.20 lakh and ₹ 20.93 lakh respectively.

Test check of records of the Nigam revealed (March 2009) that the Nigam received (April 2006) an offer from M/s Som Rosin & Turpentine Company Limited, New Delhi (firm S) to lift a minimum 54 MT rosin per month with an assurance to lift the entire quantity of rosin produced by the Nigam from 460 MT of Lisa. The buyer requested the Nigam to prepare the agreement accordingly. The supply of rosin was to be made against advance payment at an agreed rate of ₹ 53,410 per MT. While formulation of a formal agreement with Firm S was pending, the Nigam supplied (June 2006) one truck full load of 9 MT rosin to Firm S at a sale value of ₹ 4.81 lakh against the advance payment of ₹ 6 lakh. In July 2006 the Nigam demanded a guarantee deposit of ₹ 5 lakh from the Firm S and also increased the rate of supply by ₹ 1,460 per MT unilaterally. Firm S did not accept the demand and stopped further lifting of rosin in protest against the undue demand of Nigam. This resulted in piling up of the processed stock.

In order to dispose of the perishable stock of rosin, Nigam accepted (June 2008 & February 2009) the tendered offer of M/s United Chemicals, New Delhi at a much lower rate of ₹ 25,960 per MT and supplied a quantity of 221.11 MT rosin at a total sale value of ₹ 57.40 lakh. Thereafter, the Nigam obtained (June 2008 & February 2009) two supply orders from two New Delhi based firms for a supply of 107.17 MT rosin at an average rate of ₹ 28,207 per MT with total sale consideration of ₹ 30.23 lakh. Further, a quantity of 59,600 litre of turpentine oil processed out of 460 MT of Lisa procured was also sold (February 2008 & February 2009) to two firms of Bareilly and New Delhi with total sale value of ₹ 19.11 lakh at an average rate of ₹ 32.06 per litre. Thus, the entire quantity of

rosin and turpentine oil manufactured out of 460 MT of Lisa had been disposed of leaving no unsold stock with the Nigam. The Nigam however, incurred a total loss of ₹ 1.39 crore[26] in the whole business.

Thus, due to imprudent decision of the Nigam for revival of the operation of the defunct factory without carrying out the feasibility of the activity on scientific basis, Nigam incurred a loss of ₹ 1.39 crore. Further, the Nigam could have reduced the losses to the extent of ₹ 0.87 crore[27] by timely entering into supply agreement with Firm S at offered rate of ₹ 53,410 per MT for assured lifting of entire quantity of the product by Firm S.

On this being pointed out in audit, Nigam stated (June 2009) that the stock of Lisa, rosin and Turpentine Oil was nil and the loss in whole business was caused due to reduced rate of rosin in international market. Reply is not convincing as despite the offer of Firm S for assured purchase of entire quantity of rosin manufactured at the reasonable rate of ₹ 53,410 per MT, Nigam failed to sign the agreement for the deal. Moreover, the Nigam demanded unfair hike in the selling price of rosin and insisted upon additional security deposit, which allowed Firm S to withdraw from the offer.

Thus, the Nigam suffered loss of ₹ 1.39 crore due to improper planning and lack of strategy in sale deal of rosin.

The matter was reported to the Nigam/Government (May 2010); their replies had not been received (November 2010).

## UP HILL ELECTRONICS CORPORATION LIMITED

### 5.4 Non-filing of Income Tax Return

**Company suffered a loss of ₹ 20 lakh due to non-filing of Income Tax Return.**

As per Section 139 (3) of the Income Tax Act, 1961 read with Section 80 of the Act, any person who has sustained a loss in any financial year under the head "Profit and gains of business or profession" or under the head "capital gains," can claim that loss or any part thereof for setting off against profits for subsequent eight assessment years (Section 72(3), 74(2) of IT Act) only if the return for the year in which loss was suffered was filed in the prescribed form/manner within the time limit as stipulated under Section 139 (1).

Our scrutiny of records revealed (March 2010) that the Company suffered a loss of ₹ 69.75 lakh during the financial year 1999-2000 (Assessment Year 2000-2001) but did not file the Income Tax Return for that year. Consequently,

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[26] Investment: ₹ 2.51 crore minus Return: ₹ 1.12 crore = Loss: ₹ 1.39 crore.

