Chapter-II

2 Reviews relating to Government companies

2A Haryana Seeds Development Corporation Limited

Highlights

The Company was incorporated in September 1974 with a view to provide quality seeds at reasonable prices to the farmers in Haryana.

(Paragraph 2A.1)

The accumulated profit (Rs 1.40 crore) of the Company for the year ending March 2001 is to be viewed in the light of non-provision of Rs 2.27 crore towards leave encashment (Rs 1.94 crore) and penal interest payable to State Government (Rs 33 lakh). Further, the Company enjoyed the benefit of waiver of dividend of Rs 1.15 crore (State Government: Rs 0.62 crore and National Seeds Corporation Limited: Rs 0.53 crore) on preference shares and penal interest of Rs 45.26 lakh on short term loan from State Government.

(Paragraph 2A.6(a))

The capacity utilisation of seed processing plants declined substantially to 36 *per cent* in 2001-02 due to lower production programme given to growers.

(Paragraph 2A.9)

The action plan under National Seeds Project-Phase-III envisaged (January 1995) an increase in volume of sale from 65 to 75 *per cent* through Company's own sale outlets. But the sale through its own outlets ranged between 64 and 68 *per cent* during five years up to 2000-01 (except 1998-99).

(Paragraph 2A.10.1)

Contribution of the Company as a percentage of total sales in the State during five years up to 2001-02 declined constantly from 63 to 36 *per cent* for wheat and ranged between 47 and 32 *per cent* and 3 and 11 *per cent* in case of paddy and cotton respectively.

(Paragraph 2A.10.2)

As against one of the main objectives of the Company to provide certified seeds at reasonable rates, the selling price of seed was higher due to excess loading of the cost by processing charges of seeds, interest on carrying cost of unsold seeds and dealer's commission. The excess charging from the farmers in respect of wheat seed alone worked out to Rs 3.60 crore during 1999-2001.

(Paragraph 2A.10.4)

Imprudent decision of the Company to sell wheat seed outside the State at cheaper rates had resulted in loss of Rs 0.79 crore to the Company.

(Paragraph 2A.10.6.2)

As the sale of seeds was confined to two crop seasons only, the personnel posted in the field remained idle for 6 months and the Company had not evolved any scheme for their alternative use. As a result, the Company paid Rs 2.47 crore as salary and allowances to them for idle period during five years up to 2000-01.

(Paragraph 2A.11.1)

2A.1 Introduction

The Company was incorporated in September 1974 with a view to provide quality seeds of various agricultural products viz. wheat, paddy, gram, pulses, oil seeds and vegetables at reasonable prices to the farmers in Haryana.

2A.2 Objectives

The main objectives of the Company, *inter alia*, were to:

- make arrangement for supply of foundation seeds to grower-shareholders for varieties of all India and regional importance and through other agencies for other local varieties;

- carry on production of certified seeds of all those kinds and varieties coming under the purview of the Seeds Act, 1966 and quality seeds of other kinds or varieties;

- carry on business as seed merchants including export and import and make available at reasonable prices sufficient quantities of certified seeds to support agricultural production programme;

- enter into contract with individuals, co-operative societies, corporations and Government agencies in the growing, processing, drying, storing, distributing, transporting, buying and selling of agricultural seeds; and

- implement State Seed Project forming part of National Seeds Programme as formulated, and as modified from time to time.

The Company had, however, confined its activities to organising production, procurement, processing and marketing of seeds.

2A.3 Organisational set-up

The management of the Company is vested in a Board of Directors (Board) comprising of not more than 11 directors. As on 31 March 2002, there were 11 directors on the Board, six nominated by the State Government (Chairman, Managing Director, one Director from Haryana Agricultural University (HAU) and three ex-officio directors), three by National Seeds Corporation Limited (NSC), one each by Government of India and the growers. Nominees of the NSC and HAU were experts. Except Managing Director who was a bureaucrat, all the directors were on part time basis.

The Managing Director was the Chief Executive of the Company and was assisted by five departmental heads viz. Chief Manager (Marketing), Chief Manager (Production), Chief Manager (Personnel & Administration), Chief Engineer and Chief Finance & Accounts Officer in day to day affairs of the Company. Besides, there were six Regional/Branch Managers in the field to look after the six* seed processing plants and marketing of seeds.

As per Memorandum of Understanding (MOU) entered (May 1996) amongst Government of India, State Government and the Company for implementation of the National Seeds Project-Phase III (NSP-III) for making the State Seed Corporations viable on sustainable basis, it was envisaged to appoint Managing Director for a tenure of three years for ensuring commitment and continuity of management. The Committee on Public Undertakings (COPU) had also recommended (March 1983) in its 11th Report that the Chief Executive of Public Sector Undertaking/Board should be given a minimum tenure preferably three years or more. Contrary to the recommendations of COPU and MOU, 10 Managing Directors were appointed during the last five

* Umri, Yamunanagar, Hisar, Sirsa, Tohana and Pataudi.

years up to March 2002 and their tenure remained between one and 18 months.

2A.4 Scope of Audit

The working of the Company was last reviewed in the Report of the Comptroller and Auditor General of India for the year ended 31 March 1996, No. 2 (Commercial)- Government of Haryana. The review was discussed by COPU and their recommendations are contained in the 48th Report presented to the State Legislature on 15 March 2001. The cases where recommendations of the COPU/assurance given by the Company to COPU were not complied with by the Company are discussed in paragraphs 2A.9.2 and 2A.10.3 *infra*.

The present review conducted during November 2001 to February 2002 covers the performance of the Company during the last five years ended 31 March 2002. Out of six processing plants, five* plants were visited and records of 43 out of 70 sales counters were test-checked during audit besides the head office of the Company.

2A.5 Funding

2A.5.1 Capital structure

As per the Action Plan agreed (January 1995) between the Government of India, State Government and the Company under NSP-III, the existing preference shares held by the State Government (46,805) and NSC (32,228) were to be converted into equity shares and the accumulated dividend of Rs 1.15 crore up to March 1994 (State Government: Rs 0.62 crore, NSC: Rs 0.53 crore) on these shares was to be waived.

The preference shares held by the State Government were converted into equity shares (March 1996) and the Government waived the accumulated dividend of Rs 0.62 crore thereon. Although the NSC neither waived the dividend nor returned the share certificates for conversion into equity shares, the Company after seeking approval of the shareholders (December 1999) issued (April 2000) equity shares in lieu of preference shares to the NSC.

As on 31 March 2001, the paid-up capital of the Company was Rs 4.81 crore, subscribed by the State Government (Rs 2.76 crore), NSC (Rs 1.12 crore) and growers (Rs 0.93 crore).

2A.5.2 Borrowings

The Company had borrowed funds (term loans) from banks, State Government and Haryana State Agricultural Marketing Board (HSAMB). As on 31 March 2001, total loans outstanding amounted to Rs 4.19 crore from State

* Umri, Yamunanagar, Hisar, Sirsa and Tohana

Government (principal: Rs 2 crore, interest: Rs 1.55 crore), banks (principal: Rs 10.30 lakh, interest: Rs 15.64 lakh), and HSAMB (principal: Rs 35 lakh, interest: Rs 3.40 lakh).

For working capital requirement, the Company had made cash credit arrangements with a commercial bank against hypothecation of inventories and seeds. There was an outstanding amount of Rs 4.44 crore under such arrangement as on 31 March 2001.

A review of cases involving borrowings revealed the following points:

(a) Excess payment of interest

The Company obtained (1981-85) term loans of Rs 3.37 crore from New Bank of India (NBI), now merged with Punjab National Bank, under refinance scheme of National Bank for Agriculture and Rural Development (NABARD).

The Bank charged excess interest of Rs 0.88 crore by increasing rate of interest arbitrarily.

The NBI in its agreements with the Company agreed to charge fixed rate of interest of 12.5 *per cent* with no variation clause. However, the bank started (September 1990) charging rate of interest arbitrarily varying from 14 to 17.75 *per cent* and the Company paid excess interest from 1990-91 onwards**.** The excess payment as worked out by the Company/bank amounted to Rs 0.88 crore.

The management stated (January 2002) that the bank had charged higher rate of interest based on revision in rates by NABARD and the matter was taken up from time to time with the bank for charging interest as per the terms of the agreement. The reply of the management was not tenable as the Company should have initiated legal action restraining the bank from charging interest rates higher than the rate prescribed in the agreement. The management further stated (June 2002) that the legal opinion in this case was being taken separately.

(b) Avoidable payment of guarantee fee

There was no condition for providing State Government guarantee against the loans of Rs 3.37 crore obtained from NBI. However, the bank debited (June 1996) arbitrarily the Company's account with Rs 14.65 lakh (Rs 6.55 lakh guarantee fee up to 1991 and Rs 8.10 lakh interest thereon till March 1996). The fact of non-existence of guarantee clause in the original agreement was never brought to the notice of the bank. On being pointed out in audit, the management stated (June 2002) that the matter had been taken up at higher level for refund of the amount.

2A.6 Financial position and working results*

(a) Financial position

The following table summarises the financial position of the Company for the five years ending March 2001:

	Particulars	1996-97	1997-98	1998-99	1999-2000	2000-01
A.	**Liabilities**	**(Rupees in lakh)**				
(i)	Paid-up capital	463.82	471.97	473.87	476.89	480.66
(ii)	Reserve & surplus					
a)	Free reserves and surplus	157.54	93.31	94.16	163.46	141.17
b)	Capital reserve	584.66	575.73	572.90	571.21	570.18
(iii)	Borrowings (including cash credit)	390.85	372.08	299.94	275.29	688.90
(iv)	Current liabilities & provisions	311.66	454.61	316.30	337.87	359.26
	Total A	**1908.53**	**1967.70**	**1757.17**	**1824.72**	**2240.17**
B.	**Assets**					
(v)	Gross block	993.55	1195.11	1228.53	1223.25	1241.28
(vi)	Less: depreciation	645.90	691.63	739.03	764.17	801.59
(vii)	Net fixed assets	347.65	503.48	489.50	459.08	439.69
(viii)	Capital works-in-progress	123.88	0.53	4.21	0.09	0.09
(ix)	Current assets, loans & advances	1428.57	1457.42	1256.92	1362.39	1799.90
(x)	Miscellaneous expenditure to the extent not written off	8.43	6.27	6.54	3.16	0.49
	Total B	**1908.53**	**1967.70**	**1757.17**	**1824.72**	**2240.17**
C.	**Capital employed****	**1588.44**	**1506.82**	**1434.33**	**1483.69**	**1880.42**
D.	**Net worth*****	**612.93**	**559.01**	**561.49**	**637.19**	**621.34**

An analysis of the above table revealed the following points:

(i) Due to non-liquidation of seeds, the inventory of the Company had increased during 2000-01 which resulted in increase in current assets, loans and advances and capital employed.

The accumulated profit of Rs 1.40 crore at the end of March 2001 was subject to non-provision of expenditure of Rs 2.27 crore.

(ii) The accumulated profit (Rs 1.40 crore) of the Company at the end of March 2001 was to be viewed in light of non-provision of Rs 2.27 crore toward leave encashment (Rs 1.94 crore) and penal interest payable to State Government (Rs 33 lakh). Further, the Company had enjoyed the benefit of waiver of dividend of Rs 1.15 crore (State Government: Rs 0.62 crore and NSC: Rs 0.53 crore) on preference shares and penal interest of Rs 45.26 lakh on short term loan from State Government.

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* Financial position and working results were analysed up to 2000-01 due to non-finalisation of the accounts for the year 2001-02.

** Capital employed represents net fixed assets (including capital works-in-progress) plus working capital.

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

(b) Working results

The table given below summarises the working results of the Company for five years ending 31 March 2001:

	Particulars	1996-97	1997-98	1998-99	1999-2000	2000-01
A.	**Income**	**(Rupees in lakh)**				
(i)	Sales	2623.40	2000.93	2503.37	2660.25	1968.63
(ii)	Subsidy from State Government on sale of seeds	255.84	117.19	188.42	196.06	189.27
(iii)	Other income	57.75	25.59	62.81	35.50	69.86
(iv)	Accretion (+)/decretion (-) in stock	(-)505.59	(+)540.16	(-)729.73	(+)213.12	(+)906.07
	Total A	**2431.40**	**2683.87**	**2024.87**	**3104.93**	**3133.83**
B.	**Expenditure**					
(v)	Purchases	1623.14	1881.38	1223.22	2056.81	2180.45
(vi)	Administrative, selling and distribution expenses	593.15	666.55	683.03	795.72	830.72
(vii)	Interest	88.26	82.83	79.97	78.23	110.56
(viii)	Depreciation	39.51	47.43	48.56	45.19	42.30
	Total B	**2344.06**	**2678.19**	**2034.77**	**2975.95**	**3164.03**
(ix)	Profit (+)/loss (-) for the year	(+) 87.34	(+) 5.68	(-) 9.91	(+) 128.98	(-) 30.20
(x)	Prior period adjustments	(-) 6.19	(-) 41.76	(+) 10.75	(-) 51.89	(+) 7.90
(xi)	Less provision for income tax	11.27	-	-	7.79	-
	Net profit(+)/loss (-)	**(+) 69.88**	**(-) 36.08**	**(+) 0.84**	**(+) 69.30**	**(-) 22.30**

The Company's profit of Rs 1.29 crore for the year 1999-2000 turned into loss of Rs 30.20 lakh in 2000-01 despite receipt of revenue grant of Rs 23.76 lakh from Government of India under Seed Bank Scheme. Loss during 2000-01 was attributable to:

- decrease in sale and increase in interest component on borrowings/inventory holdings;
- increase in expenses on inter unit transfers (discussed in para 2A.10.3 *infra*); and
- increase in administrative expenses (discussed in para 2A.11 *infra*).

