Chapter II

2. Performance Audit relating to Government Companies

2.1 Forest Development Corporation of Maharashtra Limited

Executive Summary

Forest Development Corporation of Maharashtra Limited (Company) was incorporated in February 1974 as wholly owned Government Company to raise plantations of important species like teak, bamboo etc., protection of forest crop and wildlife, processing and grading of forest produce etc. Company was also engaged in production and distribution of seeds, seedlings and turnkey plantations. The main activity of the Company was forestry in 3.93 lakh Hectare (Ha) of forest land allotted to it by the Government of Maharashtra (GoM). The performance audit of the Company for the period 2006-07 to 2010-11 was conducted to assess whether proper planning for the activities existed, afforestation had been carried out as per the approved management plan, protection measures for forest land, plantation and wildlife were in place, manpower utilisation was efficient and proper internal controls were in existence.

Financial performance

The sales of the Company increased from ₹ 101.77 crore in 2006-07 to ₹ 128.94 crore in 2010-11. The profit before tax correspondingly increased from ₹ 54.32 crore to ₹ 76.30 crore during the period. The proposal for conversion of World Bank Loan, along with interest thereon, into share capital was pending with the GoM.

Planning

The Company did not formulate a comprehensive corporate plan encompassing plantation activities, utilisation of infrastructure, human resource development etc. The targets for plantation and harvesting fixed in Annual Plan were not realistic and resulted in major downward revision in area. Wildlife protection measures were not planned and taken up till 2009-10. No Research and development activity was planned and carried out during the audit period. The Company had not re-looked into its activities to match the requirements of National Forest Policy 1988/Maharashtra State Forest Policy 2008.

Utilisation of land

The Company had not maintained land register indicating allotment, possession, surrender and the balance land available. The Company had not taken possession of the entire land allotted to it. The Company surrendered 78,335 Ha of land due to large scale encroachment, non-viability and security related issues. On specific rejection of claims for expenditure incurred on surrendered land the Company had written off ₹ 56.54 crore during the five years ended 31 March 2011. However, similar claims of ₹ 83.95 crore had been accounted for as receivable as at the end of March 2011. The GoM had not formulated policy for reimbursement of expenditure incurred by the Company on surrendered land. An area of 13,700 Ha of land was under encroachment as at the end of March 2011.

Plantation and harvesting

During the five years ended 31 March 2011, the Company carried out plantations in an area of 13,538 Ha consisting of teak, bamboo and miscellaneous species. The survival rate of the plantation was satisfactory during this period. The Company lost 1.95 lakh trees due to illicit cutting during five years ended 31 December 2010 and the incidence was on a higher scale in Nashik region. The turnkey plantation activity of the Company was in loss during this period. The Company could not harvest the entire area fit for harvesting and there was a shortfall of harvesting in 28,559 Ha during the audit period. The productivity of the Company as

a whole during a particular year had not been estimated and therefore variance could not be analysed with actual production. The capacity utilisation of nurseries was low and the Company could not meet the demand for seeds in all the five years ending 31 December 2010. There was lack of coordination with Forest Department for placement of orders for seedlings to increase the capacity utilisation of nursery.

The Company had redeployed its manpower not based on the workload in each division after re-organisation/ surrender of land. The Company had not worked out the entitlement of land to the eligible forest dwellers under the Scheduled Tribe and Other Traditional Forest Dwellers (Recognition of Forest Rights) Act, 2006 and its impact in terms of area to be regularised. The Company did not pursue the implementation of Joint Forest Management project with the GoM and the project became defunct. The Company did not carry out wildlife protection measures till 2009-10 and the initiatives were made only in 2010-11.

Internal control and monitoring

The land records were not maintained and reconciled with records of Forest Department. The division wise revenue and expenditure statement is not prepared to ascertain the commercial viability of operations of the divisions. 3,708 Internal audit paras were pending and this includes 1,795 paras pending for a period for more than five years and 804 paras pertaining to divisions closed for operations.

Conclusion and Recommendations

To assist the Company in rectifying the deficiencies noticed, audit has made six recommendations. These includes preparation of comprehensive corporate plan, maintenance of land register, strengthen efforts to reduce encroachment and illicit cutting, increase the turnover of seeds/nurseries and action plan to turn-around loss making divisions.

Introduction

2.1.1 The Forest Development Corporation of Maharashtra Limited (Company) was incorporated in February 1974 to raise plantations of economically important species like teak, bamboo *etc.* on Government forest land, conservation and protection of forest crops and wildlife, processing and grading of forest produce, conducting business of lumbering and saw mill and manufacturing of wood based products *etc*. The National Forest Policy 1988 (NFP) aims at maintaining 33 *per cent* of the land mass under forest coverage and ensuring environment stability and maintenance of ecological balance including atmosphere equilibrium which is vital for sustenance of all life forms; *i.e.* human, animals and plants. In conformity with the NFP, the State Government formulated the Maharashtra State Forest Policy (MSFP) 2008 under which the Company is assigned with the responsibility of production and distribution of quality seeds and seedlings, turnkey plantations, eco-tourism and production and distribution of compost. While the overall area under forest cover in the country stood at 21.02 *per cent*, the percentage of forest cover in the State was 16.46 *per cent* as of 2009. The total forest area under control of the Company as at the end of March 2011 was 3.93 lakh Hectare (Ha) which represents 7.76 *per cent* of the total forest area in the State.

2.1.2 Presently, activities of the Company are confined to plantation, harvesting and afforestation in the forest land allotted to it by the State Government on lease for a period of 30 years. Besides, the Company is also engaged in production and distribution of seeds and seedlings, cultivation of medicinal plants and turnkey plantation in small scale.

2.1.3 The Management of the Company is vested in a Board of Directors (BoD) consisting of eight Directors including Chairman and a Managing Director (MD), all appointed by the State Government. The MD is the Chief Executive of the Company and is assisted by five Regional Managers, 17 Divisional Managers (DM), a Controller of Accounts and Financial Advisor and Company Secretary. The Company has fifteen working Divisions headed by DMs.

2.1.4 The Company had a paid-up capital of ₹ 27.76 crore and accumulated profit of the Company stood at ₹ 414.76 crore as at the end of March 2011 of which ₹ 307.12 crore was earned during 2006-07 to 2010-11.

Scope of Audit

2.1.5 The performance audit was conducted (February-April 2011) on the operations of the Company for five years from 2006-07 to 2010-11. The audit findings were arrived at after test check of records of the Company's Head office, three Regional offices and six Divisional offices (including one sales Depot). The sample selected for audit was based on the forest land area as well as revenue generation of the selected Regional offices which represents 87.64 *per cent* of the land area and 46.96 *per cent* of revenue of the Company.

Audit objectives

2.1.6 This performance audit was undertaken to assess whether:

- proper plan existed to utilise the forest land effectively;
- proper measures were in place for protection and conservation of forest land, plantation and wildlife;
- disposal of forest produce and collection of revenue was systematic;
- manpower was managed efficiently; and
- internal controls and internal audit arrangements were adequate.

Audit criteria

2.1.7 The criteria adopted for achievement of audit objectives were:

- Forest Conservation Act, 1980, NFP 1988 and MSFP 2008;

- budgets, targets and other parameters contained in Management Plan (MP)/ working plan (WP)/Annual Plan (AP) for extraction of forest produce and regeneration/re-plantation;
- yield norms fixed in MP; and
- directives/guidelines issued by the Government of India (GoI), Government of Maharashtra (GoM) and BoD.

Audit methodology

2.1.8 Audit adopted a mix of the following methodologies for achieving the audit objectives keeping in view the audit criteria:

- examination of the agenda notes and minutes of the meetings of the BoD;
- examination of plantation records and monitoring reports on plantation at Divisions/Regional offices of the Company;
- examination of harvesting records, fixation of upset price, bids, sales records, sundry debtors; and
- interaction with auditee, analysis of data with reference to audit criteria, raising of audit queries, discussion of audit findings with the Management and issue of draft performance audit report to the Management for comments.

Audit findings

2.1.9 The audit objectives and scope of audit were explained to the Company during an 'Entry Conference' held on 7 February 2011. The audit findings were issued to the State Government/Management on 27 July 2011 and discussed in an 'Exit Conference' held on 11 October 2011. The reply of the Company to the audit findings were received on 4 October 2011. The views of the Management have been considered while finalising the Report. The audit findings are discussed in subsequent paragraphs.

Financial position and working results

2.1.10 The financial position of the Company for the five years ended 31 March 2011 was as given below:

(₹in crore)

	2006-07	2007-08	2008-09	2009-10	2010-11
Sources of funds					
1) Share capital♦	27.66	371.71	371.71	371.71	371.76
2) Unsecured loans	314.83	0.00	0.00	0.00	0.00
3) Committed reserves	223.42	189.98	197.70	220.88	243.24
4) Profit and loss account	257.94	292.04	336.45	372.07	414.76
Total	**823.85**	**853.73**	**905.86**	**964.66**	**1,029.76**
Application of funds					
1) Net fixed assets	8.10	7.77	8.13	8.12	7.57
2) Current assets loans and advances	891.75	865.91	918.05	987.01	1,065.19
3) *Less*: Current liabilities	76.00	19.95	20.32	30.47	43.00
4) Net current assets	815.75	845.96	897.73	956.54	1,022.19
Total	**823.85**	**853.73**	**905.86**	**964.66**	**1,029.76**
Debt equity *ratio*	11:1	NA	NA	NA	NA

Analysis of financial position has revealed the following:

- The Company had accounted for ₹ 344 crore as share application money since 2007-08 as per the decision of the Government (August 2008) to convert the World Bank Loan (WBL) and accumulated interest thereon as at the end of March 2007 into share capital. Subsequently, in September 2010, the Government revoked its earlier decision. However, the Company continued to exhibit the amount as share application money and therefore no loan liability was shown in its balance sheet. The interest liability of ₹ 54.08 crore on the loan for the period 2007-08 to 2010-11 was also not provided. In reply the Company stated that they had again approached (January 2011) Government of Maharashtra (GoM) for conversion of loan and interest thereon into share capital and the decision of the GoM was awaited (October 2011).

- During 2006-07 to 2010-11, the Company raised compensation claims of ₹ 114.02 crore on GoM for expenses incurred on raising plantations on surrendered land. Out of this, claims of ₹ 30.07 crore were rejected by the GoM and were written off by the Company from its books of accounts. The claims of ₹ 83.95 crore were still under consideration of GoM and being shown as receivable by the Company. The claims of ₹ 26.47 crore pertaining to the periods prior to 2006-07 were also written off on being rejected by the GoM. These issues have been discussed subsequently in **paragraph 2.1.14**.

- The Company's claim of ₹ 16.59 crore for expenses incurred on forest land acquired subsequently for different projects by Government/other agencies during 1994 to 2003 had remained un-realised. Further, in the absence of

♦ Including share application money of ₹ 344 crore from 2007-08 onwards.

specific terms and conditions for reimbursement of expenditure, the Company could not ensure timely recovery of dues of ₹ 96 lakh being the expenditure incurred for plantations under Employment Guarantee Schemes (EGS) which were pending for the period 2006-07 to 2010-11. Another claim of ₹ 51.41 lakh towards the expenditure incurred on the Tiger Safari at National Park, Borivali at the instance of GoM had not been effectively pursued for realisation and remained pending till date (October 2011).

The working results of the Company for the five years ended 31 March 2011 were as given below:

(₹in crore)

Particulars	2006-07	2007-08	2008-09	2009-10	2010-11
Income					
Sale of material	101.77	89.77	96.46	107.82	128.94
Other income	9.14	12.78	17.58	14.02	13.87
Total income	**110.91**	**102.55**	**114.04**	**121.84**	**142.81**
Expenditure					
Cost of sales	44.22	43.98	48.99	51.24	62.69
Other expenses	12.37	10.41	3.95	3.36	3.82
Total expenditure	**56.59**	**54.39**	**52.94**	**54.60**	**66.51**
Profit before tax	54.32	48.16	61.10	67.24	76.30

Analysis of working results has revealed the following:

- Modern Fire control project was under implementation with the financial assistance of GoM in the operational area of the Company/Forest Department (FD). During the five years ending 31 March 2011 the Company received ₹ 6.93 crore while the total expenditure was ₹ 7.69 crore. The cumulative excess expenditure as on 31 March 2011 on the project was ₹ 1.14 crore which had been accounted for as receivable without confirmation from the GoM. The Company had not effectively pursued the recovery with the GoM

Three divisions incurred loss of ₹ 7.55 crore during audit period.

- Out of 15 divisions, three divisions (Kinwat, Nandurbar and Thane) were incurring losses and the total loss incurred was ₹ 7.55 crore during the five years ended 31 March 2011. Lower productivity, lesser area of harvesting as well as excess manpower were the major reasons for loss in these divisions.

Operational performance

Planning

The Company did not formulate corporate plan encompassing all its activities.

2.1.11 The Company prepares the Management Plan (MP) for each division covering the plantations and harvesting activities. However, it did not formulate any long/short term corporate plan encompassing evaluation of present activities, problems encountered and future prospects. We observed that the entire area included in MP was not in the possession of the Company which reflects that the data based on which the MP was prepared was inaccurate. The Company did not have any plan to deal with the encroachment of forest land. It did not fix plantation targets considering the availability of the land except for mandatory plantations. As such plantations except mandatory plantations were taken up on *ad hoc* basis. The targets for plantation and harvesting fixed in the annual plan were not realistic and resulted in major downward revision of the area. Physical and financial targets for forest produce for each of the divisions were not fixed and monitored to ensure proper control on this activity. Wildlife protection measures were not planned and taken up till 2009-10 though the activity was of utmost importance for ecological balance. The utilisation of nurseries and seed units were not planned in coordination with GoM/FD to keep a balance on demand and supply. The Company had not taken initiative to implement the Joint Forest Management/Community Forest Management to protect the forest and thereby increase the forest coverage as envisaged in the NFP 1988. Eco-tourism projects which required long gestation period were not planned and executed during the audit period. No target for turnkey plantations was fixed and the revenue from this activity was not significant during the audit period. Human resources development was not planned considering the dwindling number of employees and their advanced age group. The Company also did not create an integrated data bank and proposal for Research & Development work was not made during the audit period. The Company had not re-looked into activities to match the requirements of changing times as reflected in the NFP 1988/MSFP 2008. All these aspects have been discussed in the subsequent paragraphs.

