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Government of Madhya Pradesh - Report No. 4 of the year 2015

**Report of the  
Comptroller and Auditor General of India  
on  
Public Sector Undertakings  
for the year ended 31 March 2015**



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*Report No. 4 of the year 2015*

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**for the year ended 31 March 2015**

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## Preface

This report deals with the results of audit of Government companies and Statutory corporations for the year ended 31 March 2015.

The accounts of Government Companies (including companies deemed to be government companies as per provisions of Companies Act) are audited by the Comptroller and Auditor General of India (CAG) under the provisions of Section 143 (6) of the Companies Act 2013. The accounts certified by the Statutory Auditors (Chartered Accountants) appointed by the CAG under the Companies Act are subject to supplementary audit by officers of the CAG and the CAG gives his comments or supplements the reports of the Statutory Auditors. In addition, these Companies are also subject to test audit by the CAG.

Reports in relations to the accounts of a Government Company or Corporation are submitted to the Government by CAG for laying before State Legislature of under the provisions of Section 19-A of the Comptroller and Auditor General's (Duties, Powers and Conditions of Service) Act, 1971.

The instances mentioned in this Report are those, which came to notice in the course of test audit during the year 2014-15 as well as those which came to notice in earlier years, but could not be reported in the previous Audit Reports; matters relating to the period subsequent to 2014-15 have also been included, wherever necessary.

The audit has been conducted in conformity with the Auditing Standards issued by the Comptroller and Auditor General of India.

## Overview

### 1. Functioning of State Public Sector Undertakings

Audit of Government companies is governed by Section 143 (6) of the Companies Act, 2013. As on 31 March 2015, the State of Madhya Pradesh had 64 Government companies (including nine non-working companies) and three Statutory corporations (all working). The accounts of Government companies are audited by Statutory Auditors appointed by the Comptroller and Auditor General of India (CAG). These accounts are also subject to supplementary audit conducted by CAG. Audit of Statutory corporations is governed by their respective legislations<sup>1</sup>. These PSUs employed 64826 employees as on 31 March 2015. The PSUs registered a turnover of ₹ 61264.43 crore as per their latest finalised accounts as on 30 September 2015.

**(Paragraphs 1.1 and 1.3)**

#### Investments in PSUs

As on 31 March 2015, the investment (Capital and Long term loans) in 67 PSUs (including three Statutory corporations) was ₹ 56997.43 crore. It grew by 133.59 *per cent* from ₹ 24400.17 crore in 2010-11, 34.77 *per cent* of total investment was towards Capital and 65.23 *per cent* was towards Long-term loans. The thrust of PSUs investment was mainly in Power Sector which increased from ₹ 21414.20 crore in 2010-11 to ₹ 52367.63 crore in 2014-15. The State Government contributed ₹ 8921.46 crore towards Equity, Loans and Grants/Subsidies to State PSUs during 2014-15.

**(Paragraphs 1.6, 1.7 and 1.8)**

#### Arrears in accounts

Thirty Six PSUs had arrears of 77 accounts as of September 2015. The PSUs need to set targets for the work relating to preparation of accounts with special focus on clearance of arrears.

**(Paragraph 1.10)**

#### Performance of PSUs

During the year 2014-15, out of 58 working PSUs (including three Statutory corporations), 29 PSUs earned total profit of ₹ 566.51 crore while 21 PSUs incurred total loss of ₹ 6848.38 crore. Six PSUs finalised their accounts on “no profit no loss” basis and remaining two PSUs had not finalised their first accounts. The losses were mainly incurred by Madhya Pradesh Madhya Kshetra Vidyut Vitaran Company Limited (₹ 2113.02 crore), Madhya Pradesh Poorv Kshetra Vidyut Vitaran Company Limited (₹ 1887.15 crore), Madhya Pradesh Paschim Kshetra Vidyut Vitaran Company Limited (₹ 1810.95 crore) and Madhya Pradesh Power Generating Company Limited (₹ 896.82 crore).

**(Paragraph 1.16)**

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<sup>1</sup> Madhya Pradesh State Road Transport Corporation: Road Transport Corporation Act, 1950 ; Madhya Pradesh State Warehousing & Logistics Corporation: Warehousing Corporation Act, 1962; Madhya Pradesh State Financial Corporation: State Financial Corporation Act, 1951



### **Quality of accounts**

Out of 59 accounts finalised by working PSUs during October 2014 to September 2015 the Statutory Auditors had given unqualified certificates for 44 accounts and qualified certificates for 15 accounts. In addition CAG gave disclaimer on one accounts (Madhya Pradesh Laghu Udyog Nigam Limited) during the supplementary audit. The audit reports of Statutory Auditors appointed by CAG and the supplementary audit of CAG indicate that the quality of accounts needs to be improved.

**(Paragraphs 1.21 and 1.22)**

### **Coverage of this Report**

This Report contains three Performance Audits, one long paragraph and 12 audit paragraphs involving financial effect of ₹ 4099.14 crore.

## **2. Performance Audits relating to Government Companies**

### **2.1 Functioning of Sanjay Gandhi Thermal Power Station, Birsinghpur**

The Madhya Pradesh Power Generating Company Limited (Company) has four thermal power stations and eight hydel power stations with an installed capacity of 4320 MW and 915 MW respectively as on 31 March 2015. Sanjay Gandhi Thermal Power Station (SGTPS) is the major thermal power station with generating capacity of 1340 MW spread across three Power Houses (PH I consisting of two units of 210 MW each, PH II consisting of two units of 210 MW each and PH III consisting of one unit of 500 MW). A review of operation and maintenance of the plant, contract management and environmental compliance by SGTPS revealed the following.

#### **Power House I**

- Power House I did not meet the generation target during 2010-11 to 2014-15 and the shortage ranged from 7.15 *per cent* to 34.24 *per cent*. The performance of the PH was not satisfactory as it did not meet the targets set by MPERC in respect of Station Heat Rate, fuel oil consumption, auxiliary power consumption and Plant availability factor (PAF). It was mainly due to deviation in key operational parameters like high main steam temperature, vibrations in super heater and re-heater areas of boiler, furnace instability caused by poor quality of coal, improper functioning of important boiler equipment due to delay in carrying out the annual maintenance and non-taking up of the capital intensive renovation and modernisation works to improve the performance of the power house.

This resulted in excess consumption of coal by 10.42 lakh MT worth ₹ 376.04 crore, excess fuel oil consumption by 9573.490 kilo litre (KL) worth ₹ 41.63 crore, excess auxiliary power consumption of 212.784 MU worth ₹ 63.51 crore and under recovery of MPERC approved fixed cost by ₹ 379.20 crore during 2010-11 to 2014-15.

**(Paragraphs 2.1.9, 2.1.10, 2.1.11, 2.1.12 and 2.1.13)**

- There was excess presence of un-burnt coal ranging from 1.15 *per cent* to 14.80 *per cent* in bottom ash and from 0.35 *per cent* to 2.37 *per cent* in fly ash during 2010-11 to 2014-15. This was due to improper combustion in boiler furnace as required equipment to monitor the coal fineness and air-fuel ratio in the boiler furnace were not installed. This led to loss of coal measuring 79648.529 MT worth ₹ 27.67 crore.

**(Paragraph 2.1.14)**

- The re-heater tubes in boiler were not replaced despite rendering the service life of 20 years resulting in their frequent failures causing generation loss of 85.05 MU worth ₹ 30.45 crore.

**(Paragraph 2.1.17)**

- The coal mills in PH I and II were not provided with gravimetric coal feeders to measure the accurate quantity of coal to be fed into the boiler. This led to excess coal consumption of 1.31 lakh MT worth ₹ 21.20 crore *per annum*.

**(Paragraph 2.1.18)**

## **Power House II**

- Power House II did not meet the generation target during 2010-11 to 2014-15 and the shortage ranged from 13.98 *per cent* to 39.63 *per cent*. The performance of the PH was not satisfactory as it did not meet the targets set by MPERC in respect of Station Heat Rate, fuel oil consumption, auxiliary power consumption and Plant availability factor (PAF). It was mainly due to deviation in key operational parameters like high main steam temperature, vibrations in super heater and re-heater areas of boiler, furnace instability caused by poor quality of coal, improper functioning of important boiler equipment due to delay in carrying out the annual maintenance and non-taking up of the capital intensive renovation and modernisation works to improve the performance of the power house.

This led to excess consumption of coal by 7.57 lakh MT worth ₹ 276.36 crore, excess fuel oil consumption by 8270.370 KL worth ₹ 39.48 crore and excess auxiliary power consumption of 254.446 MU worth ₹ 80.91 crore during 2010-11 to 2014-15.

**(Paragraphs 2.1.22, 2.1.23, 2.1.24 and 2.1.25)**

- There was excess presence of un-burnt coal in bottom and fly ash due to non installation of equipment to monitor the coal fineness and combustion in the boiler. This led to loss of coal in the form of un-burnt coal of 32404.596 MT worth ₹ 12.38 crore.

**(Paragraph 2.1.26)**

- There was frequent outage of coal mills in PH II during 2010-11 to 2014-15 despite having preventive and regular maintenance contracts. It was due to premature failure of coal grinding elements caused by the passage of foreign materials into coal mills in the absence of proper maintenance of sieves at the entry point of coal. This resulted in shutdowns and running of the plant on partial load resulting in generation loss of 816.184 MU worth ₹ 265.42 crore.

**(Paragraph 2.1.28)**

### **Power House III**

- PH III did not meet the generation target during the years 2010-11 to 2014-15 and the shortage ranged from 0.76 *per cent* to 7.56 *per cent*. Further, it did not meet the target set by MPERC with regard to Station Heat Rate leading to excess consumption of coal by 5.92 lakh MT valuing ₹ 200.25 crore. This was caused by poor quality of coal and improper maintenance of boiler equipment from time to time.

**(Paragraphs 2.1.32 and 2.1.33)**

- Deferment of annual overhaul (AOH) of power house from scheduled dates resulted in excessive wear and tear in turbine leading to prolonging of AOH period by 14 days. This resulted in generation loss of 168 MU worth ₹ 63.67 crore.

**(Paragraph 2.1.37)**

- Improper maintenance of the tilting tangential type firing system adopted in boiler of PH-III resulted in avoidable leakages in water wall tubes and re-heater tubes. As a result there was forced shut down causing generation loss of 220.948 MU worth ₹ 75.20 crore.

**(Paragraphs 2.1.39 and 2.1.40)**

### **Contract Management in SGTPS**

- SGTPS did not realise the claims of ₹ 3.80 crore lodged against M/s South Eastern Collieries Limited towards oversized stones received along with coal. Further, interest of ₹ 80 lakh on pending claims for the delayed period was not levied though provided in Fuel Supply Agreement.

**(Paragraph 2.1.44)**

- The liaising contract awarded by SGTPS for coordinating with collieries and railways was deficient as it did not have effective clauses for holding the contractor responsible for his failure. Due to failure of contractor to ensure quality coal, SGTPS suffered generation loss of 1153.540 MU worth ₹ 351.97 crore.

**(Paragraph 2.1.45)**

### **Environmental Compliance by SGTPS**

- SGTPS did not meet the 100 *per cent* ash utilisation target set under notification (November 2009) of GoI. The actual utilisation of ash ranged from 57.73 *per cent* and 79.89 *per cent* during 2010-11 to 2014-15 due to poor response from the parties to lift the ash. Further as against the limit of 10 kilo liter (KL) for storing the hazardous waste provided under Hazardous Waste (Management & Handling) Rules, SGTPS was storing hazardous waste of 30 KL resins and 16 KL of lube oil as of 31 March 2015 due to non-disposal of the same.

**(Paragraphs 2.1.48 and 2.1.49)**

## **2.2 Working of Madhya Pradesh State Agro Industries Development Corporation Limited**

Madhya Pradesh State Agro Industries Development Corporation Limited, Bhopal (Company) was incorporated in March 1969 as a Joint Venture Company between Government of Madhya Pradesh (GoMP) and Government of India (GoI) for the promotion of agriculture and agro industries in the State. During the period from

2010-11 to 2013-14 the sales/turnover of the Company ranged from ₹ 940.02 crore to ₹ 1293.77 crore and net profit ranged from ₹ 15.16 crore to ₹ 51.20 crore.

A Performance Audit was conducted to assess the performance of the Company during 2010-15 covering various aspects such as financial management, trading and production activities, performance of Mechanised Agriculture Farm (MAF) and effectiveness of monitoring and internal control mechanism. Following are the main audit findings.

### **Financial Management**

- Due to non development of common codes of account heads, the Company was unable to consolidate accounts of its District Offices in a timely manner. This has resulted in delayed finalisation of annual accounts. As of 31 October 2015 annual accounts for the year 2013-14 and 2014-15 were in arrears.

**(Paragraph 2.2.7)**

- As on 31 March 2015 trade receivables of ₹ 231.44 crore were outstanding, out of which receivables of ₹ 8.65 crore were pertaining to more than three years. Further, the adverse (credit) balances in trade receivables were not reconciled, which increased from ₹ 10.09 crore in 2010-11 to ₹ 22.37 crore in 2013-14.

**(Paragraph 2.2.9)**

### **Planning**

- The Company had not prepared any perspective and strategic plan for driving its activities for attainment of objectives. The annual Memorandum of Understandings (MoUs) with GoMP containing financial/commercial targets for the years 2010-11 to 2013-14 were finalised belatedly. Further, MoU for the year 2014-15 was not finalised. Thus, the purpose of entering into MoU with the GoMP to optimally drive the operations of the Company was defeated.

**(Paragraphs 2.2.12 and 2.2.13)**

### **Operational Activities**

- The Company carried out expansion of Ready to Eat production unit and also procured plant for production of *khichadi* during 2009-11. However, due to non-construction of additional storage space along-with the expansion, the Company failed to operationalise *Khichadi* production plant even after lapse of four years from its procurement and incurred avoidable expenditure of ₹ 20.96 lakh on transportation of raw material from alternate location due to lack of sufficient storage space at RTE unit.

**(Paragraph 2.2.17)**

- The capacity utilisation of Bio-fertilizers plant of the Company declined from 62 *per cent* in 2010-11 to 35 *per cent* in 2014-15 due to failure of the Company to develop a marketing strategy to promote the sale of Bio-fertilizers and dependence on Government agencies for sale of Bio-fertilizers.

**(Paragraph 2.2.19)**

- MAF was engaged in traditional farming activities and did not undertake the activities as per its objectives i.e. production of seeds, demonstration of cultivation methods and training to farmers. Further, the utilisation of agricultural land ranged between 22.27 *per cent* to 48.41 *per cent* in *Kharif* season and 41.42 *per cent* to 51.85 *per cent* in *Rabi* season during 2010-11 to 2014-15 due to non provision of

irrigation facility. Due to under-utilisation of the allotted land by MAF, GoMP transferred 679.89 hectares land to Commerce, Industries and Employment Department in October 2012.

**(Paragraphs 2.2.20 and 2.2.22)**

### **Monitoring and Internal Control**

- The internal control mechanism was deficient as there was no system for watching the timely utilisation of subsidies/advances and timely disposal of non-moving stores and unserviceable assets. Due to non-holding of regular meetings of Board of Directors of the Company, the timely decision making and monitoring process was hampered.

**(Paragraphs 2.2.25 and 2.2.26)**

## **2.3 Development of New and Renewable Energy in Madhya Pradesh**

For the promotion of renewable energy (RE) resources of the State, Madhya Pradesh Urja Vikas Nigam Limited (Company) was incorporated on 25 August 1982. The RE activities in the State are classified into “Grid connected” and “Off-grid” projects. For implementation of the Grid connected projects, Office of Commissioner, New and Renewable Energy (Department) was setup (April 2010), whereas the Company undertakes the activities related to implementation of Off-grid projects.

The Performance Audit was conducted to assess the performance of the Department and the Company relating to development of Grid connected and Off-grid renewal energy in the State during 2010-11 to 2014-15. Following are the main findings of the Performance Audit.

### **Grid Connected Renewal Energy Projects**

- The installed capacity of RE in the State was only 1243 MW against the estimated potential of 39095 MW. The RE policies for Solar, Wind, Small Hydel and Biomass based energy projects formulated during October 2011 to July 2012 by Government of Madhya Pradesh were not based on the assessment of RE potential in the State, which was assessed belatedly in October 2014. Further, no specific targets for capacity addition were set and no long term/short term plans were prepared by the Department for development of RE. As a result, the potential of RE in the State could not be harnessed in a planned manner.

**(Paragraphs 2.3.2 and 2.3.8)**

- As of 31 March 2015, the projects of 453.22 MW in Solar (45 per cent), 665.30 MW (nine per cent) in Wind and 55.40 MW in Biomass (12 per cent) could only be commissioned against registered projects of 1007.50 MW, 7196.55 MW and 471.20 MW capacity respectively. Also no Small Hydel project was commissioned by the Department. Further, the projects of 247 MW in Solar (25 per cent), 833.35 MW (12 per cent) in Wind, 44.80 MW in Small Hydel (14 per cent) and 194 MW in Biomass (41 per cent) were deregistered by the Department.

The reasons for low percentage of commissioning and high deregistration were non-allotment of land to projects, disinterest shown by the developers, non-availability of the raw materials, insufficient tariffs for energy and long gestation period of the projects etc. As a result, the basic objective of RE policies to

encourage participation of private developers to setup RE power projects had not been fulfilled.

**(Paragraphs 2.3.9, 2.3.13 and 2.3.14)**

- Undue benefit of ₹ 1.02 crore was extended to seven developers of Grid connected Wind and Biomass energy projects due to non-collection of performance guarantee for ensuring timely completion of projects on Government land.

**(Paragraphs 2.3.12 and 2.3.15)**

### **Off-grid Renewal Energy Projects**

- GoMP has not framed any specific policy and annual targets for installation of the Off-grid RE systems. In the absence of specific targets, the Off-grid installations were being done on the basis of adhoc demands received from beneficiaries. As a result, the full potential for Off-grid RE in the State could not be harnessed.

**(Paragraph 2.3.17)**

- During 2010-15, Company could commission only 3061 kWp capacity (45 *per cent*) of Solar Photovoltaic Power Plants (SPVPP) against the MNRE sanction of 6725 kWp capacity due to non-completion of the work by the suppliers and frequent cancellation of the work orders. Failure of the Company to analyse the reasons for non-completion of work by the suppliers and to take corrective action resulted in deprivation of RE benefits to the beneficiaries though the beneficiary share of ₹ 34.08 crore was lying unutilised with the Company as on 31 March 2015.

**(Paragraph 2.3.18)**

- During 2010-15, the Company installed only 18.66 lakh litre per day (22.84 *per cent*) capacity of Solar water heater systems against 81.70 litre per day of capacity sanctioned by MNRE due to delay in retendering of the cancelled work orders. As a result the beneficiary share of ₹ 4.54 crore was lying idle with the Company as on 31 March 2015.

**(Paragraph 2.3.19)**

- In the Joint physical verification by audit team along with Company officials of 38 installed Solar photovoltaic power plant systems, only 26 systems (68 *per cent*) were found working, four systems (11 *per cent*) were not working and eight systems (21 *per cent*) though working but were facing problems in spares/batteries etc. due to lack of maintenance by the suppliers in the absence of proper monitoring by the Company. Thus the Company failed to ensure long term sustainability and proper functioning of the installed systems resulting in deprivation of intended benefits to the beneficiaries.

**(Paragraph 2.3.20)**

- Due to insufficient generation of RE in the State during the years 2010-15, the Power Distribution Companies could not meet the Renewable Purchase Obligation (RPO) targets fixed by the Madhya Pradesh Electricity Regulatory Commission which resulted in RPO shortfall aggregating to 6316.91 MU. Further, the Power Distribution Companies did not purchase the Renewable Energy Certificates of ₹ 3013.20 crore for the shortfall in RPO in contravention of the regulations.

**(Paragraph 2.3.22)**

### 3. Transaction Audit Observations

Transaction audit observations included in the Chapter highlight deficiencies in the management of Public Sector Undertakings involving serious financial implications. The Chapter also includes one Long Paragraph on “Implementation of Financial Restructuring Plan of State Government in Madhya Pradesh Poorv Kshetra Vidyut Vitaran Company Limited”. The irregularities pointed out are broadly of the following nature:

There was loss of ₹ 2231.75 crore in nine cases due to non-compliance with rules, directives, procedures, terms and conditions of contracts.

**(Paragraphs 3.1, 3.2, 3.3, 3.6, 3.7, 3.8, 3.9, 3.10 and 3.12)**

Loss of ₹ 5.37 crore was incurred in four case due to defective/ deficient planning.

**(Paragraphs 3.4, 3.5, 3.11 and 3.13)**

**Gist of important audit observations in the Long Paragraph are given below:**

- In the first phase of Financial Restructuring Programme (FRP) implemented during 2011-12 to 2013-14, the Government of Madhya Pradesh (GoMP) did not set any targets for the Discom to improve operational and financial performance. As a result, due to poor financial health of the Discom, GoMP had to release short term loan of ₹ 2214.38 crore besides financial assistance of ₹ 5012.90 crore under FRP.

**(Paragraph 3.1.8)**

- In the extended FRP (2014-17), GoMP fixed target for Average Rate of Revenue Realisation (ARRR) without linking it to reduction in gap between ARRR and Average Cost of Supply (ACS). As a result, gap between ARRR and ACS persisted even after implementation of FRP.

**(Paragraph 3.1.9)**

- The Discom was not able to reduce the Aggregate Technical and Commercial (AT&C) losses to the level fixed by MPERC as stipulated in the extended FRP. As a result, the Discom had to absorb excess AT&C losses of ₹ 582.83 crore, which adversely affected the financial condition of the Discom.

**(Paragraph 3.1.10)**

- As against the condition of FRP, the Discom failed to complete the feeder separation works in 777 feeders out of 1589 feeders due to delay in re-awarding the terminated works and delay in execution of ongoing works under Feeder Separation Programme (FSP).

**(Paragraph 3.1.13)**

- The Discom could not achieve the objectives of improvement in financial health and becoming commercially viable even after completion of four years period of FRP. As a result, the Discom continued to be dependent on GoMP despite receipt of financial assistance of ₹ 8602 crore during 2011-12 to 2014-15.

**(Paragraph 3.1.14)**

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**Gist of some important audit observations in respect of other transaction audit paragraphs are given below:**

- By not opting for Corporate Liquid Term Deposit in the current account and consequently due to idle surplus funds in the current account, Madhya Pradesh Poorv Kshetra Vidyut Vitaran Company Limited lost interest income of ₹ 1.98 crore.

**(Paragraph 3.3)**

- Madhya Pradesh State Electronic Development Corporation Limited incurred avoidable expenditure of ₹ 1.21 crore on electricity due to improper assessment of required connected load.

**(Paragraph 3.5)**

- Madhya Pradesh State Electronic Development Corporation Limited allotted land to the IT Companies at lower rate in deviation from the IT Policy, which resulted in loss of ₹ 128.85 crore to the Government and undue favour to the IT Companies to that extent.

**(Paragraph 3.6)**

- Madhya Pradesh Paschim Kshetra Vidyut Vitaran Company Limited short recovered workers welfare cess of ₹ 49.39 lakh from the bills of contractors for supply portion and thereby extended un-intended benefit to the Contractors.

**(Paragraph 3.7)**

- By allowing construction period more than the period recommended/considered in the project feasibility report by the consultants, Madhya Pradesh Road Development Corporation Limited paid extra bonus to concessionaires to the extent of ₹ 12.21 crore.

**(Paragraph 3.8)**

- Non-recovery of interest on delayed payment of premium as per the clause in concession agreement by Madhya Pradesh Road Development Corporation Limited resulted in loss of interest of ₹ 3.17 crore, besides non recovery of ₹ 43.20 crore from the concessionaire.