2A.7 National Seeds Project- Phase-III

In order to make the Seed Corporations financially viable on sustainable basis and to restructure them on commercial lines, the Government of India formulated National Seeds Project Phase-III (NSP-III). In January 1992, the State Government approved participation in the project. Based on the diagnostic study (November 1994 and January 1995) conducted by the

operating consultant* appointed by the Government of India, following key action plan was agreed to (January 1995):

- Contribution of margin money of Rs 4.20 crore by the Government of India (Rs 2.70 crore) and State Government (Rs 1.50 crore) for working capital;

- Waiving penal interest (Rs 45.26 lakh) on short term loan of Rs 5 crore obtained from the State Government;

- Contribution of rupee one crore by the Government of India for repayment of the loan, ibid;

- Charging of 6 *per cent* simple interest on repayment of the whole outstanding loan and repayment of the entire loan by 31 March 1998;

- Contribution of capital grant of Rs 19.50 lakh each by the Government of India and State Government for capital investment;

- Grant of Rs 16 lakh for Electronic Data Processing (EDP) equipments by the Government of India; and

- Introduction of recommended measures of cost reduction by surrendering excess load of power in the plants, rationalisation of manpower, increase in sale through own outlets from 65 to 75 *per cent* and to increase the Company's market share in the sale of seeds in the State to 75 *per cent*.

2A.7.1 Implementation of the NSP-III

The State Government did not release its share of matching contribution of Rs 19.50 lakh for capital investment.

The Government of India disbursed (May 1995) Rs 3.86 crore towards margin money for working capital (Rs 2.70 crore), grant for electronic data processing equipment (Rs 16 lakh) and repayment of loan to the State Government (rupee one crore). Further, the Government of India released (March 1996) Rs 19.50 lakh being its share for capital investment. The State Government did not release the matching contribution of Rs 19.50 lakh for capital grant but released (August 1995) Rs 1.50 crore towards margin money for working capital.

A scrutiny of the records relating to implementation of NSP-III revealed the following points:

(i) State Government waived (March 1996) penal interest (Rs 45.26 lakh) on short term loan of Rs 5 crore and agreed for 6 *per cent* simple interest on outstanding loan. The Company repaid only Rs 3 crore during 1995-96 (Rs 1.50 crore) and 1996-97 (Rs 1.50 crore). As on 31 March 2001, Rs 3.55 crore (including interest of Rs 1.55 crore at the rate of 6 *per cent* per annum) was outstanding.

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* M/s K. Lal Goel & Company, New Delhi

EDP equipment purchased for Rs 15.24 lakh under the scheme was not put to use.

(ii) The Company purchased computer hardware out of the grant for EDP equipment for Rs 15.24 lakh during 1995-97. However, computerisation of Head Office, processing plants and marketing units had not been completed in the absence of which MIS reports, profit centre reports, inter-plant comparison report etc had not been generated. The management stated (June 2002) that the equipment had become obsolete and computerisation could not be completed due to financial constraints.

(iii) The Company could not achieve the target of 75 *per cent* sale through its own outlets and the same ranged between 64 and 68 *per cent* during the last five years up to 2000-01 (except in 1998-99).

(iv) Against the envisaged 75 *per cent* share of the Company in the total sale of seed in the State, the actual share during the last five years up to 2001-02 ranged between 36 and 63 *per cent* for wheat, 32 and 47 *per cent* for paddy and 3 and 11 *per cent* for cotton (discussed in paragraph 2A.10.2 *infra*).

2A.8 Production performance

2A.8.1 Seed development process

Breeder seed constitutes the basis of all further seed production and is used in production of foundation seed. Breeder seed was provided by the Government of India which was used in the production of foundation seed. The foundation seed of marked genetic purity and other physical characteristics was used for multiplication/ production of certified seed, which was sold to the farmers for raising crops on a large scale.

The seed development process is narrated below:

Procurement of breeder seed from Government of India
↓
Multiplication to foundation seed
↓
Distribution of foundation seed to growers
↓
Receipt of raw seed from growers
↓
Processing of raw seed in seed processing plants
↓
Certification of processed seed for sale to farmers

The Company procured foundation seed from Haryana Agriculture University (HAU) and the growers by giving them production programme. The foundation seed so obtained was distributed amongst individual grower shareholders and other farmers for multiplication/production of raw seed on their land holdings. The entire raw seed was procured from these growers at the rates fixed each year by the Company by adding some premium on

minimum support price fixed by the Government of India. The raw seed was then processed in processing plants of the Company. The processed seed was tested by Haryana State Seed Certification Agency (HSSCA) in its seed testing laboratory and the seed labelled as certified seed by the HSSCA was sold to the farmers.

2A.8.2 Foundation seed

The requirement of foundation seed was assessed by the Company on the basis of targeted coverage of total cultivable area as per crop production programme of each season prepared by the Seed Production Committee. The foundation seeds were sold to growers for production of raw seed.

Excess payment of rupee one crore was made on procurement of foundation seed from HAU.

It was observed in audit that during the last five years up to 2000-01, 20,362.60 quintals foundation seed of wheat valuing Rs 2.51 crore was purchased from HAU at a rate ranging between Rs 1,108 and Rs 1,369 per quintal, though the Company procured foundation seed (from growers and Government seed farms) through its own production programme at rates ranging between Rs 611 and Rs 832 per quintal. This had resulted in excess payment of Rs 1.0 crore to HAU.

The management stated (June 2002) that it had followed the policy for production of foundation seed since its inception and preferred to get maximum quantity of seed produced from HAU farm followed by Government Seed Farms/ Haryana Land Reclamation and Development Corporation Limited (HLRDC) farm and Central State Farm (CSF), Hisar. The Company further stated that it went for production programme through private growers only under special circumstances and under strict and close supervision of technical staff.

The management's reply was not tenable as the foundation seed procured through its own production programme was cheaper as compared to the foundation seed procured from HAU, and the Company should have procured maximum quantity of foundation seed from Government agencies and private growers through its own production programme.

2A.8.3 Fixation of targets

The State Government constituted (May 1997) a Seed Production Committee comprising of 14 members representing State/Central Government and technical institutions. The Committee draws production programme of certified seed for each season (Rabi and Kharif) on the basis of the demand received from field offices, projection given by the Agriculture Department and targets suggested under NSP-III. The production programme so decided by the Committee was then considered by the Board of the Company. The implementation of seed production programme was reviewed periodically by the Managing Director of the Company.

The table below indicates the targeted area for production of certified seed

vis-à-vis actual area sown for the last five years up to 2000-01:

Crop season	Year	Target fixed	Area sown	Shortfall	Percentage of shortfall
		(Figures in acres)			
Rabi					
	1996-97	25577	21484	4093	16
	1997-98	20455	18759	1696	8
	1998-99	19346	18290	1056	5
	1999-2000	20142	19269	873	4
	2000-2001	16052	15350	702	4
Kharif					
	1996-97	8198	4483	3715	45
	1997-98	9306	8230	1076	12
	1998-99	4358	3187	1171	27
	1999-2000	3819	3067	752	20
	2000-2001	3976	3631	345	9

The Company had not been able to sow the targeted area in any of the crops.

An analysis of the above table would reveal that the Company had not been able to sow the targeted area in any of the crops i.e. Rabi and Kharif during the last five years though it continued to reduce the targets year after year.

The management stated (June 2002) that production programme underwent change based on the response from growers received during the previous years and also keeping in view the stocks of unsold seed available.

2A.8.4 Production of certified seed

The table below indicates the targets and actual production of certified seeds of wheat, paddy and cotton during the last five years up to 2000-01:

Crop	Year	Target for production	Actual production	Percentage of achievement
		(quintals)		
Wheat				
	1996-97	267000	202232	76
	1997-98	261650	119987	46
	1998-99	208650	186085	89
	1999-2000	220000	205532	93
	2000-2001	167560	95549	57
Paddy				
	1996-97	17500	10172	58
	1997-98	20400	11423	56
	1998-99	15000	6400	43
	1999-2000	16000	11241	70
	2000-2001	17550	13082	75
Cotton				
	1996-97	15000	4769	32
	1997-98	18000	1145	6
	1998-99	7850	206	3
	1999-2000	4800	3065	64
	2000-2001	7350	4455	61

Source:- Data taken from seed production registers maintained by the Company.

NSP-III envisaged progressive increase in sale of wheat seed from 2.22 lakh quintals to 2.85 lakh quintals, paddy seed from 10,736 quintals to 21,000 quintals and cotton seed from 5,444 quintals to 20,000 quintals during 1994-2000. An analysis of the above table would reveal that Company fixed targets lower than those envisaged in NSP-III and was not able to achieve even the reduced targets. The management stated (June 2002) that due to marketing problems, the lower targets were fixed and even the reduced produce could not be sold. The reply was not tenable as by adopting proper marketing strategy, the sale could have been increased.

2A.9 Processing of seed

The raw seed procured from the farmers was processed in the six processing plants of the Company. It would be seen from the Annexure-10 that the capacity utilisation of the processing plants declined substantially to 36 *per cent* in 2001-02 which was the lowest during five years, the highest being 78 *per cent* in 1999-2000.

The management stated (June 2002) that low production of seeds and resultant under utilisation of capacities were due to carry over of stock from the previous years and fluctuation in weather conditions.

The reply was not tenable as carry over of stock was due to poor marketing and fixation of higher rates in comparison with rates of private traders. Moreover, fluctuation in weather condition had no impact as the total sales of wheat seed in the State increased from 2.14 lakh quintals during 1997-98 to 4.16 lakh quintals during 2001-02.

It was further seen that the capacity utilisation of Umri and Yamunanagar plants ranged between 25 and 68 *per cent* and 19 and 46 *per cent* respectively during the last five years up to 2001-02. As the capacity utilisation at Yamunanagar was lower as compared to Umri, the processing cost at Yamunanagar was Rs 292.99, Rs 110.33 and Rs 89.45 per quintal as against processing cost of Rs 56.93, Rs 51.87 and Rs 22.55 per quintal at Umri during the last 3 years up to 1999-2000. As both the plants were located at close proximity to each other, the processing of entire seeds at Umri would have not only increased its capacity utilisation but also reduced the processing cost. The management stated (June 2002) that it was planning to reduce the installed capacity at Yamunanagar.

2A.9.1 Cotton ginning and bale pressing plant, Hisar

The Company procured raw cotton (*Kapas*) from the growers which was ginned and seed was separated from cotton. The cotton was pressed in cotton ginning and bale pressing plant. The installed capacity of the plant was 11,200 bales per working season of 100 days in a year.

The table below summarises the capacity utilisation of the plant for the last

five years up to 2000-01:

Year	Installed capacity in number of bales	No. of cotton bales ginned & pressed	Percentage utilisation of installed capacity
1996-97	11200	1153	10.29
1997-98	11200	Nil	Nil
1998-99	11200	27	0.24
1999-2000	11200	444	3.96
2000-2001	11200	1317	11.76

The capacity utilisation of the plant ranged between nil and 11.76 *per cent* during five years up to 2000-01.

Low capacity utilisation was attributed to less production programme given as the target area for cotton was reduced from 6,461 acres during Kharif 1997 to 2,197 acres during Kharif 2000. Further, the Company could not obtain work of ginning from Government agencies viz. HAFED, Cotton Corporation of India (CCI) and private parties. NSP-III envisaged (January 1995) to dispose of the cotton ginning plant and replace it with smaller plants. However, no action had been taken (March 2002) in this regard.

The management admitted (June 2002) that installed capacity of the plant was much higher than the requirement and the Company could not get work from private parties, HAFED and CCI in spite of their earnest efforts.