Preparation and submission of Management plan

2.1.12 The NFP 1988 marked a departure by stipulating a shift from simple production forestry to preservation of environment, eco-system and bio-diversity, besides promoting increase in forest productivity. As per the Forest (Conservation) Act, 1980 as amended in 1988, prior approval of the GoI is mandatory for MP covering all proposals for harvesting forest areas and re-forestation. The MP contains the year wise program of work to be done *viz.* identification of areas for harvesting, plantations, silviculture operations to be carried out *etc.* The Company prepares the MP for 10 years at division level. Subsequently, based on the MP, the Company prepares AP incorporating the changes due to conditions prevailing at the time of preparation of AP. The Action Taken Report on the AP is also sent to the GoI for information. At present, the Company is operating the MPs for the period 2005-2017. We observed that the MPs of the divisions were not uniform and there were marginal delays in submission and obtaining the approval of MP.

Acquisition and utilisation of land

2.1.13 The GoM transferred forest land to the Company in phases till 2006-07 on lease for a period of 30 years and at the beginning of current MPs (2005-06/2006-07) the Company had 4.72 lakh Ha of land. During the performance audit period ending 31 March 2011, the Company surrendered 78,335 Ha of land and another 244 Ha of land was taken over for different projects by Government/other agencies and the land available with the Company was 3.93 lakh Ha as on 31 March 2011. The Company had not maintained the Land Register containing the transfer of forest land by Government, actual possession by the Company, surrender/acquisition of forest land by the Company/Government/other agencies for projects and the balance land available with the Company.

The Company had not maintained land register and reconciled the same with records of Forest Department.

We observed that, as per the records of Department of Forest/GoM, the land available with the Company was 3.56 lakh Ha and the difference had not been reconciled. The lease deed incorporating terms and conditions, including lease rent to be paid to the Government, had not been finalised and executed for any of the forest land transferred to it by Government though the initial lease period of 30 years was over by 2008. In two divisions *viz.*, Thane and Dahanu, the Company did not take possession till date of 4,820 Ha and 1,844 Ha of land respectively allotted to it in the year 1997 by GoM. However, the fact that the Company had not taken possession of the entire area allotted to it was not communicated to the Government. Though the area of these two divisions was included in the MPs of the divisions, no activity could be carried out by Company in the allotted land in the absence of possession of the said land.

The Management stated that the corrective measures, as suggested by audit with regard to lease agreement and surrender of land, would be taken up.

Surrender of land

The State Government had not framed any policy regarding reimbursement of expenditure incurred by the Company on surrendered land.

2.1.14 The Company surrendered during 2006-07 to 2010-11 the forest land admeasuring 78,335 Ha to FD allotted to it between 1978 and 1997 due to difficulties in managing these lands on the ground of large scale encroachment, non-viability of plantations and security related issues. We observed that the Company took more than 10 years to identify the suitability of the land for plantation and incurred expenditure of ₹ 114.02 crore on plantation on the land (78,335 Ha) later surrendered. The Company raised compensation claims for the same which were not accepted by the GoM. In addition, the Forest land admeasuring 244 Ha was also transferred as per directives of State Government for various irrigation and power projects, wildlife sanctuary *etc.*

The Management stated that they were entitled for expenditure incurred for raising the plantations in the surrendered land. We observed that the GoM had not framed any policy regarding reimbursement of such expenditure. The

Company should take up the matter with GoM and pursue it effectively so that the GoM take a policy decision in the matter.

In Yawal division, the Company had surrendered (March 2007) the entire land admeasuring 14,864 Ha after incurring ₹ 22.47 crore on raising plantation on account of large scale encroachment, illicit cutting, resistance from the local people in conducting protection activities and difficulties in obtaining police protection. The operation of the division was closed in April 2007 with surrender of land. The Company should have dealt with the problems in management of forest land by obtaining the assistance from local administration of the Government instead of surrendering the same.

The Management stated that lack of authority for eviction of encroachment was a serious impediment to protection of leased forest land and these areas were difficult to be protected and maintained as productive assets. We feel that the Company should have taken all possible measures to prevent encroachment of land belonging to the Company.

Encroachment of forest land

Land admeasuring 13,700 Ha was remained encroached as on 31 March 2011.

2.1.15 The forest land transferred to the Company was encroached upon due to its failure to protect it. We observed that out of 2.97 lakh Ha land, the land admeasuring 13,700 Ha was encroached upon in following 10 divisions, as on 31 March 2011 as detailed below:

(Area in Ha)

Sl. No.	Name of divisions	Total land with divisions	Area encroached	Period of encroachment
1.	Nagpur	41,808	467	Since 1978
2.	Gondia	32,835	14	Since 1979-80
3.	C' Chanda	31,061	11	1978 to 2010-11
4.	W' Chanda	36,481	5	2004-06 to 2010-11
5.	Pranhita	24,988	1,203	1972-73 to 2010-11
6.	West Nashik	42,075	8,209	1972-78 to 2010-11
7.	Nandurbar	18,182	26	Since 1983-85 and 1990-91
8.	Thane	20,016	771	NA
9.	Dahanu	24,451	2,945	NA
10.	Yeotmal	24,905	49	2004-05 to 2010-11
	Total	**2,96,802**♣	**13,700**	

It would be seen from above that the area under encroachment in West Nashik and Dahanu was as high as 19.51 and 12.04 *per cent* respectively of the land managed by the divisions.

The Management stated that the eviction of encroachment was stayed by the GoM in 2002. It was also stated that enactment of Scheduled Tribe and Other Traditional Forest Dwellers (Recognition of forest rights) Act, 2006 (STOTFD) has conferred, the right for cultivation of forest land to forest dwellers and their rights were being determined by the designated authorities. However, the Company had not segregated the data regarding the area

♣ Does not include land of divisions where encroachment was not noticed.

encroached by forest dwellers and others to ascertain the details of area encroached by persons other than forest dwellers for appropriate action.

Plantation activities

2.1.16 The plantation activities of the Company during the audit period were confined to mandatory♦ plantations and plantations under EGS/National Bamboo Mission (NBM). The details of plantations carried out by the Company for the five years ended 31 March 2011 were as follows:

(Area in Ha)

Mandatory Plantation					Other plantation	Total plantation
Year	**Target as per AP**	**Revised target based on area available**	**Actual**	**Excess/ (Shortfall) (3-4)**		
1	**2**	**3**	**4**	**5**	**6**	**7**
2006-07	1,437	1,136	1,903	767	640	2,543
2007-08	2,800	2,331	2,545	214	105	2,650
2008-09	2,180	2,321	2,332	11	--	2,332
2009-10	2,414	1,951	1,958	7	950	2,908
2010-11	2,690	2,376	2,345	(31)	760	3,105
Total	**11,521**	**10,115**	**11,083**		**2,455**	**13,538**

The Company achieved the targets fixed for area of mandatory plantations based on the area available for plantations in all the years under audit except in 2010-11 which fell short by 31 Ha due to intermittent interference by the naxalites and non-availability of registered labourers under EGS. Non-mandatory plantations consist of plantations under EGS and NBM for which funds were given by the Government and Company had not fixed any targets for the same.

The survival count of the plantations is carried out by the Company in May and October every year up to three years of plantation. The survival count of the plantations raised during 2006-07 to 2010-11 was carried out by the Company and the survival percentage was as per the accepted norms *i.e.* 60 *per cent*. In respect of plantations of teak, the actual survival ranged from 77 to 92 *per cent* during 2006-07 to 2010-11. We observed that the Company revised its plantation targets downwards due to variations in the harvesting area as compared to the area included in the AP. Similarly, the Company undertook additional plantations under EGS/NBM on *ad hoc* basis without considering the land available with it. The Company should have planned the plantation activity considering the total land availability.

Illicit felling of trees

2.1.17 The illicit felling of trees is another concern and constraint for protection of forest. During the five years ended December 2010, the

♦Plantations as per the approved MP/AP.

Due to illicit felling of trees, the Company incurred loss of ₹ 4.74 crore.

Company reported loss of 1.95 lakh trees valuing ₹ 4.74 crore[†]. The loss on account of illicit felling of tree was on increasing trend and ranged between ₹ 0.47 crore to ₹ 1.56 crore during 2006 to 2010. We observed that illicit felling was on a much higher scale in Nashik region which accounted for 1,17,050 numbers of trees valued at ₹ 1.68 crore during 2006-10. The illicit cutting of the trees adversely affects the future revenue of the Company and the afforestation of the land.

The Management stated that the prospects of regularisation of the encroached area under STOTFD Act, 2006 led people to indulge in illicit felling and the increased efforts of the Company were yielding dividends except in Nashik region. The reply is not tenable as the Company had not put in place any specific plan to control illicit felling despite the increase in its incidence.

Harvesting activities

2.1.18 Harvesting activities include obtaining yield through thinning, over wood removal and final felling of dead and dying trees in the plantations. The forest land with the Company produce teak and other timber which have rotation period up to 80 years. The MP of the Company prescribes harvesting operations in the plantations in different working circles as approved by GoI. The changes required on the basis of surveys carried out are incorporated while preparing AP. Further, variations in area in the planned activity were noticed during actual working. The details of harvesting carried out by the Company during the five years ended 31 March 2011 were as under:

(Area in Ha)

Year	Area proposed for felling as per AP	Area fit for harvesting	Actual felling/ working	Shortfall (3-4)	Shortfall in percentage
1	2	3	4	5	6
2006-07	61,111	34,285	34,285	0.00	0
2007-08	51,803	47,164	35,204	11,960	25.36
2008-09	50,226	42,816	34,781	8,035	18.77
2009-10	46,359	44,722	41,250	3,472	7.76
2010-11	46,109	44,713	39,621	5,092	11.39
Total	**2,55,608**	**2,13,700**	**1,85,141**	**28,559**	**13.36**

As against the total area of 2.56 lakh Ha proposed in AP, the area found fit for harvesting was 2.14 lakh Ha during the five years ended 31 March 2011 and the actual harvesting was carried out in an area of 1.85 lakh Ha which represents 72 *per cent* of the proposed area and 87 *per cent* of the area fit for harvesting. This adversely affected the operation/cash flow of the Company. We observed that there were wide variations in the area proposed in AP and area fit for harvesting.

[†] Valuation done based on form factor as prescribed by Forest Department.

The Management stated that the bulk of the area which could not be harvested was due to naxalite interference and the balance area due to lower than critical crop girth *etc*. We observed that the APs were prepared immediately before the activity and therefore, the variations indicate the defective data on which the APs were based. The management had not analysed the reason for such variations in area proposed in AP and area fit for harvesting so as to take corrective measures to avoid its recurrence in future.

Productivity analysis

2.1.19 The profitability of the Company is directly related to the productivity of the plantations in the working area of the Company. Productivity denotes volume of outturn of timber/poles *etc.* per hectare achieved in harvesting.

We observed that out of 14[♦] divisions, nine divisions did not estimate the yield and in the remaining five[¥] divisions the productivity was much lower than the estimates as detailed below:

Year	Name of produce	Expected yield	Actual yield	Shortfall	Percentage of shortfall
2006-07	Teak timber (Cum)	2,563	1,271	1,292	50
	Teak poles (No.)	1,83,935	91,897	92,038	50
2007-08	Teak timber (Cum)	1,447	273	1,174	81
	Teak poles (No.)	82,286	29,184	53,102	65
2008-09	Teak timber (Cum)	3,695	1,644	2,051	56
	Teak poles (No.)	74,794	59,001	15,793	21
2009-10	Teak timber (Cum)	3,680	1,287	2,393	65
	Teak poles (No.)	1,11,170	77,778	33,392	30
2010-11	Teak timber (Cum)	3,952	1,489	2,463	62
	Teak poles (No.)	66,738	39,017	27,721	42

Productivity of five divisions remained lower as compared to estimates resulting in short realisation of ₹ 24.87 crore.

The actual outturn was much lower as compared to the estimated output of timber as well as poles in respect of the five divisions. The short realisation of revenue due to lower productivity compared to estimated yield worked out to ₹ 24.87 crore for timber and poles for the five years ended 31 March 2011. The reasons for shortfall in productivity were failure of plantation, low stock growth, illicit cutting *etc.* The productivity of the Company as a whole, during a particular year had not been estimated. As a result, the actual production could not be compared in the absence of any benchmark.

[♦] Except the Ballarshah sale depot division.
[¥] Gondia,Kinwat,Nashik,Nandurbar and Dahanu.

Sale of forest produce

2.1.20 The Company obtained revenue from disposal of forest produce for the five year period ending 31 March 2011, as follows:

(₹ in crore)

Year	Harvesting	Other activities	Total
2006-07	101.64	0.13	101.77
2007-08	89.67	0.10	89.77
2008-09	96.09	0.37	96.46
2009-10	107.18	0.64	107.82
2010-11	127.26	1.68	128.94
Total	**521.84**	**2.92**	**524.76**

The Company did not fix physical/financial targets for sale of forest produce and monitored the same to ensure proper control on this most important activity.

2.1.21 The sale includes sale of forest produce on *nistar*[‡] basis to the local people. The Company during the five years period ending 31 March 2011 effected sale of ₹ 29 lakh under *nistar,* the market value of which was ₹ 69 lakh thereby extending the benefits of ₹ 40 lakh to the beneficiaries. We observed that the volume of this activity was very negligible as compared to the total revenue earned by the Company during the same period.

The Management replied that there was no unmet demand under the scheme for forest produce. We observed that there was no initiative to create awareness regarding the availability of the benefit under *nistar* among the beneficiaries and therefore the fulfillment of demand could not be ascertained.

Incorrect fixation of upset price

Incorrect fixation of upset price resulted in short realisation of ₹ 1.47 crore.

2.1.22 Every six months, the Company fixes the upset price of the forest produce to be sold. The upset price is fixed based on the average sale price realised during the corresponding six months of the previous year. During auction, an offer below the upset price is not accepted. We observed that in Ballarshah Sale Depot, during April 2007 to March 2008, April 2009 to March 2010 and October 2010 to March 2011, the upset price was proposed by adding two/five *per cent* on the upset price fixed for the corresponding six months of the previous year which was lower than the average of sale price realised in auction conducted during corresponding six months of the previous year. The lower fixation of upset price resulted in disposal of produce below reasonable price and loss of revenue. The estimated loss on account of incorrect fixation of upset price worked out to ₹ 1.47 crore in respect of the above period calculated on the basis of the difference between upset price which should have been fixed as per the guidelines and the actual price realised by the Company.