**(Paragraph 3.9)**

- Madhya Pradesh Road Development Corporation Limited did not specify any maximum limit on payment of bonus for early completion of projects in the concessionaire agreement and allowed construction period more than that recommended by the consultants resulting in payment of extra bonus of ₹ 85.02 crore.

**(Paragraph 3.10)**

- Dada Dhuniwale Khandwa Power Limited continued its operation without formal assurance of coal linkage which resulted in avoidable expenditure of ₹ 1.03 crore.

**(Paragraph 3.12)**

- Narmda Basin Projects Company Limited failed to invest its idle funds in fixed deposits as envisaged in the Memorandum of the Company and lost opportunity to earn interest of ₹ 1.15 crore.

**(Paragraph 3.13)**



## CHAPTER - I

### 1. Functioning of State Public Sector Undertakings

#### Introduction

**1.1** The State Public Sector Undertakings (PSUs) consist of State Government Companies and Statutory Corporations. The State PSUs are established to carry out activities of commercial nature keeping in view the welfare of people and also occupy an important place in the State economy. As on 31 March 2015, in Madhya Pradesh there were 67 PSUs as detailed in *Annexure – 1.1*. None of these PSUs was listed in any of the stock exchanges. During the year 2014-15, no PSU was incorporated and no PSU was closed down. The details of the State PSUs in Madhya Pradesh as on 31 March 2015 are given in **Table -1.1**.

**Table 1.1: Total number of PSUs as on 31 March 2015**

Type of PSUs	Working PSUs	Non-working PSUs <sup>1</sup>	Total
Government Companies <sup>2</sup>	55	09	64
Statutory Corporations <sup>3</sup>	03	-	03
<b>Total</b>	<b>58</b>	<b>09</b>	<b>67</b>

There were 58 working PSUs (including three Statutory corporations) as of 31 March 2015. These working PSUs registered a turnover of ₹ 61264.36 crore as per their latest finalised accounts as of September 2015. This turnover was equal to 12.06 *per cent* of State Gross Domestic Product (GDP) for 2014-15. The working PSUs incurred aggregate loss of ₹ 6281.87 crore as per their latest finalised accounts as of September 2015. They had employed 64823 employees as at the end of March 2015. State PSUs does not include the Madhya Pradesh Electricity Regulatory Commission (MPERC), an autonomous body, of which the Comptroller and Auditor General of India (CAG) is the sole auditor.

As on 31 March 2015, there were nine non-working PSUs existing from 5 to 25 years and having investment of ₹ 192.03 crore. This is a critical area as the investments in non-working PSUs do not contribute to the economic growth of the State.

#### Accountability framework

**1.2** The process of audit of Government companies is governed by respective provisions of Section 139 and 143 of the Companies Act, 2013 (Act). According to Section 2 (45) of the Act, “Government Company” means any company in which not less than fifty one per cent of the paid-up share capital is held by the

<sup>1</sup> Non-working PSUs are those which have ceased to carry on their operation.

<sup>2</sup> Government Companies include other Companies referred to in Section 139 (5) and 139 (7) of the Companies Act, 2013.

<sup>3</sup> M.P. State Road Transport Corporation, M.P. Warehousing Logistics Corporation and M. P. Financial Corporation

Central Government or by any State Government or Governments or partly by the Central Government and partly by one or more State Governments and includes a company which is a subsidiary company of such a Government company.

Further, as per sub-Section 7 of Section 143 of the Act, the C&AG may, in case of any company covered under sub-Section (5) or sub-Section (7) of Section 139, if considers necessary, by an order, cause test audit to be conducted of the accounts of such Company and the provisions of Section 19 A of the Comptroller and Auditor General's (Duties, Powers and Conditions of Service) Act, 1971 shall apply to the report of such test Audit. Thus, a Government Company or any other Company owned or controlled, directly or indirectly, by the Central Government, or by any State Government or Governments or partly by Central Government and partly by one or more State Governments is subject to audit by the CAG. An audit of the financial statements of a Company in respect of the financial years that commenced on or before 31 March 2014 shall continue to be governed by the provisions of the Companies Act, 1956.

### **Statutory Audit**

**1.3** The financial statements of the Government companies (as defined in Section 2 (45) of the Companies Act, 2013) are audited by Statutory Auditors, who are appointed by CAG as *per* the provisions of Section 139 (5) or (7) of the Act which shall submit a copy of the Audit Report to the C&AG which, among other things, including financial statements of the Company under Section 143(5) of the Act. These financial statements are subject to supplementary audit to be conducted by CAG within sixty days from the date of receipt of the audit report under the provisions of Section 143 (6) of the Act.

Audit of Statutory Corporations is governed by their respective legislations<sup>4</sup>. Out of three Statutory Corporations, CAG is the sole auditor for Madhya Pradesh State Road Transport Corporation. In respect of Madhya Pradesh State Warehousing and Logistics Corporation and Madhya Pradesh Financial Corporation, the audit is conducted by Chartered Accountants and supplementary audit by CAG.

### **Role of Government and Legislature**

**1.4** The State Government exercises control over the affairs of these PSUs through its administrative departments. The Chief Executive and Directors to the Board are appointed by the Government.

The State Legislature also monitors the accounting and utilisation of Government investment in the PSUs. For this, the Annual Reports together with the Statutory Auditors' Reports and comments of the CAG, in respect of State Government companies and Separate Audit Reports in case of Statutory corporations are to be placed before the Legislature under Section 394 of the Act or as stipulated in the respective Acts. The Audit Reports of CAG are submitted to the Government under Section 19A of the CAG's (Duties, Powers and Conditions of Service) Act, 1971.

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<sup>4</sup> MPRTC: Road Transport Corporation Act, 1950 ; MPWLC: Warehousing Corporation Act, 1962; MPFC: State Financial Corporation Act, 1951

## Stake of Government of Madhya Pradesh

**1.5** The State Government has huge financial stake in these PSUs. This stake is of mainly three types:

- **Share Capital and Loans-** In addition to the Share Capital Contribution, State Government also provides financial assistance by way of loans to the PSUs from time to time.
- **Special Financial Support-** State Government provides budgetary support by way of grants and subsidies to the PSUs as and when required.
- **Guarantees-** State Government also guarantees the repayment of loans with interest availed by the PSUs from Financial Institutions.

## Investment in State PSUs

**1.6** As on 31 March 2015, the investment (capital and long-term loans) in 67 State PSUs was ₹ 56997.43 crore as detailed in **Table 1.2**.

**Table 1.2: Total investment in PSUs**

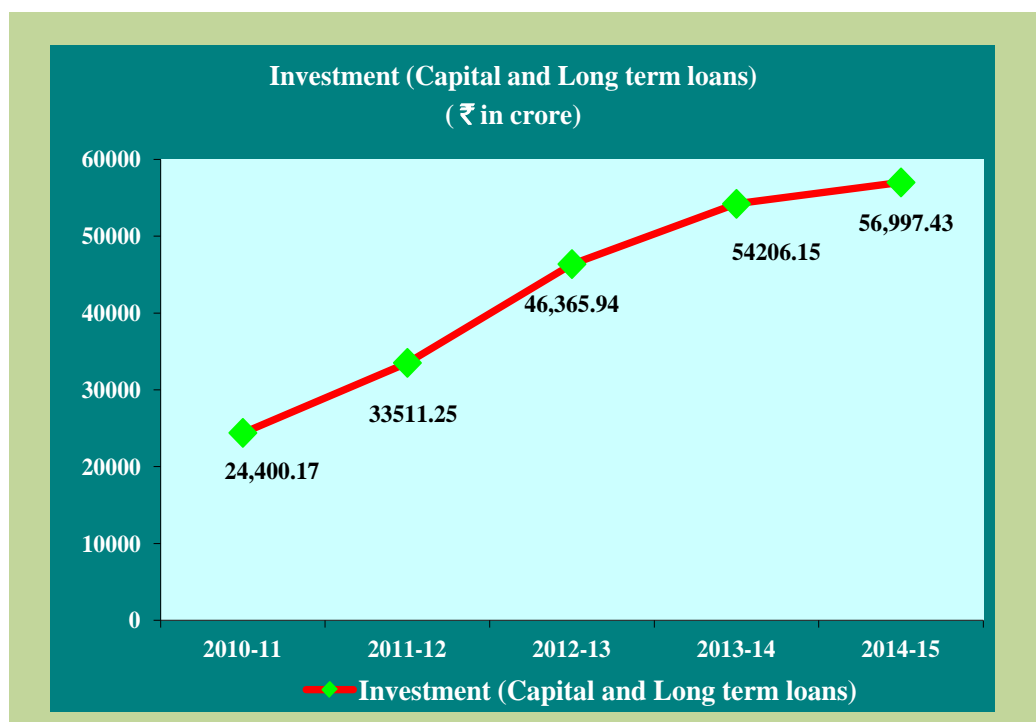
(₹ in crore)

Type of PSUs	Government Companies			Statutory Corporations			Grand Total
	Capital	Long Term Loans	Total	Capital	Long Term Loans	Total	
Working PSUs	19239.91	35270.25	54510.16	521.01	1774.23	2295.24	56805.40
Non-working PSUs	57.59	134.44	192.03	--	--	--	192.03
<b>Total</b>	<b>19297.5</b>	<b>35404.69</b>	<b>54702.19</b>	<b>521.01</b>	<b>1774.23</b>	<b>2295.24</b>	<b>56997.43</b>

(Source: Data compiled from the information furnished by the PSUs)

As on 31 March 2015 of the total investment in State PSUs, 99.66 per cent was in working PSUs and the remaining 0.34 per cent in non-working PSUs. This total investment consisted of 34.77 per cent towards capital and 65.23 per cent in long-term loans. The investment has grown by 133.59 per cent from ₹ 24400.17 crore in 2010-11 to ₹ 56997.43 crore in 2014-15 as shown in **Chart-1.1**.

**Chart 1.1: Total investment in PSUs**



(Source: Data compiled from the information furnished by the PSUs)

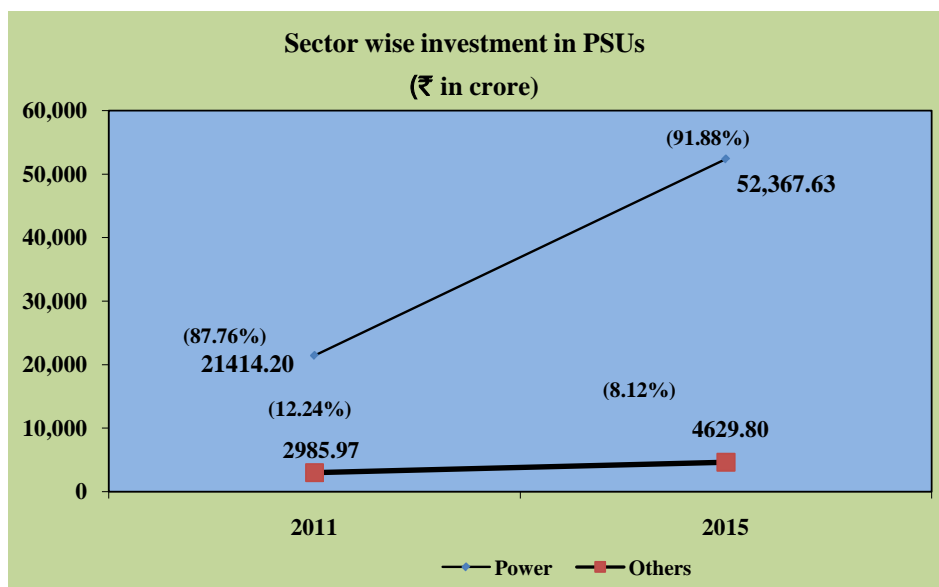
1.7 The sector wise summary of investments in the State PSUs as on 31 March 2015 is given **Table 1.3**.

**Table 1.3: Sector-wise investment in PSUs**

Name of Sector	Government/ Other companies		Statutory corporations	Total	Total Investment (₹ in crore)
	Working	Non-Working	Working		
Power	11	00	0	11	52367.63
Manufacturing	14	03	0	17	530.06
Finance	11	02	01	14	1926.27
Service	14	00	01	15	1733.57
Infrastructure	03	02	0	05	208.96
Agriculture & Allied	02	02	01	05	230.94
<b>Total</b>	<b>55</b>	<b>09</b>	<b>03</b>	<b>67</b>	<b>56997.43</b>

(Source: Data compiled from the information furnished by the PSUs)

The investment in two significant sectors and percentage thereof at the end of 31 March 2011 and 31 March 2015 are indicated below in the **Chart-1.2**. The thrust of PSUs investment was mainly in Power sector which increased from ₹ 21414.20 crore in 2010-11 to ₹ 52367.63 crore in 2014-15.

**Chart 1.2: Sector wise investment in PSUs**

(Figures in brackets show percentage of total investment)

During the past five years the investment in this sector is showing an increasing trend. It grew by 144.55 per cent during 2010-11 to 2014-15 mainly due to investment made by the Government in the form of equity/loans and loans obtained by Power sector PSUs from Power Finance Corporation / Rural Electrification Corporation Limited for their new projects and up-gradation works.

**1.8** The State Government provides financial support to PSUs in various forms through annual budget. The summarised details of budgetary outgo towards equity, loans, grants/ subsidies, loans written off and interest waived in respect of State PSUs are given in **Table 1.4** for three years ended 2014-15.

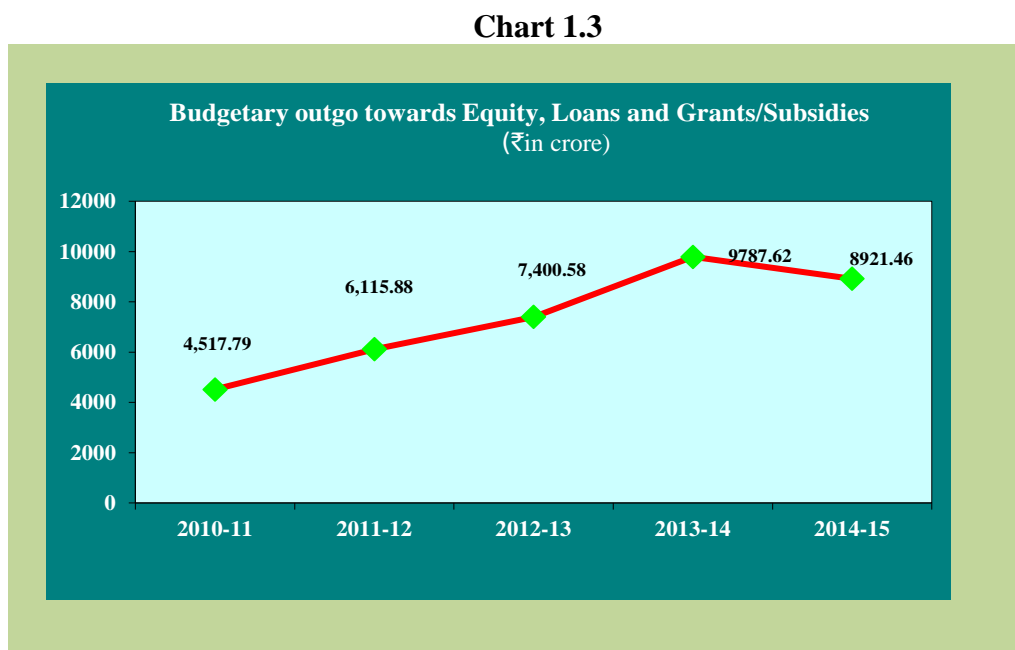
**Table 1.4: Details regarding budgetary support to PSUs**

Sl. No.	Particulars	2012-13		2013-14		2014-15	
		No. of PSUs	Amount	No. of PSUs	Amount	No. of PSUs	Amount
1.	Equity Capital outgo from budget	09	1418.65	06	1544.67	08	803.10
2.	Loans given from budget	04	2148.50	06	3786.50	05	2060.14
3.	Grants/Subsidy from budget	15	3833.43	18	4456.45	15	6058.22
<b>4.</b>	<b>Total Outgo (1+2+3)</b>	-	<b>7400.58</b>	-	<b>9787.62</b>	--	<b>8921.46</b>
5.	Waiver of loans and interest	--	--	--	--	01	1379.23
6.	Guarantees issued	07	5303.11	08	6528.32	10	3311.27
7.	Guarantee Commitment	08	4815.88	09	7873.52	10	8958.90

(Source: Data compiled from the information furnished by the PSUs)

The details regarding budgetary outgo towards equity, loans and grants/ subsidies for past five years are given in **Chart 1.3**.

**Chart 1.3: Budgetary outgo towards Equity, Loans and Grants/Subsidies**



(Source: Data compiled from the information furnished by the PSUs)

The Budgetary outgo towards equity, Loans and Grants/Subsidies has decreased from ₹ 9787.62 crore in 2013-14 to ₹ 8921.46 crore in 2014-15. The budgetary outgo of ₹ 8921.46 crore during 2014-15 included support of ₹ 7743.16 crore extended to four PSUs viz. ₹ 2716.58 crore to Madhya Pradesh Poorv Kshetra Vidyut Vitaran Company Limited, ₹ 1487.21 crore to Madhya Pradesh Madhya Kshetra Vidyut Vitaran Company Limited, ₹ 1906.12 crore to Madhya Pradesh Pashchim Kshetra Vidyut Vitaran Company Limited and ₹ 1633.25 crore to Madhya Pradesh State Civil Supplies Corporation Limited by way of Equity, Loan, Subsidy and Grants.

In order to enable PSUs to obtain financial assistance from Banks and Financial Institutions, State Government gives guarantee under Madhya Pradesh State Guarantee Rules 2009 subject to the limits prescribed by the Constitution of India, for which the guarantee fee is being charged. This fee varies from 0.50 per cent to one per cent as decided by the State Government depending upon the loanees. The guarantee commitment increased from ₹ 4815.88 crore in 2012-13 to ₹ 8958.90 crore in 2014-15. Further, three PSUs paid guarantee fee to the tune of ₹ 4.36 crore during 2014-15. There were six PSUs which did not pay guarantee fees/commission during the year and accumulated/outstanding guarantee fees/commission there against was ₹ 170.45 crore (as on 31 March 2015).

#### Reconciliation with Finance Accounts

**1.9** The figures in respect of equity, loans and guarantees outstanding as per records of State PSUs should agree with that of the figures appearing in the Finance Accounts of the State. In case the figures do not agree, the concerned PSUs and the Finance Department should carry out reconciliation of differences. The position in this regard as at 31 March 2015 is stated in **Table 1.5**.

**Table 1.5: Equity, loans, guarantees outstanding as per finance accounts vis a vis records of PSUs**

(₹ in crore)			
Outstanding in respect of	Amount as per Finance Accounts	Amount as per records of PSUs	Difference
Equity	4511.22	16291.87	11780.65
Loans	15017.39	24692.41	9675.02
Guarantees	15676.62	8958.90	6717.72

(Source: Finance Accounts 2014-15 and the Information as furnished by the PSUs)

We observed that the differences occurred in respect of 38 PSUs and some of the differences were pending reconciliation for more than five years. Though the differences between the amount reflected in the Finance Accounts and as per the records of the PSUs were reported in the Audit Report of earlier years, no corrective action was taken by the State Government. The Government and PSUs should take concrete steps to reconcile the differences in a time-bound manner.

### Arrears in finalisation of accounts

**1.10** The financial statements of the companies for every financial year are required to be finalised within six months from the end of the relevant financial year i.e. by September end in accordance with the provisions of Section 96 (1) of the Companies Act 2013. Failure to do so may attract penal provisions under Section 99 of the Act. Similarly, in case of Statutory Corporations, their accounts are finalised, audited and presented to the Legislature as per the provisions of their respective Acts.

The **Table 1.6** provides the details of progress made by working PSUs in finalisation of accounts as of 30 September 2015.

**Table 1.6: Position relating to finalisation of accounts of working PSUs**

Sl. No.	Particulars	2010-11	2011-12	2012-13	2013-14	2014-15
1.	Number of Working PSUs/other companies	51	55	55	58	58
2.	Number of accounts finalised during the year	59	50	49	47	59
3.	Number of accounts in arrears	58	63	64	84	77
4.	Number of Working PSUs with arrears in accounts	26	26	25	32	36
5.	Extent of arrears (numbers in years)	1-7	1-8	1-9	1-10	1-11

It can be observed that the number of accounts in arrears of working PSUs has increased from 58 (2010-11) to 77 (2014-15). The arrear accounts include 69 accounts of Government Companies for the period ranging from one to 11 years and accounts of two Statutory Corporations i.e. Madhya Pradesh Ware Housing and Logistics Corporation for one year and Madhya Pradesh State Transport Corporation for seven years.

The Administrative Departments have the responsibility to oversee the activities of these entities and to ensure that the accounts are finalised and adopted by these PSUs within stipulated period. Though the concerned Department/Ministry were informed of the regularly (February 2015 and November 2015). However, no improvement has been noticed and the arrears have increased.

**1.11** The State Government had invested ₹ 2630.52 crore in 13 PSUs {equity: ₹ 269.53 crore (five PSUs), loans: ₹ 1897.63 crore (five PSUs) and grants ₹ 463.36 crore (10 PSUs)} during the years for which accounts have not been finalised as detailed in *Annexure-1.2*. In the absence of finalisation of accounts and their subsequent audit, it could not be ensured whether the investments and expenditure incurred have been properly accounted for and the purpose for which the amount was invested was achieved or not and thus Government's investment in such PSUs remained outside the control of State Legislature.

**1.12** In addition to above, as on 30 September 2015, there were arrears in finalisation of accounts by non-working PSUs. Out of nine non-working PSUs seven<sup>5</sup> were in the process of liquidation. Arrears of accounts in respect of remaining two non-working PSUs ranged from three to seven years.

**Table 1.7: Position relating to arrears of accounts in respect of non-working PSUs**

Name of non-working companies	Period for which accounts were in arrears	No. of years for which accounts were in arrears
Madhya Pradesh State Textile Corporation Limited	2008-09	07
Madhya Pradesh State Industries Corporation Limited	2012-13	03

### Placement of Separate Audit Reports

**1.13** The position depicted in **Table 1.8** shows the status of placement of Separate Audit Reports (SARs) issued by the CAG (up to 30 September 2015) on the accounts of Statutory Corporations in the Legislature.

<sup>5</sup> Madhya Pradesh Lift Irrigation Corporation Ltd, Madhya Pradesh Dairy Development Corporation Ltd, Madhya Pradesh Film Development Corporation Ltd, Madhya Pradesh Panchayati Raj Vitt Evam Gramin Vikas Nigam Ltd, Madhya Pradesh Rajya Setu Nirman Nigam Ltd, Optel Telecommunication Ltd and Madhya Pradesh Vidyut Yantra Ltd.



**Table 1.8: Status of placement of SARs in Legislature**

Sl. No.	Name of statutory corporation	Year up to which SARs placed in Legislature	Year for which SARs not placed in Legislature	
			Year of SAR	Date of issue to the Government/Present Status
1	Madhya Pradesh Warehousing and Logistics Corporation Limited	2013-14	2014-15	Accounts not finalised
2	Madhya Pradesh State Road Transport Corporation Limited	2007-08	2008-09	Accounts not finalised
3	Madhya Pradesh Financial Corporation Limited	2013-14	2014-15	02 November 2014

### Impact of non-finalisation of accounts

**1.14** As pointed out above (para 1.10 to 1.12), the delay in finalisation of accounts may also result in risk of fraud and leakage of public money apart from violation of the provisions of the relevant Statutes. In view of the above arrears of accounts, the actual contribution of these PSUs to the State GDP for the year 2014-15 could not be ascertained and their contribution to State exchequer was also not reported to the State Legislature.