2A.9.2 Cotton delinting plants

The Company had three delinting* plants (two machine delinting plants at Hisar and Sirsa and one acid delinting plant at Hisar) with total installed capacity of 23,000 quintals per season.

The capacity utilisation ranged between one and 23 *per cent* during 1996-2001.

The capacity utilisation of the plants ranged between one and 23 *per cent* which was due to low production programme given to growers and non-procuring of work from private parties. Though the COPU recommended (March 2001) constitution of a committee of officers to take effective steps for improving the capacity utilisation of plants, no such committee had been constituted so far (March 2002).

The management stated (June 2002) that it had closed the acid delinting plant and work of improving the capacity utilisation of machine delinting plants was under consideration.

Some of the important points on the working of plants are discussed below:

Unfruitful expenditure of Rs 12.11 lakh was incurred on repair of the acid delinting plant.

(a) The utilisation of acid delinting plant at Hisar decreased from 2,641.10 quintals during Kharif 1993 to 752.50 quintals during Kharif 1997 due to high cost and increased risk to seed quality. Despite this, the Company incurred an expenditure of Rs 12.11 lakh on replacement of its dryer and wash machine (Rs 10.41 lakh) and procurement of new acid storage tank (Rs 1.70 lakh) in

* Delinting is a process of removing cotton attached with the cotton seed.

1997. Thereafter, only 550 quintals of seed was delinted during Kharif 1998 and since then it was lying idle. Expenditure of Rs 12.11 lakh had, thus, proved to be unfruitful. Although the management decided to dispose of the plant in March 2001, the plant had not been disposed of so far (June 2002).

(b) Avoidable payment of minimum electricity charges

Non-surrendering of excess power/load resulted in excess payment of Rs 10.45 lakh.

The Hisar plant was sanctioned (1986) power load of 509.327 KW with the contract demand of 550 KVA for its cotton ginning, bale pressing and acid delinting plant. The Company continued to avail sanctioned load despite low capacity utilisation of the plant for the last 10 years. On being pointed out in audit (July 2000), the Company reduced (March 2002) the load to 174.32 KW with contract demand of 194 KVA. Had the Company reduced the load earlier, it could have saved Rs 10.45 lakh paid as minimum charges during April 2000 to February 2002.

2A.9.3 Short packing of wheat seed

The raw seed received by the Company from seed growers are processed and quality seed retained and packed by the Company for sale to the farmers. Payment to the seed growers was made on the basis of quantity of seeds packed.

At Umri plant, the Company was having 49,937.20 quintals and 8,888.80 quintals of packed wheat seed of PBW-343 and UP-2338 varieties respectively for sale during 2000-01. The Company could sell 31,113.20 quintals of these varieties and was left with unsold stock of 27,712.80 quintals. The left over stock of seed was put to revalidation before sale during Rabi 2001. While revalidating the left over stock of seed, shortage of 525.80 quintals of wheat seed, being the difference between the quantity offered for revalidation and quantity actually revalidated, was noticed.

The Committee constituted to enquire into the shortages found (January 2002) that non-certification of weights/scales vis-a-vis calibration before/during processing of Rabi seed (1999-2000) resulted in under weight filling i.e. short packing of seed. Resultantly, wheat seed sold during 2000-01 was also under weight.

Thus, negligence in monitoring the actual weight at the packing stage had resulted in short packing of 525.80 quintals of wheat seed valuing Rs 6.70 lakh against unsold stocks of 27,712.80 quintals. The management stated (June 2002) that responsibility of concerned staff was being fixed and recovery of losses being made.

2A.10 Marketing

To ensure timely availability of certified seed at the doorsteps of the farmers, the Company had created its own network of 70 regular sale counters. Besides regular sale counters, about 20 to 30 temporary sale counters were opened

during sale season. Certified seed was also sold through institutional agencies viz. Mini Banks, Haryana Agricultural Marketing Federation Co-operative Limited (HAFED), HLRDC and Haryana Agro Industries Corporation Limited (HAIC) etc. The sale performance of certified seed during the last five years up to 2001-02 is detailed below:

Crop Season	Year	Availability of seed	Sale	Percentage of sale to availability
		(quintals)		
Rabi				
	1997-98	208386	138250	66
	1998-99	192592	186404	97
	1999-2000	199691	180329	90
	2000-2001	227016	142102	63
	2001-2002	184760	182060	99
Kharif				
	1997-98	21452	17531	82
	1998-99	18242	15638	86
	1999-2000	17884	17046	95
	2000-2001	19482	17679	91
	2001-2002	22688	18262	80

The availability of Rabi seeds declined from 2.08 lakh quintals in 1997-98 to 1.85 lakh quintals in 2001-02.

The availability of Rabi seed declined from 2.08 lakh quintals in 1997-98 to 1.85 lakh quintals in 2001-02 and of Kharif seed declined in the first four years and increased marginally during 2001-02. Even this seed could not be sold in all the five years (except Rabi crop during 2001-02).

The management stated (June 2002) that the change in the preference of the farmers for certain varieties of seeds, entry of a large number of private seed producers and unfavorable weather conditions were the factors responsible for decline in sale of certified seeds. It was, however, noticed in audit that poor marketing, higher selling rates and failure of the Company to ascertain the farmers' preferences were responsible for poor sales.

2A.10.1 Commission to institutional agencies

The action plan under NSP-III envisaged (January 1995) an increase in volume of sale from 65 to 75 *per cent* through Company's own sale outlets. However, the sale through its own outlets ranged between 64 and 68 *per cent* during five years up to 2000-01 (except in 1998-99). During the last five years up to 2000-01, the Company paid commission of Rs 2.55 crore to the institutional agencies for sale of seed on 10 *per cent* commission basis.

The management stated (February 2002) that from 2001-02 Rabi crops, the Company was allowing 7.5 *per cent* commission instead of 10 *per cent* to the agencies. However, the fact remained that the Company could not increase the quantum of sale through its own outlets.

2A.10.2 Contribution of the Company towards meeting the demand of major seeds in the State

The table below indicates contribution of the Company towards distribution of major seeds in the State during five years up to 2001-02.

Crop	Year	Total sale of seeds in the State (quintals)	Contribution of the Company (quintals)	Percentage of contribution
Wheat	1997-98	214333	134005	63
	1998-99	313230	173449	55
	1999-2000	354689	175822	50
	2000-2001	335430	137740	41
	2001-2002	415932	149435	36
Paddy	1997-98	25988	9049	35
	1998-99	33867	10760	32
	1999-2000	32332	11899	37
	2000-2001	29618	11420	39
	2001-2002	23112	10962	47
Cotton	1997-98	44942	4821	11
	1998-99	50737	1754	3
	1999-2000	33746	1334	4
	2000-2001	41117	2552	6
	2001-2002	43860	4606	11

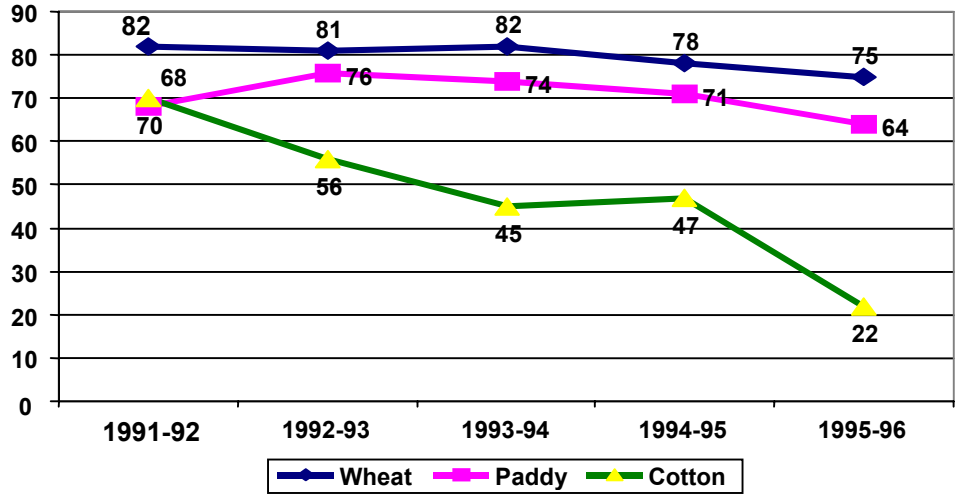
The contribution of the Company in the State dropped from 63 *per cent* in 1997-98 to 36 *per cent* in 2001-02 in respect of wheat seed.

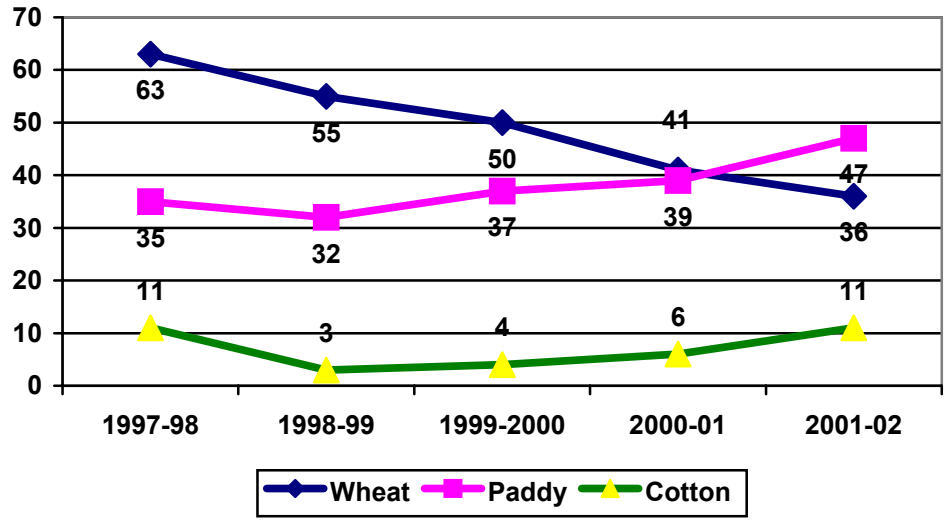
From the above table, it would be seen that there was substantial increase in sale of wheat seed in the State from 2.14 lakh quintals to 4.16 lakh quintals during 1997-2002. The contribution of the Company, however, dropped from 63 *per cent* to 36 *per cent* during the same period.

Interestingly, during the preceding block of 5 years of 1991-96, the Company's contribution of wheat, paddy and cotton ranged between 75 and 82, 64 and 76 and 22 and 70 *per cent* respectively whereas the contribution of wheat, paddy and cotton during 1997-2002 ranged between 36 and 63, 32 and 47 and 3 and 11 *per cent* respectively.

The graphical presentation indicating the Company's contribution (in terms of percentage) in the total sale of seed in the State for the block years 1991-96

and 1997-2002 was as under:





The management stated (June 2002) that decline in sale was due to entry of private seed producers, change in the preference of the farmers, non-lifting of allocated wheat seed by the institutional agencies and taking of seeds by the farmers from adjoining areas of other States like Punjab and Rajasthan. The reply was, however, not tenable as with substantial subsidy from the Government, the Company could have maintained its contribution by providing seed at competitive rates keeping in view the preference of the farmers.

2A.10.3 Expenditure on inter unit transfers

While discussing Para 2A.11 of the Report of the Comptroller and Auditor General of India for the year ended 31 March 1996, No. 2 Commercial Government of Haryana, regarding excess expenditure of transportation on inter-unit transfer of seed, the management intimated (August 1999) the COPU that the expenditure had decreased from Rs 25.71 lakh during 1995-96

to Rs 14.79 lakh during 1998-99 and further assured to minimise the expenditure. However, it was noticed that the expenditure incurred on inter-unit transfer had again increased to Rs 21.88 lakh and Rs 24.57 lakh during the years 1999-2000 and 2000-01 respectively. The increasing trend in inter-unit transfers was due to non-assessment of production programme properly.

The management stated (June 2002) that higher expenditure was attributable to hike in transportation and labour rates. However, efforts were constantly being made to minimise the expenditure.

2A.10.4 Fixation of sale price

One of the main objectives of the Company was to make available certified seed to the farmers at reasonable rates. With this in view, the State Government provided subsidy to the Company on the seeds sold to the farmers within the State. The Board authorised (December 1995) the Managing Director to fix the sale rates of various seeds produced during Rabi and Kharif crops. While fixing the sale rates, the Company added various elements of cost viz. processing cost, packing cost, interest on inventory carrying, dealers commission, overheads etc. in the procurement price of seeds.

The table below indicates the rates at which the Company procured seed of various crops and their sale rates fixed by the Company after processing during one year test checked in audit.