[‡] *Nistar*-concession granted for removal from forest coupes on payment at stipulated rates, specified forest produce for bonafide domestic use but not for barter or sale, as per the directives of State Government.

The Management stated that the fixation of upset price was based on the harmonised average sale price of the previous six months. However, the instructions contained in circular dated 24 April 1991 stipulated the fixation of price based on the average sale price of the corresponding six months of the previous year.

Inadequacy of earnest money deposit

2.1.23 The recovery of Earnest Money Deposit (EMD) at the rate of 15 *per cent* of bid value was fixed as early as in 1986. The initial amount of 15 *per cent* recovered by the Company is lower than the statutory levies payable on such sale at 16 *per cent* which is remitted to appropriate authorities within the prescribed time limit. In case, the bidder fails to make the final payment and defaults taking delivery of the material, no cushion is available to the Company to make good the loss, if any, in resale of the same material. On being pointed out in audit, the Company revised the rate of EMD to 16 *per cent* effective from 1 September 2011.

Seed collection units and nurseries

2.1.24 As per the MSFP 2008, the Company is entrusted with the responsibility of producing and supplying high quality seedlings/stumps for plantation. The Company collects seeds from the plantations for its own requirement as well as for sale. The Company's seed centre at Nagpur and nursery at Chulban in Gondia has been certified ISO 9001:2008 in 2010 for production and supply of seeds and production and supply of planting stock respectively.

Audit scrutiny of demand and supply of seeds for the period of five years ended 31 December 2010 revealed that the Company could not meet the demand for supply of seeds as detailed below:

(Quantity in MTs)

Calendar Year	2006	2007	2008	2009	2010
Demand	27,786	23,916	32,673	39,200	65,625
Supply	24,982	23,660	31,533	29,810	62,494
Shortage	2,804	256	1,140	9,390	3,131
Percentage of shortage to demand	10.09	1.07	3.49	23.95	4.77

The Company could not meet the demand for seeds in all the five years ending 31 December 2010. We observed that during 2009 the shortage was much higher. The main reason of shortage of seeds was its non availability and therefore the Company should have explored the possibility of procuring seeds from FD particularly in view of the responsibilities assigned to it under MSFP 2008 in this regard. However, no such efforts had been made to work in co-ordination with FD and meet the demand for seeds.

Capacity utilisation of nurseries

2.1.25 The Company had 12 nurseries[§] with facilities to produce high quality Teak stumps and root trainer/clonal/poly pot seedlings for transplantation in forest land and also for sale to Forest Department (FD)/Social Forestry Department (SFD) *etc.* The details of production of seedlings in the nurseries of the Company during the five years ended 31 March 2011 was as under:

(Unit in lakh)

Year	2006-07	2007-08	2008-09	2009-10	2010-11
Teak stump nurseries					
Capacity	83.00	83.00	83.00	83.00	83.00
Production	42.91	75.20	41.26	55.43	63.21
Capacity utilisation (percentage)	52	91	50	67	76
Teak/non teak Root trainer nurseries					
Capacity	80.00	80.00	80.00	80.00	80.00
Production	34.64	17.56	18.38	23.82	29.95
Capacity utilisation (percentage)	43	22	23	30	37
Clonal nurseries					
Capacity	8.00	8.00	8.00	8.00	8.00
Production	1.29	1.61	0.17	0.10	0.06
Capacity utilisation (percentage)	16	20	2	1	0.75

The clonal nurseries remained largely unutilised.

The capacity utilisation of teak stump nurseries was 50 *per cent* and above in all the five years whereas the capacity utilisation of root trainer nurseries were substantially lower which ranged from 22 to 43 *per cent* during 2006-07 to 2010-11. The production of clonal seedlings was also substantially low and ranged from 20 *per cent* in 2007-08 to 0.75 *per cent* in 2010-11. We observed that clonal seedlings facility was created to meet demand of clonal eucalyptus seedlings for Maharashtra Forestry Project. This facility remained largely unutilised in absence of demand for eucalyptus seedlings during audit period. In view of the limited usage, the Company may consider closing the clonal nurseries.

The State Government instructed (March 2009) the FD/SFD to procure seeds/ seedlings from the Company to the extent possible in conformity with the State Forest Policy 2008 to utilise the infrastructure created by the Company. However, the Company had not secured any order either from FD or from SFD for sale of plantation stock. Thus, there was lack of co-ordination

[§]Located at Ramdongri, Chulband, Lohara, Zaran, Pathri, Elgor, Malampalli, Pathrotdevi, Makhamalabad, Jamli, Wada and Kasa.

between FD and Company for placement of orders and thereby increasing the capacity utilisation of nursery.

The Management stated that various efforts for improving the capacity utilisation were being taken and the Company was hopeful of a breakthrough in getting the orders from FD/SFD.

Turnkey plantation

2.1.26 The Company had been undertaking turnkey• plantations since 1990 and had completed 247 such projects covering an area of 1,903.81 Ha at a contract value of ₹ 28.26 crore up to 31 March 2011. The Company had not planned and fixed any financial/physical targets for this activity. Though, the Company had undertaken this activity since 1990, the revenue generated from this activity was insignificant.

Presently, the major turnkey projects were under implementation in Western Coal Fields Limited (₹ 5.04 crore), Karnataka EMP Coal Mines Limited (₹ 1.65 crore) NHAI and JNPY (₹ 1.36 crore) and Raj Bhavan, Nagpur (₹ 1.39 crore). The total expenditure incurred on the projects during the last five years was ₹ 5.66 crore and the income generated was ₹ 5.57 crore and the net revenue generated from the turnkey projects was negative and the loss suffered was ₹ 9.07 lakh during the last five years under audit. We observed that an amount of ₹ 1.66 crore towards turn key plantations was outstanding for over three years against five Government Companies/agencies as they had levied penalties on poor survival rate and unsatisfactory growth of plantations. Thus, this amount is doubtful of recovery.

The Management stated that it would vigorously pursue the recovery. It was also stated that the terms and conditions of the turnkey contract had been revised by incorporating provisions for advance payment and adequate security deposit to ensure recovery of its dues and avoiding recurrence of such instances.

Manpower planning

2.1.27 The men in position as on 31 March 2011 was 1,393 employees including 15 officers in the Rank of Divisional Managers and above on deputation from Forest Department. Besides, five officers in the Internal Audit Department were also on deputation from Finance Department. As per the instructions of the State Government (August 2007), the Company constituted a committee in February 2010 for reviewing the requirement of its staff. Accordingly, the Company assessed the requirements of 1,953 posts as against the then existing sanctioned strength of 2,216 posts. However, the State Government approved (January 2011) 1,688 posts.

We observed that as on 31 March 2011, there was excess manpower in the cadre of Account Assistant in 12 units and clerk cum typist in five units

•Plantations raised on land of Government Companies/Corporations and other Government agencies on mutually agreed terms and conditions.

including the loss making Divisions of the Company. It was also observed that the Company had redeployed the staff without assessing the work load in each divisions/regions after re-organisation/surrender of land. The average age of the employees of the Company was above 50 years which indicates the necessity of inducting young people to the organisation for smooth transition in the working of the Company. Further, the Company had not carried out training need analysis for its employees and conducted any training.

The Management stated that necessary decision for redeployment of staff based on the requirement had been taken and was being implemented.

Environmental and social impact

2.1.28 The principal aim of NFP 1988 is to ensure environment stability and maintenance of ecological balance including atmosphere equilibrium which is vital for sustenance of all life forms; human, animals and plant. The policy considers the derivation of direct economic benefit as subordinate to this principal aim. Some of the incidental activities of the Company which had impact on environment and society are discussed in the following paragraphs:

Compliance under Scheduled Tribe and Other Traditional Forest Dwellers Act, 2006

2.1.29 Under the Scheduled Tribe and Other Traditional Forest Dwellers (ST&OTFD) (Recognition of Forest Rights) Act 2006, certain rights including right to hold and live in the forest land were given to the Scheduled Tribes and other forests dwellers. The Company had not worked out the entitlement of land to the eligible forest dwellers under the Act in any of the divisions and its impact on the Company in terms of area to be regularised to the forest dwellers as well as estimated loss of revenue on regularisation of Rights. Thus, the preparedness of the Company in meeting the requirements of (ST&OTFD) (Recognition of Forest Rights) Act, 2006 was found inadequate.

The Management stated that the settlement of the claims was pending with different committees constituted by the Government for the purpose.

Medicinal Plant Conservation and Development

2.1.30 The cultivation of medicinal plants is considered to be of great importance for safeguarding of bio-diversity and contribution to rural livelihood. It also plays a very important role in primary health care of neighbouring communities who do not have access to hospitals or cannot afford to buy costly medicines. In order to conduct a study regarding plantation, collection, processing, value addition and marketing of medicinal plants, the GoM appointed a committee in July 2007. On the basis of the recommendation of the committee, the State Government accorded (February 2010) approval to establish an independent Medicinal Plants Conservation and Development Branch (MPCDB) in the Company for execution of medicinal plant related activities. The Company submitted (October 2010 to January 2011) proposal to National Medicinal Plant Board (NMPB), GoI for sanction of ₹ 25.29 crore for implementation of various activities proposed for MPCDB. The NMPB has sanctioned ₹ 34.54 lakh till 31 March 2011 for establishment of Herbal Garden Demonstration Centre at Nagpur and Nashik and Herbal Garden of Medicinal Plant at Dahanu. Of this ₹ 20 lakh was released in July 2011. We observed that though the committee appointed by GoM in July 2007 submitted its report in 2008, the decision to implement the recommendations was taken belatedly in February 2010. Further, effective steps for establishment of Herbal demonstration centre/ herbal garden as per the approved proposal had not been initiated and no expenditure was incurred on these activities (October 2011).

The Management stated that the level of financial input from various sources was expected to rise manifold during 2011-12.

Protection of Forest

2.1.31 The forest area is subjected to loss due to biotic pressure like encroachment, illicit cutting, illegal grassing, loping and toppling, fire, *etc.* Soil erosion and degradation also contribute to the failure of plantations and deforestation. The protection measures include soil conservation, fire protection and action against illicit grazing/felling of trees *etc*. In order to protect the forest, the area under control of the Company has been divided into 75 Ranges, 205 Rounds and 432 Beats. Eleven mobile squads are also working for forest protection and the protection staff has been provided with wireless set in some of the regions. Forest guards are deployed for protection of forest at the range level and the area allotted to each guard depends on the sensitivity of the area. The forest guards make regular rounds in the area allotted to them. The mobile squads conduct the patrolling in a routine manner and also assist the regular protection staff on demand. The protection measures are discussed in the monthly meeting of officers and necessary instructions are issued and monitored at Head office level of the Company.

The Management stated that it had taken due care to protect forest areas including plantation created on the same under its control.

Joint Forest Management Scheme

2.1.32 The GoI introduced (June 1990) Joint Forest Management (JFM) scheme setting out involvement of village communities in the regeneration of degraded forest lands to strengthen socio ecological system. Accordingly, the Company initiated a pilot project and entered into 'Memorandum of Understanding' (MoU) with villagers of Bafanvihir (Nashik) in March 1998 providing for payment of 25 *per cent* of net revenue from the forest produce of the area among the members of the group who are engaged in protection mechanism. The project functioned successfully till 2000 in anticipation of revenue from the Company. Since, the Company did not pursue the issue with the State Government effectively it was not getting required support from the local village communities for protection of forest. Consequently, the loss on account of illicit cutting showed continuous increase since 2000.

The Management stated that it was considering launching of eco-tourism program in which participation of local people would be ensured.

Wildlife management

2.1.33 The Indian WildLife (Protection) Act, 1972 provides for protection of wild animals, birds and for matters connected therewith with a view to ensure the ecological and environment security of the country. The Company did not prepare any action plan for wildlife habitat augmentation work, wildlife census, data base preparation, vaccination of cattle *etc*. for protection of wildlife in the operational area of the Company up to 2009-10. The maiden proposal for such activities was made only in 2010-11 and the Company received ₹ 35.50 lakh as grant from GoI in March 2011. As such, the Company had not conducted any activity as required under WildLife Protection Act till 31 March 2011.

The Management stated that various initiatives were being taken to improve the wildlife habitat and other related works. However, the fact remains that the Company did not take any initiative up to 2009-10 as envisaged in NFP 1988 for the wildlife management.

Eco-Tourism

2.1.34 Eco-tourism involves responsible traveling to tranquil and non polluted natural areas that conserve the environment and improve the well being of the local people. The Company prepared a project report for development of eco-tourism facilities at six different locations[**] and submitted the proposal to the GoM in August 2003. We observed that neither the GoM approved the plan nor the Company pursued the proposal. Similarly, the Company proposed at the same time a eco-tourism project at Usgaon Dam. The project has also not taken off as necessary approval from the local authority has not been obtained by the Company, since it did not approach the Government for intervention and issue of directives.

The Management stated that they had signed an MoU with Maharashtra Tourism Development Corporation Limited for undertaking eco-tourism projects and funds to the tune of ₹ 1.58 crore had been received.

Internal control and monitoring

2.1.35 Presence/adherence to a strong internal control system minimises risk of errors and irregularities in operational and financial matters and provides assurance in matters relating to accounting, financial reporting and overall efficiency of the Company's operations. Review of the Company's operations revealed the following control deficiencies:

- The Company had not maintained 'Management Information System' regarding allotment, possession, transfer/surrender and balance of land. The records maintained at divisions were not reconciled with corporate office records relating to area of land under operation, land surrendered and land under encroachment. The land details were not reconciled with FD/GoM.

[**] Borivali, Karnala, Kasa, Tungareshwar, Wada and Alibaug.

- The Company did not prepare physical/financial targets for production and sale of forest produce for monitoring the activity.

- The Company did not prepare division wise statement of revenue generation and expenditure to ascertain the commercial viability of operations of different divisions.

- Deployment of staff was done without considering the volume of work consequent to surrender of land.

- As on 31 March 2011, 3,708 internal audit paras were pending for want of proper response from Management. There were 1,795 paras pending for a period for more than five years and include paras from Reports pertaining to as back as 1978. The outstanding internal audit paras include 804 paras pertaining to divisions closed for operations. Thus, the compliance to the internal audit observations was poor.