It is, therefore, recommended that:

- The Government may set up a cell to oversee the clearance of arrears and set the targets for individual companies which would be monitored by the cell.
- The Government may consider outsourcing the work relating to preparation of accounts wherever the staff is inadequate or lacks expertise.

### Performance of PSUs as per their latest finalised accounts

**1.15** The financial position and working results of working Government companies and Statutory Corporations are detailed in *Annexure- 1.1*. A ratio of PSUs turnover to State GDP shows the extent of PSUs activities in the State economy. **Table 1.9** provides the details of working PSUs turnover and State GDP for a period of five years ending 2014-15.

**Table 1.9: Details of working PSUs turnover vis-a vis State GDP ( ₹ in crore)**

Particulars	2010-11	2011-12	2012-13	2013-14	2014-15
Turnover <sup>6</sup>	31637.50	37949.25	58237.27	59860.12	61264.36
State GDP	263396.00	305158.00	361270.00	434730.00	508006.00
Percentage of Turnover to State GDP	12.01	12.44	16.12	13.77	12.06

(Source: Data compiled from the information furnished by the PSUs)

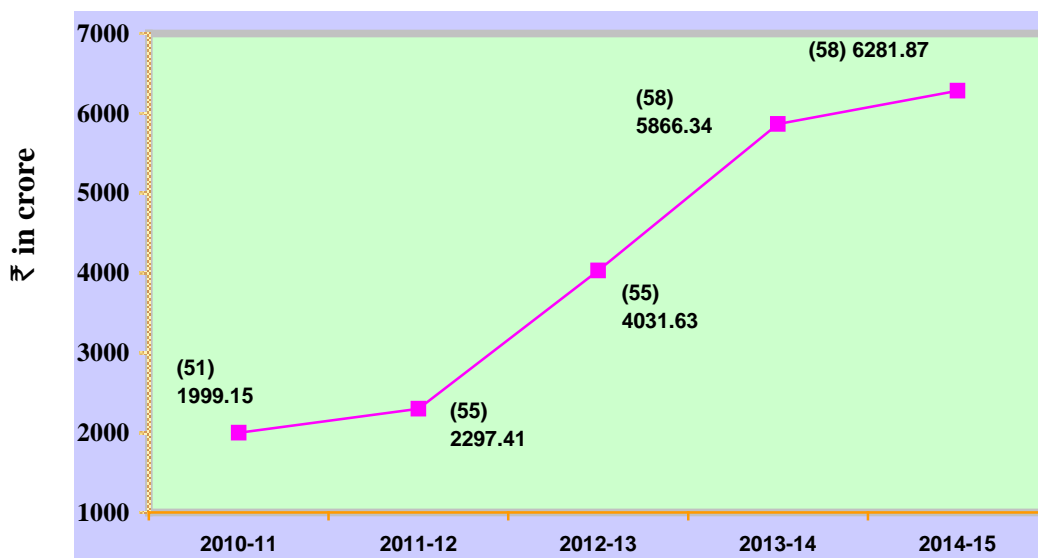
The percentage of Turnover to State GDP increased from 12.01 *per cent* in 2010-11 to 16.12 *per cent* in 2012-13 and thereafter came down to 12.06 *per cent*

<sup>6</sup> Turnover as per the latest finalised accounts as of 30 September.

in 2014-15 indicating declining contribution of PSUs to the State GDP during 2013-14 and 2014-15.

**1.16** Overall losses incurred by State working PSUs during 2010-11 to 2014-15 are given below in *Chart 1.4*.

**Chart 1.4: Loss of working PSUs**



(Figures in brackets shows the number of PSUs in the respective year based on latest audited accounts)

(Source: Data compiled from the information furnished by the PSUs)

During the year 2014-15, out of 58 working PSUs, 29 PSUs earned profit of ₹ 566.51 crore and 21 PSUs incurred loss of ₹ 6848.38 crore. Six working PSUs prepared their accounts on 'no profit no loss' basis and two working PSUs did not finalise their first accounts. The major contributors to profit were Madhya Pradesh Power Transmission Company Limited (₹ 120.81 crore), Madhya Pradesh Audyogik Kendra Vikas Nigam (Indore) Limited (₹ 86.75 crore), Madhya Pradesh Rajya Van Vikas Nigam Limited (₹ 80.50 crore) Madhya Pradesh State Mining Corporation Limited (₹ 66.12 crore).

The heavy losses were incurred by Madhya Pradesh Madhya Kshetra Vidyut Vitaran Company Limited (₹ 2113.02 crore), Madhya Pradesh Poorv Kshetra Vidyut Vitaran Company Limited (₹ 1887.15 crore), Madhya Pradesh Pashchim Kshetra Vidyut Vitaran Company Limited (₹ 1810.95 crore), Madhya Pradesh Power Generating Company Limited (₹ 896.82 crore).

1.17 Some other key parameters of PSUs are given in **Table - 1.10**.

**Table 1.10: Key Parameters of State PSUs**

(₹ in crore)

Particulars	2010-11	2011-12	2012-13	2013-14	2014-15
Return on Capital Employed (Per cent)	--	--	--	--	--
Debt	13599.12	21670.95	28932.24	34988.54	37178.92
Turnover <sup>Y</sup>	31637.50	37949.25	58237.27	59860.12	61264.36
Debt/ Turnover Ratio	0.43:1	0.57:1	0.50:1	0.58:1	0.61:1
Interest Payments	2082.37	1601.69	2715.97	3382.32	4064.62
Accumulated Profits/ (losses)	(-)2034.28	(-)2332.51	(-)4066.23	(-) 28254.01	(-) 29597.25

(Source: Data compiled from the information furnished by the PSUs)

The Accumulated losses has showed increasing pattern as it increased from ₹ 2034.28 crore in 2010-11 to ₹ 29597.25 crore in 2014-15. The major contributor PSUs were Madhya Pradesh Madhya Kshetra Vidyut Vitaran Company Limited (₹ 8673.05 crore), Madhya Pradesh Poorv Kshetra Vidyut Vitaran Company Limited (₹ 8824.44 crore), Madhya Pradesh Pashchim Kshetra Vidyut Vitaran Company Limited (₹ 7733.55 crore), Madhya Pradesh Power Generating Company Limited (₹ 3047.01 crore). This indicated deteriorating operational performance of the PSUs. The Debt turnover ratio increased from 0.43: 1 in 2010-11 to 0.61:1 in 2014-15 showing that turnover has not increased in the proportion in which debt has increased during this period.

1.18 The State Government had formulated July 2005 a dividend policy under which all PSUs are required to pay a minimum return of 20 per cent on profit after tax. As per their latest finalised accounts, 29 PSUs earned an aggregate profit of ₹ 566.51 crore and out of these only eight PSUs<sup>7</sup> declared a dividend of ₹ 34.28 crore. Thus, 21 PSUs did not declare dividend despite earning profit in violation of the Dividend Policy of GoMP.

#### Winding up of non-working PSUs

1.19 There were nine non-working PSUs as on 31 March 2015. Of these, seven PSUs have commenced liquidation process. The numbers of non-working companies at the end of each year during past five years are given in **Table 1.11**.

**Table 1.11: Non working PSUs**

Particulars	2010-11	2011-12	2012-13	2013-14	2014-15
No. of non-working companies	10	09	09	09	09
No. of non-working corporations	--	--	--	--	--
<b>Total</b>	<b>10</b>	<b>09</b>	<b>09</b>	<b>09</b>	<b>09</b>

Since the non-working PSUs are not contributing to the State economy and meeting the intended objectives, therefore, these PSUs may be considered either to

<sup>Y</sup> Turnover of working PSUs as per the latest finalised accounts as of 30 September

<sup>7</sup> MP SAIDCL, MP RVVN, PICL, MPPHCL, MP RDC, Sant Ravidas MP Hasthashilp Evam Hath Kargha Vikas Nigam Ltd, MPSMCL, MPLUN,

be closed down or revived. During 2014-15, two non-working PSUs<sup>8</sup> incurred an expenditure of ₹.0.08 crore towards administrative and establishment expenditure. This expenditure was financed by the GoMP (₹ 1.19 crore).

**1.20** During 2014-15, no PSU has concluded the process of winding up. The stages<sup>9</sup> of closure in respect of non-working PSUs are given in **Table 1.12**.

**Table 1.12: Closure of Non working PSUs**

Sl. No.	Particulars	Companies	Statutory Corporations	Total
1.	Total No. of non-working PSUs	9	--	9
2.	Of (1) above, the No. under			
(a)	liquidation by Court (liquidator appointed)	--	--	--
(b)	Voluntary winding up (liquidator appointed)	7	--	7 <sup>10</sup>
(c)	Closure, i.e. closing orders/ instructions issued but liquidation process not yet started.	2	--	2

During the year 2014-15, the process of voluntary winding up under the Companies Act is much faster and needs to be adopted/ pursued vigorously. The Government may make a decision regarding winding up of two non-working PSUs<sup>11</sup> where no decision about their continuation or otherwise has been taken after they became non-working.

#### Accounts Comments

**1.21** Forty four working companies forwarded their 58 audited accounts to PAG/AG during the year 2014-15. Of these, 31 accounts of 30 companies were selected for supplementary audit. The audit reports of statutory auditors appointed by CAG and the supplementary audit of CAG indicate that the quality of maintenance of accounts needs to be improved substantially. The details of aggregate money value of comments of statutory auditors and CAG are given in **Table 1.13**.

<sup>8</sup> MPSTC and MPSICL

<sup>9</sup> Adapted from Audit Report 2013-14, as no conclusive information was furnished by the Companies

<sup>10</sup> Madhya Pradesh Lift Irrigation Corporation Ltd, Madhya Pradesh Dairy Development Corporation Ltd, Madhya Pradesh Film Development Corporation Ltd, Madhya Pradesh Panchayati Raj Vitt Evam Gramin Vikas Nigam Ltd, Madhya Pradesh Rajya Setu Nirman Nigam Ltd, Optel Telecommunication Ltd and Madhya Pradesh Vidyut Yantra Ltd

<sup>11</sup> Madhya Pradesh State Industries Corporation Limited and Madhya Pradesh State Textile Corporation Limited

**Table 1.13: Impact of audit comments on working Companies**

(₹ in crore)

Sl. No.	Particulars	2012-13		2013-14		2014-15	
		No. of accounts	Amount	No. of accounts	Amount	No. of accounts	Amount
1.	Decrease in profit	03	8.39	02	15.87	10	121.16
2.	Increase in loss	02	52.16	03	181.06	02	11.10
3.	Non-disclosure of material facts	02	697.28	06	110.63	08	40.94
4.	Errors of classification	02	2548.36	10	234.26	04	194.30

(Source: Data compiled from the information furnished by the Government Companies)

During the year, the Statutory Auditors had given unqualified certificates for 44 accounts and qualified certificates for 14 accounts. In addition to above, CAG gave disclaimer comments on one accounts (Madhya Pradesh Laghu Udyog Nigam Limited) during the supplementary audit. The compliance of companies with the Accounting Standards remained poor as there were 46 instances of non-compliance in eight accounts during the year.

**1.22** Similarly, Madhya Pradesh Financial Corporation forwarded its accounts for the year 2014-15 to PAG/AG during the year 2015-16. The Statutory Auditors have given qualified certificate on the accounts and the accounts of the Corporation was selected for supplementary audit. The Audit Report of Statutory Auditors and the supplementary audit of CAG indicate that the quality of maintenance of accounts needs to be improved substantially. The details of aggregate money value of comments of statutory auditors and CAG on the accounts of the Statutory Corporation are given in **Table 1.14**.

**Table 1.14: Impact of audit comments on Statutory Corporations**

(Amount ₹ in crore)

Sl. No.	Particulars	2012-13		2013-14		2014-15	
		No. of accounts	Amount	No. of accounts	Amount	No. of accounts	Amount
1.	Decrease in profit	--	--	02	8.80	01 <sup>12</sup>	13.30
4.	Errors of classification	--	--	02	23.60	--	--

(Source: Data compiled from the information furnished by the Statutory Corporations)

### Response of the Government to Audit

#### Performance Audits and Paragraphs

**1.23** For the Report of the Comptroller and Auditor General of India for the year ended 31 March 2015, three performance audits and one long paragraph and 12 audit paragraphs involving four Departments, were issued to the Additional Chief

<sup>12</sup> MPFC

Secretaries/Principal Secretaries of the respective Departments with request to furnish replies within six weeks. However, replies in respect of one Performance Audit and nine compliance audit paragraphs were awaited from the State Government (October 2015).

### Follow up action on Audit Reports

#### Replies Outstanding

**1.24** The Report of the Comptroller and Auditor General (CAG) of India represents the culmination of the process of audit scrutiny. It is, therefore, necessary that they elicit appropriate and timely response from the executive. The Finance Department, Government of Madhya Pradesh issued in August 2015 instructions to all Administrative Departments to submit replies/explanatory notes to paragraphs/reviews included in the Audit Reports of the CAG of India within a period of three months of their presentation to the Legislature, in the prescribed format without waiting for any questionnaires from the COPU.

**Table 1.15: Explanatory notes not received (as on 30 September 2015)**

Year of the Audit Report (Commercial/ PSU)	Date of placement of Audit Report in the State Legislature	Total Performance audits (PAs) and Paragraphs in the Audit Report		Number of PAs/ Paragraphs for which explanatory notes were not received	
		PAs	Paragraphs	Pas	Paragraphs
2012-13	22.07.2014	05	11	00	03
2013-14	22.07.2015	03	08	03	08
<b>Total</b>		<b>08</b>	<b>19</b>	<b>03</b>	<b>11</b>

From the above in **Table 1.15**, it could be seen that out of 19 paragraphs and eight performance audits, explanatory notes to 11 paragraphs and three performance audits in respect of three departments, which were commented upon, were awaited (September 2015).

#### Discussion of Audit Reports by COPU

**1.25** The status as on 30 September 2015 of Performance Audits and paragraphs that appeared in Audit Reports (PSUs) and discussed by the Committee on Public Undertakings (COPU) was as under in **Table 1.16**.

**Table 1.16: Reviews/Paras appeared in Audit Reports vis a vis discussed as on 30 September 2015**

Period of Audit Report	Number of reviews/ paragraphs			
	Appeared in Audit Report		Paras discussed	
	Pas	Paragraphs	Pas	Paragraphs
2009-10	02	09	02	08
2011-12	02	07	01	07
2012-13	05	11	00	00
2013-14	03	08	00	00
<b>Total</b>	<b>12</b>	<b>35</b>	<b>03</b>	<b>15</b>

**Compliance to Reports of Committee on Public Undertakings (COPU)**

**1.26** Action Taken Notes (ATNs) to 411 paragraphs pertaining to 66 Reports of the COPU presented to the State Legislature between September 1976 and March 2015 had not been received (December 2015) as indicated in **Table 1.17** :

**Table 1.17: Compliance to COPU Reports**

<b>Year of the COPU Report</b>	<b>Total Number of COPU Reports</b>	<b>Total No. of Recommendations in COPU Reports</b>	<b>No. of Recommendations where ATNs not received</b>
From 1973-74 to 2003-04	37	653	286
2004-05	08	54	28
2005-06	06	45	29
2006-07	03	30	17
2007-08	07	28	19
2008-09	04	39	30
2009-10	01	03	02
<b>Total</b>	<b>66</b>	<b>852</b>	<b>411</b>

These Reports of COPU contained recommendations in respect of paragraphs pertaining to 11 departments, which appeared in the Reports of the CAG of India for the years 1973-74 to 2009-10

It is recommended that the Government may ensure: (a) sending of replies to IRs/explanatory Notes/ draft paragraphs/ performance audits and ATNs on the recommendations of COPU as per the prescribed time schedule; (b) recovery of loss/ outstanding advances/ overpayments within the prescribed period; and (c) revamping of the system of responding to audit observations.

**Coverage of this Report**

**1.27** This Report contains three Performance Audits, one long paragraph and 12 paragraphs involving financial effect of ₹ 4099.14 crore.

## CHAPTER-II

### 2. Performance Audits relating to Government Companies

#### 2.1 Functioning of Sanjay Gandhi Thermal Power Station, Birsinghpur

##### Executive summary

##### Introduction

The Madhya Pradesh Power Generating Company Limited (Company) has four thermal power stations and eight hydel power stations with an installed capacity of 4320 MW and 915 MW respectively as on 31 March 2015. Sanjay Gandhi Thermal Power Station (SGTPS) is the major thermal power station with generating capacity of 1340 MW spread across three Power Houses (PH I consisting of two units of 210 MW each, PH II consisting of two units of 210 MW each and PH III consisting of one unit of 500 MW). A review of operation and maintenance of the plant, contract management and environmental compliance by SGTPS revealed the following.

##### Power House I

- Power House I did not meet the generation target during 2010-11 to 2014-15 and the shortage ranged from 7.15 *per cent* to 34.24 *per cent*. The performance of the PH was not satisfactory as it did not meet the targets set by MPERC in respect of Station Heat Rate, fuel oil consumption, auxiliary power consumption and Plant availability factor (PAF). It was mainly due to deviation in key operational parameters like high main steam temperature, vibrations in super heater and re-heater areas of boiler, furnace instability caused by poor quality of coal, improper functioning of important boiler equipment due to delay in carrying out the annual maintenance and non-taking up of the capital intensive renovation and modernisation works to improve the performance of the power house.

This resulted in excess consumption of coal by 10.42 lakh MT worth ₹ 376.04 crore, excess fuel oil consumption by 9573.490 kilo litre (KL) worth ₹ 41.63 crore, excess auxiliary power consumption of 212.784 MU worth ₹ 63.51 crore and under recovery of MPERC approved fixed cost by ₹ 379.20 crore during 2010-11 to 2014-15.

**(Paragraphs 2.1.9, 2.1.10, 2.1.11, 2.1.12 and 2.1.13)**

- There was excess presence of un-burnt coal ranging from 1.15 *per cent* to 14.80 *per cent* in bottom ash and from 0.35 *per cent* to 2.37 *per cent* in fly ash during 2010-11 to 2014-15. This was due to improper combustion in boiler furnace as required equipment to monitor the coal fineness and air-fuel ratio in the boiler furnace were not installed. This led to loss of coal measuring 79648.529 MT worth ₹ 27.67 crore.

**(Paragraph 2.1.14)**

- The re-heater tubes in boiler were not replaced despite rendering the service life of 20 years resulting in their frequent failures causing generation loss of 85.05 MU worth ₹ 30.45 crore.

**(Paragraph 2.1.17)**



- The coal mills in PH I and II were not provided with gravimetric coal feeders to measure the accurate quantity of coal to be fed into the boiler. This led to excess coal consumption of 1.31 lakh MT worth ₹ 21.20 crore *per annum*.

**(Paragraph 2.1.18)**

### **Power House II**

- Power House II did not meet the generation target during 2010-11 to 2014-15 and the shortage ranged from 13.98 *per cent* to 39.63 *per cent*. The performance of the PH was not satisfactory as it did not meet the targets set by MPERC in respect of Station Heat Rate, fuel oil consumption, auxiliary power consumption and Plant availability factor (PAF). It was mainly due to deviation in key operational parameters like high main steam temperature, vibrations in super heater and re-heater areas of boiler, furnace instability caused by poor quality of coal, improper functioning of important boiler equipment due to delay in carrying out the annual maintenance and non-taking up of the capital intensive renovation and modernisation works to improve the performance of the power house.

This led to excess consumption of coal by 7.57 lakh MT worth ₹ 276.36 crore, excess fuel oil consumption by 8270.370 KL worth ₹ 39.48 crore and excess auxiliary power consumption of 254.446 MU worth ₹ 80.91 crore during 2010-11 to 2014-15.

**(Paragraphs 2.1.22, 2.1.23, 2.1.24 and 2.1.25)**

- There was excess presence of un-burnt coal in bottom and fly ash due to non installation of equipment to monitor the coal fineness and combustion in the boiler. This led to loss of coal in the form of un-burnt coal of 32404.596 MT worth ₹ 12.38 crore.

**(Paragraph 2.1.26)**

- There was frequent outage of coal mills in PH II during 2010-11 to 2014-15 despite having preventive and regular maintenance contracts. It was due to premature failure of coal grinding elements caused by the passage of foreign materials into coal mills in the absence of proper maintenance of sieves at the entry point of coal. This resulted in shutdowns and running of the plant on partial load resulting in generation loss of 816.184 MU worth ₹ 265.42 crore.

**(Paragraph 2.1.28)**

### **Power House III**

- PH III did not meet the generation target during the years 2010-11 to 2014-15 and the shortage ranged from 0.76 *per cent* to 7.56 *per cent*. Further, it did not meet the target set by MPERC with regard to Station Heat Rate leading to excess consumption of coal by 5.92 lakh MT valuing ₹ 200.25 crore. This was caused by poor quality of coal and improper maintenance of boiler equipment from time to time.

**(Paragraphs 2.1.32 and 2.1.33)**

- Deferment of annual overhaul (AOH) of power house from scheduled dates resulted in excessive wear and tear in turbine leading to prolonging of AOH period by 14 days. This resulted in generation loss of 168 MU worth ₹ 63.67 crore.

**(Paragraph 2.1.37)**

- Improper maintenance of the tilting tangential type firing system adopted in boiler of PH-III resulted in avoidable leakages in water wall tubes and re-heater tubes. As a result there was forced shut down causing generation loss of 220.948 MU worth ₹ 75.20 crore.

(Paragraphs 2.1.39 and 2.1.40)

### Contract Management in SGTPS

- SGTPS did not realise the claims of ₹ 3.80 crore lodged against M/s South Eastern Collieries Limited towards oversized stones received along with coal. Further, interest of ₹ 80 lakh on pending claims for the delayed period was not levied though provided in Fuel Supply Agreement.

(Paragraph 2.1.44)

- The liaising contract awarded by SGTPS for coordinating with collieries and railways was deficient as it did not have effective clauses for holding the contractor responsible for his failure. Due to failure of contractor to ensure quality coal, SGTPS suffered generation loss of 1153.540 MU worth ₹ 351.97 crore.

(Paragraph 2.1.45)

### Environmental Compliance by SGTPS

- SGTPS did not meet the 100 *per cent* ash utilisation target set under notification (November 2009) of GoI. The actual utilisation of ash ranged from 57.73 *per cent* and 79.89 *per cent* during 2010-11 to 2014-15 due to poor response from the parties to lift the ash. Further as against the limit of 10 kilo liter (KL) for storing the hazardous waste provided under Hazardous Waste (Management & Handling) Rules, SGTPS was storing hazardous waste of 30 KL resins and 16 KL of lube oil as of 31 March 2015 due to non-disposal of the same.

(Paragraphs 2.1.48 and 2.1.49)

### Introduction

**2.1.1** The function of power generation in Madhya Pradesh is vested with Madhya Pradesh Power Generating Company Limited (Company). The Company has four thermal power generating stations with an installed capacity of 4320 MW and eight hydel power generating stations with an installed capacity of 915 MW as on 31 March 2015. During the years 2010-11 to 2014-15 the Company generated revenue of ₹ 25815.56 crore, incurred total cost of ₹ 27560.77 crore and suffered loss of ₹ 1745.21 crore. The details of installed capacity (both thermal and hydel) and the financial performance of the Company are given in *Annexure 2.1.1*.

Sanjay Gandhi Thermal Power Station (SGTPS), Birsinghpur consists of three Power Houses (PHs) with an installed capacity of 1340 MW. These are PH I consisting of two units of 210 MW each commissioned during 1993-94, PH II consisting of two units of 210 MW each commissioned during 1998-99 and PH III consisting of one unit of 500 MW commissioned during August 2008. The power generated by SGTPS during the period 2010-11 to 2014-15 was ranging between 40.35 *per cent* and 52.26 *per cent* of total power generated by the Company.