Crop	Year	Procurement rate	Sale rate	Percentage addition over procurement rate
		(Rate in Rupees per quintal)		
Wheat	2001-02	710	1275	80
Paddy	2001-02	665	1350	103
Mustard	2001-02	1485	2750	85
Arhar	2000-01	1950	4000	105
Toria	2001-02	1190	2700	127

From the above it would be seen that the addition over procurement rate of the Company ranged between 80 and 127 *per cent*. Due to abnormal processing charges and other overheads, the sale rates of the Company were higher than the prevailing market rates even after providing for subsidy by the State Government.

A test-check in audit revealed that the Company fixed higher prices for wheat seed during the years1999-2000 and 2000-01 on account of excess loading of seed processing charges, interest on carrying cost of unsold seeds and dealers commission causing excess charging of Rs 3.60 crore from the farmers as discussed below:

Inclusion of excess processing cost in cost sheet resulted in overcharging of Rs 0.59 crore during 1999-2001 in wheat seed.

(i) As per policy of the Company for working out the processing cost in a year, the actual processing cost incurred during the previous year was increased by 10 *per cent* being general cost escalation. Accordingly, the Company had included Rs 101.11 and Rs 80.83 per quintal during the years 1999-2000 and 2000-01 for wheat seed against the actual processing cost of Rs 73.48 and

Rs 73.59 per quintal respectively resulting in excess charging of Rs 0.59 crore during these years.

(ii) The Company charged interest component for six months at the rate of 18 *per cent* per annum on fresh stocks as inventory carrying cost while working out the sale rates, as against actual interest rate of 14.25 *per cent* paid by it. The excess interest charged on wheat alone comes to Rs 45.35 lakh during these two years.

Inclusion of dealer's commission on sales effected through Company's own outlets resulted in excess charging of Rs 2.56 crore.

(iii) The Company charged dealer's commission at 10 *per cent* on whole of the quantity to be sold while working out the sale price whereas only 22 to 34 *per cent* of sale was effected through dealers. As against Rs 1.11 crore paid to dealers as commission on all the seeds sold, Rs 3.67 crore was charged on wheat seed alone during these years which resulted in excess charging of Rs 2.56 crore.

Thus, the Company could have improved quantum of sales and profit by fixing realistic prices.

2A.10.4.1 Avoidable extra expenditure on the purchase of bajra seed

Procurement of bajra seed at higher rates resulted in avoidable extra payment of Rs 37.31 lakh.

The Company purchased 4,107 quintals, 1,487 quintals, 1,251 quintals and 93 quintals of bajra certified seed (Hybrid-67) from NSC during 1996, 1997, 1998 and 1999 at the rate of Rs 2,430, Rs 2,408, Rs 2,322, and Rs 2,200 per quintal respectively. At the same time, it purchased the same variety of seed from Andhra Pradesh State Seeds Corporation Limited/Maharashtra State Seeds Corporation Limited (APSSC/MSSC) at the rate of Rs 1,800, Rs 1,900 and Rs 2,100 per quintal during 1996, 1998 and 1999. Further, the Company was having offer from APSSC to supply seed at Rs 2,000 per quintal during 1997 which was ignored. The Company did not make any efforts to negotiate with NSC for charging the rates at par with other agencies which resulted in avoidable extra expenditure of Rs 37.31 lakh on above purchases.

The management stated (June 2002) that after 1997, preference was given to other agencies in comparison to NSC for major supply and seeds which were not available with them, were purchased from NSC. The reply was not tenable as the varieties pointed out in the para were available at cheaper rates with other agencies.

2A.10.5 Loss on revalidation of seed

The seeds which could not be sold during the current sowing season were carried over for sale during the next sowing season. Before sale, the seeds were revalidated and that part of the seed which did not contain the minimum required germination was rejected and sold as grain.

The table below indicates the details of stock of seed put to revalidation, stock failed in germination test, seeds sold as commercial grain and loss suffered by

the Company:

Sl No.	Production Year	Seed	Stock put to revalidation (quintal)	Stock failed in germination test (quintal)	Year of sale as grain	Loss suffered (Rupees in lakh)
1	1993 and 1994	Cotton	686.26	685.66	1996 and 1997	7.02
2	1995 and 1996	Cotton	2814.11	2608.17	1998	24.75
3	1999	Wheat	17643	3657	2001	19.59
4	1994 and 1996	Paddy	2567.90	959.80	1997 and 1999	8.13
					Total	**59.49**

Failure of seed during revalidation resulted in loss of Rs 0.59 crore.

Thus, failure of seeds during revalidation test resulted in loss of Rs 0.59 crore to the Company.

The management stated (February 2002) that certified seed lost its vigour/germination during long period of storage and nobody was responsible for failure of seed. However, the fact remained that abnormal time gap between production of seed and its disposal as grain resulted in deterioration of stocks.

2A.10.6 Inter-state sale

The action plan under NSP-III envisaged increase in inter-state sales so as to make State Seeds corporations commercially viable. Table below indicates the inter-state sales during the last five years up to 2001-02:

Year	Total sale	Inter-state sale	Percentage of inter-state sale to total sale
	(quintals)		
1997-98	155779	440	0.28
1998-99	202041	8391	4.15
1999-2000	197374	1166	0.59
2000-01	159781	20	0.01
2001-02	200325	28810	14.4

The management stated (June 2002) that due to higher cost of seeds, the Company was unable to sell their seeds in other states. However, it was observed in audit that poor inter-state sale was also due to lack of marketing policy and late fixation of selling rates.

2A.10.6.1 Failure to sell wheat seed to a private party outside the State

Failure to sell wheat in the inter-state market resulted in inventory holding and avoidable expenditure of Rs 0.75 crore on storage

For sale season 2000-01, the Company had 2,20,087 quintals of wheat seed. To liquidate this stock, the Company decided (September 2000) to explore possibilities of inter-state marketing at the rate of Rs 1,085 per quintal. One party viz. Tarai Seed Syndicate, Udham Singh Nagar (UP) consented to purchase 30,000 quintals of seed at the rate of Uttar Pradesh Seed and Tarai Development Corporation Limited/NSC for sale in Uttar Pradesh and Bihar and also offered to be a distributor of the Company for these States. It also

offered advance payments for 30,000 quintals of seed and earnest money for dealership. Representative of the firm visited (October 2000) the office of the Company at Panchkula to finalise the purchase proposal. The Company insisted upon the rate of Rs 1,085 per quintal and held no negotiations with the party. At the end of the season, huge stocks of 82,347 quintals remained unsold. The Managing Director observed (July 2001) that the manner in which the offer of 30,000 quintals of seeds was unceremoniously buried was very intriguing and the Company could have reduced its margins to prevent blockade of funds.

Thus, had the negotiations been conducted at higher level, the Company could have not only saved carry over charges of about Rs 0.75 crore as worked out by the management but also given a boost to the inter-state sale by accepting the offer of the party to be distributor for inter-state sale.

The Company has, however, not investigated the matter further and fixed any responsibility for not pursuing the matter at an appropriate level.

2A.10.6.2 Loss due to injudicious inter-state sale

Injudicious decision to sell wheat seed outside the State resulted in loss of Rs 0.79 crore.

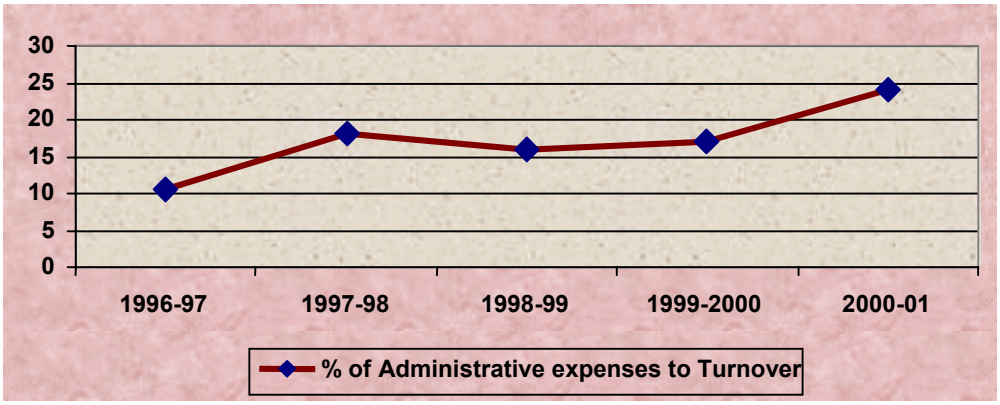
As per production programme given (5 October 2000) for the year 2000-01 (sale season 2001-02), 1,90,500 quintals wheat seed was to be procured. During mid season review, the target was reduced to 1,67,500 quintals due to carry over stocks. The Company could, however, procure only 96,190 quintals due to untimely rains even by relaxing luster factor. Thus, total availability of seed with the Company for sale for the crop season 2001-02 was 1,77,053 quintals, including 80,863 quintals of carry over stock. However, overlooking the aspect of low availability of seed, the Company sold 27,600 quintals of wheat seed to Himachal Pradesh (23,600 quintal) and Jammu & Kashmir (4,000 quintal) during September to November 2001 at the rate of Rs 990 per quintal against its sale rate of Rs 1,275 per quintal in the State. Thus, imprudent decision of the Company to sell wheat seed outside the State at cheaper rates had resulted in loss of Rs 0.79 crore to the Company.

The management stated (June 2002) that to avoid the last year's bad precedence of having left over of approximately 82,000 quintals of stock this quantity was sold. The reply was not tenable as the decision to sell seed at reduced rates particularly when there was large demand at higher rates within the State lacked commercial prudence.

2A.11 Manpower analysis

The Company was having six processing plants with a total processing capacity of 2.90 lakh quintals graded seeds besides corporate office at Panchkula. For undertaking this activity, the Company had deployed regular manpower ranging between 435 and 441 during the last five years up to 2000-01.

The salary bill shot up from Rs 3.03 crore during 1996-97 to Rs 5.16 crore in 2000-01 (excluding payment to daily wagers) which ranged between 10.5 and 24 *per cent* of the total turnover during these years as given in the following graph:



The Company deputed (May 2001) a team of officers for examining the working of Rajasthan State Seeds Corporation (RSSC). Based on their study, it was observed that RSSC had 13 plants with processing capacity of 3.34 lakh quintals and was having manpower of only 225 and its wage bill was about Rs 2.50 crore per annum. Therefore, the Company continued to deploy excess manpower in comparison to RSSC.

A further scrutiny of major wings (Marketing, Production and Engineering) with reference to deployment of manpower revealed following points:

2A.11.1 Payment of idle wages to marketing staff

The Company deployed 140 regular persons in the Marketing wing out of which 102 persons were directly involved in marketing. As the sale of seed was confined to two crop seasons only, the personnel in the field remained idle for a considerable time.

Idle manpower in marketing wing resulted in the payment of Rs 2.47 crore as salary and allowances for the idle period.

The management stated (June 2002) that the manpower remained idle for six months. As a result of idle manpower, the Company had paid about Rs 2.47 crore as salary and allowances to the staff directly involved with the sale of seed during the last five years up to 2000-01 for the period they remained idle (i.e. six months per year). No effective steps were taken for gainful deployment of idle manpower.

2A.11.2 Deployment of excess staff in Engineering Wing

The Engineering wing was headed by a Chief Engineer with the assistance of one Executive Engineer and one Assistant Engineer at head office of the Company as against deployment of only one Assistant Engineer at head office of RSSC. For operation of 6 plants, the Company had deployed 36 persons as against deployment of 13 persons for operation of 13 plants by RSSC. The expenditure of the Company on repair and maintenance/capital works was only Rs 1.03 crore during the five years up to 2000-01, against the

administrative expenditure of Rs 1.89 crore of Engineering Wing. Thus, the Company incurred expenditure of Rs 1.83 on manpower for every Rs 1 spent on repairs and maintenance.

The management stated (June 2002) that staffing pattern of RSSC was not workable as the Company was generally operating the plants in three shifts. The reply was not tenable as the staff deployment was far in excess of requirements in view of lower capacity utilisation.

Conclusion

The Company was formed to make quality seed available to the farmers at reasonable rates. However, the Company has not been able to fully achieve this objective as its share of sale in the State has been decreasing consistently. Main reasons for the decrease in market share were un-competitive prices of seeds, poor marketing and excessive overheads/manpower.

The Company should make all out efforts to improve its marketing by fixing the rates of seeds realistically and by reducing overheads to become competitive in the changed economic scenario. The Company should study the practices adopted by other seed corporations for meaningful deployment of the marketing staff during lean season.

The matter was referred to the Government in April 2002; the reply had not been received (September 2002).

2B Haryana Vidyut Prasaran Nigam Limited, Uttar Haryana Bijli Vitran Nigam Limited and Dakshin Haryana Bijli Vitran Nigam Limited (erstwhile Haryana State Electricity Board)

Purchase, Performance and Repair of Transformers

Highlights

One of the main objectives of the power sector reforms programme approved (November 1997) by the erstwhile Haryana State Electricity Board was to create strong transmission and distribution system at various levels of transmission so as to reduce damage rate of transformers and system losses.