The Management stated that the corrective measures were being taken to maintain the land records and minimising the outstanding paras.

Acknowledgement

2.1.36 Audit acknowledges the co-operation and assistance extended by different levels of the management at various stages of conducting of the performance audit.

The matter was reported to the Government (July 2011); the reply had not been received (November 2011).

Conclusion

- **The Company did not formulate any long term/short term corporate plan encompassing plantation, harvesting, utilisation of infrastructure facilities like nurseries, human resource development, computerisation, fund management *etc*.**

- **The Company had not maintained land register indicating the allotment, possession, surrender and balance land in possession of the Company.**

- **The Company surrendered forest land due to non-viability, encroachment, illicit cutting *etc*. after incurring expenditure of ₹ 114.02 crore on plantations on such land. GoM has not framed any policy for reimbursement of expenditure incurred for plantations on the surrendered land.**

- **Encroachment in Nashik and Dahanu was as high as 19.51 and 12.04 *per cent* respectively of the land under management of the divisions.**

- **The Company could not carry out harvesting operations in 28,559 Ha out of 2,13,700 Ha of plantations fit for harvesting.**
- **Shortfall in productivity of five divisions resulted in short realisation of revenue by ₹ 24.87 crore.**
- **Three divisions of the Company were incurring losses due to low productivity, lesser area of harvesting and excess manpower.**

Recommendations

The Company should consider:

- **preparing comprehensive corporate plan encompassing plantation activities and utilisation of infrastructure facilities like nurseries *etc*;**
- **maintain Land register indicating the allotment, possession, surrender and balance land available and reconcile the same with the records of Forest Department (FD);**
- **pursuing with the GoM for framing policy regarding reimbursement of expenditure incurred on forest land surrendered on the grounds of unviability;**
- **strengthen efforts to reduce the encroachment and illicit cutting;**
- **taking action in co-ordination with FD to increase the sale of seedlings to improve utilisation of the infrastructure of nurseries and meet the demand for seeds; and**
- **drawing comprehensive action plan to turn-around the loss making divisions.**

2.2 Maharashtra State Electricity Distribution Company Limited

Executive Summary

Introduction

In order to assess the progress achieved in the State in respect of various parameters stipulated in National Electricity Policy/ Plan with regard to distribution of power, it was considered desirable to conduct performance audit of Maharashtra State Electricity Distribution Company Limited. The performance audit covered network planning, rural electrification, billing and collection efficiency, tariff fixation and subsidy support by the State Government during 2006-07 to 2010-11.

Financial Position and Working Results

The revenue of the Company from sale of power increased from ₹ 18,864 crore in 2006-07 to ₹ 33,238 crore in 2010-11. However, the Company incurred losses during performance audit period and accumulated losses increased from ₹ 487 crore in 2006-07 to ₹ 3,793 crore in 2010-11. The loss per unit was between ₹ 0.13 and ₹ 0.46 during 2006-07 to 2010-11. The losses were attributed to disallowance of certain controllable expenses by Maharashtra Electricity Regulatory Commission (MERC) while fixing the tariff. The borrowing increased from ₹ 3,795 crore in 2006-07 to ₹ 10,074 crore in 2010-11 due to taking infrastructural projects linked with loan.

Distribution Network Planning

The Company had not assessed the total requirement of distribution network to provide reliable and quality power and did not prepare well documented long term plan for replacement/additions of existing network. The Company added 466 substations during 2006-07 to 2010-11 as against 525 targeted. The Company had total 2,236 substations as at the end of 31 March 2011. The shortfall between connected load and transformer capacity was of 4,967 MVA as on 31 March 2011.

Rural electrification

Four projects undertaken under Rajiv Gandhi Grameen Vidyudhikaran Yojna during X five year plan (2002-07) were completed by September 2010 and actual cost was ₹ 108.64 crore as against ₹ 86.24 crore approved by Ministry of Power. The increase in cost was mainly due to non inclusion of certain expenditure in Detailed Project Report. Further, the Company had taken 30 projects at a cost of ₹ 748 crore during XI plan to be completed by December 2011. As compared to completion period, the progress was poor. There were instances of non levy of penalty for delay in execution and irregularities in payment to contractors.

Operational efficiency

The Company sold 49,148 MUs in 2006-07 which increased to 71,280 MUs in 2010-11. The distribution losses reduced from 29.60 per cent in 2006-07 to 17.28 per cent in 2010-11. The losses were above the norm of MERC during 2009-11 and amount of excess loss was ₹ 214 crore. Replacement of Distribution Transformers failed within Guarantee Period was not monitored effectively and penalties for delays were not recovered in time from suppliers. Besides 6.67 lakh faulty meters were awaiting replacement while 15.36 lakh Agricultural (Ag) consumers were to be metered by 31 March 2011. The Company had not assigned priority for replacement of faulty meters by including requirement in the annual plan for procurement of meters.

Billing and collection efficiency

The energy billed included an element of assessed sale to the extent of 14 per cent. The unmetered agricultural and faulty meter consumers had a impact on assessed sales. There were instances of incorrect/ delay in application of revised tariff resulting in loss of revenue of ₹ 20.82 crore. The arrears recoverable from consumers as at the end of March 2011 were ₹ 13,396 crore. The major portion was recoverable from Ag consumers (₹ 6,033 crore) and Public Water Works (PWW) consumers (₹ 1,490 crore). The Company did not take action for disconnection of PWW connections.

Subsidy support and cross subsidisation

The State Government provided subsidy of ₹10,552 crore in tariff for Agricultural and Power loom consumers during 2006-07 to 2010-11. Besides, these consumers were also heavily cross subsidised at the cost of commercial and industrial consumers while fixing tariff by MERC. National Tariff policy envisaged that the tariff of all categories of consumers should range within plus or minus 20 per cent of the cost of supply. However, the gap in tariff fixation was more than ± 20 per cent during 2010-11.

Conclusion and recommendations

The Company had not prepared well documented long term plan for replacement of overaged network and additions required to meet the increasing demand for power. Distribution losses were more than MERC norms during 2009-11. Non replacement of faulty meters and unmetered Ag consumers had an impact on billing efficiency. Major portion of arrears was due from Ag and PWW consumers. While fixing the tariff, MERC had not allowed certain controllable expenses in full. The impact of disallowance during 2009-10 and 2010-11 was ₹ 504 crore approximately. The audit made seven recommendations which include preparation of well documented long term plan for development of distribution network, timely replacement of faulty meters, metering of all Ag consumers, fixing targets for reduction in controllable expenditure and pursuing recovery of outstanding dues from consumers and improve Management Information System on faulty meters/energy audit reports.

Introduction

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

As part of power sector reforms, the erstwhile Maharashtra State Electricity Board (MSEB) was unbundled and four Companies were formed. There are separate Companies for generation, transmission and distribution of power. Besides, there is a Holding Company to look after the management and distribution of assets of MSEB. Consequently, the business of distribution of power in Maharashtra is carried out by Maharashtra State Electricity Distribution Company Limited (Company), which was incorporated on 31 May 2005 under the Companies Act, 1956 under the administrative control of Department of Energy, Government of Maharashtra (GoM). The Company purchases power from State Electricity Generation Company, Central sector and others. The Company serves consumers in the State excluding Mumbai and certain Sub-Urban area served by other private distribution licensees. The Company also handed over its distribution activities in Bhiwandi from January 2007 and Aurangabad (Urban) and Nagpur (Urban) circles from May 2011 to Distribution Franchisees in order to minimise distribution losses.

The Management of the Company is vested with a Board of Directors (BoD) comprising seven Directors appointed by the Holding Company (MSEB Holding Company Limited). The day-to-day operations are carried out by the Chairman and Managing Director, who is the Chief Executive of the Company. He is assisted by four Directors and seven Executive Directors. The Company is operating its power distribution activity through 44 'operation and maintenance' (O&M) circles. During 2006-07, 49,148 Million Units (MUs) of energy were sold by the Company which increased to 71,280 MUs during 2010-11 *i.e.* an increase of 45.03 *per cent* during 2006-07 to 2010-11. As on 31 March 2011, the Company had distribution network of 8.19 lakh Circuit Kilometers (CKM) of High Tension (HT) and Low Tension (LT) lines, 2,236 sub-stations and 3.13 lakh transformers of various capacities. The number of consumers was 1.94 crore as on 31 March 2011. The turnover of the Company was ₹ 33,237.50 crore in 2010-11 which was equal to 67.75 and 3.23 *per cent* of the turnover of the State PSUs and State GDP respectively**.** It employed 57,675 employees as on 31 March 2011.

NEP aims to bring out reforms in the Power Distribution Sector with focus on system upgradation, controlling and reduction of Transmission and Distribution (T&D) losses and power thefts and making the sector commercially viable besides financing strategy to generate adequate resources. It further aims to bring out conservation strategy to optimum utilisation of electricity with focus on demand side management and load management. In view of the above, it was proposed to conduct a performance audit on the working of the Power Distribution Utility in the State Sector to ascertain whether it was able to adhere to the aims and objectives stated in the NEP and Plan and how far the distribution reforms have been achieved.

A performance audit on Power Purchase Management was included in the Report of the Comptroller and Auditor General of India (Commercial), Government of Maharashtra for the year ended 31 March 2008 which was yet to be discussed in Committee on Public Undertakings (September 2011).

Scope and Methodology of Audit

2.2.2 The present performance audit conducted during February to May 2011 covers the performance of the Company during the period from 2006-07 to 2010-11. The review mainly deals with Network Planning and execution, Implementation of Central Schemes, Operational Efficiency, Billing and Collection efficiency, Consumer Satisfaction, Energy Conservation and Monitoring. The audit examination involved scrutiny of records at the Head Office (HO) and 15[#] O&M circles, selected on the basis of annual revenue generated giving due consideration to geographical coverage.

The methodology adopted for attaining the audit objectives with reference to audit criteria consisted of explaining audit objectives, audit criteria,

[#]Ahmednagar, Aurangabad (Urban), Dhule, Gadchiroli, Jalna, Kalyan (Urban-I), Kolhapur, Nagpur (Urban), Nashik (Urban), Pen, Pune Urban (Rastapeth), Ratnagiri, Vasai, Vashi and Yavatmal.

methodology *etc*. to top management, scrutiny of records at HO and selected units, interaction with the auditee personnel, analysis of data with reference to audit criteria, raising of audit queries, discussion of audit findings with the Management and issue of draft performance audit report to the Management for comments.

Audit objectives

2.2.3 The objectives of the performance audit were to assess:

- whether aims and objectives of NEP/Plans were adhered to and distribution reforms achieved;
- adequacy and effectiveness of network planning and its execution;
- efficiency and effectiveness in implementation of the central schemes such as Restructured Accelerated Power Development & Reform Programme (RAPDRP) and Rajiv Gandhi Grameen Vidyudhikaran Yojna (RGGVY);
- operational efficiency in meeting the power demand of the consumers in the State;
- billing and collection efficiency of revenue from consumers;
- whether a system was in place to assess consumer satisfaction and redressal of grievances;
- that adequate energy conservation measures were undertaken; and
- that a monitoring system is in place and the same is utilised during audit of overall working of the Company.

Audit criteria

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

- Provisions of Electricity Act, 2003;
- National Electricity Plan, Plans and norms concerning distribution network of the Company and Planning criteria fixed by the Maharashtra Electricity Regulatory Commission (MERC);
- Terms and conditions contained in the Central Scheme Documents;
- Standard procedures for award of contract with reference to principles of economy, efficiency and effectiveness;
- Norms prescribed by various agencies with regard to operational activities;
- Norms of technical and non-technical losses; and

❖ Guidelines/instructions/directions of State Government/MERC.

Financial position and Working results

2.2.5 The financial position of the Company for the five years ending 2010-11 is given below:

(₹in crore)

Particulars	2006-07	2007-08	2008-09	2009-10	2010-11
A. Liabilities					
Paid up Capital	0.05	0.05	0.05	0.05	3,000.05
Contribution from MSEB Holding Company	3,083.93	3,211.36	3,232.71	3,263.01	1,620.02
Equity from GoM	Nil	Nil	207.80	484.23	-
Reserve and Surplus (Capital reserve and contingency reserve as per MERC)	1,458.44	2,271.86	3,119.74	3,972.22	4,566.74
Borrowings (Loan Funds)					
Secured	3,794.90	3,665.51	3,834.41	5,989.76	9,587.27
Unsecured	Nil	622.64	611.33	629.51	486.46
Deferred Tax Liability	Nil	Nil	Nil	Nil	105.69
Current Liabilities and Provisions	6,643.62	9,229.63	12,149.94	13,091.01	16,522.87
Total	**14,980.94**	**19,001.05**	**23,155.98**	**27,429.79**	**35,889.10**
B. Assets					
Gross Block	10,589.40	11,865.35	13,499.38	15,749.99	20,568.69
Less: Depreciation	6,304.20	6,846.71	7,478.07	8,264.98	9,375.44
Net Fixed Assets	4,285.20	5,018.64	6,021.31	7,485.01	11,193.25
Capital works-in-progress	1,446.74	1,684.93	1,975.56	2,343.74	4,116.40
Investments	531.12	68.38	68.45	136.74	165.40
Current Assets, Loans and Advances	8,230.58	11,806.96	13,285.49	14,847.36	16,620.83
Deferred Tax Assets	Nil	Nil	659.39	357.39	Nil
Accumulated losses	487.30	422.14	1,145.78	2,259.55	3,793.22
Total	**14,980.94**	**19,001.05**	**23,155.98**	**27,429.79**	**35,889.10**
Debt equity *ratio*	**0.94:1**	**0.85:1**	**0.82:1**	**1.21:1**	**1.87:1**
Net Worth	**4,055.12**	**5,061.13**	**5,414.52**	**5,459.96**	**5,393.59**

(Source: Information furnished by the Company)

The accumulated losses increased from ₹ 487.30 crore to ₹ 3,793.22 crore during audit period.