### **Organisational Setup**

**2.1.2** The management of the company is vested in Chairman and the Board of Directors which consists of eight directors including the Managing Director as on 31 March 2015.

The operational activities of SGTPS are supervised by the Chief General Manager (CGM) who is assisted by five Deputy Chief General Managers (Dy CGM) and twenty General Managers (GM) to supervise the day to day operation and maintenance activities of the generating station. The organisation structure is given in *Annexure 2.1.2*.

### **Audit objectives**

**2.1.3** The Performance Audit was conducted with a view to assess whether:

- The action plans were prepared and implemented to optimize the existing plant capacity and the running of plant was meeting the operational parameters fixed by MPERC,
- Timely preventive and breakdown maintenance of plant was carried out to minimize outages and maximize plant utilization
- Contracts entered into for procurement and liaising were managed efficiently and effectively
- The plant was complying with the environmental statutes and regulations.

### **Audit Criteria**

**2.1.4** The audit criteria for the Performance Audit were drawn from the following sources.

- Regulations/guidelines issued by Central Electricity Authority (CEA)/State Government/ Electricity Regulatory Commission (Central and State) with regard to operation and maintenance of generating stations.
- Parameters fixed by Madhya Pradesh Electricity Regulatory Commission (MPERC) for various operational parameters for power generation.
- Statutes, Rules and regulations relating to protection of environment.
- Standard procedures for tendering and awarding contracts as per the procurement policy of the company and their execution.

### **Scope and methodology of Audit**

**2.1.5** The Performance Audit was conducted covering the functional performance of SGTPS for the period 2010-11 to 2014-15. Entry conference with the Principal Secretary (Energy) was held on 6 April 2015 where in the audit objectives and scope of audit were discussed. During the course of audit, Board Agenda items and minutes of the meetings were reviewed. The operational performance of SGTPS with regard to the parameters set by MPERC was examined. The maintenance plans prepared and implemented and the environmental compliance were studied. Exit conference was held with Principal Secretary (Energy) on 16 October 2015. The replies furnished by Government and views of Government in exit conference have been suitably included in the report.

### Audit Findings

**2.1.6** SGTPS was given a generation target of 44083 MU by MPERC during the years 2010-11 to 2014-15. However it could generate only 39390.010 MU falling short by 4692.990 MU (10.64 per cent) as detailed in *Annexure 2.1.3*. This was mainly due to shortcomings on the part of SGTPS to frame and implement action plans to optimise the utilisation of resources for achieving operational parameters, maintain the equipments to run at rated capacity and other reasons as discussed in the succeeding paragraphs.

#### *Ineffective functioning of Planning and Management Cell*

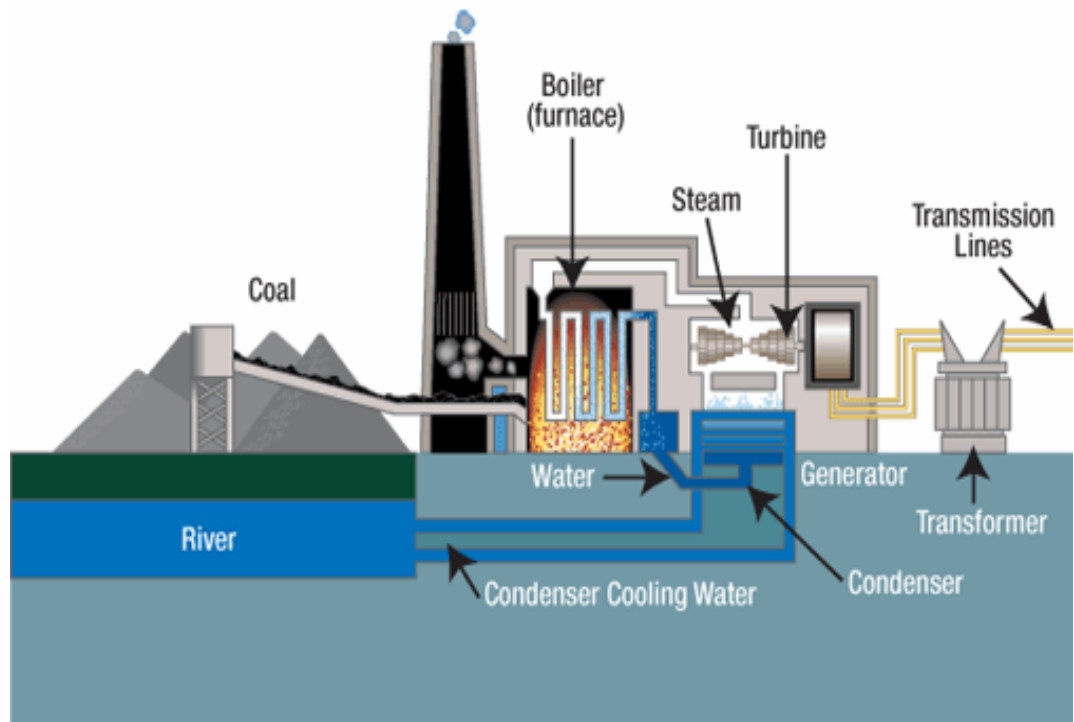
**2.1.7** A dedicated Planning and Management Cell (PMC) was established in the generating station, to prepare plans for improving the functional performance and achieve overall efficiency and economy. However, during the period under audit, no major plans were prepared and implemented by this Cell. Consequently, the generating station continued to face operational problems and the targets set by MPERC with regard to various operational parameters were not achieved. Government while accepting the audit observation stated (September 2015) that as against the sanctioned strength of 21 persons, the cell was functioning with six persons. Hence there were certain shortcomings in the functioning of the cell.

#### **Recommendation**

Management should initiate steps to strengthen the planning cell to frame and implement the action plans for improved performance of SGTPS.

### Operational performance and maintenance activities

**2.1.8** A symmetric diagram and the process of energy generation in a thermal power station is given below:



A review of the operational performance and maintenance activities of PH-I, PH-II and PH-III of SGTPS during 2010-11 to 2014-15 revealed the following shortcomings.

### Power House -I

**2.1.9** Power House (PH) I consists of two units of 210 MW capacity which were in operation since 1993 and 1994 onwards. The PH generated 10626.180 MU of energy against the target of 12148 MU during the years 2010-11 to 2014-15. The shortage in generation against the target was ranging between 7.15 per cent and 34.24 per cent as indicated below.

**Table 2.1.1**

Year	Target (in MU)	generation (in MU)	Shortage (in(%))
2010-11	2058	1910.80	7.15
2011-12	2100	2037.70	2.97
2012-13	2771	2602.07	6.10
2013-14	2513	2296.13	8.63
2014-15	2706	1779.48	34.24
<b>Total</b>	<b>12148</b>	<b>10626.18</b>	

The performance of this PH with regard to operational parameters was below the targets fixed by MPERC as discussed below.

### Excess Station Heat Rate (SHR)

**2.1.10** Station Heat Rate (SHR), a parameter to assess the efficiency of a thermal power station, represents the heat energy required in Kilo Calorie (K cal) to generate one kilo watt hour (kwh) of electrical energy. MPERC fixed the target of SHR at 2700 K cal, 2650 K cal and 2600 K cal for PH I during 2010-11, 2011-12 and 2012-13 to 2014-15 respectively. Considering, MPERC target of SHR, the thermal efficiency<sup>1</sup> should have been at 31.85 per cent, 32.45 per cent and 33.08 per cent during above period.

We noticed that, the SHR in PH I was higher by 189.67 K cal to 450.40 K cal than the norm fixed by MPERC. The excess SHR utilisation resulted in the fall of thermal efficiency of PH I between 2.09 per cent and 4.89 per cent. This led to excess consumption of coal by 10.42 lakh MT valuing ₹ 376.04 crore during the period 2010-11 to 2014-15 as detailed in *Annexure 2.1.4*. The reasons for the high SHR were deviations in key operational parameters such as higher main steam temperature, vibrations in super heater and re-heater areas of boiler, furnace instability, poor quality of coal, excess utilisation of make-up water and running the units on partial load. These were caused by improper functioning of important equipment (Primary Air fan, Induced Draft fan, Forced Draft fan, Turbine driven pumps) of the boiler due to their improper maintenance and non-taking up the capital intensive renovation and modernisation works to improve the performance of the power house.

**PH I did not meet the SHR target due to deviation in operational parameters resulting in excess consumption of coal by 10.42 lakh MT worth ₹ 376.04 crore.**

<sup>1</sup> It measures the efficiency of boiler in terms of conversion of total heat generated into actual energy generation (in percentage terms).

We further noticed that the Company circulated an operational guideline in April 2014 for reducing the SHR of PHs and to improve the operational efficiency of thermal power stations. The generating station however continued to record excess SHR in the year 2014-15 indicating ineffective implementation of the guidelines.

Government while accepting the audit observation stated (September 2015) that the units of PH I were very old and due to shortage of funds adequate expenditure on repair and maintenance/capital investment could not be done. Hence the SHR remain beyond MPERC prescribed limits.

The fact remains that, MPERC while fixing the operational targets considers the working condition of the units. Hence the prescribed target should have been achieved.

**Recommendation:**

Management should prepare and implement action plans for addressing the deficiencies resulting in non-achievement of MPERC prescribed SHR target.

***Excess fuel oil consumption***

**2.1.11** Thermal generating stations use fuel oil (Heavy Fuel Oil and Light Diesel Oil) as secondary fuel to give support for starting the unit and to attain furnace/flame stability. MPERC had fixed norms of consumption of fuel oil of 1.15 mili litre *per kwh* for PH I for the period 2010-11 to 2014-15.

We noticed that the units in PH I were consuming excess fuel oil than the limit prescribed by MPERC ranging between 494.050 KL and 3512.580 KL during 2010-11 to 2014-15. The total excess fuel oil consumed during this period was 9573.49 KL worth ₹ 41.63 crore as detailed in *Annexure 2.1.5*. It was mainly was due to factors such as operational problems in coal mills, poor bunker feeding, furnace instability, frequent forced outages, frequent hot starts etc. These were caused by not getting the supply of quality coal from mines despite having a separate liaising contract for coordinating with collieries, problems in coal handling plant, and not taking up of capital intensive renovation and maintenance work in the power house.

Government while accepting the audit observation (September 2015) stated that the units in PH I were of old age and due to financial crunch the adequate funds were not provided for capital intensive works and repair/maintenance works hence the targets set by MPERC were not met.

The fact remains that MPERC while fixing the operational norms considers the working condition of the units. Hence the prescribed target should have been achieved.

***Excess Auxiliary Consumption***

**2.1.12** Auxiliary consumption represents the power used internally by generating station for running the equipment/common services. Based on the plant design,

**There was excess consumption of fuel oil by 9573.49 KL worth ₹ 41.63 crore due to furnace instability, frequent forced outages etc.**

specifications and working conditions, MPERC specifies norm for auxiliary power consumption.

We noticed that PH I registered excess auxiliary power consumption ranging between 1.11 *per cent* and 3.20 *per cent* as compared to MPERC prescribed norm during the period 2010-11 to 2014-15. As a result excess auxiliary power of 212.784 MU valuing ₹ 63.51 crore was consumed as detailed in **Annexure 2.1.6**.

As per the Energy Audit Report (February 2011) conducted by M/s. Electrical Research and Development Association (ERDA) during the year 2006-07, many of the auxiliaries were operating below their rated capacities leading to excess auxiliary consumption. We noticed that measures suggested by ERDA for reducing the auxiliary consumption were only partially implemented as of June 2015. As a result there was no marked improvement and the auxiliary consumption still remain high as compared to the MPERC norm.

Government while accepting the audit observation stated (September 2015) that due to old age the efficiency of electrical equipment had reduced and power consumption increased. Further, due to financial crunch the adequate funds were not provided for capital intensive works, repair and maintenance works hence the targets set by MPERC were not met.

The fact remains that MPERC while fixing the operational norms considers the working condition of the units. Hence the prescribed target should have been achieved.

#### ***Plant Availability Factor (PAF)***

**2.1.13** Plant Availability Factor (PAF) represents the availability of a generating unit to produce electricity in a given period. The MPERC has fixed PAF target of 80 *per cent* for PH I and PH II together during the years 2010-11 to 2014-15.

The generation cost incurred by a PH includes both variable cost and fixed cost. MPERC, after analysis of the elements of the fixed cost submitted by the management, approves the fixed cost that could be recovered in a year through generation tariff. If the actual PAF achieved by a PH was lesser than targeted PAF then the actual recovery of fixed cost would be reduced proportionately for that year.

The details of PAF target fixed by MPERC, actual PAF certified by State Load Dispatch Center (SLDC)<sup>2</sup>, fixed cost approved by MPERC and actual fixed cost recovered during the period 2010-11 to 2014-15 are as below.

**Non achievement of PAF target resulted in under recovery of MPERC approved fixed cost by ₹ 379.20 crore.**

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<sup>2</sup> SLDC is responsible for maintaining the optimum scheduling and despatch of electricity within the state and it certifies the actual PAF achieved by each PH. In Madhya Pradesh it is operated by the Transmission Company.

Table 2.1.2

Year	Power House (I &II)				
	PAF (%)		Fixed Charges (₹ in crore)		
	MPERC Target	PAF certified by SLDC	Fixed Cost Allowed by MPERC	Recovered by company	Under recovery
2010-11	80	53.96	411.87	277.78	134.09
2011-12	80	64.17	378.64	320.28	58.36
2012-13	80	72.24	429.60	387.91	41.69
2013-14	80	74.86	467.94	437.90	30.04
2014-15	80	58.34	424.82	309.80	115.02
<b>Total</b>			<b>2112.87</b>	<b>1733.67</b>	<b>379.20</b>

Source: Information furnished by the company.

It can be seen from the table that the PAF achieved by PH I and II together was ranging between 53.96 per cent and 74.86 per cent only of the targeted PAF. This resulted in under recovery of the fixed cost to the extent of ₹ 379.20 crore during 2010-11 to 2014-15 in respect of PH I and II. The main reason for non-achieving the targeted PAF by PH I and PH II was excessive forced outages. PH I and II had lost 7875 hours in 231 forced outages and 7807 hours in 247 forced outages respectively during above period. This was caused by improper functioning of various important equipment of the boiler and tube leakages in boiler due to delay in carrying out the annual maintenance of power house and uneven supply of coal during the years etc,

Government while accepting the audit observation stated (September 2015) that apart from forced shut downs the short receipt of coal was also one of the factors for under achievement of PAF.

The reply is not convincing as SGTPS had in place a liaising contract for ensuring the supply of requisite quantity of coal and that PAF target was fixed by MPERC considering the working condition of the plant.

#### ***Excess un-burnt coal in bottom and fly ash***

**2.1.14** In thermal power stations, the coal gets pulverized into fine particles in coal mills and fed through coal pipes into the boiler furnace with the help of primary air. The coal particles fineness and air-fuel ratio in the furnace have impact on the combustion<sup>3</sup> of coal and the performance of boiler. Therefore, required coal fineness and air-fuel ratio is to be maintained for achieving the optimum efficiency of boiler. Non-maintenance of required coal fineness and air-fuel ratio results in improper combustion which causes excess release of un-burnt coal particles in the bottom and fly ash. As per the design parameters of boiler in PH I, prescribed limits of un-burnt coal particles in bottom and fly ash were four per cent and less than one per cent respectively.

We noticed from the chemical reports of SGTPS that in PH I there was excess presence of un-burnt coal ranging from 1.15 per cent to 14.80 per cent in bottom ash and from 0.35 per cent to 2.37 per cent in fly ash respectively during the years 2010-11 to 2014-15. This indicates that the combustion in the boilers was not

<sup>3</sup> Combustion refers to the rapid oxidation of fuel. Complete combustion of any fuel is possible only in the presence of adequate supply of oxygen.



**Lack of proper equipment to monitor coal fineness led to improper combustion in boiler and excess un-burnt coal particles in bottom and fly ash resulting in loss of 79648.529 MT coal worth ₹ 27.67 crore.**

proper. The main reasons for the improper combustion were time consuming manual system of analyzing the size of coal particles drawn from the coal pipes leading to belated setting of coal mills and improper functioning of the oxygen analysers meant for monitoring the proportion of oxygen in flue gases emitting from the boiler.

To overcome the problem of improper combustion a trial run of laser based online coal sizer to measure the coal fineness was conducted (December 2008) in SGTPS and the results were found satisfactory. However, this equipment was not procured and installed at SGTPS up to 2014-15, the reasons for which were not found on record. This resulted in avoidable loss of 79648.529 MT coal worth ₹ 27.67 crore as detailed in *Annexure 2.1.7*.

Government while accepting the audit observation stated (September 2015) that the online coal sizer required to arrest this problem were not installed at SGTPS since in no other power station in the country these were installed in the past.

The reply is not acceptable since, the company itself worked out (March to November 2013) the savings of ₹ 6.23 crore *per annum* in coal by installing these required equipments. Further, the trial run (December 2008) of the equipment was found successful by SGTPS itself.

**Recommendation:**

Management should immediately install required equipment to reduce the un-burnt coal in ash and to ensure the optimum utilisation of coal.

***Delay in carrying out overhaul and resultant loss of generation***

**Delay in carrying out the annual overhaul resulted in generation loss of 156.196 MU worth ₹ 52.15 crore.**

**2.1.15** We noticed that despite the units in PH I were very old and have already rendered 20 years life, there was inordinate delay of 10 months in each unit in carrying out the annual overhaul (AOH) (October 2013 to July 2014 for unit-1 and October 2012 to July 2013 for unit-2). This resulted in tripping of unit-1 on 23 occasions causing generation loss of 108.986 MUs worth ₹ 35.53 crore and tripping of unit-2 on 11 occasions causing generation loss of 47.210 MUs worth ₹ 16.62 crore.

Government replied (September 2015) that, AOH of the units was planned considering factors like performance of the units, technical requirement and availability of generating capacity to meet the target.

The reply is not convincing as considering the old age and incidence of frequent trippings of the units, the overhaul should be carried as per the schedule. In exit conference (October 2015) Principal Secretary (Energy), directed the Company to adhere to the AOH schedule in order to ensure improved performance of units.

**Recommendation:**

Management should adhere to the scheduled time period for carrying out AOH considering the age of the plant and frequent tripping.

***Frequent failure of coal mills resulting in avoidable generation loss***

**2.1.16** PH I was provided with 12 coal mills for continuous supply of pulverised coal with requisite fineness into boiler furnace. Of this two coal mills remain standby.

We noticed that coal mills in PH I were out of order for 1008 hours during 2010-11 to 2014-15 and thereby suffered generation loss of 658.976 MU worth ₹ 204.48 crore. Further, PH I consumed fuel oil of 3094.90 KL worth ₹ 12.99 crore during the above period to overcome furnace instability caused by frequent outage of coal mills as detailed in **Annexure 2.1.8**. This poor performance was witnessed in PH I despite having preventive maintenance contracts worth ₹ 3.09 crore and regular maintenance contracts worth ₹ 1.82 crore to cater the coal mills.

We further noticed that as against the expected life of 8000 hours, the grinding elements in coal mills had rendered life between 2884 hours and 6464 hours. The main reasons for premature failure of grinding elements and frequent outage of coal mills were flow of foreign materials such as stones, iron particles, nuts and bolts, big hammers along with coal into the coal mills. We also noticed during physical verification of coal mills that the sieve grills provided at the delivery point of coal were in damaged condition allowing easy entry of foreign materials into coal feeders.

Government while accepting the audit observation replied (September 2015) that, the coal mills in PH I were in continuous operation since their installation and no major modification was carried out. It was further stated that, considering the lesser number of hours rendered by grinding mills the metallurgy of the same was being upgraded.

**Recommendation:**

Management should strengthen system of receipt and feeding of coal to avoid entry of foreign materials into coal mills for their improved performance.

***Non-replacement of re-heater tubes resulting in generation loss***

**2.1.17** The re-heater tubes constitute an important component of boiler pressure part. The re-heater tubes in unit-1 of PH I were in operation since commissioning (1993) and rendered their service life of about 20 years. We noticed that leakages in re-heater tubes caused forced shut down of unit-1 during 2010-11 to 2014-15.

**Non replacement of re-heater tubes in boiler resulted in forced shut down causing generation loss worth ₹ 30.45 crore.**

We further noticed that in the residual life assessment (RLA) study of unit-2 the consultant recommended (2007-08) for replacement of re-heater tubes once in five years. Though this recommendation was implemented in unit-2, it was not implemented in unit-1 (as of June 2015) despite deteriorating condition of re-heater tubes. The main reason for delay in replacement of re-heater tubes was defective procurement procedure adopted by SGTPS by obtaining offer from one party instead of calling for tenders in the first instance (September 2013) as per the procurement manual (2012-13) of the Company.

During this delayed period, SGTPS incurred avoidable expenditure of ₹ 3.21 crore on fixed cost and suffered the generation loss of 85.05 MU worth ₹ 30.45 crore on account of re-heater tube leakages causing forced shut downs.

Government while accepting the audit observation stated (September 2015) that the proposal for replacement of re-heater tubes was under consideration and same would be replaced in the year 2016-17.

### ***Non-installation of gravimetric coal feeders***

**2.1.18** In order to ensure optimum efficiency of thermal power generating station, right quantities of coal are required to be measured before feeding into boiler furnace. To measure the quantity of coal to be fed into the boiler, PH I and PH II had the system of volumetric coal feeders which was not an accurate method to measure the quantity of coal required for consumption in boiler furnace. On the directive (April 2010) of the Secretary (Energy), GoMP, the BoD of the Company approved (September 2010) proposal for the installation of microprocessor controller (MPC) type gravimetric coal feeders in PH I and II of SGTPS.

**Non installation of gravimetric coal feeders in PH I and PH II resulted in excess consumption of coal worth ₹ 63.60 crore**

The cost of equipment having expected life of 15 years was estimated at ₹ 30 crore with a payback period of 18 months. The Company estimated three *per cent* savings (130683 MT *per annum*) worth ₹ 21.20 crore<sup>4</sup> in coal consumption by installing this equipment. The Company had, however, not placed order for installation of gravimetric coal feeders in PH I and PH II so far (June 2015). This resulted in loss of savings in coal consumption worth ₹ 63.60 crore<sup>5</sup>.

Government stated (September 2015) that action had been initiated to install these equipments at SGTPS. The fact remains that Company had failed to install the equipment despite lapse of five years period since the approval of BoD.

### **Recommendation:**

Management should install the gravimetric coal feeders immediately considering significant saving of coal and payback period of just 18 months.

### ***Non-installation of bus bar protection system***

**2.1.19** The electricity generated by PH I and PH II is evacuated through 220 KV bus bar<sup>6</sup> and that of PH III it is evacuated through 400 KV bus bar. These two bus bars were interconnected through an inter-connecting transformer (ICT) to transfer the power generated as per grid requirement from time to time. To restrict damage caused by faults in any part of the bus bar, a bus bar protection system was required to be installed to save the remaining parts of the bus bar by way of auto tripping. This protection system was available in 400 kV bus bar but the same was not installed in 220 kV bus bar.

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<sup>4</sup> ₹ 21.20 crore (savings in coal consumption 130683 Mt \* cost of coal ₹ 1662 per MT)

<sup>5</sup> Savings of ₹ 21.20 crore \* 3 years (from 2012 to 2015) after excluding the work completion period of 18 months

<sup>6</sup> Functions of a bus bar mentioned in this report is as per the literature 'Network Protection & Automation Guide available on website.

We noticed that Western Region Load Dispatch Centre (WRLDC) was insisting (since October 2013) for implementation of bus bar protection system in 220 kV bus bar, but SGTPS did not install the system in 220 kV bus bar so far (June 2015).