(Paragraph 2B.1)

As on 31 March 2002, against the connected load of 9676 MVA, the sub-power transformation and distribution transformation capacity was 6648 MVA and 8454 MVA respectively. This had resulted in overloading of sub-power transformation and distribution system causing in turn excessive system losses and failure of distribution transformers. Against the norm of 15.5 *per cent* fixed by Central Electricity Authority, system losses ranged between 32.56 and 40.04 *per cent* during 1997-2002.

(Paragraph 2B.4.1and 2B.4.2)

The Company failed to avail benefit of lower rates under World Bank loan and incurred extra avoidable expenditure of Rs 0.60 crore on procurement of 455 transformers due to improper planning for placement of order for additional 15 *per cent* quantity i.e. 105 transformers (Rs 13.95 lakh) and failure to match delivery schedule with World Bank loan resulting in subsequent purchase of 350 transformers at higher rate (Rs 46.50 lakh).

(Paragraph 2B.5.1.1)

The Company incurred extra expenditure of Rs 1.87 crore as risk purchase clause was not invoked in three cases.

(Paragraph 2B.5.1.2)

The Chief Engineer (Material Management) of the erstwhile Board/Uttar Haryana Bijli Vitran Nigam Limited did not recover liquidated damages of Rs 1.79 crore for delayed receipt of distribution transformers.

(Paragraph 2B.5.1.4)

Against the norm of 10 *per cent* fixed by the erstwhile Board, the damage rate of distribution transformers ranged between 16.1 and 30.8 *per cent* during the five years up to 2001-02. This resulted in extra financial burden of Rs 69.30 crore on repair of 69,608 transformers in excess of the norm.

(Paragraph 2B.6.1.2)

During the five years up to 2001-02, the Company disposed of 9,663 distribution transformers at rates lower than the reserve price, which resulted in loss of Rs 0.57 crore.

(Paragraph 2B.8.2)

The erstwhile Board/companies did not recover Rs 12 crore towards short receipt of 8968 kilolitre transformers oil (Rs 9.97 crore) and parts of 1,24,081 damaged transformers (Rs 2.03 crore) during 1997-2002.

(Paragraph 2B.9)

2B.1 Introduction

One of the main objectives of the power sector reform programme approved (November 1997) by the erstwhile Haryana State Electricity Board (Board) was to create strong transmission and distribution system at various levels of transmission so as to reduce damage rate of transformers and system losses.

Transformer is a static equipment used for stepping up or stepping down voltage in transmission and distribution of electricity. Power is usually

generated at low voltage (11 KV* to 15.75 KV) and is then stepped up (132 KV, 220 KV and 400 KV) through power transformers for transmission to the load centres. At the receiving sub-stations, the voltage is brought down (132 KV to 11 KV) through step down transformers. The transformers used at the generating stations and in the high voltage substations (known as transmission system) are called power transformers, while transformers used in distribution systems are called distribution transformers. Power is distributed to the consumers through transmission and distribution lines having voltage ranging from 440 volts to 132 KV.

2B.2 Organisational set-up

The procurement of power transformers (for transmission system) was being done by the Chief Engineer (Design and Procurement) of Haryana Vidyut Prasaran Nigam Limited (HVPNL), whereas procurement of distribution transformers (for distribution system) was being done by the Chief Engineer (Material Management) under Uttar Haryana Bijli Vitran Nigam Limited (UHBVNL) up to November 2000. Thereafter, the work of procurement of distribution transformers was transferred to Chief Engineer (Material Management) of Dakshin Haryana Bijli Vitran Nigam Limited (DHBVNL).

The receipt and issue of power transformers is controlled through four** dedicated stores under the charge of Assistant Executive Engineers whereas receipt and issue of distribution transformers to user divisions is controlled by respective Controllers of Stores of UHBVNL and DHBVNL through five*** central stores and 27 divisional stores under charge of Executive Engineers/Assistant Executive Engineers. The maintenance and upkeep of the power transformers and other transmission system in the field is carried out through five**** Construction, Operation and Maintenance circles under overall control of two Chief Engineers of HVPNL, whereas maintenance and upkeep of the distribution transformers and other distribution system is done through 13 operation circles under the overall charge of two Chief Engineers (Operation) each of UHBVNL and DHBVNL.

2B.3 Scope of Audit

Issues relating to repair of transformers were last reviewed in the Report of the Comptroller and Auditor General of India for the year ended 31 March 1996, No. 2 (Commercial)-Government of Haryana. Recommendations of the

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* K.V. means 'Kilovolt' which is used for expressing capacity of transmission and distribution lines.

** Panipat, Ballabgarh, Hisar and Khera (Yamunanagar).

*** Dhulkot, Panipat, Rohtak, Hisar and Ballabgarh.

**** Panchkula, Karnal, Hisar, Faridabad and Gurgaon.

Committee on Public Undertakings are contained in their 48th Report presented to State Legislature on 15 March 2001. The present study, which was conducted during the period from November 2001 to February 2002 is a review of activities and arrangements regarding purchase, performance and repair of transformers for the last five years up to 2001-02 through scrutiny of tenders for procurement and test-check of four* out of 13 operation circles in the field and all the five** central stores and 12@ transformer repair workshops/yards.

2B.4 Adequacy of transformation capacity

2B.4.1 Adequate grid power transformation capacity is needed for evacuation of power from generating stations. Sub-power transformation capacity is the middle chain for feeding distribution transformers to meet power load of consumers.

The table below indicates growth of the power transformation capacity, distribution transformation capacity, connected load, and HT/LT lines during five years up to 2001-02:

Sl. No.	Particulars	1997-98	1998-99	1999-2000	2000-01	2001-02
1	Grid Power Transformation Capacity (220/132 or 66 or 33 KV; 132/66 or 33 KV and 66/33 KV)					
	MVA	6617	6781	7377	7471	7703
	MW#	5624	5764	6270	6350	6548
	No. of transformers	169	177	180	175	182
2	Sub-power transformation capacity (132 or 66 or 33/11 KV)					
	MVA	5430	5676	6150	6395	6648
	MW	4616	4825	5228	5436	5651
	No. of transformers	705	721	771	786	780
3	Distribution transformation capacity (11/0.4 KV)					
	MVA	6823	7078	7349	7996	8454
	MW	5800	6016	6247	6797	7186
	No. of transformers	99938	103678	106992	111476	117301
4	Percentage of distribution transformation capacity in excess of sub power transformation capacity	25.7	24.7	19.5	25.0	27.2

* Ambala, Kurukshetra, Karnal and Hisar.

** Dhulkot, Panipat, Rohtak, Hisar and Ballabgarh.

@ Dhulkot, Mathana, Karnal, Sonepat, Rohtak, Hisar, Sirsa, Bhiwani, Faridabad, Narnaul, Ballabgarh and Panipat.

Million Watt (MW) = Million Voltage Ampere (MVA) X 0.85.

Sl. No.	Particulars	1997-98	1998-99	1999-2000	2000-01	2001-02
5	Total connected load					
	MVA	8164	8221	8495	9013	9676
	MW	6939	6988	7221	7661	8225
6	(a) Connected load in excess of distribution transformation capacity MW (5 - 3)	1139	972	974	864	1039
	(b) Percentage of excess load(6/5)	19.6	16.2	15.6	12.7	14.5
7	Sub-power transformation capacity per MVA of connected load (2/5)					
	MVA	0.67	0.69	0.72	0.71	0.69
8	Distribution transformation capacity per MW of connected load (3/5)	0.84	0.86	0.87	0.89	0.87
9	Length of lines (Kms)					
	LT	103878	105266	105749	107217	107136
	HT	54240	55059	55765	56601	58247
10	Ratio of LT lines to HT lines	1.92:1	1.91:1	1.90:1	1.89:1	1.84:1

Analysis of the above table revealed the following:

There was mismatch between sub-transformation and distribution transformation capacity and connected load.

(i) As on 31 March 2002, the sub-power transformation capacity was 6648 MVA and distribution transformation capacity was 8454 MVA against the connected load of 9676 MVA. Ideal ratio of transformation capacity to connected load is considered 1:1. Sub-power transformation capacity per MVA of connected load ranged between 0.67 and 0.72 MVA during 1997-2002. Similarly, the distribution transformation capacity per MW of connected load ranged between 0.84 and 0.89 MW during the last five years up to 2001-02.

The mismatch between transformation (sub-power and distribution) capacity and connected load had resulted in overloading of transformers causing in turn excessive transmission and distribution losses and failure of distribution transformers. This indicated a requirement for augmentation of the transformation capacity to meet the demand of power by consumers and to avoid damage of transformers.

In order to strengthen transmission and distribution system, Power Sector Reform Programme, *inter alia,* envisaged addition of 2461 MVA power transformation (220 KV, 132 KV and 66 KV) capacity and 47,666 distribution transformers during 1998-2002. Thereagainst, the erstwhile Board/companies could make addition of 1757 MVA power transformation capacity and 17,363 distribution transformers during the same period resulting thereby in shortfall of 704 MVA power transformation capacity and 30,303 number of distribution transformers. Reasons for shortfall called for from the management in July 2002 were awaited.

The management stated (July 2002) that ideally speaking the distribution transformation capacity should be equal to connected load but it required substantial investment for which the companies had planned to induct additional transformers in the distribution system. It was also noticed that mismatch of sub-power transformation capacity and distribution transformation capacity to connected load was due to excessive rate of damage of transformers, delay/non-repair of transformers as discussed in para 2B.6.1.2 and 2B.7.1.1 *infra*.

(ii) A general review of statements of maximum demand recorded on 756 out of 961 power transformers during 2000-01 revealed that 65 transformers were overloaded and aggregate maximum demand on these transformers was 1309 MVA against the capacity of 1229 MVA which worked out to 107 *per cent* although as per guidelines of Power Finance Corporation, transformers should not be loaded beyond 80 *per cent* of their rated capacity.

(iii) Transmission voltage is required to be kept high so that energy losses are as low as possible. The National Council of Power Utilities observed (July 1987) that to reduce the energy losses by about two *per cent*, there was a necessity to reduce the LT/HT line length ratio from 2:1 to 1:1. Ratio of LT lines to HT lines improved slightly from 1.92 in 1997-98 to 1.84 during 2001-02, but was significantly more than the recommended ratio of 1:1. The companies had, not devised any system to match the growth of HT lines with that of LT lines so as to reduce the energy losses and overloading of lines/transformers.

The management admitted (July 2002) that in ideal conditions, LT/HT ratio should be 1:1 but over the years there had not been sufficient investment on the higher voltage transmission system and on the contrary LT distribution system was extended considering the requirement for rural electrification. It further stated that as a remedial measure, efforts were being made to adopt less LT system for new expansion projects.

2B.4.2 Excessive transmission losses

Transmission losses and transformation losses are known as technical losses which occur due to inherent characteristics of the conductor and equipment used for transmitting and distributing power. Transmission losses occur due to resistance in conductors through which the energy passes from one place to another. Transformation losses include copper losses (load losses) which are dependant upon the quantum of power being transformed whereas iron losses (no load losses) are due to design characteristics of the transformer and are constant irrespective of whether there is load on it or not.

Excessive transmission and distribution losses resulted in loss of potential revenue of Rs 3,554.72 crore.

Central Electricity Authority (CEA), while issuing (May 1992) guidelines for energy audit, fixed the accepted level of transmission and distribution losses at 15.5 *per cent* (8.5 *per cent* transmission and sub-transmission losses and 7 *per cent* distribution losses). As against level of 15.5 *per cent* fixed by CEA and actual losses of 17.76 to 17.80 *per cent* in adjoining State of Punjab during 1997-2000, the transmission and distribution losses worked out by HVPNL, UHBVNL and DHBVNL (erstwhile Board) ranged between 32.56 and 40.04 *per cent* during the five years up to 2001-02. Due to transmission and distribution losses being in excess of 15.5 *per cent*, the erstwhile Board and the companies lost potential revenue of Rs 3,554.72 crore.

As per Reform Programme of the erstwhile Board, the transmission and distribution losses were to be reduced to 32 *per cent* during 1998-99 and to 26 *per cent* by the end of 2001-02 in a phased manner. It was, however, observed that losses, which were 32.56 *per cent* in 1998-99 increased to 40.04 *per cent* in 2000-01 and thereafter reduced marginally to 39.72 *per cent* in 2001-02.

Besides commercial losses which were mainly due to undetected theft of energy and unauthorised load, the main reason for excessive technical losses was inadequate growth of distribution lines and transformers.