It may be seen from the above that the accumulated losses of the Company increased by 678.42 *per cent* from ₹ 487.30 crore in 2006-07 to ₹ 3,793.22 crore in 2010-11. Further, the debt-equity *ratio* of the Company increased from 0.94:1 to 1.87:1 during 2006-07 to 2010-11. We observed that the dependence on borrowings increased from ₹ 3,794.90 crore in 2006-07 to ₹ 10,073.73 crore in 2010-11. Consequently, the interest burden increased from ₹ 572.15 crore in 2006-07 to ₹ 1,081.30 crore in 2010-11. Further, net fixed assets increased from ₹ 4,285.20 crore in 2006-07 to ₹ 11,193.25 crore in 2010-11 and work-in-progress rose from ₹ 1,446.74 crore in 2006-07 to ₹ 4,116.40 crore in 2010-11. Thus, loan funds had been utilised towards assets creation.

The Management stated that the losses were mainly due to disallowance of controllable expenditure on depreciation, interest on working capital/loan, repairs and maintenance expenses, administrative and general expenses, *etc.* by MERC.

The particulars of total income and expenditure *vis-a-vis* cost of electricity and revenue realisation per unit are indicated below.

(₹in crore)

Sl. No.	Description	2006-07	2007-08	2008-09	2009-10	2010-11
1.	**Income**					
(i)	Revenue from Sale of Power (including subsidy in tariff)	18,863.78	20,158.61	23,483.06	27,642.31	33,237.50
(ii)	Revenue subsidy *	Nil	Nil	Nil	400.00	28.05
(ii)	Other income	887.14	840.55	1,315.38	1,146.28	1,251.69
	Total Income	**19,750.92**	**20,999.16**	**24,798.44**	**29,188.59**	**34,517.24**
2.	**Distribution (in MUs)**					
(i)	Total power purchased	75,436	78,597	79,871	85,474	90,341
(ii)	Less: Transmission losses	5,623	5,197	5,312	4,948	4,171
(iii)	Net Power available for Sale	69,813	73,400	74,559	80,526	86,170
(iv)	Less: Sub-transmission and distribution losses	20,665	17,684	16,388	16,585	14,890
	Net power sold	**49,148**	**55,716**	**58,171**	**63,941**	**71,280**
3.	**Expenditure on Distribution of Electricity**					
(a)	**Fixed cost**					
(i)	Employees cost	1,922.03	1,689.82	2,398.39	1,838.07	2,046.87
(ii)	Administrative and General expenses	147.85	219.38	317.49	302.79	231.94
(iii)	Depreciation	502.25	539.83	646.75	812.28	1,067.47
(iv)	Interest and finance charges	572.15	603.66	787.90	900.12	1,081.30
(v)	Other Expenses	516.94	319.33	819.41	1,520.17	1,239.30
	Total fixed cost	**3,661.22**	**3,372.02**	**4,969.94**	**5,373.43**	**5,666.88**
(b)	**Variable cost**					
(i)	Purchase of Power	14,908.75	15,260.63	18,515.15	21,995.58	26,524.39
(ii)	Transmission/Wheeling Charges	1,367.89	1,745.76	2,091.14	1,846.37	2,425.05
(iii)	Repairs and Maintenance	416.26	525.80	598.78	596.19	514.19
	Total variable cost	**16,692.90**	**17,532.19**	**21,205.07**	**24,438.14**	**29,463.63**
(c)	**Total cost 3(a) + (b)**	**20,354.12**	**20,904.21**	**26,175.01**	**29,811.57**	**35,130.51**
4.	Realisation (₹ per unit) (including revenue subsidy)	3.84	3.62	4.04	4.39	4.67
5.	Fixed cost (₹ per unit)	0.74	0.60	0.85	0.84	0.79
6.	Variable cost (₹ per unit)	3.40	3.15	3.65	3.82	4.13
7.	Total cost per unit (in ₹) (5+6)	4.14	3.75	4.50	4.66	4.92
8.	Contribution (4-6) (₹ per unit)	0.44	0.47	0.39	0.57	0.54
9	**Profit (+)/Loss (-) per unit (in ₹) (4-7)**	**(-) 0.30**	**(-) 0.13**	**(-) 0.46**	**(-) 0.27**	**(-) 0.25**

(Source: Information furnished by the Company)

It may be seen from the above that though the realisation per unit increased from ₹ 3.84 to ₹ 4.67 during the audit period (21.61 *per cent*), the cost per unit increased from ₹ 4.14 to ₹ 4.92 (18.84 *per cent*) during the corresponding period.

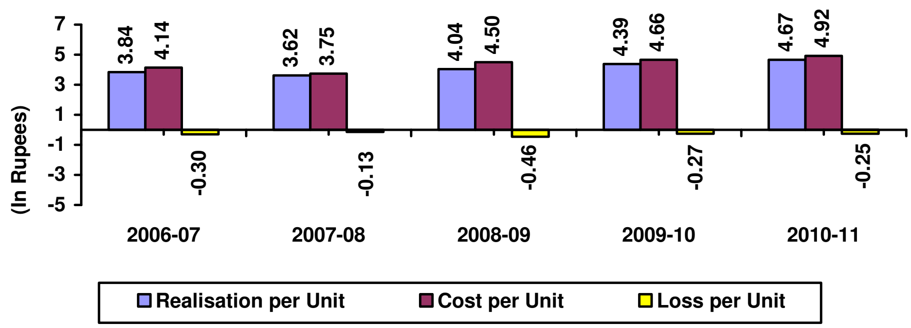
It was also evident from the above table that the purchase of power, wheeling charges and employees cost constituted the major elements of cost which represented 76, seven and six *per cent* of the total cost respectively during 2010-11. On the other hand, sale of power constituted the major element of

*Represents subsidy provided by the State Government to buy power available in the market at higher rates.

revenue which represented 96 *per cent* of the total revenue income during the same period. The increase in employees cost during 2008-09 was as a result of pay revision. The subsidy in tariff provided by the State Government to Agricultural and Power Loom consumers has been discussed subsequently.

Recovery of cost of operations

2.2.6 The Company was not able to recover its cost of operations. During the last five years ending 2010-11, the loss per unit decreased from ₹ 0.30 in 2006-07 to ₹ 0.13 in 2007-08. It again increased to ₹ 0.46 in 2008-09 which decreased to ₹ 0.25 in 2010-11 as given in the graph below:



It would be seen from above that Company improved upon its operations in recovery of cost during 2009-10 and 2010-11.

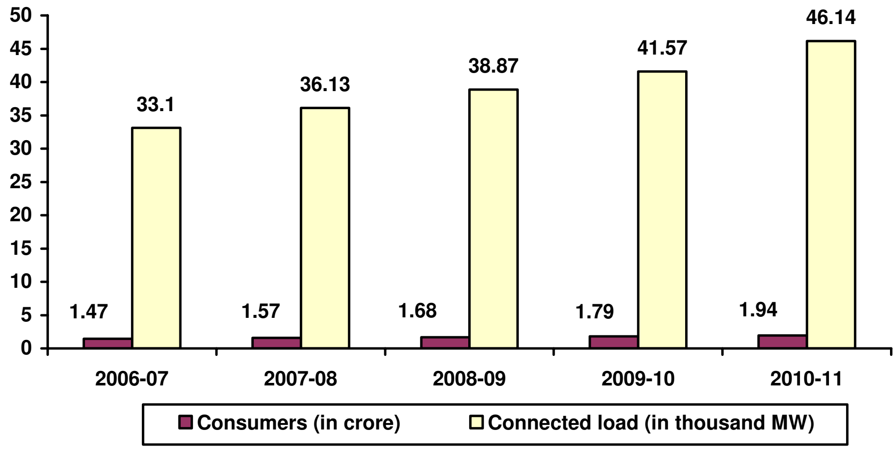
Audit findings

2.2.7 We explained the audit objectives to the Company during an 'Entry Conference' held on 4 February 2011. The audit findings were reported to the Company and the State Government in August 2011 and discussed in an 'Exit Conference' held on 7 October 2011 which was attended by the Chairman and Managing Director and there was no representative from State Government. The views expressed by the Management in the meeting and their replies received on 14 October 2011 have been considered while finalising the performance audit report. The audit findings are discussed below.

Distribution Network Planning

2.2.8 The Power Distribution Company in the State is required to prepare long term/annual plan for creation of infrastructural facilities for efficient distribution of electricity so as to cover maximum population in the State. Besides, the upkeep of the existing network, additions in distribution network are planned keeping in view the demand/connected load, anticipated new connections and growth in demand based on 17th Electric Power Survey. Considering physical parameters, Capital Investment Plans are submitted to the State Government/MERC.

The number of consumers and their connected load during audit period are given below in bar chart:



(*Source: Information furnished by the Company)*

The particulars of distribution network planned *vis-a-vis* actual achievement in the State are depicted in **Annexure-7**. It may be seen from the annexure that against the planned additions of 525 sub-stations over the performance audit period, only 466 sub-stations were actually added increasing the total number to 2,236 sub-stations. HT and LT lines increased from 2.21 lakh CKM and 4.75 lakh CKM at the beginning of 2006-07 to 2.84 lakh CKM and 5.35 lakh CKM at the end of 2010-11 respectively totalling to 8.19 lakh CKM. Further, as compared to the growth of connected load from 33.10 thousand Mega Watt (MW) in 2006-07 to 46.14 thousand MW (equivalent to 57,675 Million Volt Ampere (MVA)) in 2010-11 *i.e.* increase of 39.40 *per cent* as depicted in the graph, the increase in transformer capacity was from 37,752 MVA as on 1 April 2006 to 52,708 MVA as on 31 March 2011 (increase of 39.62 *per cent*). Thus, considering the connected load there was still a shortfall in transformer capacity by 4,967 MVA.

The Company had not prepared well documented long term plan for its distribution network.

In order to have good quality supply of power there was a need to have adequate number of substations, distribution transformers, good quality net work of HT/LT lines, accurate energy measuring equipments, good quality IT system *etc*. However, we observed that the State Government/Company had not assessed the total requirement of such distribution network in the State and also did not prepare long term plan so far (October 2011) to meet shortfall if any in the existing network. Thus, in the absence of such assessment, the adequacy of the existing network could not be ascertained.

The Management stated that the Company prepared long term/annual plan for creation of infrastructure. The infrastructure plan for ₹ 10,000 crore approved by MERC was under execution. For electrification of Agricultural pumps and rural development also, the Company planned infrastructure scheme. However, the fact remains that the Company had not prepared well documented action plan for replacement of overaged network and additions required to meet the increasing demand in future.

Implementation of Centrally Sponsored Schemes

Rural Electrification

2.2.9 The NEP States that the key objective of development of the power sector is to supply electricity to all areas including rural areas for which the Government of India (GoI) and the State Governments would jointly endeavour to achieve this objective. Accordingly, the RGGVY was launched in April 2005, which aimed at providing access to electricity for all households in five years for which the Government provides 90 *per cent* capital subsidy and 10 *per cent* loan from the REC.

Besides, the GoI notified the Rural Electrification Policy (REP) in August 2006. The REP *inter-alia* aims at providing access to electricity for all households by 2009 and minimum lifeline consumption of one unit per household per day by the year 2012. The other Rural Electrification schemes *viz.*, Accelerated Electrification of one lakh villages and one crore households, Minimum Needs Programme were merged into RGGVY.

As on 31 March 2006, there were 41,095 villages in the State of Maharashtra (as per 2001 Census), out of which 36,010 villages were electrified (88 *per cent*). The Company had electrified all the remaining villages by June 2011.

As per Census 2001, there were total 113.42 lakh households (including 31.11 lakh Below Poverty Line (BPL) families. The RGGVY was sanctioned by GoI for implementation during X Five Year Plan (2002-07) and XI Five Year Plan (2007-2012) period.

Projects taken under the scheme involves constructing of HT/LT lines, installation of DTRs and release of connections to BPL households. The Company had undertaken four projects under the scheme in four districts (Dhule, Gondia, Nanded and Solapur) during X FYP (2002-07) and the cost approved by Ministry of Power (MoP) was ₹ 86.24 crore. The completion period was extended by REC up to September 2010 and all four projects were completed. We observed that actual cost of these projects increased to ₹ 108.64 crore for which revised proposal was sent to MoP and REC. The sanction for revised proposal was awaited (September 2011). On test check of one project at Gondia it was noticed that the approved cost of ₹ 21.71 crore increased to ₹ 39.41 crore mainly due to preparation of defective Detailed Project Report (DPR) as the same did not include certain infrastructural requirement, meter cost, internal wiring and AB Switches.

The financial and physical progress in the scheme taken during XI five year plan were as under.

Sl. No.	Particulars	XI Plan (2007-12)
1	No. of schemes taken	30
2	Financial Progress (31 July 2011)	***(₹ in crore)***
a	Total cost approved by Ministry of Power	729.66
b	Total cost as per award of contracts	747.53
c	Funds received	509.01
d	Expenditure incurred up to 31 July 2011	485.92
3	Physical progress	
a	Construction of HT line (KMs) As per Target Actual Shortfall	 5,578.62 2,591.66 2,986.96
b	Construction of LT Lines (KMs) As per Target Actual	 6,323.48 6,325.82
c	Installation of DTRs (Nos) As per Target Actual Shortfall	 7,719 6,426 1,293
d	Release of BPL connections (In lakh) As per Target Actual Shortfall	 16.14 9.05 7.09

It could be seen from above that the Company targetted 16.14 lakh BPL families under the scheme of which BPL connections to 9.05 lakh families were given. It was also seen that actual progress in construction of HT line was 2,592 KMs (46 *per cent*) against the target of 5,579 KMs fixed under XI five year plan. As compared to completion period by December 2011, the progress was poor.

The Management stated that while carrying out the work it was found that actual BPL families were only 11.84 lakh out of which 11.28 lakh families were provided connection by September 2011 during X and XI plan and remaining families will be covered by December 2011. With a view to cover all BPL families, the Company should reconcile its records.

Irregularities in implementation of RGGVY

2.2.10 The following irregularities were noticed in implementation of RGGVY:

- The turnkey contract for implementation of the scheme in Gadchiroli circle was awarded (October 2008) to Chadalwada Construction Private Limited (CCPL), Hyderabad for ₹ 14.61 crore excluding taxes. The stipulated period of completion of work was 18 months from the date of letter of award *i.e.* by April 2010. The scope of work included construction of 104 Km. of HT lines, 190 KM. of LT lines, installation of 164 Distribution Transformers (DTRs) and metering for the purpose of releasing connections to 39,237 BPL families. There was considerable delay in completion of work by CCPL. As on 31 January 2011, the work of HT line, LT lines and DTRs installation was completed to the extent of 45, 49 and 32 *per cent* respectively. Though, no extension of time limit was approved by the Management, liquidated damages/penalty to the extent of ₹ 63.60 lakh (10 *per cent* of total gross bills of ₹ 6.36 crore released to contractor by the Circle Office) was not recovered as per clause 13(2) of the contract. The contractor, however, had released the targeted number of BPL connections through the existing distribution network without laying the required infrastructure causing heavy burden on the existing infrastructure of the Company.