[27] 328 MT X ₹ 53410 per MT (rates offered by Firm S) i.e. ₹ 1.75 crore minus ₹ 0.88 crore(actual sale amount) = ₹ 0.87 crore.

the Income Tax Department did not allow the Company to carry forward the loss suffered in 1999-2000 for setting off against taxable profits of subsequent years. During the financial year 2004-05 (AY 2005-06), the Company had taxable profits of ₹ 1.66 crore (including capital gain of ₹ 0.20 crore) against which the tax authorities demanded (August 2007) tax of ₹ 63.76 lakh from the Company.

The Company filed (Oct. 2007) an appeal against the demand notice and also deposited (August 2008) ₹ 20 lakh with the department as per the direction (August 2008) of the Assistant Commissioner of Income Tax. The Commissioner of Income Tax (Appeals), Dehradun heard the appeal (November 2009) and observed that the loss incurred in the financial year 1999-2000 was not allowed to be carried over, hence, no tax relief was allowable to the Company on this account. Thus, the Company lost the opportunity to set off the taxable profits (₹ 1.66 crore) for the assessment year 2005-06 to the extent of losses of ₹ 69.75 lakh pertaining to the financial year 1999-2000 due to non-filing of Income Tax Return for the loss year and incurred avoidable tax liability of ₹ 20 lakh[28].

The Management admitted (March 2010) that the tax liability to the tune of ₹ 20 lakh was on account of non filing of return for the financial year 1999-2000 and the person responsible for not filing the return had been charge sheeted.

The Company needs to strengthen the internal control mechanism for effectively monitoring filing of Income Tax Returns in time so as to avoid recurrence to such lapse in future.

The matter was referred to the Company/Government (May 2010); their replies had not been received (November 2010).

## POWER TRANSMISSION CORPORATION OF UTTARAKHAND LIMITED

### 5.5 Blocking of funds and loss of interest

**Company awarded a contract without obtaining clearance from Forest Department, resulting in blocking of funds of ₹ 8.25 crore and loss of interest of ₹ 2.01 crore thereon.**

In order to reduce the transmission losses and to improve the voltage supply in remote areas of Chamoli district of Garhwal region, a sub-station of 132 KV was proposed to be constructed at Simli, under first phase of Rural Electrification Corporation's (REC) Scheme. Accordingly, the Company awarded (November 2005) a contract to ABB Ltd., Dehradun for supply of equipment and other materials and construction of 132 KV sub-station. The work was completed

[28] Worked out at flat rate of 30 *per cent* of the previous losses ( ₹ 69.75 lakh ), *viz*. the income tax rate applicable in the case of the company.

(December 2007) by the Contractor as per schedule at a total expenditure of ₹ 8.25 crore.

A test check (February 2010) of records of the Company revealed that the sub-station could not be energized till date (November 2010) due to non-completion of 132 KV transmission line from Srinagar to Simli. The work of construction of this line was awarded in October 2005 but the same could not be completed due to non availability of clearance for use of forest land from Government of India (GOI). The case for forest clearance was submitted to GOI, Ministry of Forest and Environment by the Chief Conservator of Forest (Nodal Officer) only in July 2009 and the forest clearance for the work was finally granted in April 2010. However, the construction of the transmission line from Srinagar to Simli was still in progress. (November, 2010). We noticed that pending construction and energisation of transmission line, the sub-station had to be back charged (July 2009) from Karnprayag feeder so as to keep the transformers alive.

We observed that the work of construction of transmission line involve clearance of forest land from Government of India, Forest Department and for the purpose, work of detailed route survey needed to be taken up. As per the past experience of the Company, the exercise is tedious and time consuming as it involved consent of various departments of State and Central Governments. Keeping this fact in view, the Company should have planned for completing the construction of transmission tine in advance and should have awarded the work for construction of the sub-station later. However, the Company awarded the work for taking up the route survey and for construction of the sub-station simultaneously in October 2005 & November 2005 respectively, which was indicative of deficient planning by the Company. Resultantly, the expenditure of ₹ 8.25 crore incurred on construction of the sub-station remained unfruitful since December 2007. The Company has suffered a loss of interest of ₹ 2.01 crore on cost of construction of sub-station so blocked for the period from January 2008 to November 2010 calculated at minimum lending rate (9.75 *per cent*) of REC.