The management stated (July 2002) that to reduce technical losses, large investment was needed for expansion of the system but for non-technical losses, it was more a matter of better governance and administrative steps.

2B.5 Procurement of transformers

2B.5.1 Distribution transformers

The purchase of material up to Rs 0.50 crore required by power utilities was decided by the Stores Purchase Committee headed by Chief Engineer. The cases above Rs 0.50 crore were decided by Special High Powered Purchase Committee under the Chairmanship of the Chief Minister of the State. The purchases of material against World Bank financed projects were made as per guidelines laid down by the World Bank authorities. The equivalent rates of various firms were determined after loading on account of various factors such as taxes, excise duty, freight and insurance, payment terms, discounts etc. From April 1999, warranty period was extended from one to five years and the equivalent rates included capitalised cost for transformation losses (energy consumed internally by transformer during its life). The requirement of transformers was assessed annually considering the targets for release of connections, other system improvement works, average consumption of preceding two years and expected availability of repaired transformers.

During the last five years ended 31 March 2002, the erstwhile Board and companies placed 55 orders for supply of 41,926 distribution transformers

against which 30,719 distribution transformers valued at Rs 125.97 crore were received.

The system deficiencies resulting in non-placement of orders at the lowest tendered rates, non-invoking of risk purchase and liquidated damages clause noticed during audit are discussed in succeeding paragraphs.

2B.5.1.1 Extra avoidable expenditure in the procurement of transformers

Tenders for procurement of 700 distribution transformers of 100 KVA were opened (October 1999) against World Bank Scheme. The terms and conditions of bidding documents, *inter alia,* provided that:

- The purchaser reserved the right at the time of awarding the contract to increase or decrease 15 *per cent* of the quantity of goods originally specified in the bid without change in price or other terms and conditions.

- The bidders were required to complete supplies in four equal monthly lots after one month from the date of release of 10 *per cent* advance payment/opening of letter of credit, whichever was later.

Lowest offer at equivalent rate of Rs 1,16,156.89 per transformer of Indo Tech Transformers Limited, Chennai was accepted (April 2000). The Company signed (8 June 2000) the contract agreement with the firm for supply of 700 transformers without increasing the quantity of transformers by 15 *per cent*. The Company, however, enhanced the quantity to 805 transformers (30 June 2000) but the same was not agreed to by the World Bank as it was done after the signing of the agreement.

The Company opened the letter of credit on 9 September 2000 and as such, delivery schedule commenced from 9 October 2000 and spilled over up to 8 February 2001. The firm supplied 350 transformers up to March 2001. Since the unutilised World Bank loan lapsed in December 2000, the UHBVNL decided (28 March 2001) to cancel the order for balance 350 transformers. Meanwhile, the UHBVNL purchased (July 2000) 10,230 transformers at equivalent rate of Rs 1,29,442 per transformer against subsequent tender enquiry finalised in June 2000 against which supply of 5,746 transformers was received up to November 2001.

Delayed placement of order for additional quantity and non-matching of delivery schedule with availability of World Bank loan led to extra expenditure of Rs 0.60 crore.

Thus, the Company failed to avail benefit of lower rates under World Bank loan and incurred extra avoidable expenditure of Rs 0.60 crore on procurement of 455 transformers due to improper planning for placement of order for additional 15 *per cent* quantity i.e. 105 transformers (Rs 13.95 lakh) and failure to match delivery schedule with World Bank loan resulting in subsequent purchase of 350 transformers at higher rate (Rs 46.50 lakh).

The management stated (July 2002) that quantity could not be increased by 15 *per cent* as the World Bank did not agree to it. Reply was not tenable because additional quantity was increased after 22 days of signing the contract which was not as per guidelines of World Bank which provided that the additional quantity could be ordered at the time of signing the contract. The management further stated that the Company did not incur additional expenditure as the subsequent purchase of transformers at equivalent rate of Rs 1,29,442 was procured under Rural Electrification Corporation (REC) loans and these were not for the replacement under World Bank loan. The reply was not acceptable because the UHBVNL did not match the delivery schedule with availability of World Bank loan and thus incurred extra expenditure as the transformers available against World Bank loan were cheaper than those procured against REC loan.

2B.5.1.2 Extra expenditure due to non-effecting risk purchase

Non-invoking of risk purchase clause resulted in extra expenditure of Rs 0.93 crore.

2B.5.1.2.1 The erstwhile Board placed (March 1998) an order on T.A. Transformers Limited, Lucknow for supply of 2,500 distribution transformers of 100 KVA capacity at equivalent rate of Rs 29,504 per transformer excluding capitalised cost of transformation losses. The firm was required to complete supplies up to 4 June 1999 failing which, these could be procured at the risk and cost of the firm. The firm supplied 969 transformers during the period from December 1998 to January 2000 and did not supply the balance 1,531 transformers. The Board of Directors of UHBVNL decided (March 2000) to issue risk purchase notice for supply of material failing which the firm be blacklisted. The UHBVNL issued notice to the firm in April 2000 but did not invoke risk purchase clause against the firm. The firm did not supply material and contested the notice for blacklisting. In the meanwhile, the UHBVNL placed orders (June/July 2000) against subsequent tender enquiry (QH-2277) for purchase of transformers at equivalent rate of Rs 35,567 excluding capitalised cost of transformation losses. Thus, due to non-invoking of risk purchase clause against the firm, the UHBVNL incurred an extra expenditure of Rs 0.93 crore in the purchase of 1,531 transformers.

The management stated (July 2002) that the risk purchase was not effected as it had improved the technical specifications. Reply was not tenable because transformers of same capacity with old specifications were accepted against pending orders as discussed in para 2B.5.1.3 *infra* and extra expenditure as pointed out in the para was worked out after considering the impact of improved technical specifications of lower transformation losses and longer warranty period.

Non-invoking of risk purchase clause led to extra expenditure of Rs 0.76 crore.

2B.5.1.2.2 Similarly, the UHBVNL under World Bank loan placed (18 May 2000) an order on Mutual Inductor Limited, Cuttack for supply of 920 distribution transformers of 63 KVA at equivalent rate of Rs 84,899.28 per transformer (including capitalised cost of transformation losses). The firm was required to supply transformers in four lots after one month from the date of release of 10 *per cent* advance payment/opening of letter of credit,

whichever was later. Advance payment was made to the firm on 30 June 2000 and letter of credit was opened on 6 July 2000. As such, supply was to be completed by 6 December 2000. The firm supplied 255 transformers up to February 2001 and did not supply the balance 665 transformers. The UHBVNL decided (28 March 2001) to cancel the order for balance 665 transformers on the plea of comfortable position of stock of distribution transformers. It was observed in audit that the UHBVNL had, however, purchased transformers under REC loan at equivalent rates of Rs 96,325 per transformer (including capitalised cost of transformation losses) against tender enquiry finalised in June 2000. Thus, due to non-invoking of risk purchase clause against the defaulting firm, the UHBVNL incurred an avoidable expenditure of Rs 0.76 crore in purchase of 665 transformers.

2B.5.1.2.3 In another case, the erstwhile Board placed (5 May 1995) two purchase orders on M/s Lakshmi Transformers and Electricals, Agra (firm 'A') and Electra Exports Limited, Meerut (firm 'B') for supply of 250 and 1,525 distribution transformers respectively of 63 KVA at the rate of Rs 30,194 per transformer. The rates were subject to variation based on the cost of inputs. Supplies in both the cases were to be completed by November 1995. After taking into account the effect of price variation, rates payable to the firm worked out to Rs 30,918.53 per transformer. In case of default, the erstwhile Board was entitled to make purchases at risk and cost of the firms. Firms 'A' and 'B' supplied only 50 and 700 transformers up to November 1995 and August 1996 and did not supply balance 200 and 825 transformers respectively. The orders for balance quantities were cancelled in February 1999 on the plea that there was no requirement of transformers in the budget for 1997-98 and 1998-99.

It was noticed (January 2002) in audit that without invoking risk purchase clause, the erstwhile Board had procured 3,330 transformers against purchase orders (May 1996) placed at equivalent variable rate of Rs 32,890.13 per transformer which were received at Rs 32,698.64 per transformer after taking into account the effect of price variation.

Thus, non-invoking of risk purchase clause against the firms and subsequent purchase of transformers at higher rates, had resulted in an extra expenditure of Rs 18.25 lakh on the purchase of 1,025 transformers.

The management stated (July 2002) that firm 'A' kept on assuring that it would supply the transformers but it did not supply and the subsequent tenders were floated in November 1995 and it was too early to invoke the risk purchase clause. It further stated that risk purchase clause was not invoked in the case of firm 'B' as the default was on the part of the erstwhile Board in releasing payments to the firm. Reply was not tenable because (i) the erstwhile Board could invoke risk purchase clause in both the cases after the delivery period expired in November 1995 and (ii) in the case of firm 'B' the management was required to plan the funds for timely payments to avoid such extra expenditure. Thus, the Company incurred extra expenditure of

Rs 1.87 crore due to non-effecting risk purchase clause in the above three cases.

2B.5.1.3 Loss due to acceptance of delayed supplies

Terms and conditions of the purchase orders placed by the Company, *inter alia*, provided that when the supplier failed to deliver the material within the contractual delivery period, the Company as a purchaser had a right to refuse/accept such supplies. The Whole Time Members (WTMs) of the erstwhile Board decided (October 1994) that while accepting delayed supplies, the present market rates of the material should be ascertained and compared with the rates of delayed supplies. Audit scrutiny revealed as follows:

(i) The erstwhile Board placed (July 1997) an order for supply of 1,000 (reduced to 500 in April 1998) transformers of 100 KVA with transformation losses of 1980 Watt (1.98 units per hour) and one year warranty on Rajasthan Transformers and Switchgear, Jaipur, at an equivalent variable rate of Rs 43,669.40 per transformer. As per purchase order, the firm was to supply the entire quantity by February 1998. The firm supplied 280 transformers during January 1998 to May 1999. The HVPNL worked out (September 1999) the rates for same rating of transformers of improved specifications (transformation losses of 1835 Watt (1.835 units per hour) and one year warranty) at Rs 38,689.46 per transformer. Though the delivery schedule expired in February 1998, the HVPNL did not cancel the order for balance 220 transformers in view of the lower rates received in subsequent tenders and accepted the supplies between November 1999 and December 2000, thereby incurring avoidable expenditure of Rs 10.96 lakh.

(ii) Similarly, the Company placed (October 1998) an order on Lakshmi Transformers and Electricals, Agra for supply of 250, 100 KVA transformers with transformation losses of 1980 Watt (1.98 units per hour) and one year warranty at Rs 44,670 per transformer. As per terms of the purchase order, supply was to be completed by May 1999. Up to July 1999, the firm supplied only 48 transformers. Though, the HVPNL worked out (September 1999) the rates for same rating of transformers of improved specifications (transformation loss of 1835 Watts and one year warranty) at Rs 38,689.46 per transformer, the Company did not cancel the order for remaining transformers and accepted belated supply of 202 transformers between September 1999 and July 2001 at Rs 44,495.95 per transformer resulting in extra expenditure of Rs 11.73 lakh.

The management stated (July 2002) that the rate of Rs 38,689.46 per transformer worked out (September 1999) by the Company was based on certain assumptions and there was no indication of downward trend in prices of transformers. The reply was not tenable as the management had worked out the rate of Rs 38,689.46 per transformer after taking into consideration lower transformation losses and longer warranty period and in the case of (ii) above the Company had released the payment of 10 transformers accordingly.

2B.5.1.4 Non-enforcing of liquidated damages clause

Liquidated damages of Rs 1.79 crore for delayed supplies were not recovered from the suppliers.

The terms and conditions of purchase orders issued by the erstwhile Board and HVPNL/UHBVNL, stipulated the period within which supply should commence, the rate of supplies per month/quarter and the scheduled completion period. In case of delayed supplies, the companies had a right to recover liquidated damages at 0.5 *per cent* per week subject to a maximum of five *per cent* of value of delayed/undelivered material. It was noticed in audit that the UHBVNL (Chief Engineer, Material Management) had not been recovering liquidated damages as per monthly/quarterly schedule and these were being recovered only in the cases where material was received after the expiry of overall delivery schedule. A test-check of supply position revealed that UHBVNL accepted 15,069 transformers (in 52 purchase orders placed during April 1996 to August 2000) belatedly and the delays ranged between one and 34 weeks. The UHBVNL, however, recovered only Rs 17.87 lakh as liquidated damages against the required recovery of Rs 1.97 crore leaving unrecovered amount of Rs 1.79 crore due to non-enforcement of liquidated damages clause. However, it was noticed that the Chief Engineer (Design and Procurement) of the erstwhile Board (HVPNL) which procured power transformers with similar terms and conditions had been enforcing the clause of liquidated damages as per monthly/quarterly schedule stipulated in the purchase orders since its inception.