The Management stated that the liquidated damages will be recovered as per terms of contract and stated that existing network was not overloaded. However, the reply is not tenable as the Company should not have included infrastructure works in this scheme if the existing network was sufficient.

- The Chief Engineer (Kalyan Zone) placed (March 2009) work order on Herodex Power Systems Private Limited for supply, erection, commissioning of HT/LT line, DTRs and other allied works under RGGVY for ₹ 15.54 crore for Vasai circle. The contractor had submitted the bills for ₹ 16.03 crore which were passed by circle office without verifying correctness of the same. This resulted in avoidable payment of ₹ 0.49 crore.

- The Chief Engineer (Aurangabad Zone) placed (November 2008) work order on PEC Electricals Private Limited, Hyderabad for supply, erection, testing, commissioning of BPL household electrification work and other allied works in Jalna circle under RGGVY scheme for ₹ 15.34 crore. In this regard we observed that: (a) the circle office paid ₹ 1.69 crore to contractor towards internal wiring at the rate of ₹ 392.13 per BPL connection (total 43,020 BPL connections). However, we noticed that the contractor had provided single bulb connection on the meter board itself outside the house without providing the internal wiring to BPL consumers at Soyagaon Devi village of Bhokardan Sub-division and Hivarkheda, Limbona and Jatkheda villages of Mantha Sub-division. Hence the payment to contractor was avoidable. Possibility of similar practice in other villages covered under the above work order could not be ruled out and (b) the contractor had released 358 BPL connections to the existing consumers for which Company paid connection charges of ₹ 7.56 lakh (₹ 2,112 per connection x 358 BPL connections) to the contractor. As the electrical installation in above cases was not necessary, the payment should not have been effected. Moreover, the scheme did not envisage the connections to existing consumers. This indicated that monitoring mechanism was not in place to ensure that work was actually executed and benefits were passed on to eligible beneficiaries.

There was no proper mechanism in place for verifying works executed and that benefits were passed on to eligible consumers.

- It was mandatory for the implementing agency to obtain the certificate from the Gram Panchayats as soon as the works under RGGVY villages were completed. However, no such certificates were obtained from the concerned Gram Panchayats. The Company should have taken the matter with the appropriate authorities and complied with the scheme guidelines.

Restructured Accelerated Power Development Reforms Programme

2.2.11 The GoI launched the Restructured APDRP (R-APDRP) in July 2008 as a Central Sector Scheme for XI Plan comprising of Part A and B. Part A pertains to establishment of Information Technology (IT) enabled system for achieving reliable and verifiable baseline data system in all towns besides installation of SCADA[5]/Distribution Management System (DMS). The Part B relates to strengthening of regular sub-transmission and distribution system and up-gradation projects. The focus in this part was on reduction of Aggregate Technical & Commercial (AT&C) losses on sustainable basis.

The Ministry of Power (MoP) and Power Finance Corporation Limited (PFC-Nodal Agency) had selected 130 towns in the State of Maharashtra having population of more than 30,000 (Census 2001) for implementation of R-APDRP scheme. Funds received under the scheme and its utilisation was as under.

Under Part A for establishment of IT enabled system, loan of ₹ 324.42 crore was sanctioned by PFC in March 2010 for 130 towns and the Company received advance of ₹ 97.32 crore during 2009-10. The Company has awarded the work to Larsen & Toubro Limited (L&T) in respect of 95 towns for ₹ 212.05 crore and SPANCO Limited in respect of remaining 35 towns for ₹ 94.95 crore in March and October 2010 respectively. Both the contracts were to be completed within 56 weeks from the date of award of contract. The work was at initial stage and GIS survey was completed in 58 towns by September 2011.

Under Part B Strengthening of sub-transmission and distribution system PFC had sanctioned 122 towns for implementation of RAPDRP. The MoP, GoI had sanctioned (June/August 2010) 66 projects (one project per town) for ₹ 1,314 crore and balance 56 projects were sanctioned during 2011-12. The Company also received an advance of ₹ 198.26 crore in February 2011. The scheme was sanctioned for implementation during XI FYP (2007-12). Considering the period of implementation, the progress made by the Company was poor.

The Management stated that the work will be completed within time. However, the fact as stated above do not corroborate the reply.

Aggregate Technical & Commercial Losses

2.2.12 One of the prime objectives of R-APDRP scheme was to strengthen the distribution system with the focus on reduction of AT&C losses on sustainable basis. The graph below depicts the percentage of AT&C losses over the audit

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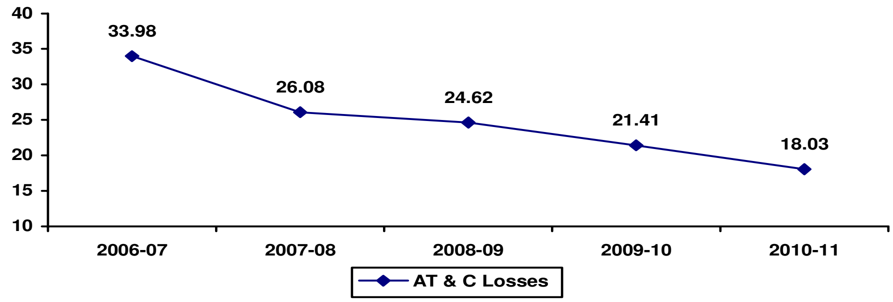
[5] **Supervisory Control And Data Acquisition (SCADA)–**It generally refers to industrial control systems: computer systems that monitor and control industrial, infrastructure, or facility- based processes.

period (2006-07 to 2010-11) in the Company.



It is evident from above that AT&C losses declined from 33.98 *per cent* in 2006-07 to 18.03 *per cent* in 2010-11 indicating marked improvement during the audit period.

Consumer metering

Replacement of 6.67 lakh faulty meters and metering of 15.36 lakh Agricultural consumers remained pending at the end of 2010-11.

2.2.13 Attaining of 100 *per cent* metering was one of the objectives of the R-APDRP scheme. The Company had a total 11.13 lakh faulty meter consumers and 16.41 lakh unmetered Agricultural (Ag) consumers as on 1 April 2006. There was an addition of 3.36 lakh faulty meter consumers and 1.55 lakh unmetered consumers during 2006-07 to 2010-11. The Company targeted replacement of all faulty meters during 2006-07 to 2010-11. However, the actual replacement was only 7.82 lakh of faulty meters and remaining 6.67 lakh faulty meters were yet to be replaced (April 2011). Similarly, the Company metered only 2.60 lakh Ag consumers during 2006-07 to 2010-11 and 15.36 lakh Ag consumers were yet to be metered (April 2011). We observed that the Management Information System (MIS) on faulty meters was deficient to the extent that it did not provide information with regard to age-wise analysis of faulty meters requiring replacement. Such improvement in MIS system would help the Company in exercising effective control on replacement of faulty meters and improve billing efficiency. It is recommended to consider the quantum of faulty meters in the annual procurement plan so that replacement could not be held up for want of meters.

Test check of records at nine♣ circles revealed that 39,118 consumer meters were faulty for the period ranging from three months to four years (three-12 months: 13,021, one-two years: 16,756 and two-four years: 9,341) and were yet to be replaced (April 2011).

The Management stated that the faulty meters will be replaced and instructions have been issued to all field officers to provide meters to all Ag consumers.

Operational efficiency

2.2.14 The operational performance of the Company is judged on the basis of availability of adequate power for distribution, adequacy and reliability of

♣Dhule, Jalna, Kalyan Urban I, Nashik Urban, Pen, Pune Urban, Ratnagiri, Vasai and Ahmednagar.

distribution network, minimising line losses, detection of theft of electricity, *etc*. These aspects have been discussed below.

Purchase of Power

2.2.15 As already brought out in **paragraph 2.2.1**, a performance audit on Power Purchase Management was included in the Report of the Comptroller and Auditor General of India (C&AG) (Commercial), Government of Maharashtra for the year ended 31 March 2008. Further, this matter has again been discussed in **paragraphs 2.2.17** to **2.2.18** of the Report (No.4) of C&AG of India (Commercial) for the year ended 31 March 2010 (Government of Maharashtra). Therefore, it is not being discussed here again.

Sub-transmission and distribution losses

2.2.16 The losses at 33KV stage are termed as sub-transmission losses while those at 11 KV and below are termed as distribution losses. The losses occur mainly on two counts, *i.e.*, technical and commercial. Technical losses occur due to inherent character of equipment used for transmitting and distributing power and resistance in conductors through which the energy is carried from one place to another. On the other hand, commercial losses occur due to theft of energy, defective meters and drawal of unmetered supply, *etc*.

The table below indicates the energy losses for the Company in the State as a whole (excluding Mumbai and certain sub-urban areas served by other licensees) for last five years up to 2010-11.

(In Million Units)

Sl. No.	Particulars	2006-07	2007-08	2008-09	2009-10	2010-11
1.	Energy purchased	75,436	78,597	79,871	85,474	90,341
2.	Energy sold	49,148	55,716	58,171	63,941	71,280
3.	Energy losses (1–2)	26,288	22,881	21,700	21,533	19,061
4.	Percentage of T&D losses {(3/1) x 100}	34.85	29.11	27.17	25.19	21.10
5	Percentage of distribution losses	29.60	24.09	21.98	20.60	17.28
6.	Percentage of distribution losses allowed by MERC	34.97	24.15	22.24	20.12	17.20
7.	Excess losses (in MUs)	Nil	Nil	Nil	410.28	72.27
8.	Average realisation rate per unit (in ₹)	3.84	3.62	4.04	4.39	4.67
9.	Amount of excess losses (₹ in crore) (7 x 8)	Nil	Nil	Nil	180.11	33.75

(Source: Information furnished by the Company)

It would be seen from the above table that distribution losses decreased from 29.60 *per cent* in 2006-07 to 17.28 *per cent* in 2010-11. The distribution losses remained within the norm allowed by MERC during 2006-07 to 2008-09 and exceeded the norm during 2009-10 and 2010-11. The amount of

Distribution losses remained more than norms during 2009-10 and 2010-11 resulting in loss of ₹ 213.86 crore.

excess loss was ₹ 213.86 crore. We observed that 10♦ circles had incurred distribution losses ranging from 30 to 45 *per cent* during 2009-10 as against overall norm of 20.12 *per cent* prescribed by MERC. Thus, there was a scope for further reduction in distribution losses in those circles.

The Management stated that due to various constraints in the field *viz.* geographical, techno commercial, *etc.* it would not be feasible to arrest the distribution loss in every circle on an identical platform. However, the Company could have put concerted efforts to reduce these losses.

Performance of Distribution Transformers

2.2.17 MERC had not fixed any norms or permissible rate for failure of DTRs. The Company on its own had fixed (September 2010) failure rate of 12 *per cent* during 2010-11. The details of norms fixed, actual DTRs failed and the expenditure incurred on their repairs is depicted in the table below.

Sl. No.	Particulars	2006-07	2007-08	2008-09	2009-10	2010-11
1.	Existing DTRs at the close of the year (in Number)	2,39,333	2,56,793	2,71,251	2,84,633	3,13,284
2.	DTRs failed (in Number)	36,626	34,426	35,041	36,589	38,306
3.	Percentage of failure	15.30	13.41	12.92	12.85	12.23

(Source: Information furnished by the Company)

It may be seen from the above table that the overall percentage of failure reduced from 15.30 in 2006-07 to 12.23 in 2010-11. The cause wise analysis of failed DTRs revealed that the percentage of failure due to overloading increased from 32.41 (2007-08) to 35.74 *per cent* (2010-11). The percentage of failure due to overloading was on increase during the audit period. This indicated that the remedial action taken on monthly reports of failure of DTRs was not effective.

The Management stated that additional transformers would be installed to reduce the over loading. However, fact remains that no concrete action was taken to curtail failure of DTRs on this account.

Failure of DTRs within Guarantee Period

2.2.18 As per the terms of contract, the performance guarantee of DTRs was 60 months from the date of commissioning or 66 months from the date of delivery whichever was earlier. If the DTR failed within Guarantee Period (GP), the supplier was liable to replace/repair the same within one month from the date of intimation of failure and within 48 hours for the supplies made against order issued from January 2009 onwards. If the supplier failed to replace/repair failed DTRs within the stipulated time the equivalent amount with supervision charges at the rate of 15 *per cent* was to be recovered from the supplier. During audit period, 1.05 lakh DTRs were procured and 8,291 DTRs failed during the same period. Monthly MIS indicating division/circle

♦Akola, Aurangabad, Beed, Gondia, Gadchiroli, Hingoli, Latur, Nanded, Nandurbar and Osmanabad.

wise number of DTRs failed, lying at site, sent to suppliers and received back from suppliers was not being generated by circles test checked. Further, there was no coordination among the field offices, Central Purchase Agency (CPA) and the Billing Section to ensure that the recovery was made as per the terms of contract. Records at Billing Section indicated that recovery was not made immediately on receipt of intimation from CPA. An amount of ₹ 4.07 crore intimated by CPA during May 2009 to June 2010 was yet to be recovered from EMCO Limited (May 2011).

Lack of co-ordination among field offices resulted in non recovery of dues from suppliers.

On test check of DTRs supplied (2006-10) by two suppliers (EMCO Limited and Vijay Electricals Limited), we observed that 3094 DTRs had failed within GP. However, majority of them were neither replaced nor repaired within the stipulated period. On test check of 161 DTRs, delay in the replacement/repair up to 60 months was noticed. The Company failed to recover the cost of failed DTRs immediately after due date for replacement/repair. There were delays up to 35 months in intimation by CPA to billing section. Further, scrutiny revealed that in Vasai, Jalna and Gadchiroli O&M circles 132 new DTRs (Vasai: 68, Jalna: 50 and Gadchiroli: 14), failed within GP during 2005-06 to 2010-11, had not been replaced by the suppliers so far (August 2011).