The Management in its reply stated (May 2010) that the delay occurred because after the award of contract (October 2005) the work of detailed route survey started (April 2006) and could be completed only in July 2009, as it was routed through various offices of different departments. The reply of the Management is not convincing as the planning of the company was defective and the survey work should have been taken up separately and well in advance of finalization of the contract.

It is recommended that the clearance from Forest Department and other such formalities should be completed well in advance before awarding the contract.

The matter was reported to the Company/Government (May 2010); their replies are awaited (November 2010).

## STATE INDUSTRIAL DEVELOPMENT CORPORATION OF UTTARAKHAND LIMITED

### 5.6 Undue favour to private firms

**Company suffered a loss of ₹ 32.68 lakh due to restoration of allotment of three plots at rates lower than those specified in its policy.**

State Industrial Development Corporation of Uttarakhand Ltd. developed an Integrated Industrial Estate (IIE) at Pantnagar. Three plots at IIE were allotted to M/s Akash Cables (1,416 sqm), M/s National Packaging (1,340 sqm) and M/s World Ad Packaging (968.50 sqm) during the period from June 2005 to January 2006 @ ₹ 560 per sqm, ₹ 588 per sqm and ₹ 560 per sqm, respectively.

As per conditions of the undertaking given by the allottees at the time of allotment of the plots, the possession of the plot was to be taken within 60 days of allotment after execution of lease deed and also the construction work was to be started within 90 days from the date of allotment, failing which allotment was bound to be cancelled.

Scrutiny of records (September 2008) of the Company revealed that allotment of these three plots was cancelled (7 July 2006) by the Company as neither the lease deed was executed nor also the construction started on the plots as per the conditions of allotment. As per the restoration policy of the Company, however, the defaulter could request for restoration of the cancelled plots latest by 21 August 2006. The documents for restoration of the plot by all three allottees were submitted after a delay of 18 days to 29 days. The delay was condoned (December 2006) by the Board of Directors and restoration of allotment of the three plots was allowed (25 January 2007) by the company by charging 7.5 *per cent* on ₹ 700 per sqm, being the rate of allotment prevailing on the last date (21 August 2006) fixed for submission of documents for restoration of plots.

The decision of allowing restoration of three plots was contrary to the revised restoration policy approved (September 2006) by the Company and made effective from 2 November 2006 i.e. before approval of the restoration in 25 January 2007. According to this policy *"restoration of allotment was to be allowed at the difference between current base price and originally allotted price or 7.5 per cent on the current base rate of allotment, whichever is higher".*

As the current base rate of allotment on the date of restoration (January 2007) had increased (18 September 2006) to ₹ 1,500 per sqm, the restoration should have been made by charging the difference between ₹ 1,500 per sqm and the rate of original allotment (being higher than 7.5 *per cent* of the current base rate of ₹ 1,500 per sqm). The decision to restore the above three plots by charging only

7.5 *per cent* on ₹ 700 per sqm was a clear violation of the extant restoration policy and resulted in a loss of ₹ 32.68 lakh[29].

It is recommended that the company should adhere to their Rules, Regulations and Policy and also the financial interest of the Company while deciding on restoration of the cancelled plots and should recover the restoration charges as per the applicable rates.

The matter was referred to the Company/Government (August 2010); their replies had not been received (November, 2010).