The management stated (July 2002) that the liquidated damages were being imposed as per the decision (1980) of the erstwhile Board which provided that unless the contract specifically provided for levy of penalty stage-wise, it should be imposed only when the material had not been supplied within the contracted delivery period. It further stated (July 2002) that clause of lot-wise supply in the terms and conditions was added so as to put supplier under pressure to make regular supplies, and if the clause of penalty by lot-wise supply was insisted, it may result in increase in the price of material. The reply was not tenable as the Company was required to recover liquidated damages as per terms and conditions of the purchase orders as the Design and Procurement (D&P) Wing of the erstwhile Board (now HVPNL) was recovering liquidated damages as per terms and conditions of the purchase orders. Further, management's plea of increase in the price of material was also not tenable because the price was already finalised based on the levy of stage-wise penalty as per terms of supply.

2B.5.2 Power transformers

2B.5.2.1 Undue benefit to a supplier

The erstwhile Haryana State Electricity Board now UHBVNL awarded (March 1998) contract to Marson's Electrical Industries Limited, Agra for supply of 49 power transformers of 6.3/8 MVA, 33/11 KV capacity at the rate of US $ 40,425 each transformer. As per terms of contract, supply was to be completed within nine months from the date of payment of 10 *per cent* advance/opening of letter of credit or approval of drawings, whichever was

later. Four transformers were to be supplied in first four months and thereafter nine transformers per month were to be supplied during next five months. In case of delay in supplies, liquidated damage at the rate of 0.5 *per cent* per week or part thereof, of the value of the contract were to be levied. The Board had the right for stage inspection to ensure that internal details are in accordance with the data supplied/guaranteed technical specifications as per order.

The Company made advance payment on 16 June 1998 and drawings were approved on 19 June 1998. The Company opened letter of credit on 28 August 1998. As such the supplies were to be completed by 27 May 1999, after reckoning 28 August 1998 as date of commencement of delivery.

The firm supplied three transformers up to 26 December 1998 and the remaining 46 were supplied after delays ranging between 31 and 185 days during the period from 27 February to 27 November 1999 and the liquidated damages of Rs 0.53 crore were recovered (February 1999 to November 1999) from the supplier on account of delayed supplies.

It was observed in audit that on receipt of several representations from the supplier (latest of August 2000) for refund of liquidated damages, the Company extended date of commencement of supply from 28 August to 3 October 1998 (36 days) on the plea that modalities were finalised on 3 October 1998. Accordingly, refund of liquidated damages to the extent of Rs 17.18 lakh was allowed in August 2001.

Thus, extending the delivery period by 36 days and allowing refund of liquidated damages to the extent of Rs 17.18 lakh had resulted in undue benefit to the supplier.

The management/Government stated (April/May 2002) that modalities of conducting stage inspections were finalised on 28 September 1998 and the firm gave its acceptance on 3 October 1998, hence the commencement of contract was reckoned from 3 October 1998. The reply was not tenable since the Company had the right for stage inspection as per contract agreement and had a standing arrangement for inspection with Nuclear Power Corporation since July 1997.

2B.6 Performance of transformers

2B.6.1 Distribution transformers

2B.6.1.1 As per notification (March 1995) issued by the Government of India under the Electricity (Supply) Act, 1948, normal life of transformers is 25 years. Test-check of records of the erstwhile Board and the companies revealed that transformer-wise 'History Cards' containing full particulars of

transformers including their movement and repairs, etc. had not been maintained. In the absence of 'History Cards' it could not be ascertained whether the transformers had achieved prescribed normal life of 25 years. Besides, age-wise incidence of failure, frequency of failure and reasons for frequent failures, if any, could also not be ascertained. Besides, the companies were deprived of crucial information necessary for managing the transmission and distribution systems.

The management stated (July 2002) that the Company had decided to provide the printed movement cards for the distribution transformers for issue along with transformers. It further stated that since these movement cards would be kept in the sub-stations, it would then be possible to ascertain age-wise incidence of failure, frequency of failure and reasons of failure of such transformers.

2B.6.1.2 Excessive damage of transformers

The erstwhile Board issued (April 1983) instructions that the number of damaged transformers in a year should not exceed 10 *per cent* of the number of installed transformers. The Board of Directors of UHBVNL reiterated (April 2001) that efforts should be made to bring down the damage rate, which should not be more than 10 *per cent* by carrying out regular maintenance of transformers viz. topping up of oil level, balancing of load, providing HT/LT fuse and proper earthing etc.

Test-check of records revealed that maintenance of transformers was not being carried out properly, as a result of which, percentage of damaged transformers to installed transformers always exceeded the norms as detailed below:

	Distribution transformers (Numbers)						
Year	**Average installed**	**Damaged***	**Damage as per norms**	**Damaged in excess of norms**	**Percentage of damaged transformers**	**Average repair charges per transformer (In Rupees)**	**Expenditure in excess of norms (Rs in lakh)**
1997-98	98603	30419	9861	20558	30.8	7101	1459.82
1998-99	101808	27635	10181	17454	27.1	7762	1354.78
1999-2000	105335	24902	10534	14368	23.6	13017	1870.28
2000-01	109234	21133	10923	10210	19.3	13032	1330.57
2001-02	114388	18457	11439	7018	16.1	13032	914.59
Total				**69608**			**6930.04**

* Excluding damaged during warranty period and due to natural calamity.

Transformers failed in excess of norms which resulted in extra expenditure of Rs 69.30 crore.

The erstwhile Board and the companies had to bear a heavy financial burden of Rs 69.30 crore on repair of transformers which were damaged in excess of the norms during five years up to 2001-02. The percentage of damaged transformers decreased from 30.8 in 1997-98 to 16.1 in 2001-02 due to purchase/induction of 30,719 new transformers during 1997-98 and 2001-02 and getting all the transformers repaired from outside firms from December 1999 after abandoning repair in its own workshops which were found uneconomical. The percentage of damaged transformers was still above the norm of 10 *per cent.*

However, it was observed that excessive damage of transformers was mainly due to providing higher size fuses on HT as well as LT side, non-provision of proper earthing, non-adherence of preventive maintenance, non-maintenance of required oil level and above all the overloading of transformers.

2B.6.1.3 Non-replacement of overloaded transformers

Despite the fact that there was a sufficient stock of 5,112 transformers at the end of March 2001 in the stores of UHBVNL, the Company failed to provide new transformers/replace the existing overloaded transformers of four operation circles test-checked, where 1,452 transformers (Rohtak: 111, Karnal: 770, Yamunanagar: 483 and Ambala: 88) were overloaded at the end of December 2001.

2B.6.1.4 Premature failure of transformers

During 1998-2002, 7,257 distribution transformers were declared irreparable by Survey Off Committee and therefore, these were scrapped. A scrutiny of survey reports revealed that of 7,257 distribution transformers, only 1,023 distribution transformers had completed their normal life. In the case of 6,065 (83.6 *per cent)* transformers, the survey reports did not indicate the month and year of purchase, as such their performance could not be ascertained in audit. The balance 169 transformers were scrapped within a period of five to 20 years resulting in loss of Rs 22.93 lakh worked out on the basis of proportionate replacement cost for the balance period of prescribed life span of the transformers.

2B.6.2 Performance of power transformers

There were two workshops at Ballabgarh and Panipat for the repair of power transformers of 66 KV and above and 33 KV under HVPNL and UHBVNL respectively. While routine repairs and capital maintenance of transformers was done in workshops, major repairs were got done from manufacturers of the transformers. Table below indicates the transformers damaged, repaired,

scrapped and lying unrepaired during the last five years up to 2001-02:

	Particulars	**1997-98**	**1998-99**	**1999-2000**	**2000-01**	**2001-02**
		Number of power transformers				
1	Opening balance	34	25	36	40	43
2	Damaged during the year	32	52	42	48	44
	Total (1+2)	66	77	78	88	87
3	Repaired	37	37	36	40	51
4	Scrapped	4	4	2	5	--
	Total (3+4)	41	41	38	45	51
5	Balance lying unrepaired	25	36	40	43	36

Out of 36 power transformers lying unrepaired as on 31 March 2002, nineteen and five power transformers were lying unrepaired for more than one year and two to four years respectively. Out of 218 transformers damaged during 1997-2002, investigation reports of 50 transformers examined in audit revealed the following points:

(i) Forty five transformers were damaged due to lack of maintenance of transformers and feeder lines and/or inadequate protection system at grid sub-station. Of these, one transformer was declared irreparable and scrapped after seven years of service thereby resulting in loss of Rs 23.61 lakh (worked out on the basis of proportionate cost for the balance life). While 13 transformers were under repairs, 31 transformers were repaired at a cost of Rs 1.52 crore.

(ii) Two transformers were damaged due to wrong operation of equipment by staff and were repaired at a cost of Rs 7.29 lakh. One transformer was scrapped after 15 years due to inherent weak design as its condition continued to deteriorate with every major fault, thereby incurring loss of Rs 7.83 lakh (worked out on the basis of proportionate cost for the balance life).

2B.7 Repair of transformers

2B.7.1 Distribution transformers

2B.7.1.1 Transformers awaiting repair

The UHBVNL and DHBVNL were repairing the damaged distribution transformers in their own workshops up to March 2000 besides getting them repaired on rate contract basis from private firms. In view of the uneconomical running of its own workshops and one year warranty given by the private firms, the companies (UHBVNL/DHBVNL) abandoned (March 2000) the repair of transformers in their own workshops. The staff

posted in the workshops was transferred to other wings of the companies while keeping only skeleton staff in the workshop yards for handling and issue of transformers to the private firms for repairs. Position of transformers damaged, repaired, discarded and lying unrepaired during the five years is given below:

Sl. No.	Particulars	1997-98	1998-99	1999-2000	2000-01	2001-02
		Transformers in Numbers				
1	Opening balance	16471	16158	14670	19329	14990
2	Damaged transformers received in workshops	27921	31010	23750	24159	17228
	Total	**44392**	**47168**	**38420**	**43488**	**32218**
3	Repaired					
	In Workshop	11364	11122	5491*	502	325
	By Private firms	15850	18040	11895	25100	10663
4	Scrapped	1020	3336	1705	2896	1440
	Total	**28234**	**32498**	**19091**	**28498**	**12428**
5	Transformers lying unrepaired	16158	14670	19329	14990	19790
6	Percentage of unrepaired transformers to damaged transformers	36	31	50	34	61

From the above table, it would be observed that the transformers lying un-repaired during five years up to March 2002 ranged between 14,670 and 19,790. Percentage of unrepaired transformers to total damaged transformers ranged between 31 and 61 during 1997-2002. Out of 19,790 damaged transformers, 2,468 and 342 transformers were lying unrepaired for one to two years and more than two years respectively. Despite the fact that the companies (UHBVNL/DHBVNL) could get the damaged transformers repaired on contract basis, 61 *per cent* of the damaged transformers were awaiting repair as on March 2002. Effective steps were needed to speed up the repair of damaged transformers so as to induct more transformers in the distribution system.

The management stated (July 2002) that if more transformers were got repaired from firms than its requirement, there was every likelihood that warranty period might expire even before utilization. The reply was not tenable because there was shortfall of 30,303 transformers as discussed in para 2B.4.1(i) *supra.* Further, the number of unrepaired transformers during five years up to March 2002 ranged between 14,670 and 19,790, the companies could not induct more transformers in the distribution system as 30,719 transformers procured at a cost of Rs 125.97 crore during the same period were mainly utilised for replacement of damaged transformers which remained unrepaired.

* Repaired up to December 1999.

2B.7.1.2 Extra expenditure on repair of distribution transformers

The existing contracts for repair of damaged transformers placed in July 1998 as extended from time to time, expired in June 2001. UHBVNL neither invited tenders for repair of damaged transformers nor consulted its sister concern, DHBVNL which had invited tenders in March 2001 for repair of 9,800 transformers (25,63 and 100 KVA) and finalised (30 August 2001) contracts for repair of distribution transformers (25,63 and 100 KVA) at Rs 9,692, Rs 14,860 and Rs 19,632 respectively.

In the meantime, UHBVNL decided (June 2001) to get the transformers repaired against existing contracts with the stipulation that if rates finalised by DHBVNL against their tender enquiry were found to be lower than the existing contracts, the lower of the two would be paid. Only five new firms agreed to accept the rates of DHBVNL and the UHBVNL awarded (November 2001) contracts for repairs of 125 transformers each to five firms. It was, however, noticed that during September 2001 to January 2002, UHBVNL got repaired 1,000 transformers (25, 63 and 100 KVA) at its old rates (Rs 10,552, Rs 16,768 and Rs 21,436 respectively), which were higher than the rates finalised by DHBVNL in August 2001. This resulted in extra expenditure of Rs 15.20 lakh.