Thus, there is a need to strengthen the reporting and recovery mechanism and fix responsibility of all Officers involved in this process so that there would be no delay in replacement of DTRs and recovery, if any, from suppliers.

The Management, while accepting the facts, stated that the recovery of ₹ 1.96 crore was made and balance recovery would be made in due course.

Delay in repair of Distribution Transformers

2.2.19 The time limit for return of repaired transformers was prescribed as 30 days from the date of handing over of failed DTRs to repairer. In Vasai and Jalna circles the time limit for return of repaired transformers was prescribed as 15 days. Penalty at the rate of 0.5 *per cent* per week of delay or part thereof subject to maximum of 10 *per cent* of the repair cost was to be levied.

On test check of records it was noticed that there was delay in receipt of repaired DTRs as under in three circles:

(No. of DTRs)

Name of the circle	Delay in repair		
	Up to six months	Six months to one year	one year to two years
Gadchiroli	47	9	---
Vasai	93	3	5
Jalna	132	1	---

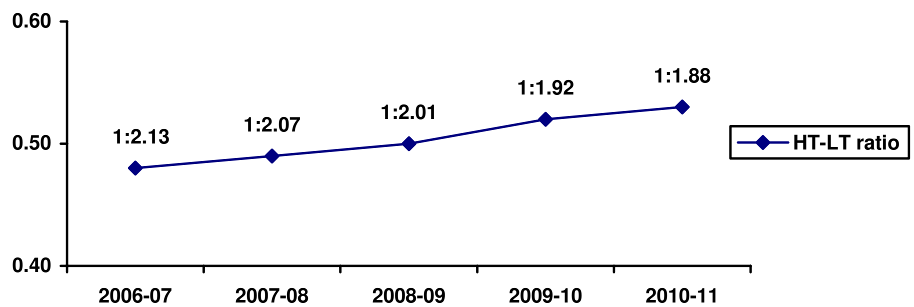
We observed that no proper records were maintained for monitoring delays and there was no proper system to recover the penalty for delays as per terms of contract.

Commercial losses

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

Implementation of LT less system

2.2.21 High voltage distribution system is an effective method for reduction of technical losses, prevention of theft, improved voltage profile and better consumer service. The GoI had also stressed (February 2001) the need to adopt LT less system of distribution through replacement of existing LT lines by HT lines to reduce the distribution losses. The HT-LT *ratio* over the audit period is depicted in the graph below:



It may be seen from the above graph that use of LT distribution system was on decreasing trend and ratio of HT to LT lines decreased from 1:2.13 in 2006-07 to 1:1.88 in 2010-11. However, the Company had not prepared any action plan for conversion of LT lines into HT lines. The Company had also not maintained records to document conversion of LT lines, if any, during 2006-07 to 2010-11.

The Management stated that it is quite difficult to maintain HT: LT *ratio* in rural areas for which more LT lines are required. However, in future plans improvement in HT: LT *ratio* will be done for better voltage profile.

High incidence of theft

2.2.22 Substantial commercial losses are caused due to theft of energy by tampering of meters and unauthorised tapping/hooking from the existing net work. Theft of energy is an offence punishable under Section 135 of Electricity Act, 2003. The Company had deployed flying squads at circle level under the control of vigilance and security department besides regular checks by O&M staff for detection of theft/unauthorised use of electricity.

The details of the raids conducted, number of theft cases detected, First Information Report (FIR) lodged and compounding charges recovered by O&M offices during the audit period are as given in **Annexure-8**. Scrutiny of theft cases revealed that no targets were fixed for the number of raids to be conducted. In case of theft of energy, FIR was to be lodged in each case with Police Station. However, Section 152 of Electricity Act, 2003 permits compounding of offence on payment of compounding charges fixed by the State Government from time to time. If compounding charges are paid FIR need not be filed. As such, total FIR cases and compounding cases should match with total theft cases detected. It may be seen from the annexure that there were 2,74,709 theft cases detected during audit period against which action of filing FIRs was taken in 39,176 cases and compounding of offences was done in 1,70,675 cases leaving 64,858 cases where neither FIRs were filed nor compounding charges recovered. This needs reconciliation.

The Management stated that the reconciliation was being carried out.

Performance of Flying Squad

2.2.23 The Vigilance Department of the Company headed by the Officer of the rank of Inspector General of Police was entrusted with the work of conducting raids. Each O&M circle had one Flying Squad (FS) directly under the control of vigilance department. FSs had checked total 1.13 lakh consumers during 2006-07 to 2010-11 covering annually 0.13 *per cent* of total consumers. There was detection of 13,213 theft cases during the audit period involving recovery of ₹ 31.37 crore from the consumers of which an amount of ₹ 2.53 crore was yet to be recovered (September 2011).

The Management stated that the recovery of unrealised amount was in process.

Billing Efficiency

2.2.24 As per procedure prescribed in the Commercial and Revenue Manual, the Company is required to take the reading of energy consumption of each consumer at the end of the notified billing cycle. After obtaining the meter readings, the Company issues bill to the consumers for consumption of energy. Sale of energy to metered categories consists of two parts *viz.*, metered and assessed units. The assessed units refer to the units billed to consumers in case meter reading is not available due to meter defects, door lock *etc*. There were also un-metered Ag consumers who were billed as per HP tariff. Their consumption in terms of units was assessed on the basis of consumption of metered Ag consumers. The efficiency in billing of energy lies in distribution/sale of maximum energy by the Company to its consumers and realisation of the revenue therefrom in time.

The details of power available for sale, power actually sold and quantum of assessed sale during audit period were as under:

(Figures in MUs)

Sl. No.	Particulars	2006-07	2007-08	2008-09	2009-10	2010-11
1	Power available for sale (total purchases less transmission losses)	69,813	73,400	74,559	80,526	86,170
2	Metered sale	41,515	47,286	50,085	55,098	61,664
3	Assessed sale	7,633	8,430	8,086	8,843	9,616
4	Total sale	49,148	55,716	58,171	63,941	71,280
5	Percentage of assessed sale to metered sale	15.53	15.13	13.90	13.83	13.49
6	Percentage of distribution losses	29.60	24.09	21.98	20.60	17.28

(Source: Information furnished by the Company)

It was observed that energy billed includes assessed sale (13.49 to 15.53 *per cent*) in respect of unmetered Ag consumers and faulty meter consumers. Though distribution losses had a decreasing trend and reduced from 29.60 *per cent* in 2006-07 to 17.28 *per cent* in 2010-11, the reduction in assessed sale to metered sale decreased marginally over the period of five years.

The Company had assessed the consumption of unmetered Ag consumers on the basis of recorded consumption of metered Ag consumers subject to maximum consumption of 224 units per HP/month. The Company introduced (2006-07) Gaothan feeder separation scheme so that consumption of Ag consumers both metered and unmetered could be correctly assessed and theft of energy also be controlled. The Company had installed 4,266 such feeders covering 26,341 villages in the State at a cost of ₹ 2,226 crore by 31 March 2011. In this regard, we observed that due to incorrect mapping of consumers and faulty meters, the energy losses of any particular feeder or DTR could not be ascertained by the Company. Thus, purpose of feeder separation scheme could not be achieved.

The Management stated that the work of remapping of consumers was in progress.

Incorrect/delay in application of tariff

2.2.25 MERC fixes the tariff for different categories like residential, industrial, railways, agriculture, commercial *etc*. depending upon the purpose for which electricity is supplied. Therefore, correct classification of consumers is vital as incorrect classification may adversely affect the revenue of the Company. On test check of billing of HT consumers, we noticed incorrect application/delay in application of tariff as detailed below:

- Prior to October 2006 all HT Public Water Works (PWW) consumers in Grampanchayat or C class Municipal Council area were provided concessional tariff. However, MERC had withdrawn the concession from October 2006 and all such consumers were to be billed at the uniform rate applicable for HT III PWW category. However, revised tariff was applied to 75 PWW consumers in four circles (Dhule, Osmanabad, Satara and Solapur) from June/October 2008 instead of October 2006. This resulted in short recovery of ₹ 3.19 crore.

- MERC had introduced a new category *viz.* HT II commercial in the tariff order applicable from June 2008 for Education Institutions; Charitable Trusts, Religious Institutions and Institutions run by Government/ Municipal Corporations *etc*. However, the decision to apply HT II commercial tariff to six consumers (Vasai circle: two and Pune Ganeshkhind circle: four) was still under consideration (September 2011). As a result, as compiled by Audit, revenue of ₹ 14.35 crore from June 2008 to June 2010 remained un-recovered (September 2011).

- There were certain HT industrial consumers having electricity consumption for industrial as well as residential and commercial purposes. As per MERC tariff applicable from June 2008, consumption for commercial and residential purposes recorded by separate meter was to be billed as per new tariff. Thus, consumption by HT consumers for commercial use was to be charged and levied at the rate of ₹ 7 per unit instead of ₹ 5.25 per unit. However, in respect of 323 consumers from six circles (Ahmednagar: 33, Aurangabad rural: 14, Gadchiroli: two, Nashik rural: 30, Nashik urban: 211 and Satara: 33) the revised tariff was applied from April/May 2009 instead of June 2008. This has resulted in under billing of ₹ 0.68 crore.

The Management stated that supplementary bills in few cases had been issued and application of revised tariff to other consumers was under process. It is recommended that field offices should prepare Action Plan for application of revised tariff and ensure that all consumers are correctly categorised to suit the requirement of tariff.

Failure to implement the revised tariff in time resulted in loss of revenue of ₹ 20.82 crore.

- Pune Urban circle entered into agreement in September 2004 for supply of power to Marigold Premises Private Limited as a commercial establishment. The Company billed the consumer at industrial tariff instead of commercial tariff. As a result, the Company had suffered loss of revenue of ₹ 2.60 crore being differential amount between commercial and industrial tariff during the period from September 2004 to January 2011.

The Management stated that the matter was under investigation.

Non/under levy of ED

2.2.26 The State Government is empowered to recover Electricity Duty (ED) under Bombay Electricity Duty Act, 1958 on the consumption of energy. Rate of ED was fixed by State Government from time to time. ED Tariff prescribed different rates of ED on consumption of energy for industrial, commercial and residential purpose. ED on energy used for commercial and residential purpose by industrial consumers was to be recovered separately from June 2008 onwards.

We observed that in billing of 30 HT consumers from four circles (Kolhapur: five, Pune Ganeshkhind: three, Thane urban: 14 and Vashi: eight) ED was recovered at uniform industrial rate though part consumption was for residential and commercial purposes. Data compiled by Audit in respect of Kolhapur, Pune and Vashi for the period February 2010 to August 2011 and Thane (urban) for 2009-10 detected under recovery of ₹ 2.27 crore. As all bills were generated through IT programme it is recommended to improve the quality of IT programme to avoid such non-recovery of ED. The Kolhapur circle stated (October 2011) that supplementary bills were raised. However, bills were raised by the circle from February 2010 instead of June 2008.

Revenue collection efficiency

2.2.27 As revenue from sale of energy is the main source of income of the Company, prompt collection of revenue assumes great significance. The table below indicates the balance outstanding at the beginning of the year, revenue assessed during the year, revenue collected and the balance outstanding at the end of five years ending 2010-11.

(₹in crore)

Sl. No.	Particulars	2006-07	2007-08	2008-09	2009-10	2010-11
1	Balance outstanding at the beginning of the year	5,454	6,595	8,486	11,525	13,126
2	Revenue assessed/billed during the year	18,864	20,159	23,483	27,642	30,306
3	Total amount due for realisation (1+2)	24,318	26,754	31,969	39,167	43,432
4	Amount realised during the year	17,707	18,076	20,252	25,936	29,858
5	Amount written of during the year	16	192	192	105	178
6	Balance outstanding at the end of the year	6,595	8,486	11,525	13,126	13,396
7	Percentage of amount realised to total dues (4/3)	72.82	67.56	63.35	66.22	68.75
8	Arrears in terms of No. of months assessment	4	5	6	6	5

(Source: Information furnished by the Company)

Major recoverable amounts pertained to Agricultural and Public Water Works consumers.

It was seen from above that dues outstanding at the end of 2010-11 doubled from ₹ 6,595 crore in 2006-07 to ₹ 13,396 crore. Of this, ₹ 6,033 crore were recoverable from Ag consumers, ₹ 1,490 crore from PWW consumers and ₹ 5,761 crore from Permanently Disconnected (PD) consumers.

As per Section 56 (1) of Electricity Act, 2003, if the consumer neglects to pay electricity charges, the licensee may after giving 15 days notice in writing, disconnect the supply till such charges are paid. However, no action for disconnection was being resorted to against PWW consumers though arrears of ₹ 1,490 crore were recoverable from them. The Company may take up the matter with the GoM for pursuing the respective departments to pay the long outstanding dues or pay the balance through budget allocations.

Dishonoured Cheques

2.2.28 The consumer may pay energy bills by cheque. If the cheque is dishonoured the Consumer Personnel Ledger was to be debited to that extent immediately along with interest. Scrutiny of records of Vasai (East) sub-division (Vasai circle) revealed that 444 cheques amounting to ₹ 89.15 lakh received during January 2010 to August 2011 had been dishonoured but not debited to consumers account. Similarly, 26 cheques amounting to ₹ 6.92 lakh received during May 2007 to April 2011 in Jalna circle had also dishonoured but not debited to consumers account so far (August 2011).

Lack of MIS on Disciplinary Cases

2.2.29 The annual average assessment of revenue from sale of power (2006-07 to 2010-11) was ₹ 24,677 crore and there was addition of ₹ 9,578 crore in the net asset of the Company during 2006-07 to 2010-11. In the process of providing services to the consumers and assessing the revenue and its recovery, there are chances of frauds being committed, misappropriations of cash/property, accepting of bribes and other acts causing loss of revenue to the Company. There is a need to have a comprehensive MIS which would be useful for remedial action in case of deficiencies noticed by competent authorities. On scrutiny of records maintained by General Administration Department, we observed that no such comprehensive MIS at State level has been developed so far (May 2011). Monthly reports submitted by Zonal offices are not being compiled and reviewed at Central office level for corrective action.

On test check of monthly report on above cases submitted by Amravati zone for March 2011, we observed that there were 19 cases for which orders were issued for appointment of enquiry officers during May 2009 to February 2010 but there was no progress in those cases thereafter.