## UTTARAKHAND POWER CORPORATION LIMITED

### 5.7 Undue advantage to a contractor

**Interest free Mobilization Advance was given to a contractor in contravention of the guidelines issued by the Central Vigilance Commission, with a consequent loss of interest of ₹ 1.25 crore.**

Government of India, Central Vigilance Commission (CVC) issued guidelines from time to time ( October 1997 and January 2002) regarding Mobilisation Advance (MA) which, inter alia, provided that:

i) Provision of MA should essentially be need based and decision to provide such advance should rest at the level of Board (with concurrence of Finance) in the organisation;

ii) Recovery of MA should be time-based and not linked with progress of work;

iii) There should be clear stipulation of interest to be charged on delayed recoveries either due to the late submission of bill by the contractor or any other reason;

iv) MA should be given in installments and subsequent installments should be released only after getting satisfactory utilization certificate from the contractor for the previous installment already released; and

v) Bank guarantee of equal amount should be obtained before releasing the MA, and in case contractor fails to complete the work in stipulated period

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[29]

| | | | |
|---|---|---|---|
| Plot | 1416 sqm x ₹ 940 (₹ 1500-₹ 560) | = | ₹ 13.31 lakh |
| Plot | 1340 sqm x ₹ 912 (₹ 1500-₹ 588) | = | ₹ 12.22 lakh |
| Plot | 968.50 sqm x ₹ 940 (₹1500-₹ 560) | = | ₹ 9.10 lakh |
| Total | 3724.50 sqm | | ₹ 34.63 lakh |
| Less the restoration charges (7.5 *per cent* of ₹ 700x 3724 sqm) | | = | ₹ 1.95 lakh |
| | | | ₹ 32.68 lakh |

the whole amount of MA should be recovered by encashing the bank guarantee.

The Company entered into (December 2005) a contract with M/s ICOMM Tele Ltd., Hyderabad (contractor ) for execution of the work of Route Survey, Design, Supply, Testing, Commissioning of material and equipment required for electrification of villages and their households under Rajeev Gandhi Gramin Vidyutikaran Yojna (RGGVY) in Almora on turnkey basis, at a cost of ₹ 95.37 crore. The contractor could complete only 60 *per cent* of the work till October 2010 as against the scheduled date of June 2007 fixed for completing the entire work.

Further, in accordance with the terms and conditions of the contract, an interest free MA of ₹ 9.54 crore i.e. 10 *per cent* of the contract value was given to the contractor against an equal value of the bank guarantee in two instalments in May and June 2006. In this connection, we observed the following irregularities with reference to the guidelines of CVC in the matter:

a) The clause regarding extending the interest free MA was incorporated in the contract without approval of the Board of Directors in violation of CVC guidelines;

b) Second instalment of MA of ₹ 4.77 crore was released (June 2006) without obtaining utilization certificate of previous installment;

c) No time bound schedule was fixed for recovery of MA nor the contract contained any provision for charging interest on delayed recovery of MA from the contractor;

d) The Company could adjust the MA to the extent of ₹ 2.08 crore only against the running bills of the contractor till the scheduled date of completion of the work (viz. June 2007). Balance amount of MA of ₹ 7.46 crore was recovered/adjusted from the running bills of the contractor during the period from July 2007 to October 2010. However, no interest was charged on the MA remaining pending for recovery after the schedule date of completion of work which was in contravention of CVC guidelines; and

e) Although the Company obtained a bank guarantee of ₹ 9.54 crore against the MA the company never encashed the same for recovery of long pending MA from the contractor.

Thus, the Company failed to safeguard its financial interest by incorporating unfavourable condition in the contract for providing interest free MA to the contractor and suffered an interest loss of ₹ 1.25 crore[30] on delayed recovery of MA after scheduled date of completion of work (viz. July 2007 to October 2010).

[30] Calculated on reducing balance at an average rate of interest of 8.5 *per cent* per annum.

In the Division level reply, it was stated (July 2010) that the provision of payment of 10 *per cent* interest free MA was made in the tender document and agreement in question as per the past practice of the company.

Reply of the company is not acceptable as the terms and conditions on which the MA was given contravened the guidelines of the CVC in this regard. Company needed to revise the tender document for future duly taking into account the guidelines issued by CVC from time to time.

The matter was referred to the Company/Government (August 2010); their replies had not been received (November 2010).

**Dehradun** **(ASHWINI ATTRI)**
**The** **Principal Accountant General (Audit), Uttarakhand**

**Countersigned**

**New Delhi** **(VINOD RAI)**
**The** **Comptroller and Auditor General of India**