Similarly, in case of DHBVNL, its workshop at Hisar got repaired 413 transformers of 63 KVA (65) and 100 KVA (348) under old contracts during the period from September 2001 to November 2001. Though the Company finalised the new rates in August 2001, but the workshop continued (up to November 2001) to get the transformers repaired against the old contracts and incurred extra expenditure of Rs 7.52 lakh. The Company had not fixed any responsibility for incurring extra expenditure.

While confirming the facts that the UHBVNL did not invite tenders, the management stated (July 2002) that though item-wise lowest rates were finalised in August 2001, it took 2 to 3 months in completing formalities such as (i) allotment of distribution transformers to the firms, (ii) issue of letter of intent and work orders and (iii) receipt of bank guarantee and issue of release orders to the firms. Reply was not tenable because the transformers should have been got repaired at the lowest available rates and the formalities stated in the reply were also a part of processing of the work orders.

2B.7.1.3 Failure of repaired transformers within warranty period

As per clause 10 of the agreement for repair of damaged distribution transformers, the firms were responsible to remove free of cost, all defects noticed within twelve months from the date of commissioning of the repaired transformers for which security deposit/bank guarantee was taken from the firms. In case the damaged transformers were not attended to by the repairing firms within a period of two months, the transformers could be got repaired at the cost of defaulting firms. Further, in case the defects were not attended to

within two months of intimation of defects, the supplier was under contractual obligation to pay interest at the rate of 12 *per cent* per annum of the value of transformer from the date of its becoming defective up to the date of its re-commissioning after repair. Audit scrutiny revealed as follows:

(a) Non-repair of transformers failed within warranty period

Repaired transformers which failed during warranty period were lying unrepaired.

A scrutiny of records of Central Stores, Dhulkot, Panipat and Rohtak under UHBVNL revealed that 233 repaired transformers valued at Rs 41.94 lakh, failed within warranty period during April 1997 to December 2000 and were lying unrepaired (December 2001). The Company did not take action to get the same repaired from the firms at their cost resulting in locking up of funds of Rs 41.94 lakh in 233 transformers.

(b) Non-return of damaged transformers

A scrutiny of records of various stores under UHBVNL/DHBVNL revealed that 604 transformers, valued at Rs 1.09 crore pertaining to 30 firms that failed within warranty period during April 1993 to December 2000, were lifted from time to time by the repairing firms but were not repaired/returned by them till December 2001. As such, funds to the extent of Rs 1.09 crore remained locked up in 604 damaged transformers.

(c) Non-recovery of interest charges

During audit it was observed that 1,243 transformers damaged during warranty period, received in Central Stores, Dhulkot, Panipat and Rohtak of UHBVNL, were repaired by the firms during July 1999 to June 2001 after a delay ranging from two to 77 months and interest charges calculated from the date of damage worked out to Rs 26.45 lakh which had not been recovered as per provisions of the agreement.

With reference to audit points (a) to (c) above, the management stated (July 2002) that besides issuing notices and filing of FIRs, the companies had withheld Rs 0.50 crore and financial coverage of Rs 45.60 lakh was available in the shape of bank guarantees. As regards recovery of interest, an amount of Rs 0.61 crore was withheld from payment of firms. The fact remains that though the cases were old, the companies had not made final adjustments for recovery of cost of transformers and interest charges amounting to Rs 1.77 crore against available financial coverage of Rs 1.57 crore.

2B.7.1.4 Non-replacement/repair of defective transformers (new) within the warranty period

As per terms and conditions of purchase orders issued by the erstwhile Board and the companies, the suppliers were liable to repair/replace the transformers damaged during warranty period within a period of 45 days of intimation to

them. In case these transformers were not replaced within the stipulated period, they could be disposed of at the risk and cost of the supplier and recovery made from 10 *per cent* bank guarantee which was to be released after expiry of warranty period. Audit examination revealed that:

(a) As on 31 March 2002, 858 transformers (new) valued at Rs 2.83 crore pertaining to 37 suppliers, got damaged during warranty period and were lying unrepaired in various stores of UHBVNL/DHBVNL. An audit analysis revealed that out of 858 transformers, 95 transformers were lying unrepaired for three to five years, 88 transformers for five to 10 years, and 62 transformers for more than 10 years. The locking up of funds in these transformers had also resulted in loss of interest of Rs 0.70 crore (calculated at the rate of 12 *per cent* per annum) during 1990-2002. No action had been taken to recover the amount by disposing of the transformers at the risk and cost of the suppliers. The companies had also not taken any action against the defaulting officers/officials.

(b) As on 31 March 2002, 300 transformers valued at Rs 0.99 crore which were lifted from Central Stores, Dhulkot, Panipat, Rohtak and Hisar of UHBVNL/DHBVNL by the suppliers for repair/replacement were not repaired/replaced by the suppliers and were lying with them. An audit analysis revealed that 133 transformers were lying with the firms for three to five years and 65 transformers for more than five years. The locking up of funds in these transformers had resulted in loss of interest of Rs 36.51 lakh (calculated at the rate of 12 *per cent* per annum) during 1994-2002. No action had been taken to take back the repaired transformers from the suppliers. Companies had also not taken any action against the defaulting officers/officials.

(c) 823 transformers of Central Stores, Dhulkot, Panipat, Rohtak and Ballabgarh of UHBVNL/DHBVNL damaged during July 1994 to June 2001 were repaired belatedly and the delays ranged from four to 77 months. The erstwhile Board and the companies suffered a loss of interest of Rs 44.46 lakh, calculated at 12 *per cent* on the average cost of transformer at Rs 33,000 per transformer. Stipulation for recovery of interest was not made in the purchase orders, though such provision prevailed in the orders placed by neighbouring State of Punjab.

While admitting the facts, the management stated (July 2002) that Whole Time Directors of UHBVNL decided (May 2000) to take remedial measures such as prompt notice to the suppliers, safeguarding interests of the Company by allowing lifting of transformers by the firms equivalent to the bank guarantee cover available etc. It further stated that a sum of Rs. 1.22 crore had been deducted and bank guarantees of Rs 9.24 crore had not been released in respect of 21 suppliers against the transformers damaged during the warranty period. The reply was not tenable as the Company had not made final adjustment for recovery of cost of transformers amounting to Rs 3.82 crore against available financial coverage of Rs 10.46 crore. Further, in respect of 148 transformers valued at Rs 48.84 lakh pertaining to 16 suppliers, position

of recoveries made/amount withheld/bank guarantees available was not furnished.

2B.8 Scrapping and disposal of unusable transformers

2B.8.1 Delay in scrapping and disposal of transformers

Distribution transformers damaged in field were returned to transformer repair stores. Scrap survey reports of irreparable transformers were sent to disposal cells of the companies for disposal of irreparable transformers.

Delayed scrapping of irreparable transformers resulted in loss of interest of Rs 1.55 crore.

During the period April 1998 to November 2001, 7,257 distribution transformers were declared irreparable. A test-check of records of 6,691 transformers of UHBVNL/DHBVNL revealed that 4,082 transformers (61 *per cent*) were scrapped after a period ranging from one to three years from the date of their damage. Due to delay in scrapping of irreparable transformers, the erstwhile Board and the companies suffered a loss of interest of Rs 1.55 crore on 3,826 transformers which were disposed of for Rs 3.73 crore. Remaining 256 transformers which were scrapped during 1989-99 valuing Rs 25.86 lakh were lying in stores (December 2001).

The management stated (July 2002) that it was not possible to transport every transformer to the workshop immediately on its damage and transformers were auctioned in big lots. Reply was not convincing, as the management took one to three years in scrapping 61 *per cent* transformers. It should have evolved effective mechanism for expeditious disposal of transformers.

2B.8.2 Sale of irreparable distribution transformers at the rates lower than reserve price

Loss of Rs 0.57 crore on the sale of irreparable transformers below the reserve price.

Irreparable transformers were sold by auction as well as by inviting tenders. The disposal cell fixed reserve price of irreparable transformers on the basis of weight of various components (copper/aluminium coil scrap, core, body iron scrap etc.) at the prevalent market rates of metal scrap published in the Economic Times. During five years up to 31 March 2002, the erstwhile Board and companies after inviting tenders disposed of 9,663 transformers for Rs 9.57 crore against reserve price of Rs 10.68 crore. The rates at which the transformers were disposed of were lower by 5.05 to 15.33 *per cent* than the reserve price. It was observed in audit that the rates of different components when disposed of separately through auction within the same period were lower only up to five *per cent* than the reserve price. Compared with reserve price (after allowance of five *per cent*) loss in sale of 9,663 transformers at lower rates worked out to Rs 0.57 crore.

It was also seen in audit that on an enquiry by the UHBVNL, Metal Scrap Trading Corporation (MSTC) (A Govt. of India Undertaking) had offered in September 1999 their services for selling components of transformers at the

rates which were lower by 2.01 *per cent* than the reserve price, but no action was taken in this regard. The loss sustained by the companies (based on offer of MSTC including 3 *per cent* commission on sales) worked out to Rs 41.56 lakh in sale of 4,565 transformers during September 1999 to March 2002 at Rs 4.37 crore against reserve price of Rs 5.04 crore.

The management stated (July 2002) that the transformers surveyed off were not dismantled in various components to save extra cost of dismantling, to avoid loss on account of fire as the coils are oil soaked and prevent pilferage of the dismantled material. It further stated that the MSTC had offered its services for selling components of transformers for which indicative rates were mentioned and there was no firm commitment to sell the components at the indicative prices. Reply was not tenable because (i) the reserve price of damaged transformers was fixed by the disposal cell on the basis of weight of various components at the prevailing market rates of metal scrap published in the leading newspapers, (ii) the oil soaked coil extracted from the damaged transformers were being stored and disposed of. There was no justification for disposing of the damaged transformers at lower rates. Regarding the rates indicated by the MSTC, the apprehension of the Company that the same rates would not have been received did not hold good as its services were not availed of.

2B.9 Non-recovery of transformer oil and missing parts

Cost of transformer oil found short and missing part of transformers valued at Rs 12 crore were not recovered.

As per procedure in vogue, the damaged distribution transformers were sent by the various divisional offices to the transformer repair workshops for their repairs. During test-check of records of 10 transformer repair workshops, it was noticed that recoveries aggregating Rs 12.23 crore towards short receipt of 8,968 kilolitre transformers oil valued at Rs 9.97 crore and parts valued at Rs 2.26 crore of 1,24,081 damaged transformers were not made during the last five years up to 2001-02.

The management stated (July 2002) that in respect of UHBVNL, an amount of Rs 1.80 crore had been charged to officials who returned the damaged transformers and an amount of Rs 22.72 lakh had been recovered and the process of recovery was continuing. Steps taken to recover remaining amount of Rs 10.43 crore were not intimated.

2B.10 Non-disposal of raw material

Distribution transformer repair workshops were closed in March 2000, but raw material viz. copper/aluminium wire, HV/LV coils, rods, etc., valued at Rs 0.82 crore needed for repair of damaged distribution transformers were still lying in Transformers Repair Workshops at Dhulkot (Rs 3.63 lakh), Hisar (Rs 27.06 lakh), and Faridabad (Rs 0.51 crore) at the end of March 2002. The management stated (July 2002) that efforts were made (February/April 2001) to dispose of the HT/LT coils valued at Rs 25 lakh through press tender but it

could not be disposed of due to poor response from the tenderers. It further stated that material lying in the workshop was very old and purchased at the time of erstwhile Board and that the HT/LT coils lying in the workshops were being got converted into required size of wire so that the same could be used for repair of distribution transformers departmentally, thus saving a lot. The reply was not tenable as no effective steps were taken to use the material, and the fact remained that UHBVNL/DHBVNL could not augment its revenue receipts by Rs 0.82 crore and sustained loss of interest of Rs 9.81 lakh per annum.

Conclusion

The augmentation of transformation capacity was not done rationally with the result that the sub-transformation capacity and the distribution capacity was less than the connected load. Inadequate transformation and distribution capacities led to overloading of transformers. The repair of transformers was marked by poor quality and inability to obtain free repairs of transformers failed within warranty period. The companies had not maintained history cards of transformers, in the absence of which the movement of transformers and their performance could not be properly monitored. There was also considerable delay in scrapping of irreparable transformers.

There is urgent need to take immediate steps to augment and rationalise transformation capacity to match the connected load. The companies should exercise close monitoring of its transformers from their purchase to their failure and repairs. The causes of failure of distribution transformers should be analysed and preventive steps taken for avoidance of such cases in future.

The matter was referred to Government in March 2002, the reply had not been received (September 2002).