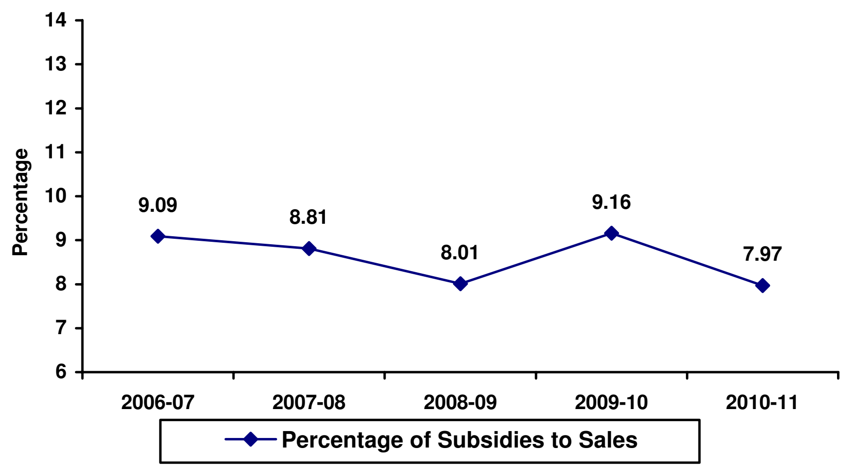
The Management stated that corporate office has formed the disciplinary action cell and action against the employees is taken by the competent authority. However, development of MIS for effective monitoring control would help in the matter.

Subsidy Support and Cross Subsidisation

2.2.30 There is an urgent need for ensuring recovery of cost of service from consumers to make the power sector sustainable. The State Government is providing subsidy with a view to ensure supply of power to specific category of consumers at concessional rates of tariff.

Subsidy support

2.2.31 MERC fixes the tariff for sale of electricity to various categories of consumers. The State Government fixes further lower tariff for agricultural and Power looms consumers. The difference between MERC rate and recovery rate was treated as subsidy to the Company. The graph below indicates revenue subsidy support from State Government (against concessional tariff) as a percentage of sales[6] for five years ending 31 March 2011.



The State Government provided subsidy amounting to ₹ 10,552.25 crore to Agricultural and Power loom consumers.

It is evident from the above that subsidy support from the Government was about eight to nine *per cent* of total sale which is a matter of concern since the subsidy needs to be withdrawn over a period of time in a phased manner so that tariff may cover average cost of supply to consumers. Against the subsidy of ₹ 10,552.25 crore due from State Government over the audit period ₹ 10,172.91 crore was received from State Government and ₹ 379.34 crore remained outstanding at the end of March 2011.

Cross subsidisation

2.2.32 Section 61 of Electricity Act, 2003 stipulates that the tariff should progressively reflect the Average Cost of Supply (ACoS) of electricity and also reduce cross subsidy in a phased manner as specified by the Commission. National Tariff Policy envisaged that the tariff of all categories of consumer should range within *plus/minus* 20 *per cent* of the ACoS by 2010-11. The

[6]The figures here is including revenue subsidy from State Government for concessional tariff.

position of cross-subsidies in various major sectors during 2010-11 is depicted in the table below.

Categories	ACoS (₹/unit)	Average billing rate (₹/unit)	Percentage of average billing rate to ACoS
HT category			
HT–I Industry (Express feeder)		5.62	128
HT-I Seasonal industrial		6.92	158
HT-II Commercial		8.14	186
HT-III Railways		5.80	132
HT-V Agricultural	**4.38**	2.39	55
HT-VI Bulk Supply-Commercial		6.80	155
LT category			
LT-II Non-domestic		6.61	151
LT-III Public Water Works		2.18	50
LT-IV Agricultural		1.98	45

It would be seen from above that Ag and PWW consumers were heavily cross subsidised at the cost of commercial and industrial consumers. The gap in tariff fixation under various categories of consumers was more than *plus/minus* 20 *per cent* of ACoS. Therefore, efforts may be made to reduce the gap and bring the same in the range of *plus/minus* 20 *per cent* of ACoS.

Tariff Fixation

2.2.33 The Company is required to file the ARR for each year 120 days before the date from which tariff is intended to be made effective. The MERC accepts the application filed by the Company with such modifications/conditions as may be deemed just and appropriate and after considering all suggestions and objections from public and other stakeholders.

We observed that there was a delay ranging from 69 to 227 days in submission of ARR for five years (2006-07 to 2010-11). As a result of delay, benefits of revised tariff to the Company got delayed. The delay in submission of ARR was mainly attributed to pendency of review petitions before MERC challenging some of the decisions on earlier ARR. This resulted in postponement of revenue realisation significantly.

Detailed analysis revealed that the extent of tariff was lower than breakeven levels (3.70 to 11.46 *per cent*) of revenue from sale of power at the present level of operations and efficiency, the details of which for the last five years ending 31 March 2011 were as shown in the table below:

(₹in crore)

Year	Sales (including subsidy)	Variable cost	Fixed cost	Contribution (2 – 3)	Deficit in recovery of fixed cost (4 – 5)	Deficit as percentage of sales {6/2} x 100
1	2	3	4	5	6	7
2006-07	18,863.78	16,692.90	3,661.22	2,170.88	1,490.34	07.90
2007-08	20,158.61	17,532.19	3,372.02	2,626.42	745.60	03.70
2008-09	23,483.06	21,205.07	4,969.94	2,277.99	2,691.95	11.46
2009-10	27,642.31	24,438.14	5,373.43	3,204.17	2,169.26	07.85
2010-11	33,237.50	29,463.63	5,666.88	3,773.87	1,893.01	05.70

It could be seen that the Company was not able to recover total fixed cost and annual deficit ranged between ₹ 745.60 crore and ₹ 2,691.95 crore during 2006-07 to 2010-11.

MERC disallowed controllable expenditure of ₹ 504 crore during 2007-08 to 2008-09.

MERC (Terms and Conditions of Tariff) Regulations prescribed that one third of loss on account of controllable factors may be passed on to the consumers through tariff and balance two-thirds shall be absorbed by the licensee. Scrutiny of MERC Tariff order dated 17 August 2009 and 12 September 2010 revealed that while approving the truing up (approval of expenditure as per audited accounts) of the ARR for 2007-08 and 2008-09, MERC disallowed ₹ 195 crore and ₹ 309 crore, respectively towards efficiency. As per MERC Regulations, two-thirds of the efficiency losses (₹ 336 crore) was borne by the Company and one-third (₹ 168 crore) was allowed to be passed on to the consumers through the tariff. MERC also rejected the petition stating that the expenses were higher than approved by it. Thus, there is need to minimise such expenditure.

Though the tariff is on lower side and needs to be revised for recovery of the cost, it may be highlighted here that revenue gap may be reduced significantly by improving operational efficiency, *viz*., reduction in AT&C losses, conversion of LT lines into HT lines, metering of unmetered connections/ defective meters, improving billing and collection efficiency.

The Management stated that steps for reduction in expenditure will be taken during financial year 2011-12.

Consumer Satisfaction

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

Redressal of Grievances

2.2.35 The MERC specify the mode and timeframe for redressal of grievances in Standards of Performance (SoP) Regulations, 2005 in pursuance of Electricity Act, 2003. The MERC had prescribed the time limit for rendering services to the consumers and compensation payable for not adhering to the schedule. The nature of services contained in the Standards *inter-alia* include line breakdowns, replacement of failed DTRs, period of load shedding/scheduled outages, voltage variations, meter complaints, installation of new meter/connections or shifting thereof, *etc*.

Each circle office has internal unit for redressal of consumer complaints. The consumers may also appeal before Zonal Grievance Redressal Forum. For consumer satisfaction, the Company opened 15 call centres (24*7) in major cities for redressing complaints of consumers.

On test check of records of eleven O&M circles,[•] we observed that the Company had no mechanism in place for implementation of SoP. MIS was not being generated indicating service wise time prescribed in SoP, actual time taken, delay if any in providing services to consumers (September 2011). In the absence of such mechanism the efficiency of the Company in providing service to the consumers could not be ensured. It was further observed from the information on SoP reported by these circles for 2009-10 that all services have been provided within the time as per SoP excluding 'compensation paid' cases. As the data reported by field offices were not supported by subsidiary records, the information on SoP reported to MERC was, thus, not reliable.

The Management stated that MIS would be developed and subsidiary records maintained.

Energy Conservation

2.2.36 The Company had taken up Compact Fluorescent Lamp (CFL) Programme under Clean Development Mechanism. The Company completed pilot project for supply of 3.80 lakh CFL in Nashik. The Company had thereafter executed (November 2008) agreement with private party for supply of 20 lakh CFL free of cost in Ahmednagar circle and the agency was to get carbon credit to cover the cost of CFL. However, the scheme was not implemented by the party and agreement was cancelled. Similarly, the scheme implemented (September 2008) in Pune through private agency was also not successful. However, the Company had not made any efforts thereafter to search another agency.

[•] Aurangabad, Ahmednagar, Dhule, Gadchiroli, Kalyan, Kolhapur, Nashik, Pen, Ratnagiri Vasai and Vashi.

Energy Audit

2.2.37 Scrutiny of the energy audit reports revealed the following:

- Out of 3.13 lakh DTRs, 3,05,651 DTRs were in operation as at the end of March 2011 of which meters were installed on 1,87,448 DTRs at a cost of ₹ 246.23 crore (₹ 13,136 per meter) leaving 1,18,203 DTRs un-metered (38.67 *per cent*). The Company had also not fixed any target for metering of DTRs.

- Energy audit reports were generated in March 2011 in respect of 1,54,866 DTRs indicating that there were 41,624 DTRs, which had losses of more than 35 *per cent* and 42,610 DTRs had abnormal results *i.e*. negative losses. We observed that the main reasons for abnormal results were attributed to incorrect mapping of consumers, and faulty meters.

Remedial action had not been taken on Energy Audit Reports.

- The MIS on Energy Audit Reports was deficient to the extent that it did not provide information with regard to age-wise analysis of DTRs incurring heavy losses/abnormal result so that priorities could be assigned to those Energy Audit Reports. On test check of field units selected for audit it was noticed that the energy audit reports of top 70 DTRs (10 DTRs each from Dhule, Jalna, Kalyan urban-I, Pen, Pune urban, Ratnagiri and Vasai circles) indicated continuous losses per DTRs during August 2003 to March 2011 and the average energy loss per DTRs was as high as 80.98 *per cent*. Even though a period of eight years had elapsed no action was undertaken by these circles to investigate abnormal losses.

The Management, while accepting the fact, stated that such poor performance was on account of DTRs that were located in Ag dominated areas and efforts are being made to bring down the losses of each DTR within permissible range.

Monitoring by top Management

MIS Data and monitoring of service parameters

2.2.38 The Company plays an important role in the State economy. For an organisation to succeed in operating economically, efficiently and effectively, there should be well documented Management systems of operations, service standards and targets. Further, there has to be a MIS to report on achievement of targets and norms. The achievements need to be reviewed to address deficiencies and also to set targets for subsequent years. The targets should generally be such that the achievement of which would make an organisation self-reliant.

In this regard, we observed the following:

- The Company had not prepared well documented plan of network and additions/replacement of over aged network in a phased manner. In the absence of such assessment/plan, adequacy of existing network to provide quality power could not be ensured**.**

- Technical and financial performance were reviewed by the Managing Director through Monthly Review Meetings. However, operational performance of the Company was not reported to the Board of Directors for evaluation.

- Reports on MIS generated on faulty meters and 'DTR wise' energy audit Reports had not been updated to show age-wise details so that management could assign priority for over-aged cases.

- No mechanism was in place for implementation of SoP and data on SoP reported to MERC was not supported by subsidiary records to be maintained by field offices.

- Replacement/repair of DTRs failed within GP was not monitored.

- A reliable and comprehensive MIS was not in existence.

Acknowledgement

2.2.39 Audit acknowledges the co-operation and assistance extended by different levels of the Management at various stages of conducting the performance audit.

The matter was reported to the Government (August 2011); the reply had not been received (November 2011).

Conclusion

- **The Company had not prepared well documented action plan for replacement of overaged network and additions required to meet the increasing demand for power in future.**

- **The physical progress in the projects taken under RGGVY during XI five year plan was poor as compared to required completion by December 2011. There was no proper mechanism in place to ensure that BPL works were actually executed and benefits were passed on to eligible beneficiaries.**

- **Replacement of 6.67 lakh faulty meters and metering of 15.36 lakh agricultural consumers were pending at the end of 2010-11.**

- **The distribution losses decreased from 29.60 *per cent* in 2006-07 to 17.28 *per cent* in 2010-11. However, they were above MERC norms during 2009-10 and 2010-11.**

- **Failure of DTRs increased from 36,626 in 2006-07 to 38,306 in 2010-11. The failure on account of overloading remained on increasing trend. The failure of DTRs within guarantee period was also not effectively monitored resulting in delay in repairs/replacement by suppliers.**

- **There was no proper mechanism in place in field offices to ensure that new tariff was applied in time to all consumers. Delay/non-application of revised tariff was noticed in 405 HT consumers involving revenue loss of ₹ 20.82 crore.**

- **Outstanding dues recoverable from consumers increased from ₹ 5,454 crore to ₹ 13,396 crore during 2005-06 to 2010-11. Major portion of dues was recoverable from Agricultural and PWW consumers.**

- **The MIS on Energy Audit Reports and faulty meters was deficient to the extent that it did not provide information with regard to age-wise analysis of DTRs incurring huge losses and faulty meters requiring replacement.**

Recommendations

The Company may consider:

- **preparing well documented long term plan for development of distribution network;**

- **strengthening mechanism for verification of works executed under RGGVY and ensuring that intended benefits are passed on to eligible beneficiaries;**

- **concentrating on area with huge distribution losses and brining down the same within the permissible norms of MERC;**

- **improving billing efficiency by replacement of faulty meters, metering of agricultural consumers in a time bound manner and application of new tariff in time;**

- **generating MIS regarding age-wise details of faulty meters and DTRs showing abnormal results for longer duration;**

- **establishing co-ordination among various field offices for timely repair/replacement of DTRs failed during guarantee period; and**

- **pursuing vigorously the recovery of outstanding energy bills from the consumers.**