We further noticed that while igniting the unit-2 of PH I, an accident occurred (13 November 2014) in 220 kV bus bar and in the absence of bus bar protection system all feeders connected to 220 kV bus bar got tripped. This led to the shutdown of units-2 for 99 hours causing generation loss of 10.43 MU worth ₹ 3.95 crore.

Government stated (September 2015) that the process for installation of bus bar protection system has been initiated and would be installed by the end of this year.

### *Non up-keeping of plant & machinery resulting in partial generation loss*

**2.1.20** The generating units should run at full load to achieve the optimum operational efficiency. We observed that PH-I was running on partial load and suffered generation loss of 3392.852 MU<sup>7</sup> during 2010-11 to 2014-15 as detailed in *Annexure 2.1.9*. This was arrived after excluding the backing down of the units under Merit Order Dispatch (MOD)<sup>8</sup> system during the above period.

The review of monthly partial loss statements of SGTPS revealed that the major reasons responsible for running the units on partial load were frequent operational problems faced coal handling plant, tube leakages in various areas of the boiler, malfunctioning of important auxiliaries, poor bunkering of coal, poor ducting in the flue gas areas, low vacuum pressure etc., which were controllable. The partial loss suffered by PH-I due to above reasons along with the plant load factor (PLF)<sup>9</sup> achieved is given below.

**Table 2.1.3**

Year	Partial loss			Achievement of PLF		
	Actual partial loss suffered (MU)	Ranges of partial loss (%) as against available capacity		PLF should be achieved against actual hours run (%)	PLF actually achieved against actual hours run (%)	Shortfall in PLF achievement (%)
		Minimum	Maximum			
2010-11	1052.076	23.34	54.25	81.46	51.94	29.53
2011-12	704.891	17.40	42.18	77.32	55.38	21.93
2012-13	658.571	16.46	34.42	91.30	70.72	20.57
2013-14	433.020	20.85	27.43	34.74	62.41	20.30
2014-15	604.964	20.83	39.22	67.79	48.37	19.43
<b>Total</b>	<b>3453.522</b>					

We noticed that SGTPS had the system of AOH/COH besides the preventive maintenance and regular maintenance contracts worth ₹ 19.55 crore for up-

<sup>7</sup> Loss is worked out after deducting the total partial loss incurred due to poor quality coal (60.67 MU) received during the months from July to September in respective years during the period under audit from total partial loss of 3453.522 MU suffered on account of all controllable reasons.

<sup>8</sup> MOD means Merit Order Dispatch system under which, scheduling for generation would be given to generating station based on its cost efficiency. It means, the units, with least generation cost would be given preference and units with high generation would be withdrawn from the generation schedule under backing down

<sup>9</sup> Plant Load Factor represents the load at which the units in a power house were operating.

keeping the various equipments of the plant and machinery. Despite having this maintenance mechanism in place, there were frequent problems in various equipments compelling to run the units on partial load resulting in partial generation loss of 3392.582 MU.

Government while accepting the audit observation replied (September 2015) that the efforts were put in place to minimise the partial loss caused by controllable reasons.

**Recommendation:**

The Company should address the factors responsible for running the units on partial load in order to improve their performance.

**Overall performance of Power House I:**

**2.1.21** The above audit findings indicate that Power House I could not meet the generation target during the years 2010-11 to 2014-15 and shortage was ranging from 7.15 per cent to 34.24 per cent. The performance of this PH was not satisfactory as it did not meet the operational parameters set by MPERC and incurred excess expenditure by registering high SHR, fuel oil consumption, auxiliary power consumption and low PAF during the above period. It was caused due to deficient planning to optimise the utilisation of available resources, poor quality of coal, improper maintenance of plant and machinery, non-installation of equipment required to measure accurate quantity of coal and non-taking up of capital intensive renovation and modernisation works in timely manner.

**Power House II**

**2.1.22** Power House II consists of two units of 210 MW capacity each and these units were in operation since 1998 and 1999 onwards. PH II generated 11016.610 MU of energy against the target of 13652 MU during the years 2010-11 to 2014-15. The shortage in production against the target was ranging between 13.98 per cent and 39.63 per cent as indicated below.

**Table 2.1.4**

Year	Target (in MU)	Generation (in MU)	Shortage (in %)
2010-11	3553	2144.93	39.63
2011-12	2325	2499.00	No shortfall
2012-13	2944	2532.46	13.98
2013-14	2566	2012.73	21.25
2014-15	2274	1827.49	19.64
<b>Total</b>	<b>13652</b>	<b>11016.61</b>	

The performance of this PH with regard to operational parameters was below the targets fixed by MPERC as discussed below.

**Excess Station Heat Rate (SHR)**

**2.1.23** Similar to as discussed in paragraph 2.1.10, MPERC fixed the target of SHR for PH II at 2700 K cal, 2650 K cal and 2600 K cal during 2010-11, 2011-12 and 2012-13 to 2014-15 respectively. Considering, MPERC target of SHR, the

thermal efficiency of the PH II should have been at 31.85 per cent, 32.45 per cent and 33.08 per cent during above period.

We noticed that, the SHR was higher than the norm fixed by MPERC. The excess SHR utilisation was ranging between 44.18 K cal and 747.61 K cal during 2010-11 to 2014-15 leading to fall in thermal efficiency ranging between 0.47 per cent and 7.39 per cent. This resulted in excess consumption of coal by 7.57 lakh MT valuing ₹ 276.36 crore as detailed in **Annexure 2.1.10**. It was mainly due to deviation in key operational parameters as discussed in paragraph 2.1.10. These were caused by improper functioning of important equipment of the boiler due to delay in carrying out the annual maintenance and non-taking up the capital intensive renovation and modernisation works in timely manner to improve the performance of the power house.

Government while accepting the audit observation stated (September 2015) that the units in PH II were of old age; hence the SHR target was not met.

The fact remains that, MPERC while fixing the operational norms considers the working condition of the units. Hence the prescribed target should have been achieved.

#### **Excess fuel oil consumption**

**2.1.24** Similar to as discussed in paragraph 2.1.11, MPERC fixed norm for consumption of fuel oil of one ml per kwh for PH II during 2010-11 to 2014-15.

We noticed that the units in PH II registered excess fuel oil consumption ranging between 712.011 KL and 2549.519 KL than the limit prescribed by MPERC during 2010-11 to 2014-15. The total excess fuel oil consumed was 8270.37 KL worth ₹ 39.48 crore as detailed in **Annexure 2.1.11**. The reasons responsible for excess consumption of fuel oil in PH II were similar to as discussed in paragraph 2.1.11. These were caused by not getting the supply of quality coal from mines, problems in coal handling plant and non-taking up of capital intensive renovation and maintenance work in the power house.

Government while accepting the audit observation stated (September 2015) that the units in PH II were of old age; hence the excess fuel oil was consumed.

The fact remains that, MPERC while fixing the operational norms considers the working condition of the units. Hence the prescribed target should have been achieved.

#### **Excess Auxiliary Consumption**

**2.1.25** Similar to as discussed in paragraph 2.1.12, based on the plant working conditions, MPERC specified the auxiliary consumption norm at 8.25 per cent, 8 per cent and 9 per cent for PH II, in the years 2010-11, 2011-12 to 2012-13 and 2013-14 to 2014-15 respectively.

We noticed that PH II was registering excess auxiliary power consumption ranging between 1.95 per cent and 2.76 per cent during 2010-11 to 2014-15 resulting in excess auxiliary power consumption by 254.446 MU worth ₹ 80.91

**PH II did not meet MPREC target with regard to auxiliary power consumption and consumed excess power of 254.446 MU worth ₹ 80.91 crore**

crore during this period as detailed in **Annexure 2.1.12**. The reasons responsible for excess auxiliary power consumption in PH II were similar to as discussed in paragraph 2.1.12.

Government while accepting the audit observation stated (September 2015) that the units in PH II were of old age; hence the auxiliary power consumption target was not met.

The fact remains that, MPERC fixes the operational norms considering the working condition of the units. Hence the prescribed target should have been achieved.

#### ***Excess un-burnt coal in bottom and fly ash***

**2.1.26** Similar to as discussed in paragraph 2.1.14, we noticed from the analysis of chemical reports of the SGTPS that in PH II there was presence of un-burnt coal particles ranging between 3.30 *per cent* and 12.22 *per cent* in bottom ash and between 0.7 *per cent* and 2.15 *per cent* in fly ash during the years 2010-11 to 2014-15 as against the permissible limit of four *per cent* in bottom ash and less than one *per cent* in fly ash. The reasons for excess presence of un-burnt coal particles in bottom and fly ash were similar to those discussed in paragraph 2.1.14.

The required equipment for overcoming this problem were not installed in PH II. The excess presence of unburnt coal in ash resulted in avoidable loss of 32404.596 MT coal worth ₹ 12.38 crore as detailed in **Annexure 2.1.13**.

Government while accepting the audit observation stated (September 2015) that the online coal sizer required to arrest this problem was not installed at SGTPS since in no other power station in the country these were installed in the past.

The reply is not acceptable since, as per the Company's own assessment, there could be huge savings in coal by installing the equipment in PH II.

#### ***Delay in carrying out AOH/COH and resultant loss of generation***

**2.1.27** Similar to as discussed in paragraph 2.1.15, in PH II we noticed that despite old age of units and their being in continuous operation, there was inordinate delay in carrying out AOH/ COH from the scheduled dates. There was a delay of 18 months (from September 2012 to June 2013 and from September 2014 to March 2015) in carrying out AOH of unit-3, leading to tripping of unit on 25 occasions resulting in generation loss of 231.321 MUs worth ₹ 84.85 crore. Similarly, there was delay of 20 months (from November 2011 to June 2012 and from August 2013 to July 2014) in respect of unit-4 leading to its tripping on 16 occasions resulting in generation loss of 126.824 MUs worth ₹ 42.56 crore.

Government replied (September 2015) that AOH schedule is prepared considering the generating capacity of the Company and demand in the state etc.

The reply is not acceptable as considering the old age and frequent trippings AOH/COH should be carried out as per schedule. Further in exit conference (October 2015), Principal Secretary (Energy) directed the Company to follow the schedule considering the age of plants.

***Frequent failure of coal mills resulting in avoidable generation loss***

**2.1.28** Similar to as discussed in paragraph 2.1.16, PH II (consisting of two units) was provided with 14 coal mills for continuous supply of pulverised coal with requisite fineness into boiler furnace. Of this four coal mills remain standby.

**The frequent failure of coal mills despite having maintenance contracts caused generation loss of 816.184 MU worth ₹ 265.42 crore.**

We noticed that coal mills in PH II were out of order for 1032 hours during 2010-11 to 2014-15 and thereby suffered 816.184 MU worth ₹ 265.42 crore. Further, PH II consumed fuel oil of 2540 KL worth ₹ 12.84 crore to overcome furnace instability caused by frequent outage of coal mills during this period as detailed in **Annexure 2.1.14**. The poor performance of coal meals was witnessed in PH II despite having preventive maintenance contracts worth ₹ 2.09 crore and regular maintenance contracts worth ₹ 3.25 crore to cater the coal mills.

We further noticed that, as against the expected life of 8000 hours, the grinding elements in coal mills had rendered life between 3259 hours and 7636 hours. The reasons responsible for poor performance of coal mills were similar to those discussed in paragraph 2.1.16.

Government while accepting the audit observation replied (September 2015) that steps would be initiated to improve the performance of coal mills.

***Non-installation of bus bar protection system***

**2.1.29** Similar to as discussed in paragraph 2.1.19, due to non-availability of bus bar protection system in 220kV bus bar, meant for evacuating the power generated by PH-I and II, the impact of accident occurred in November 2014 in the 220 kV bus spread in the entire bus bar and unit-3 and 4 of PH-II tripped for 06 hours, 12 hours respectively causing generation loss of 1.775 MU worth ₹ 0.67 crore.

Government while accepting the audit observation stated (September 2015) that the bus bar protection system would be installed by the end of the year.

***Non up-keeping of plant & machinery resulting in partial generation loss***

**The operation of plant on partial load caused generation loss of 2692.646 MU during 201-11 to 2014-15.**

**2.1.30** Similar to as discussed in paragraph 2.1.20, we observed that, PH-II was running on partial load resulting in generation loss of 2692.646 MU<sup>10</sup> during 2010-11 to 2014-15 as detailed in **Annexure 2.1.9**. This was arrived after excluding the backing down of the units under Merit Order Dispatch (MOD) system during the above period.

The reasons responsible for running the units on partial load were similar to those discussed under paragraph 2.1.20. The partial loss suffered by PH-II along with the plant load factor (PLF) achieved is given below.

<sup>10</sup> Loss is worked out after deducting the total partial loss incurred due to poor quality coal (175.10 MU) received during the months from July to September in respective years during the period under audit from total partial loss of 2867.746 MU suffered on account of all controllable reasons.



Table 2.1.5

Year	Partial loss			Achievement of PLF		
	Actual partial loss suffered (MU)	Ranges of partial loss (%) as against available capacity		PLF should be achieved against actual hours run (%)	PLF actually achieved against actual hours run (%)	Shortfall in PLF achievement (%)
		Minimum	Maximum			
2010-11	576.596	12.90	42.35	75.13	58.30	16.83
2011-12	573.016	12.39	34.82	85.76	67.92	17.84
2012-13	679.940	17.40	32.64	89.98	68.83	21.15
2013-14	493.843	11.09	62.75	71.66	54.71	16.96
2014-15	544.351	13.74	67.08	64.42	49.67	14.75
<b>Total</b>	<b>2867.746</b>					

We noticed that SGTGS had the system of AOH/COH besides the preventive maintenance and regular maintenance contracts worth ₹ 51.10 crore for up-keeping the various equipments of the plant and machinery. Despite having this maintenance mechanism in place, there were frequent problems in various equipments compelling to run the units on partial load causing generation loss of 2692.646 MU.

Government while accepting the audit observation replied (September 2015) that, the efforts were put in place to minimise the partial loss.

### Overall performance of Power House II:

**2.1.31** The above audit findings indicate that Power House II could not meet the generation target during the years 2010-11 to 2014-15 and shortage ranged from 19.64 per cent to 39.63 per cent. The performance of the PH was not satisfactory as it did not meet the operational parameters set by MPERC and incurred excess expenditure by registering high SHR, fuel oil consumption, auxiliary power consumption and low PAF. It was caused by poor quality of coal, improper maintenance of plant and machinery leading to frequent failure of coal mills, non-installation of equipment required to monitor coal fineness for proper combustion in boiler and non-taking up of capital intensive renovation and modernisation works in timely manner.

### Power House III

**2.1.32** Power House III consists of one unit of 500 MW capacity and is in operation since 2008. PH III generated 17747.220 MU of energy against the target of 18283 MU during 2010-11 to 2014-15. The shortage in production against the target was ranging between 0.76 per cent and 7.56 per cent as indicated below.

Table 2.1.6

Year	Target (in MU)	Generation (in MU)	Shortage (in %)
2010-11	3553	3665.85	No shortage
2011-12	3755	3726.47	0.76
2012-13	3727	3495.14	6.22
2013-14	3769	3643.98	3.31
2014-15	3479	3215.78	7.56
<b>Total</b>	<b>18283</b>	<b>17747.22</b>	

The performance of this PH with regard to operational parameters was below the targets fixed by MPERC as discussed below.

### ***Excess Station Heat Rate (SHR)***

**2.1.33** Similar to as discussed in paragraph 2.1.10, MPERC fixed the target of SHR for PH III at 2425 K cal per Kwh during the years 2010-11 to 2014-15. Considering, MPERC target of SHR, the thermal efficiency of PH III should have been at 35.46 *per cent* during this period.

We noticed that, the SHR in PH III was above the norm fixed by MPERC. The excess SHR utilisation ranged between 31 K cal and 227 K cal during 2010-11 to 2014-15 leading to fall in thermal efficiency ranging between 0.44 *per cent* and 3.03 *per cent*. This resulted in excess consumption of coal by 5.92 lakh MT valuing ₹ 200.25 crore as detailed in ***Annexure 2.1.15***. The reasons for excess SHR in PH III were similar as discussed in paragraph 2.1.10. These were caused by improper functioning of important equipment of boiler due to delay in carrying out annual maintenance.

Government while accepting the audit observation stated (September 2015) that there was marginal increase in SHR due to running the unit on partial load.

The fact remain that, PH III did not achieve the MPERC target of SHR that was fixed considering the working condition of the plant.

### ***Plant Availability Factor (PAF)***

**2.1.34** Similar to as discussed in paragraph 2.1.13, MPERC fixed the PAF target at 85 *per cent* for PH III during the years 2010-11 to 2014-15. The recovery of fixed cost allowed by MPERC depends on the actual achievement of PAF. The PAF actually achieved by PH III and the fixed cost recovered during above period is indicated below.

**Table 2.1.7**

Year	Power House III				
	PAF (%)		Fixed Charges (₹ in crore)		
	MPERC Target	PAF certified by SLDC	Fixed Cost Allowed by MPERC	Recovered by company	Under recovery
2010-11	85	86.46	414.31	417.87	0.00
2011-12	85	93.53	431.91	435.08	0.00
2012-13	85	84.81	379.82	360.43	19.39
2013-14	85	97.76	429.64	461.88	0.00
2014-15	85	80.64	423.82	412.96	10.86
<b>Total</b>			<b>2079.50</b>	<b>2088.22</b>	<b>30.25</b>

*Source: Information furnished by the company.*

As evident from the table, PH III had not achieved the targeted PAF during the years 2012-13 and 2014-15 resulting in under recovery of MPERC approved fixed cost by ₹ 30.25 crore. It was mainly due to the loss of 1744 hours in 68 forced outages occurred during the above period. This was caused by improper functioning of various important equipment of the boiler and tube leakages in boiler due to delay in carrying out the annual maintenance of power house and uneven supply of coal during the years etc.

Government replied (September 2015) that, during 2012-13 and 2014-15, the forced outages occurred due to emptying of bunkers and due to poor quality of coal received at SGTPS.

The fact remains that SGTPS had in place the liaising contract to ensure the supply of allocated quantity of proper quality coal during this period. Thus adequate quantity and quality of coal should have been received.

### ***Excess un-burnt coal in bottom and fly ash***

**2.1.35** Similar to as discussed in paragraph 2.1.14, we noticed from the analysis of chemical reports of SGTPS that in PH III there was presence of un-burnt coal particles ranging between 1.5 per cent and 4.35 per cent in bottom ash and between 0.4 per cent and 1.2 per cent in fly ash during the years 2010-11 to 2014-15 as against the permissible limit of 1.5 per cent in bottom ash and less than one per cent in fly ash. The reasons for the excess presence of un-burnt coal particles in bottom and fly ash were similar to those discussed in paragraph 2.1.14.

The required equipment for overcoming this problem were not installed in PH III. The excess presence of unburnt coal in ash resulted in avoidable loss of 17704.360 MT worth ₹ 6.06 crore as detailed in **Annexure 2.1.16**.

Government while accepting the audit observation stated (September 2015) that the online coal sizer required to arrest this problem was not installed at SGTPS since in no other power station in the country these were installed in the past.

The reply is not acceptable since, as per Company's own assessment, there could be huge savings in coal by installing the equipment.

### ***Improper power scheduling resulting in avoidable payment***

**2.1.36** As per clause 5 read with clause 6 (2) of Central Electricity Regulatory Commission Regulations, 2009, the unscheduled interchange (UI) charges were payable by the power generator for under-injection of energy within the permissible grid frequency<sup>11</sup>. Under the said regulations the generator was also allowed to revise the committed energy to be injected into grid up to two hours before the scheduled period.

We noticed (June 2015) that the PH-III of SGTPS injected less energy than the Declared Capacity (DC) into the grid due to less generation of energy during the declared period. Further the PH had not revised the committed energy within the allowed time period. This resulted in paying the avoidable UI charges of ₹ 15.29 crore during 2012-13 to 2-14-15 as detailed in **Annexure 2.1.17**.

Government replied (September 2015) that SGTPS had not suffered any loss by not injecting committed quantum of energy into the grid since it had not generated the power and saved the fuel cost.

**PH III failed to inject the energy into the grid as per commitment given and thereby paid avoidable UI charges of ₹ 15.29 crore.**

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<sup>11</sup> Permissible grid frequency is between 50.3 Hz and 49.2 Hz

The reply is not acceptable since the non-generation of energy as per commitment given resulted in loss of potential revenue from the sale of energy to that extent apart from payment of UI charges.

**Recommendation:**

SGTPS should make efforts to inject energy into grid as per the commitment given from time to time.

***Generation loss due to prolonged period of annual overhaul***

**2.1.37** Similar to as discussed in paragraph 2.1.15, in PH-III, AOH was carried out in August 2012 and next AOH was planned in August 2014. However, the AOH was delayed by six months and was planned to be carried out in February 2015 for 34 days (from 23 February 2015 to 28 March 2015).

We noticed that, due to continuous running of the unit during the delayed AOH period (from August 2014 to February 2015), it suffered severe damage in various parts of boiler and turbine leading to prolonging the AOH period by 14 days which was actually completed on 11 April 2015 as against the scheduled completion date of 28 March 2015. This resulted in the loss of generation of 168 MU<sup>12</sup> worth ₹ 63.67 crore that could have otherwise been avoided.

Government while accepting the audit observation stated (September 2015) that due to excess wear and tear in turbine and due to non availability of spares, the AOH period was prolonged. The fact remains that, the deferment of AOH led to avoidable loss of generation.

***Malfunctioning of bus bar protection system***

**2.1.38** Similar to as discussed in paragraph 2.1.19, though the bus bar protection system was available in 400 kV bus bar meant for evacuation of energy generated by PH III, but due to malfunction of the inter-connecting transformer (ICT) the impact of accident occurred (November 2014) in 220 kV bus bar, spread into 400kV bus bar. The malfunction of ICT led to its belated tripping by 1 minute and 41 seconds after the accident.

As a result, the 400 kV bus bar and all elements connected to 400 kV bus got tripped. This led to the shutdown of PH-III for 24 hours causing generation loss of 5.895 MU worth ₹ 2.23 crore.

Government while accepting the audit observation stated (September 2015) that steps have been initiated to avoid the recurrence of such incidences in future.

***Avoidable tube leakages in the boiler causing generation loss***

**2.1.39** In PH III, the wind boxes meant for supply of air and pulverised coal into boiler furnace were located very close to the water wall tubes. The proper maintenance of the wind boxes was essential to avoid any possible damage to

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<sup>12</sup> 14 days \* 24 days \* 0.50 MU per hour = 168 MU

water wall tubes by coming in contact with coal particles released by damaged wind boxes.

We noticed that the wind boxes in PH III were severely damaged due to improper maintenance leading to release of irregular/uneven supply of coal into boiler furnace and this resulted in four water wall tube leakages causing generation loss of 117.43 MU worth ₹ 39.52 crore.

**The improper maintenance of firing system in the boiler of PH III resulted in frequent trippings and generation loss of 220.948 MU worth ₹ 75.20 crore.**

Government while accepting the audit observation stated (September 2015) that steps were taken and water wall tube leakages have been reduced to minimum level.

**2.1.40** PH III was provided with tilting tangential type firing system in boiler and proper maintenance of this advanced system was essential to control the fire ball formation location (in the centre portion of boiler furnace) and to achieve optimum efficiency of the boiler.

We noticed that, six re-heater tube leakages occurred in the right side of the boiler during January 2012 to July 2013 due to overheating of tubes as per the trippings reports of mechanical maintenance (MM) division. This indicates the formation of fire ball at improper location in boiler furnace. Further, as per reports of MM division, the thermocouple probes installed inside boiler to monitor the temperature of flue gases were not functioning during this period hence the overheating in boiler could not be monitored. This resulted in tube leakages which caused forced shut downs leading to generation loss of 103.518 MU worth ₹ 35.68 crore.

The Central Power Research Institute (CPRI)<sup>13</sup> also found (October 2013) that the leakages in tubes were due to high temperature, pressure and due to internal corrosion. This confirms that boiler equipment were not properly maintained which led to tube leakages causing generation loss.

Government while accepting the audit observation stated (September 2015) that steps were taken for proper maintenance of boiler equipments to avoid leakages.

#### ***Non up-keeping of plant & machinery resulting in partial generation loss***

**2.1.41** Similar to as discussed in paragraph 2.1.20, we observed that PH-III was running on partial load resulting in generation loss of 733.689 MU<sup>14</sup> during 2010-11 to 2014-15 as detailed in **Annexure 2.1.9**. This was arrived after excluding the backing down of the units under Merit Order Dispatch (MOD) system during the above period.

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<sup>13</sup> CPRI is an autonomous body set up in 1960 and working under Ministry of Power, GoI to undertake applied research in electrical power engineering, product development and quality assurance etc.

<sup>14</sup> Loss is worked out after deducting the total partial loss incurred due to poor quality coal (62.42 MU) received during the months from July to September in respective years during the period under audit from total partial loss of 796.109 MU suffered on account of all controllable reasons.

The reasons responsible for running the units on partial load were similar to those discussed under paragraph 2.1.20. The partial loss suffered by PH-III along with the plant load factor (PLF) achieved is given below.

**Table 2.1.8**

Year	Actual partial loss suffered (MU)	Partial loss		Achievement of PLF		
		Ranges of partial loss (%) as against available capacity		PLF should be achieved against actual hours run (%)	PLF actually achieved against actual hours run (%)	Shortfall in PLF achievement (%)
		Minimum	Maximum			
2010-11	186.279	0.75	15.06	44.79	41.85	2.94
2011-12	245.441	2.79	18.50	46.07	42.54	3.53
2012-13	67.130	2.43	14.77	41.38	39.90	1.48
2013-14	26.538	3.95	22.99	48.28	41.60	6.68
2014-15	270.721	9.94	19.16	43.40	36.71	6.69
<b>Total</b>	<b>796.109</b>					

We noticed that SGTPS had the system of AOH/COH besides the preventive maintenance and regular maintenance contracts worth ₹ 23.15 crore for up-keeping the various equipments of the plant and machinery. Despite having this maintenance mechanism in place, there were frequent problems in various equipments compelling to run the PH on partial load resulting in generation loss of 733.689 MU.

Government while accepting the audit observation replied (September 2015) that, the efforts were put in place to minimise the partial loss.

### **Overall performance of Power House III:**

**2.1.42** The above audit findings indicate that Power House III could not meet the generation target during the years 2010-11 to 2014-15 and shortage ranged from 0.76 per cent to 7.56 per cent. The performance of this PH was satisfactory with regard to targets set by MPERC for fuel oil consumption and auxiliary power consumption, however the PH did not meet the targets of Station Heat Rate and Plant Availability Factor. It was caused due poor quality of coal and improper maintenance of coal firing system in the boiler.

### **Contract Management in SGTPS**

**2.1.43** The generating station entered into Fuel Supply Agreement (FSA) (August 2009) with South Eastern Collieries Limited (SECL) for supply of coal to meet its coal requirement and liaising contract (November 2009) for ensuring the smooth supply of quality coal. A review of these contracts revealed the following shortcomings.

#### ***Non-realisation of pending claims for oversized stones received along with coal***

**2.1.44** Under new coal distribution policy (NCDP) notified by the GoI (October 2007) the Company signed (August 2009) Fuel Supply Agreement (FSA) with South Eastern Collieries Limited (SECL) for supply of 64 lakh MT of coal *per annum* to SGTPS for twenty years.

As per clause 4.6.3 of the FSA, if stones of greater than 250 mm size were received at the generating station, the same shall be segregated and thereafter joint assessment shall be done by the representative of SGTPS and SECL for adjusting the value of oversized stones. Clause 9.1 further specified that the seller shall issue credit notes to the purchaser covering 100 per cent value of stones and other charges such as surface transportation charges, crushing charges, rapid loading charges and railway freight for the quantity of oversized stones received at unloading station. Clause 12 provided for levy of interest for delays in clearing the payments by either party.

We noticed that the claims of ₹ 3.80 crore lodged against SECL (excluding rail freight of ₹ 1.27 crore paid) towards oversized stones supplied during the period 2009-10 to 2014-15 were pending. We further noticed that SGTPS was not raising claims of interest for the belated settlement of claims by SECL as provided in the FSA leading loss of interest income by ₹ 86.88 lakh for that period.

Government replied (September 2015) that, FSA did not provide for refund of railway freight. It was further stated that, for levy of interest on the pending claims a mechanism would be developed.

The reply is not acceptable since clause 9.1 of FSA specifically provided for the inclusion of railway freight while lodging claims against stones supplied by SECL.

***Poor performance of liaising contractor resulted in generation loss.***

**2.1.45** The Company had been awarding liaising contract to coordinate with SECL and Railway to ensure the smooth supply of coal to SGTPS. The scope of work also included ensuring loading of proper quality and allotted quantity of coal at loading points ensuring availability of required number of rakes at mines and monitoring the movement of coal rakes. Subsequent to the introduction of FSA regime (August 2009), the role of a liaising contractor was reduced considerably as the quantity to be supplied was fixed in the FSA.

A review of the terms and conditions of the liaising contract and its implementation by the management revealed the following shortcomings.

- SGTPS was getting coal with foreign material such as mud, soil and big stones/shales etc, indicating inadequate supervision of liaising contractor at loading points. The excess presence of foreign material in coal delayed the unloading of coal rakes at SGTPS ranging between eight hours and 137 hours. This resulted in avoidable payment of heavy demurrages of ₹ 2.62 crore<sup>15</sup> (based on test check of 300 rakes) during 2010-11 to 2014-15.

Government while accepting the audit observation stated (September 2015) that contract did not provide for passing of demurrages incurred to the contractor. The

**The deficient clauses in the liaising contract and the poor performance of the contractor resulted in receipt of poor quality coal.**

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<sup>15</sup> Demurrage charges were calculated after excluding 5 1/2 hours in respect of NTH and WT and 9 hours in respect of OTH. Further the gross demurrage charges were considered without excluding the waiver if any, was granted by railways due to non availability of information.

fact remains that the contract did not have effective clauses for making the contractor accountable for this issue.

- Clause 4.1.15 of the contract provided for the assessment of impact of poor quality of coal on coal mills and boiler equipment. However, the assessment was not carried out and passed on to the contractor by SGTPS despite poor quality coal received. Instead nominal penalty of ₹ 2.82 crore alone was imposed.

Government replied (September 2015) that the assessment of damage caused to equipment by poor quality coal was not done as it depends on various other factors. The reply is not acceptable since contract provided for assessment of damage.

- The contract (clause 1.0.3) provided for the payment of materialisation incentive to the contractor for delivering the coal over and above monthly contracted quantity. However, while making payment to the contractor, the quantity of foreign material supplied along with coal was not reduced from the total quantity of coal resulting in undue payment of ₹ 20.80<sup>16</sup> lakh.

Government replied (September 2015) that the contract did not provide for such clause, hence, no deduction was made in this regard. The fact remains that the contract was deficient in this regard thereby granting undue benefit to the contractor.

- Clause 1.0.3 of contract provided for the payment of shortage minimisation charges at the rate of ₹ 471 per MT to the contractor to the extent coal transit losses were kept below 0.8 *per cent*. We noticed that the limit of 0.8 *per cent* for coal loss prescribed by MPERC includes provision for stacking/handling losses also. Hence, the limit for the shortage minimisation charges should have been fixed below 0.8 *per cent* to take care of stacking/handling loss. As a result of not considering stacking/handling losses the contractor was paid undue amount of ₹ 1.36 crore<sup>17</sup>.

Government replied (September 2015) that the transit loss norm fixed by MPERC was not realistic; hence review petition was filed. The reply is not acceptable as MPERC fixed norm considering all the factors.

The above shortcomings indicate poor performance of the contractor and also that the liasing contract was deficient so far as it did not provide for holding the contractor responsible for his failure in discharging the contractual obligations. This resulted in SGTPS facing the problems of receiving poor quality coal, coal with high gross calorific value (GCV) than required, non-placement of adequate number of rakes at mines, high demurrage charges and generation loss of 1153.540 MU worth ₹ 351.97 crore due to poor quality of coal during 2010-11 to 2014-15 (*Annexure 2.1.18*).

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<sup>16</sup> 69360 Mt stones received \* ₹ 30 per Mt incentive considering the lowest rate

<sup>17</sup> 50 *per cent* of total shortage minimisation charges paid, considering remaining 50 *per cent* towards stacking/handling losses by allowing 0.8 *per cent* which cover all other losses.



Thus the objective of engaging liaising contractor at a cost of ₹ 29.56 crore remained largely unfulfilled as it did not fully serve the intended purpose.

**Recommendation:**

The Company should remove the deficiencies in contract and safeguard its interest by making liaising contractor liable for avoidable expenditure caused due to his failure.

**Abnormal coal loss in transit, handling and stacking**

**2.1.46** It is inherent nature of coal to suffer certain percentage of losses during transit and while in storage/stacking and handling. These losses include both normal and abnormal losses. MPERC has prescribed the limit of 0.8 per cent for coal loss which covers transit loss and other losses incurred in handling and stacking of coal during 2010-11 to 2014-15.

We noticed that the excess loss of coal beyond the normal limit ranged from 0.43 per cent to 2.38 per cent. Stacking/ handling loss alone exceeded the limit of 0.8 per cent specified by MPERC. The excess loss include loss in unloading operation, loss while moving coal from coal handling plant (CHP) to coal mills and from coal mill to boiler furnace and loss due to local burning/fire accidents etc.

SGTPS lost 3.61 lakh MT coal worth ₹ 112.20 crore due to excessive handling stacking losses beyond the norm prescribed by MPERC.

We further noticed from write off proposals moved by SGTPS that no specific reasons were given for the abnormal loss of coal and BoD approved the same. Due to the high incidence of abnormal coal losses SGTPS had lost 361086 MT of coal worth ₹ 112.20 crore as detailed below.

**Table 2.1.9**

Year	Total qty of coal recd (MT)	Total coal loss incurred (MT)	MPERC limit of coal loss 0.8 % (MT)	Excess coal loss incurred	Average cost of coal per MT	Avoidable loss (₹)
1	2	3	4	5 (3-4)	6	7 (5*6)
2010-11	5918499	188416	47348.00	141068.00	2015.86	284373338
2011-12	6219068	116783	49752.54	67030.46	3648.50	244560633
2012-13	6475190	120443	51801.52	68641.48	4009.15	275193989
2013-14	5923193	109336	47385.54	61950.46	3670.95	227417041
2014-15	5227592	64176	41821.00	22355.00	4048.00	90493040
<b>Total</b>				<b>361265</b>		<b>1122038041</b>

Government while accepting the audit observation stated (September 2015) that the coal losses were caused during rainy season and due to stacking of coal in the open yard in the rest of the period.

The reply is not acceptable as the abnormal losses occurred in seasons other than rainy season also and the limit of total loss fixed by MPERC evidently took into account all factors causing loss of coal including stacking loss.

### Environment compliance by SGTPS

**2.1.47** SGTPS, being under the category of major polluting industry was under statutory obligation to comply with norms/provisions of various Acts pertaining to environment compliance.

SGTPS had received two environmental compliance awards i.e. Annual Environment Award for the year 2013-14 from GoMP and One Green Leaf rating award from Centre for Science and Environment, GoI, for the year 2014-15 for its compliance with environmental norms. However from review of records we noticed the following shortcomings.

#### *Non-achieving the ash utilisation targets*

**2.1.48** Ministry of Environment and Forests (MoE&F) issued revised notification (November 2009) specifying that each thermal power generating station should achieve 100 *per cent* utilisation of total ash generated by the end of five years (November 2014).

We noticed that SGTPS had not achieved the ash utilisation target by November 2014 and the actual utilisation of total ash was ranging between 57.73 *per cent* and 79.89 *per cent* during 2010-11 to 2014-15. This was due to poor response from the prospective user of the ash.

We further noticed that as per amended notification (2009) the whole proceeds of ash sale should be utilised for creating better facilities to improve the ash utilisation. SGTPS realised ₹ 56.85 crore by sale of ash during the years 2010-11 to 2014-15 but utilized ₹ 22.83 lakh only for creation of better facilities to improve the ash utilization up to March 2015 which was only 0.40 *per cent* of sale proceeds. Thus SGTPS, failed to utilise the funds from sale of ash as per MOEF directions.

Government while accepting the audit observation stated (September 2015) that all possible efforts were made to improve the ash utilization; however, the same had not yielded the expected results in achieving the targets. The reply was silent on non-utilisation of ash sale proceeds.

#### *Accumulation of hazardous waste beyond prescribed limits*

**2.1.49** As per Hazardous Waste (Management & Handling) Rules 2007 hazardous waste material generated could be stored for a maximum period of 90 days and up to a maximum quantity of 10 Metric Tonne (MT) or 10 kilo litre (KL).

We observed that SGTPS had accumulated stock of hazardous waste consisting of 30 KL resins and 16.46 KL lub oil at the end of 2014-15 which was beyond the limit prescribed under the above rules.

Further as per amendment (24 September 2008) of Hazardous Waste (Management and Handling) Rules utilisation of hazardous waste was allowed as supplementary fuel along with coal for energy generation. SGTPS applied for permission (July 2010) from central pollution control board (CPCB) for using the resins in the boilers by mixing with coal at prescribed proportion for heat generation process. However CPCB permission was awaited as of July 2015 and SGTPS continued to store the hazardous materials beyond the limits prescribed.

**SGTPS did not meet the ash utilization target during the years 2010-11 to 2014-15.**

Government, while accepting the audit observation, stated (September 2015) that it would utilise these materials in the boilers on obtaining the approval from CPCB.

**Recommendation:**

The Company should initiate effective steps to comply with environment norms as per statutes.

**Conclusion and Recommendations**

**Operation and Maintenance of Power Houses**

**Power House I**

- PH I did not meet the generation target during the years 2010-11 to 2014-15 and shortage ranged from 7.15 *per cent* to 34.24 *per cent*. The performance of PH was not satisfactory as it did not meet the targets set by MPERC with regard to Station Heat Rate, fuel oil consumption, auxiliary power consumption and Plant Availability Factor. It was caused by improper functioning of important equipment of boiler due to delayed maintenance and non-taking up the capital intensive renovation and modernisation works to improve the performance of PH.

This led to excess consumption of coal by 10.42 lakh MT worth ₹ 376.04 crore, excess fuel oil by 9573.490 KL worth ₹ 41.63 crore, excess auxiliary power by 212.784 MU worth ₹ 63.51 crore and under recovery of MPERC approved fixed cost by ₹ 379.20 crore.

Management should identify and address the operational problems resulting in non-achievement of operational parameters set for PH I by MPERC.

- The coal mills in PH I and II were not provided with gravimetric coal feeders to measure the accurate quantity of coal to be fed into the boilers. The inaccurate measurement of coal fed into boilers resulted in excess coal consumption of 1.31 lakh MT worth ₹ 21.20 crore *per annum*.

Gravimetric coal feeders should be installed in PH I and II for accurate measurement of coal feeding and to ensure optimisation in coal consumption.

**Power House II**

- PH II did not meet the generation target during the years 2010-11 to 2014-15 and shortage ranged from 13.98 *per cent* to 39.63 *per cent*. The performance of PH was not satisfactory as it did not meet the targets set by MPERC with regard to Station Heat Rate, fuel oil consumption, auxiliary power consumption and Plant Availability Factor. It was caused by improper functioning of important equipment of boiler due to delayed maintenance and non-taking up the capital intensive renovation and modernisation works to improve the performance of PH.

This resulted in excess consumption of coal by 7.57 lakh MT worth ₹ 276.36 crore, excess fuel oil by 8270.370 KL worth ₹ 39.48 crore and excess auxiliary power by 254.446 MU worth ₹ 80.91 crore

Management should identify and address the operational problems resulting in non-achievement of operational parameters set for PH II by MPERC.

- The coal mills in PH II were out of order for 1032 hours during the years 2010-11 to 2014-15 despite having preventive and regular maintenance contracts. It was due to premature failure of coal grinding elements as a result of passage of foreign materials into coal mills. This led to generation loss of 816.184 MU worth ₹ 265.42 crore.

Management should take steps to improve the performance of coal mills and avoid their frequent failure causing generation loss.

### **Power House III**

- PH III did not meet the generation target during the years 2010-11 to 2014-15 and shortage ranged from 0.76 *per cent* to 7.56 *per cent*. The PH did not meet the target of Station Heat Rate and PAF. It was caused due poor quality of coal and improper maintenance of coal firing system in the boiler.

This resulted in excess consumption of coal by 5.92 lakh MT worth ₹ 200.25 crore and under recovery of MPERC approved fixed cost by ₹ 30.25 crore.

Management should identify and address the operational problems resulting in non-achievement of operational parameters set for PH III by MPERC.

- Non up-keeping of plant and machinery and various auxiliaries in PH III led to running the plant on partial load. This resulted in generation loss of 733.689 MU.

Management should properly upkeep the plant and machinery to avoid running the plant on partial load so as to achieve optimum energy generation.

### **Contract Management in SGTPS**

- The liaising contract awarded by SGTPS for coordinating with collieries and railways was deficient as it did not have effective clauses for holding the contractor responsible for his poor performance. This caused generation loss of 1153.540 MU worth ₹ 351.97 crore due to receipt of poor quality coal during 2010-11 to 2014-15.

The Company should remove the deficiencies in the liaising contract in order to safeguard its interest.

### **Environmental Compliance by SGTPS**

- SGTPS did not meet the 100 *per cent* ash utilisation target set under notification (November 2009) of GoI as there was poor response from the parties to lift the ash. Further, there was accumulation of hazardous waste material (30 Kilo litre resins and 16 Kilo litre lube oil) beyond the limit (10 Kilo litre) prescribed under the Rules due to non-disposal of the same.

Management should ensure adherence to environmental norms prescribed under relevant statutes.

## 2.2 Working of Madhya Pradesh State Agro Industries Development Corporation Limited

### Executive Summary

#### Introduction

Madhya Pradesh State Agro Industries Development Corporation Limited, Bhopal (Company) was incorporated in March 1969 as a Joint Venture Company of Government of Madhya Pradesh (GoMP) and Government of India (GoI) for the promotion of agriculture and agro industries in the State. During the period from 2010-11 to 2013-14 the sales/turnover of the Company ranged from ₹ 940.02 crore to ₹ 1293.77 crore and net profit ranged from ₹ 15.16 crore to ₹ 51.20 crore.

A Performance Audit was conducted to assess the performance of the Company during 2010-15 covering various aspects such as financial management, trading and production activities, performance of Mechanised Agriculture Farm (MAF) and effectiveness of monitoring and internal control mechanism. Following are the main audit findings.

#### Financial Management

- Due to non development of common codes of account heads, the Company was unable to consolidate accounts of its District Offices in a timely manner. This has resulted in delayed finalisation of annual accounts. As of 31 October 2015 annual accounts for the year 2013-14 and 2014-15 were in arrears.

(Paragraph 2.2.7)

- As on 31 March 2015 trade receivables of ₹ 231.44 crore were outstanding, out of which receivables of ₹ 8.65 crore were pertaining to more than three years. Further the adverse (credit) balances in trade receivables were not reconciled, which increased from ₹ 10.09 crore in 2010-11 to ₹ 22.37 crore in 2013-14.

(Paragraph 2.2.9)

#### Planning

- The Company had not prepared any perspective and strategic plan for driving its activities for attainment of objectives. The annual Memorandum of Understandings (MoUs) with GoMP containing financial/commercial targets for the years 2010-11 to 2013-14 were finalised belatedly. Further, MoU for the year 2014-15 was not finalised. Thus, the purpose of entering into MoU with the GoMP to optimally drive the operations of the Company was defeated.

(Paragraphs 2.2.12 and 2.2.13)

#### Operational Activities

- The Company carried out expansion of Ready to Eat production unit and also procured plant for production of *khichadi* during 2009-11. However, due to non-construction of additional storage space along-with the expansion, the Company failed to operationalise *Khichadi* production plant even after lapse of four years from its procurement and incurred avoidable expenditure of ₹ 20.96 lakh on transportation of raw material from alternate location due to lack of sufficient storage space at RTE unit.

(Paragraph 2.2.17)

- The capacity utilisation of Bio-fertilizers plant of the Company declined from 62 per cent in 2010-11 to 35 per cent in 2014-15 due to failure of the Company to develop a marketing strategy to promote the sale of Bio-fertilizers and dependence on Government agencies for sale of Bio-fertilizers.

(Paragraph 2.2.19)

- MAF was engaged in traditional farming activities and did not undertake the activities as per its objectives i.e. production of seeds, demonstration of cultivation methods and training to farmers. Further, the utilisation of agricultural land ranged between 22.27 per cent to 48.41 per cent in *Kharif* season and 41.42 per cent to 51.85 per cent in *Rabi* season during 2010-11 to 2014-15 due to non provision of irrigation facility. Due to under-utilisation of the allotted land by MAF, GoMP transferred 679.89 hectares land to Commerce, Industries and Employment Department in October 2012.

(Paragraphs 2.2.20 and 2.2.22)

### Monitoring and Internal Control

- The internal control mechanism was deficient as there was no system for watching the timely utilisation of grants/subsidy and timely disposal of non-moving stores and unserviceable assets. Due to non-holding of regular meetings of Board of Directors of the Company, the timely decision making and monitoring process was hampered.

(Paragraphs 2.2.25 and 2.2.26)

## Introduction

**2.2.1** Madhya Pradesh State Agro Industries Development Corporation Limited, (Company) Bhopal was incorporated in March 1969 as a Joint Venture Company of Government of Madhya Pradesh (GoMP) and Government of India (GoI) for the promotion of agriculture and agro industries in the State. The Company is under administrative control of Department of Horticulture and Food Processing, GoMP.

The main objectives of the Company are to accelerate and increase agriculture production, contribute to the production of principal and supplementary food and contribute to the agro-industrial development of Madhya Pradesh.

The Company is engaged in production and trading of Ready to Eat (RTE) products (*Gehu-Soya Barfi, Aata-Besan Laddu, Halwa, Bal-Aahar and Khichadi*), trading of various agricultural implements and inputs, cultivation of various crops/horticulture/ nursery items at Mechanised Agricultural Farm and production and sales of bio-fertilizers. Activity-wise sales/turnover of the Company is given in **Table 2.2.1**.

**Table 2.2.1**

(₹ in crore)

Particulars	2010-11		2011-12		2012-13		2013-14 <sup>1</sup>	
	Turnover	%	Turnover	%	Turnover	%	Turnover	%
Ready to Eat Products	485.11	51.60	635.43	50.83	655.99	53.49	671.68	51.92
Agricultural Implements and Inputs	451.18	48.00	609.69	48.77	564.17	46.00	616.17	47.63
Crops/Horticulture/ Nursery Items	0.93	0.10	1.25	0.10	2.73	0.23	1.91	0.15
Bio-fertilizers	2.80	0.30	3.76	0.30	3.48	0.28	4.01	0.31
<b>TOTAL</b>	<b>940.02</b>	<b>100</b>	<b>1250.13</b>	<b>100</b>	<b>1226.37</b>	<b>100</b>	<b>1293.77</b>	<b>100</b>

During the four years from 2010-11 to 2013-14 the sales/turnover of the Company ranged from ₹ 940.02 crore to ₹ 1293.77 crore and net profit ranged from ₹ 15.16 crore to ₹ 51.20 crore.

### Organisational setup

**2.2.2** The management of the Company is vested in the Board of Directors (BoD). As on 31 March 2015, there were seven directors, of whom six including Chairman and Managing Director were nominated by GoMP and one director by the GoI.

The Managing Director is chief executive of the Company who is assisted by two General Managers, four Deputy General Managers and seven Regional Managers. The Company has a Head Office at Bhopal, seven Regional Offices<sup>2</sup> (ROs) and 50 District Offices (DOs). The Company owns a Mechanised Agricultural Farm (MAF) at Babai, an RTE production unit at Badi and Bio-fertilizer Plant (BFP) and Workshop both at Bhopal which are headed by respective in-charge. The organization chart of the Company is given in *Annexure-2.2.1*.

Besides this, the Company is holding 30 *per cent* shares in three Joint Venture (JV) Companies with private parties (M.P. Agro Nutri Foods Limited, Indore; Madhya Pradesh Agro Food Industries Limited, Mandideep and M.P. Agrotonics Limited, Mandideep) to meet the demand of RTE products from Woman and Child Development Department (WCDD).

### Audit Objectives

**2.2.3** The Performance Audit was undertaken to assess whether;

- Sound financial management system was in place;
- Plans were prepared and implemented for driving the activities of the Company in consonance with its objectives;
- Operations of the Company including farming, production, rendering of products and services were carried out efficiently and economically; and
- Internal control and monitoring mechanism was adequate and commensurate with the size and nature of the organisation.

<sup>1</sup> Annual accounts of the year 2013-14 is provisional accounts as furnished by the Company.

<sup>2</sup> Bhopal, Indore, Ujjain, Gwalior, Jabalpur, Sagar and Satna

### Audit Criteria

2.2.4 The audit criteria for the performance audit was drawn from the following sources:

- Policies, guidelines & directions framed or issued from time to time by GoMP and GoI viz. Food Processing Policies;
- Various schemes objectives and targets/Memorandum of Understandings (MoUs) for the supply of RTE products;
- Memorandum of Association, Articles of Association of the Company; and
- Agenda and minutes of the board meetings.

### Scope and methodologies of Audit

2.2.5 The present Performance Audit was conducted during April to June 2015 to assess the performance of the Company during 2010-11 to 2014-15 covering Head Office (HO), all the seven ROs, 17 DOs (i.e. 34 *per cent* of the total 50 DOs based on geographical distribution in the State), MAF, RTE production unit and BFP of the Company. We also reviewed the action taken by the management on the recommendations of COPU on the previous Performance Audit on the working of the Company for the period from 2004-05 to 2008-09 included in the Report of the Comptroller and Auditor General of India (Commercial) for the year ended 31 March 2009, GoMP and observations in this regard have been included in the present report.

We explained the audit objectives, audit criteria, scope and methodologies of audit to the Government/Company during entry conference held on 8 April 2015. Audit findings were reported to the Company and Government in August 2015. Replies of the Government and Company were received in October 2015. Audit findings were discussed with Principal Secretary and Managing Director of the Company in exit conference held on 14 October 2015. Views and replies of the Company and Government have been suitably incorporated in the Report.

### Audit Findings

Audit findings are discussed in the succeeding paragraphs.

### Financial Management

#### *Financial position and working results*

2.2.6 The Company had finalised (October 2015) its accounts up to 2012-13 and provisional accounts for the year 2013-14. The financial position and working results of the Company for the years 2010-11 to 2013-14 are given in *Annexure-2.2.2* and *Annexure-2.2.3*.

A review of financial position and working results of the Company for the years 2010-11 to 2013-14 revealed that the turnover of the Company increased from ₹ 940.02 crore in 2010-11 to ₹ 1293.77 crore in 2013-14. Similarly net profit of the Company increased from ₹ 15.16 crore in 2010-11 to ₹ 51.20 crore in 2013-14.



The turnover mainly includes value of supply of RTE products (ranging from 50.83 per cent to 53.49 per cent) on demand of the Government and sale of agricultural implements (ranging from 46.00 per cent to 48.77 per cent) to farmers mostly on subsidy by the Government as detailed in **Table 2.2.1**. The sale prices include profit margin of 10 per cent in case of own production of RTE products, 2.5 per cent in case of supply of RTE products through JVs and varying per cent on agriculture implements. Thus, the Company had assured profit on its operations.

However, the return on capital employed drastically decreased from 98.65 per cent in 2010-11 to 38.93 per cent in 2012-13 and marginally increased to 46 per cent in 2013-14<sup>3</sup>, indicating fall in performance of the Company. Government stated (October 2015) that the return on capital employed decreased due to increase in the shareholders fund. The fact remains that there was no proportionate increase in return on capital employed along with increase in capital employed.

### ***Delay in finalisation of Annual Accounts***

**2.2.7** As per Section 210 of the Companies Act 1956 and Section 129(2) of the Companies Act 2013 (applicable from April 2014), every Company has to finalise and place in the Annual General Meetings its Annual Financial Statements within six month of the end of the financial year.

**Due to non-development of common codes of account heads there was delay in consolidation and finalisation of accounts.**

The Company has not finalised its accounts for the years 2013-14 and 2014-15 so far (October 2015). We observed that accounting of District Offices (DOs) of the Company was being done using an accounting software i.e. Tally.ERP 9. However, the compilation/consolidation of the accounts of these DOs in HO of the Company was being done on manual basis, though the accounting software provided facility of integration of accounts as common codes for account heads were not developed. This was causing delay in finalisation of accounts.

Government stated (October 2015) that the accounts for the year 2013-14 is under finalisation and services of professionals are being taken for removal of difficulties in consolidation through accounting software.

### **Recommendation:**

The Company should develop common codes of account heads to timely finalise its annual accounts

### ***Deficient management of surplus funds***

**2.2.8** The Company had cash and cash equivalents amounting to ₹ 182.07 crore, ₹ 183.22 crore, ₹ 251.44 crore, ₹ 281.12 crore and ₹ 248.11 crore as at the end of the last five years from 2010-11 to 2014-15 respectively. Company invests its surplus funds in short term deposits.

**The Company invested surplus funds in short term deposits without inviting competitive offers.**

We noticed that the Company does not have mechanism for periodically identifying surplus funds by preparing cash budget/forecast for investment in long term deposits for earning better returns. The funds amounting to ₹ 134.03 crore,

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<sup>3</sup> Based on provisional accounts for the year 2013-14.

₹ 171.86 crore, ₹ 228.29 crore, ₹ 305.35 crore<sup>4</sup> and ₹ 291.31 crore<sup>5</sup> available at the end of last five years from 2010-11 to 2014-15 respectively were invested mainly in short term fixed deposits without inviting competitive offers. Thus, the Company did not ensure optimum returns on investment of surplus funds.

Government accepted the audit observation and stated (October 2015) that detailed instructions have been issued to DOs for the transfer of surplus funds to HO and Fixed Deposits would be made after inviting the competitive rates at HO level.

**Recommendation:**

The Company should prepare cash budget regularly to find out cash surplus for investment in fixed deposits on long term basis to optimize the returns.

***Deficiencies in management of trade receivables***

**2.2.9** The Company procures agricultural implements from various producers/agencies after entering into rate contracts and supplies these implements to farmers/departments of GoMP through its DOs. The amount outstanding against the purchasing departments is reflected in accounts as trade receivables. The trade receivables of the Company stood at ₹ 231.44 crore at the end 2014-15 as per provisional figures.

From the review of the trade receivables we observed that:

- Out of the total outstanding trade receivables of ₹ 231.44 crore as on 31 March 2015, ₹ 8.65 crore was outstanding for more than three years and ₹ 15.99 crore was outstanding for more than one year and less than three years. The trade receivables includes amount of ₹ 68.73 crore (29.69 per cent) from Agriculture department. The receivables could not be recovered mainly due to inadequate records in respect of trade receivables.
- There were adverse (credit) balances in the accounts under the head trade receivables of ₹ 10.09 crore, ₹ 16.58 crore, ₹ 20.88 crore and ₹ 22.37 crore at the end of 2010-11, 2011-12, 2012-13 and 2013-14, respectively, which were not reconciled. Therefore, trade receivables balances shown in the accounts were not reliable.

**Adverse balances under the head trade receivables were not reconciled.**

Thus, there are risks of long overdue receivables turning bad besides the probability of fraudulent transactions due to non-reconciliation or confirmation of balances from receivables.

In the exit conference (October 2015) Managing Director stated that the steps would be taken for recovery/adjustment of trade receivables during finalisation of accounts for the year 2014-15.

<sup>4</sup> There was negative balance in current account under 'cash and bank balance head; hence FDs were more than the net cash and bank balance.

<sup>5</sup> This is as per the information provided by the management.

**Recommendation:**

The Company should prepare an action plan for reconciliation of trade receivable to identify actual amount of trade receivable and to ensure their timely realisation.

***Unutilised balance of subsidies and advances***

**2.2.10** The Company is engaged in trading of agricultural implements, fertilizers, pesticides, installation of bio-gas plants and implementation of schemes for food processing, horticulture and agriculture development, for which it receives subsidies/advances from the Government for direct disbursement to beneficiaries or for subsidising products etc.

We observed that subsidies and advances amounting to ₹ 34.92 crore (*Annexure-2.2.4*) were remaining unutilised as at the end of March 2014. Out of this, ₹ 3.64 crore (*Annexure-2.2.5*) was pending for utilisation/disbursement since 2007-08. The Company had not reconciled subsidy received and passed on to beneficiaries. In absence of reconciliation, amount of subsidies/advances remaining unutilised were not ascertained for utilisation or surrender to the Government.

Government accepted the audit observation and stated (October 2015) that efforts would be made to settle pending entries with respective credits and the unutilised amount would be returned to concerned department.

**Recommendation:**

The Company should reconcile and identify actual amount of subsidies and advances remaining unutilised and to take action for its utilisation or surrender to the Government.

***Avoidable payment of Entry Tax***

**2.2.11** The Company is engaged in trading of water tankers which are subject to levy of Entry Tax by GoMP. The approved purchase price (as fixed by MARKFED) of water tankers was inclusive of Entry Tax at the rate of one *per cent* of the cost.

We observed that during 2010-11 to 2013-14, eleven suppliers of water tankers have collected Entry Tax of ₹ 1.16 crore from the Company on purchase of water tankers, which was not further paid to the Commercial Tax Department by the suppliers.

Government stated (October 2015) that the Company withheld the amount of ₹ 1.16 crore from suppliers' bills and instructions for not allowing Entry Tax in future at DO level have been issued. Fact remains that the final adjustment of amount withheld from suppliers was pending in the books of accounts.

Subsidies/advances amounting to ₹ 3.64 crore were pending for settlement since 2007-08.

## Planning

### *Absence of Long Term and Strategic Planning*

**2.2.12** The Company is engaged in trading activities of agriculture implements and inputs. With a view to maintain and expand its market share in the changing business environment, it needs a long term to medium term perspective and strategic plan in respect of these activities to compete with the private players as well as the other government agencies. We, however, observed that the Company has not prepared any perspective and strategic plan. The Company prepared only the projection of business and budget estimates for the ensuing years on annual basis. Besides, targets are set in the MoUs with GoMP on annual basis.

### *Deficiencies relating to Memorandum of Understanding with GoMP*

**2.2.13** Every Public Sector Undertaking in the State is required to enter into MoU with GoMP every year, detailing the activities proposed to be undertaken in the ensuing year. The MoUs entered in to by the Company with GoMP mainly include financial/commercial targets and further, evaluation of the achievements against previous year targets. In this regard following deficiencies were noticed:

#### *(a) Delay in entering MOUs:*

MoU is required to be signed by the Public Sector Undertakings before the commencement of the relevant year. However, we observed that MoUs with GoMP for the years 2010-11, 2011-12, 2012-13 and 2013-14 were signed belatedly in the month of February 2011, February 2012, January 2013 and October 2013 i.e. at the fag end of the relevant financial year. MoU for the year 2014-15 was not finalised even though the financial year is long over. Thus, the purpose of entering MoU with the GoMP to optimally drive the operations of the Company was entirely defeated.

Government replied (October 2015) that the MoU is finalised by a taskforce established by the GoMP and the Company follows the same MoU. Fact remains that long delays in finalisation of MoUs defeated vary purpose of entering into MoUs.

#### *(b) Non-fixation of activity-wise physical targets:*

The targets fixed in the MoUs were not in physical terms of the different activities being undertaken by the Company. The financial targets in terms of overall business and achievements there against for the period 2010-11 to 2013-14 are given in **Table 2.2.2**.

Particulars	2010-11	2011-12	2012-13	2013-14
Targets	78000	110000	142000	142400
Achievements (as per MOU)	101700	134806	133208	139852
Achievement (%)	130	123	94	98

As already pointed out above, the entire target fixation process was rendered meaningless because the targets were fixed belatedly, generally in the last quarter

There was inordinate delay in finalisation of MoUs with GoMP for setting financial/commercial targets.

of the relevant year. Despite this, as seen from the table above, the Company failed to fully achieve the targets during the years 2012-13 and 2013-14. Further, it was also observed that achievements mentioned in MOUs differ with the certified/provisional annual accounts.

Further, we observed that following significant targets in MOUs were also not achieved:

- As planned in the MoU (2013-14), the Company could not expand its business in the open market and it was largely dependent on the sale of RTE products to WCDD which alone constituted 52 *per cent* of Company's turnover during 2013-14.
- In the MoUs for the years 2010-11 to 2013-14, the Company planned for better utilisation of non-performing assets. The COPU suggested (March 2012) for establishment of a new plant on the land available after disposal of existing non-functional Organic Manure Plant at Gwalior. However, we noticed that the plant could not be disposed of even after lapse of 15 years since it became non-functional. Consequently the land available at plant site could not be used for setting up a new plant or any other purpose. During the exit conference the GoMP while accepting audit observation stated (October 2015) that it has been decided to auction the material at plant and to handover the plant site to Municipal Corporation, Gwalior.
- The Company had targeted in the MoUs for years 2011-12 to 2013-14 for commercial utilisation of vacant land of Putali-ghar and Indrapuri, Bhopal to generate income from these assets. We noticed that no action was taken in this regard.
- In the MoU for the year 2010-11, the Company planned for disposal of hazardous waste lying at its pesticides formulation plant, Bina since 1991-92. The COPU also recommended (March 2012) for disposal of hazardous waste. However, hazardous waste had not been disposed off so far (October 2015).

Government stated (October 2015) that the efforts are going on for proper disposal of hazardous waste. Fact remains that even after recommendation of COPU, Company failed to dispose off the hazardous waste.

Evidently, the planning process in the Company was flawed as no long term strategic planning system was in place and MoUs with GoMP for steering its continuing activities of trading in agricultural implements, farming, RTE products and production of bio-fertilizers were finalised belatedly at the fag end of the respective years. Therefore the Company was operating on ad-hoc basis.

Government stated (October 2015) that as per the availability of resources, requirement of Government schemes and demand raised by the Departments, the Company prepares its operational plans as well as production plan for BFP and MAF.

Reply is not acceptable as for the effective conduct of activities of the Company on continuing basis, long term planning was required. In absence of planning capacity of bio-fertilizers plant was not utilised to the full extent and total land

available at MAF was not used for cultivation as discussed in para 2.2.19 and 2.2.22 respectively.

**Recommendation:**

The Company should prepare long term plan for its continuing activities and ensure timely finalisation of MOU for adequate planning to drive its operational activities.

**Operational activities**

**2.2.14** The Company during the period of review was engaged in operating activities of production and supply of RTE products, purchase and sale of agricultural implements and inputs, production and supply of bio-fertilizers, cultivation of crops at MAF and implementation of schemes as assigned by GoMP. The shortcomings noticed in the operational activities are discussed in the succeeding paragraphs.

**Production and supply of 'Ready to Eat' products**

**2.2.15** The demand and supply of RTE products during the years 2010-11 to 2014-15 is given in **Table 2.2.3**.

**Table 2.2.3**

Year	Demand from WCDD	Supply				
		Through RTE production unit		Through JVs		Total Supply
		Quantity in MTs	Percentage	Quantity in MTs	Percentage	Quantity in MTs
2010-11	154087.44	6813.08	4.42	147274.36	95.58	154087.44
2011-12	193261.99	12841.44	6.64	180520.48	93.36	193361.91
2012-13	201146.34	16564.34	8.23	184582.00	91.77	201146.34
2013-14	190319.43	18436.92	9.68	171882.51	90.28	190319.43
2014-15	187071.72	19396.00	10.33	167675.72	89.67	187071.72

It may be seen from the above table that the Company's share in supply of RTE products ranged from 4.42 *per cent* to 10.33 *per cent* during the years 2010-11 to 2014-15. The remaining demand of RTE products from Women and Child Development Department (WCDD) was met through three JV Companies. Considering the assured margin of 10 *per cent*, the Company should have planned for increase its share in the supply of RTE products by enhancing its production capacity.

**Higher Pricing of RTE products**

**2.2.16** As per the cost data provided by the Company to WCDD for fixation of sales price of RTE products, the projected profit margin was limited to 10 *per cent* for supplies from the own RTE production unit as well as plants of the JVs. Sales price of the RTE products projected in the cost data were approved by the WCDD. The sales prices were subject to revision in every six months as mentioned in the cost sheet.

**Actual profit margin earned by the RTE production unit of the Company was significantly higher than the approved profit margin.**

We observed that the sale price for RTE products were fixed in May 2009 which was revised only once in August 2013 during 2010-11 to 2014-15 instead of revision in every six months period. We further observed from the cost data provided by the production unit, that actual profit margin earned by the own RTE production unit of the Company ranged from 23.44 *per cent* to 29.35 *per cent* (except 6.41 *per cent* during the year 2012-13) which was significantly higher than the approved margin of 10 *per cent* during 2010-11 to 2013-14.

We further analysed that while fixing sale price, non-consideration of sale value of gunny bags of the raw material, inclusion of non-applicable taxes, excess distance was considered for transportation cost of raw material and cost for fuel was taken on higher side resulting in fixation of higher sale price of RTE products. The higher profit margin on these elements earned by the Company worked out to ₹ 16.94 crore during the years 2010-11 to 2013-14. Consequently Government exchequer was overburdened to that extent.

Since the sales price fixed was also applicable on the supplies made by JVs, hence the higher profit margin was earned by them also. As the cost data of JVs was not available, the higher profit margin earned by them could not be ascertained in audit.

Government stated (October 2015) that it is true that the profit of RTE production unit is more than 10 *per cent* but the profit of JVs was ranging from 4.5 *per cent* to 7 *per cent* during the years 2009-10 to 2014-15. Further, it was also stated that audit suggestion would be taken care of at the time of preparation of cost sheet in future.

Reply is not acceptable as the Company quoted the profit of JVs from their profit and loss accounts. Above percentage of profit margin pertains to overall business of the JVs which includes sales of other items also. Further, the Company has also not obtained cost data from the JVs and cost sheet has not been revised after every six months as per the actual cost incurred by the RTE products unit, Badi and JVs.

**Recommendation:**

The Company should revise cost data for fixation of sale price of RTE products on six monthly basis based on the recent input cost to ensure that sale prices are not unduly inflated at the cost of Government exchequer.

***Delay in creation of storage capacity and non-operationalisation of Khichadi Plant***

**2.2.17** The RTE production unit was setup (1995-96) with initial annual capacity of 4800 MT per year for production and supply RTE products to the WCDD. Later, the Company carried out modernization (2009-10) of RTE production unit, enhanced capacity upto 12000 MT per year and further procured plant (2010-11) for production of *Khichadi* with capacity of 15 MT per day at the cost of ₹ 14.52 lakh.

We observed that the Company had not started (October 2015) production of *Khichadi* at RTE production unit even after the lapse of four years from the procurement of *Khichadi* production plant due to availability of limited space in

the RTE production unit. As a result, the Company is not supplying *Khichadi* to WCDD and fully dependent on its JVs' plants for this purpose.

**Due to non-construction of additional storage space along with capacity expansion, the Company failed to operationalise the *khichadi* production plant and incurred avoidable expenditure of ₹ 20.96 lakh on transportation of raw material.**

The Company belatedly decided (February 2012) to construct godown/silo of 2000 MT to meet the increased requirement of storage capacity due to expansion of the production capacity and procurement of *Khichadi* plant. However, the construction of godown/silo has not been taken up so far (October 2015), the reasons for which were not on record.

We further observed that resultantly due to lack of sufficient storage facility at RTE production unit the Company had to make alternate arrangement for storage of raw material at its JVs plants situated at Mandideep and lift back the same as per availability of storage space at RTE production unit. The JVs' plants at Mandideep are situated at a distance of about 78 km from the RTE production unit at Badi. Therefore, the Company had to incur avoidable expenditure of ₹ 20.96 lakh on transportation of raw material between JVs' plants and RTE production unit during 2012-13 to 2014-15.

Thus, absence of a plan for construction of additional storage capacity along with capacity expansion of the RTE production unit and subsequent inaction for construction of godown/silo had resulted in avoidable expenditure of ₹ 20.96 lakh on transportation of raw material.

Government stated (October 2015) that items purchased for the plant (except elevator and hopper amounting to ₹ 1.57 lakh) are being used in RTE production unit as an alternate arrangement. Further, in the exit conference (October 2015) while accepting the audit observation Company stated that they are trying to relocate the RTE production unit from Badi to Bhopal, hence the Company was not going forward on the RTE production unit Badi.

Fact remains that even after the procurement of the plant, the Company could not start the production of *Khichadi* due to non-availability of storage space and the Company is fully dependent on JVs for supply of *Khichadi*.

#### **Recommendation:**

The construction of storage facility and operationalisation of *khichadi* plant at RTE production unit should be completed in a time bound manner.

### **Performance of Bio-fertilizer plant**

**2.2.18** The Bio-fertilizer plant (BFP) having annual production capacity of 1000 MT per annum was established in 1986. The Bio-fertilizers were being produced at BFP according to season wise (*Rabi and Kharif*) demand in the State. The useful life of Bio-fertilizers is about one season of six months and it requires sale within the stipulated period.

The Ministry of Agriculture, GoI issued (January 2007) Fertilizer Control Order for promotion of Bio-fertilizers and advised the State Governments to educate farmers about the importance of Bio-fertilizers for increasing agricultural yields. The COPU in respect of previous Performance Audit on the workings of the Company had also recommended (2012) for making efforts for enhancing sales of



bio-fertilizers by educating farmers about its importance, sufficient promotion of such products and directed to analyse the reasons for decrease in sales.

***Under-utilisation of capacity of Bio-fertilizer plant***

**2.2.19 Table 2.2.4** gives details of total production, capacity utilisation, sales, and profit on sale of Bio-fertilizers:

**Table 2.2.4**

Year	Actual Production (MT)	Capacity utilisation against production capacity of 1000 MT/year (%)	Sales (₹ in lakh)	Profit/Loss for the year (₹ in lakh)	Percentage of profit to sales
2010-11	621.00	62.10	394.71	54.62	13.84
2011-12	660.00	66.00	384.46	79.26	20.62
2012-13	604.00	60.40	329.52	149.00	45.22
2013-14*	648.00	64.80	467.60	178.65	38.21
2014-15*	354.00	35.40	188.89	33.20	17.58

*\*Figures are provisional*

**Capacity utilisation of Bio-fertilizer plant declined from 60 per cent in 2010-11 to 35 per cent in 2014-15 due to failure of the Company to promote sale of Bio-fertilizers.**

It may be seen from above table that despite the order of GoI for promotion of Bio-fertilizers, the capacity utilisation ranged between 60 per cent to 66 per cent during the years 2010-11 to 2013-14 and subsequently decline to 35.40 per cent during 2014-15. We noticed that the Company had not created any marketing strategy for promoting the sales of Bio-fertilizers and is wholly dependent on other Government agencies for the sales of Bio-fertilizers. Due to this the BFP was under utilised.

We further observed that even though the production was carried out on the basis of demands informed by DOs, the Company had accumulated unsold expired stock of Bio-fertilizers measuring 1001.96 MT as of 31 March 2015 resulting in loss of ₹ 98.51 lakh.

Government stated (October 2015) that maximum sales of Bio-fertilizers occur during the *Kharif* season. The main reason for decrease in sale of Bio-fertilizer was change in the Bio-fertilizer policy of Government during *Kharif* season 2014. Further, Managing Director stated (October 2015) in exit conference that efforts are being made to popularise the Bio-fertilizers among farmers.

Reply is not acceptable as the reasons for under utilisation of plant during the period from 2010-11 to 2013-14 were not explained and there was no strategy for increasing sale of Bio-fertilizers and to optimally utilise the production capacity of the plant.

**Recommendation:**

The Company should develop a marketing strategy for promoting sale of Bio-fertilizers by educating farmers about benefits of Bio-fertilizers.

### Performance of Mechanised Agriculture Farm

#### *Non- fulfillment of the objectives of MAF*

MAF did not undertake the activities envisaged in its objectives.

**2.2.20** Mechanised Agriculture Farm (MAF), Babai was established in 1971 with the objectives of production and distribution of quality seeds to the farmers, use of latest agricultural machinery/implements in farming, demonstration of cultivation methods and functioning as a training centre for the farmers. GoMP allotted (1971) 1316.76 hectares land to the Company, out of which 376.47 hectares land was developed for cultivation, 4.05 hectares for nursery and 194.40 hectares for orchards.

We observed that the MAF was engaged in traditional farming activities such as cultivation of crops/horticulture etc. and did not undertake the activities envisaged in its objectives as mentioned above. MAF also failed to utilise total land allotted. As a result, the GoMP had transferred (October 2012) 679.89 hectares land of MAF to Commerce, Industries and Employment (CI&E) Department.

Government stated (October 2015) that the land is not suitable for other modern purposes like seed cultivation; hence traditional crops are being produced in the selected area of MAF. Further, the land has only been transferred to CI&E Department as per the instructions of Government.

Reply confirms that objective for establishment of MAF was primarily defeated.

#### *Financial performance of MAF, Babai*

**2.2.21** Table 2.2.5 gives the details of sales of agricultural and orchard production in MAF and profit/loss on such sales during the years 2010-11 to 2014-15.

Year	Sales	Profit/loss on sales	Percentage of profit/loss to sales
2010-11	93.69	-24.00	-25.62
2011-12	163.47	8.60	5.26
2012-13	274.54	26.87	9.79
2013-14*	215.92	-19.36	-8.97
2014-15*	74.23	-124.45	-167.65

*\*Figures are provisional*

It may be seen from the above table that the Company has incurred loss during the years 2010-11, 2013-14 and 2014-15 and marginal profit during 2011-12 and 2012-13 on sale of agricultural and orchard produce in MAF. The reasons for such fluctuations in loss incurred by MAF during 2013-14 and 2014-15 were under utilisation of available land and poor performance of nursery as explained in Paragraphs 2.2.22 and 2.2.23. Further sale of grains decreased from ₹ 1.26 crore in 2013-14 to ₹ 0.59 crore in 2014-15 causing sharp increase in loss.

Government while accepting the audit observation stated (October 2015) that during 2014-15 loss was incurred due to sudden decrease in price of paddy. Fact remains that the Company failed to take concrete steps for improvement in performance of MAF.

Utilisation of land for cultivating at MAF ranged from 22.27 per cent to 51.85 per cent during 2010-15.

### ***Poor Utilisation of available land for cultivation of crops in MAF***

**2.2.22** After transfer of 679.89 hectares land to CI&E Department in October 2012, the MAF had land measuring 376.47 hectares for cultivation.

The utilisation of available land for cultivation ranged from 22.27 per cent to 48.41 per cent in *Kharif* season for cultivation of paddy and 41.42 per cent to 51.85 per cent in *Rabi* season for cultivation of wheat during 2010-11 to 2014-15 as detailed in *Annexure-2.2.6*. Thus, the Company did not plan for optimum utilisation of available land for agriculture.

Government stated (October 2015) that utilisation of land has been done as per availability of irrigation capacity and staff. Fact remains that the Company has not taken steps for optimum utilisation of land available including provision for irrigation facility.

#### **Recommendation:**

The Company should plan for utilisation of the unutilised land in the farm to increase its turnover and profit margin.

### ***Decline in performance of nursery at MAF***

**2.2.23** A nursery was being maintained at MAF, Babai which was developed during the year 1971-72. The total area of nursery is 4.05 hectares. We noticed that sales of the plants reduced from 45687 numbers in the year 2010-11 to 6777 numbers in 2014-15. We did not find that management has done any analysis for ascertaining reasons for declining sale of plants and prepared any plan for increasing the sale of plants from nursery.

Government stated (October 2015) that Company is dependent on Department of Horticulture and Food Processing for the demand of nursery plants and due to less demand in the year 2014-15 the sale of plants from the nursery had reduced.

The fact remains that Company has not made efforts to explore new areas of demand instead of dependency on Government.

### ***Irregularities in auction/tendering of trees and orchards***

**2.2.24** The Company had developed orchards of fruits, vegetables and trees on 194.40 hectares of land available at MAF. The produce of these orchards are sold by inviting offers through tenders. Company made sales of ₹ 1.62 crore from these orchard during the period 2010-11 to 2014-15 through tendering.

Review of records pertaining to sale of orchards and trees at MAF, Babai revealed the following shortcoming;

- i) Base/upset price fixation/valuation of saleable items were not being done by the Company to ensure reasonableness of price bids.
- ii) The amount of EMD being demanded from the bidders was not according to the number of trees in the orchard and estimated/actual bid value as detailed in *Annexure-2.2.7*.

Government stated (October 2015) that the Company has followed its standard practice for auction of orchards/trees and the Company also involved specialists in finalisation of sale rates. Fact remains that the Company has not fixed the upset price and the EMD had not been fixed rationally.

### **Internal Control and Monitoring Mechanism**

**2.2.25** Internal control and Monitoring are essential parts of the management activity. An efficient and effective system helps the management in achieving its' laid down objectives, compliance to procedures and financial discipline.

The Internal control and monitoring mechanism prevalent in the Company was deficient as there was no effective control/monitoring for timely finalisation of accounts (Para 2.2.7), timely recovery and reconciliation of very old Trade receivables (Para 2.2.9) and timely utilisation of subsidies and advances (Para 2.2.10). Further, system for timely disposal of non-moving damaged and surplus inventory accumulated in the branches was not in place as discussed in Para 2.2.27.

#### ***Absence of regular meetings of Board of Directors***

**2.2.26** As per Section 285 of the Companies Act, 1956 and Section 173 (1) of the Companies Act, 2013 (applicable from April 2014), at least four meetings of the BoD of the Company shall be held every year.

We observed that during the years 2010-11 to 2014-15 only 12 meetings were held against the required 20 meetings. We further observed that significant matters of

(i) Commercial utilisation of pesticide plant at Bina (ii) Development of MAF as model farm on Public Private Partnership basis (iii) Creating additional storage capacity of 2000 MT at RTE production unit, and (iv) Change in the structure of the Company with a view to change in the needs of farmers and business competition, were submitted to and deliberated in the BoD meetings held during 2010-11 to 2013-14, however further progress in these matters was not submitted to the BoD leading to their non-monitoring at higher level.

Thus, non-holding of requisite meetings at the apex level has evidently impacted the timely decision making and monitoring process in the Company.

Management assured (October 2015) that the Company would hold BoD meetings as per the Companies Act in future. Further, the action would be taken to resolve the issues raised by the audit.

#### ***Non-disposal of unserviceable assets/non-moving items***

**2.2.27** The Company has been doing physical verification of stores/stock annually for identifying shortage/surplus therein.

We noticed from the scrutiny of store records and physical verification reports of DOs and production units that stock valuing ₹ 1.14 crore (*Annexure-2.2.8*) was lying idle in the stores as non-moving and unserviceable assets/store items. The

**Stock and stores of ₹ 1.14 crore were lying idle and shortage of ₹ 11.30 lakh was also noticed.**

Company has, however, not prepared age-wise breakup of these items. We further observed that at nine DOs/production units there were shortage/missing goods/stocks valuing ₹ 11.30 lakh (**Annexure-2.2.9**). Management has not taken any action for disposal of the non-moving/defective stock/stores and has not fixed responsibility any of the officials for the shortage/missing items.

Management stated (October 2015) that the instructions to DOs for disposal of unserviceable goods have been issued. Fact remains that Company had not disposed the unserviceable goods in timely manner.

**Recommendation:**

The Company should hold required number of meetings of Board of Directors for timely decision making and effective monitoring. The Company should also prepare a system for timely disposal of unserviceable assets and non-moving store.

**Conclusion and Recommendations**

- Due to non development of common codes of account heads, the Company was unable to consolidate accounts of its District Offices within time. This has resulted in delayed finalisation of annual accounts. As of 31 October 2015 annual accounts for the year 2013-14 and 2014-15 were in arrears.

The Company should develop common codes of account heads and ensure timely finalisation of its annual accounts

- The Company had not prepared any perspective and strategic plan for driving its activities for attainment of objectives. The annual Memorandum of Understandings (MoUs) with GoMP containing financial/commercial targets for the years 2010-11 to 2013-14 were finalised belatedly. Further, MoU for the year 2014-15 was not finalised. Thus, due to delayed/non-finalisation of MoUs, their purpose to optimally drive the operations of the Company was defeated.

The Company should prepare long term plan for its continuing activities and ensure timely finalisation of MOU for adequate planning to drive its operational activities

- Due to non-revision of sale price of RTE products after every six months as stipulated in approved cost sheet, the sale price for supply to Women and Child Development Department were fixed on higher side. Consequently, the Company earned higher profit of ₹ 16.94 crore overburdening the Government exchequer to that extent.

The Company should review fixation of sale prices of RTE products on prescribed six monthly basis to ensure that the sale prices are not unduly inflated at the cost of Government exchequer.

- Due to non- construction of storage space along with the expansion of RTE production unit at Badi, the Company failed to operationalise *Khichadi* production plant even after lapse of four years from its procurement and also incurred avoidable expenditure of ₹ 20.96 lakh on transportation of raw material from alternate location.

The construction of storage facility and operationalisation of *khichadi* plant at RTE production unit should be completed in a time bound manner.

- There was low utilisation of available land at Mechanised Agricultural Farm (MAF), Babai which ranged from 22.27 per cent to 48.41 per cent in *Kharif* season and 41.42 per cent to 51.85 per cent in *Rabi* season during 2010-11 to 2014-15.

The Company should put in place a plan for better utilisation of available land at MAF, Babai to increase its turnover and profitability.

- The internal control mechanism was deficient as there was no system for watching the timely utilisation of grants/subsidy and timely disposal of non-moving stores and unserviceable assets. Due to non-holding of regular meetings of Board of Directors of the Company, the timely decision making and monitoring process was hampered.

The Company should hold required number of meetings of Board of Directors for timely decision making and effective monitoring. The Company should also prepare a system for timely disposal of unserviceable assets and non-moving store.

## 2.3 Development of New and Renewable Energy in Madhya Pradesh

### Executive Summary

#### Introduction

For the promotion of renewable energy (RE) resources of the State, Madhya Pradesh Urja Vikas Nigam Limited (Company) was incorporated on 25 August 1982. The RE activities in the State are classified into “Grid connected” and “Off-grid” projects. For implementation of the Grid connected projects, Office of Commissioner, New and Renewable Energy (Department) was setup (April 2010), whereas the Company undertakes the activities related to implementation of Off-grid projects.

The Performance Audit was conducted to assess the performance of the Department and the Company relating to development of Grid connected and Off-grid renewable energy in the State during 2010-11 to 2014-15. Following are the main findings of the Performance Audit.

#### Grid Connected Renewal Energy Projects

The installed capacity of RE in the State was only 1243 MW against the estimated potential of 39095 MW. The RE policies for Solar, Wind, Small Hydel and Biomass based energy projects formulated during October 2011 to July 2012 by Government of Madhya Pradesh were not based on the assessment of RE potential in the State, which was assessed belatedly in October 2014. Further, no specific targets for capacity addition were set and no long term/short term plans were prepared by the Department for development of RE. As a result, the potential of RE in the State could not be harnessed in a planned manner.

**(Paragraphs 2.3.2 and 2.3.8)**

- As of 31 March 2015, the projects of 453.22 MW in Solar (45 per cent), 665.30 MW (nine per cent) in Wind and 55.40 MW in Biomass (12 per cent) could only be commissioned against registered projects of 1007.50 MW, 7196.55 MW and 471.20 MW capacity respectively. Also no Small Hydel project was commissioned by the Department. Further, the projects of 247 MW in Solar (25 per cent), 833.35 MW (12 per cent) in Wind, 44.80 MW in Small Hydel (14 per cent) and 194 MW in Biomass (41 per cent) were deregistered by the Department.

The reasons for low percentage of commissioning and high deregistration were non-allotment of land to projects, disinterest shown by the developers, non-availability of the raw materials, insufficient tariffs for energy and long gestation period of the projects etc. As a result, the basic objective of RE policies to encourage participation of private developers to setup RE power projects had not been fulfilled.

**(Paragraphs 2.3.9, 2.3.13 and 2.3.14)**

- Undue benefit of ₹ 1.02 crore was extended to seven developers of Grid connected Wind and Biomass energy projects due to non-collection of performance guarantee for ensuring timely completion of projects on Government land.

**(Paragraphs 2.3.12 and 2.3.15)**

### Off-grid Renewal Energy Projects

- GoMP has not framed any specific policy and annual targets for installation of the Off-grid RE systems. In the absence of specific targets, the Off-grid installations were being done on the basis of adhoc demands received from beneficiaries. As a result, the full potential for Off-grid RE in the State could not be harnessed.

(Paragraph 2.3.17)

- During 2010-15, Company could commission only 3061 kWp capacity (45 per cent) of Solar Photovoltaic Power Plants (SPVPP) against the MNRE sanction of 6725 kWp capacity due to non-completion of the work by the suppliers and frequent cancellation of the work orders. Failure of the Company to analyse the reasons for non-completion of work by the suppliers and to take corrective action resulted in deprival of RE benefits to the beneficiaries though the beneficiary share of ₹ 34.08 crore was lying unutilised with the Company as on 31 March 2015.

(Paragraph 2.3.18)

- During 2010-15, the Company installed only 18.66 lakh litre per day (22.84 per cent) capacity of Solar water heater systems against 81.70 litre per day of capacity sanctioned by MNRE due to delay in retendering of the cancelled work orders. As a result the beneficiary share of ₹ 4.54 crore was lying idle with the Company as on 31 March 2015.

(Paragraph 2.3.19)

- In the Joint physical verification by audit team along with Company officials of 38 installed Solar photovoltaic power plant systems, only 26 systems (68 per cent) were found working, four systems (11 per cent) were not working and 8 systems (21 per cent) though working but were facing problems in spares/batteries etc. due to lack of maintenance by the suppliers in the absence of proper monitoring by the Company. Thus the Company failed to ensure long term sustainability and proper functioning of the installed systems resulting in deprival of intended benefits to the beneficiaries.

(Paragraph 2.3.20)

- Due to insufficient generation of RE in the State during the years 2010-15, the Power Distribution Companies could not meet the Renewable Purchase Obligation (RPO) targets fixed by the Madhya Pradesh Electricity Regulatory Commission which resulted in RPO shortfall aggregating to 6316.91 MU. Further, the Power Distribution Companies did not purchase the Renewable Energy Certificates of ₹ 3013.20 crore for the shortfall in RPO in contravention of the regulations.

(Paragraph 2.3.22)

### Introduction

**2.3.1** For the promotion of renewable energy (RE) resources of the State, Madhya Pradesh Urja Vikas Nigam Ltd, (Company) was incorporated on 25 August 1982. The Company receives fund from the Ministry of New and Renewable Energy



(MNRE), Government of India (GoI) as well as from Government of Madhya Pradesh (GoMP) for implementation of various RE schemes/Projects.

The RE activities in the State are classified into “Grid connected” and “Off-grid” projects. Grid connected projects produce energy generated from Solar, Wind, Small Hydel and Biomass source which is fed into the Grid. Off-grid projects include RE generated from Solar Photovoltaic Power plants, Street light systems, Home light Systems, Solar water heater systems, Solar photovoltaic water pump, the energy generated by which is consumed by the beneficiaries without feeding it into the Grid. For implementation of the Grid connected projects, Office of Commissioner, New and Renewable Energy (Department) was set up (April 2010), whereas the Company undertakes the activities related to implementation of Off-grid projects.

### Overall Power Scenario of Madhya Pradesh

**2.3.2** The total installed capacity (March 2015) of Power from all sources was 15320 Mega Watt (MW) in the State, out of which power from renewable energy sources constituted only 1243 MW (eight *per cent*). The estimated potential and installed capacity under various RE sources in the State as of 31 March 2015 is detailed in **Table 2.3.1**

The installed capacity of RE in the State was only 1243 MW against the estimated potential of 39095 MW

**Table 2.3.1**

Source of Renewable Energy	Potential in (MW)	Installed Capacity in (MW)	Power Generation during 2010-15 in (MU)
Solar	17672	453	575.92
Wind	19550	665	2087.01
Small Hydel	411	70	893.00
Biomass	1462	55	137.02
<b>Total</b>	<b>39095</b>	<b>1243</b>	<b>3692.95</b>

(Source: Information provided by Company and Department)

It is seen from the above table that as on 31 March 2015, the installed capacity of individual RE source in comparison to its estimated potential was mere three *per cent* each for Solar, Wind, Biomass projects and 17 *per cent* for Small Hydel projects. In the installed capacity of RE sources, the Wind energy constituted the maximum (54 *per cent*) followed by Solar (37 *per cent*), Small Hydel (six *per cent*) and Biomass projects (three *per cent*).

In the total energy generation of 3692.95 MUs from RE sources during 2010-15, the Wind energy projects contributed the maximum (56 *per cent*) followed by Small Hydel projects (24 *per cent*), Solar projects (16 *per cent*) and Biomass projects (four *per cent*).

### Organisational Setup

**2.3.3** The organisational setup of the Company comprises of Board of Directors at apex level. The Energy Minister, GoMP is the Chairman of the Company. The Managing Director is assisted by one Chief Engineer, one Superintendent Engineer, two Executive Engineers and Controller Finance and Accounts. The Office of Commissioner is headed by Principal Secretary, Department of New and Renewable Energy, GoMP and is assisted by Deputy Commissioner, four

Executive Engineers and an Accounts Officer. The organisational structure of the Company and the Department is given in **Annexure 2.3.1**.

### **Audit Objectives**

**2.3.4** The objectives of the Performance Audit were to assess whether:-

- Sound financial management mechanism was in place in the Company and the Department for economic and effective utilisation of the funds.
- The Company/Department prepared plans to increase contribution of renewable energy in the energy mix of the state in line with the renewable energy potential of each source as per policy of MNRE/GoI/GoMP.
- Implementation of the schemes/programmes was as per the plans framed and monitoring of schemes/programmes was adequate and effective.

### **Audit Criteria**

**2.3.5** The audit criteria for the Performance Audit were drawn from following sources:

- Guidelines of Ministry of New and Renewable Energy (MNRE) for implementation of New and Renewal Energy programmes
- GoMP policies and instructions/guidelines for the promotion of renewable sources of energy;
- Relevant Financial Rules/Regulations of GoMP and MPERC regulations 2008 on Cogeneration and generation of electricity from renewable source of energy.

### **Scope and Methodology of Audit**

**2.3.6** The Performance Audit was conducted during April to June 2015 covering the activities of the Department and the Company in respect of Grid connected and Off-grid projects respectively for the period 2010-11 to 2014-15. We test checked records of 152 out of 357 Grid connected projects (including 38 out of 94 commissioned projects and 21 out of 69 deregistered projects).

Further, the Head Office of the Company was selected along with four<sup>1</sup> District Renewable Energy Office (DREO) out of 37 DREOs across the State. In the selected four DREOs, 38 out of the 61 Solar Photovoltaic Power Plant (SPVPP) systems were selected for joint physical verification by the audit team along with Company officials.

The entry conference with the Principal Secretary, NRE Department, GoMP was held on 30 April 2015, wherein the audit objectives, methodology and coverage were discussed. The findings of audit were brought out to the notice of Department and the Company on 4 August 2015. The reply of the Government

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<sup>1</sup>Chhindwara, Shivpuri, Bhopal, Raisen

and the Company is awaited. The exit conference was held on 4 November 2015. The views of the management have been suitably incorporated in the report.

### Audit Findings

Audit findings are discussed in the succeeding Paragraphs:

### Grid connected Renewable Energy Project

**2.3.7** As discussed in Para 2.3.1, the implementation of Grid connected projects in the State is entrusted to the Commissioner New and Renewable Energy Department. No direct financial assistance/grant is provided by the MNRE/GoMP for the Grid connected RE projects and the projects are fully funded by the private developers from their own source. However the RE policies provided incentives like stamp duty exemption on purchase of private land, entry tax and vat tax exemption on purchase of plant and machinery, electricity duty exemption etc. to the developers as detailed in *Annexure 2.3.2*.

### Policy and Planning

#### *Non preparation of Long-term/short term plans and non-setting of targets*

**2.3.8** GoMP issued (October 2006) Energy Policy of the State for a period of five years. Later on separate RE Policies were notified by GoMP for implementation of Grid connected Biomass based power projects (October 2011), Small Hydel power based projects (November 2011), Wind power projects (January 2012) and Solar power projects (July 2012). The policies provided incentives and exemptions to developers for establishing the Grid connected RE projects in the State as detailed in *Annexure 2.3.2*

We observed that the above policies so formulated were not based on the assessment of RE potential in the State, which was first assessed as late as in October 2014. Further no specific targets for capacity addition were set and no long term/short term plans were prepared by the Department for development of RE. As a result, the potential of RE in the State could not be harnessed in a planned way.

The projects registered, commissioned and deregistered by the Department as of 31 March 2015 are detailed in the **Table 2.3.2**

**Table 2.3.2**

S.No	RE Sources	Projects Registered (MW)	Projects commissioned (MW)
1.	Solar	1007.50	453.22
2.	Wind	7196.55	665.30
3.	Small Hydel	316.00	--
4.	Biomass	471.20	55.40

(Source: Information as provided by the Department)

From the above it may be seen that as there were no specific targets for projects registration, only 45 per cent for Solar, nine per cent for Wind and 12 per cent Biomass based RE projects against the registered projects could be commissioned during 2010-11 to 2014-2015. Moreover, in Small Hydel RE, no project was commissioned during above period. Considering the low commissioning

No targets for capacity addition were set and no long term/short term plans were prepared to increase the RE potential in the State.

percentages, the basic objective of encouraging participation of private developers to set up RE power projects has not been fulfilled.

Principal Secretary agreed in exit conference to specify short and long term plans of implementation of the projects in future.

**Recommendation:**

The Department should prepare RE source wise target oriented plans for the development of RE in the State.

**Project Implementation**

Deficiencies noticed in implementation of the Grid connected projects are discussed in the following paragraphs.

**Under-achievement of Capacity additions in Solar Power Projects**

**2.3.9** GoMP issued (July 2012) a comprehensive policy for implementation of Grid connected Solar power based projects in Madhya Pradesh with the objective of encouraging participation of private sector to set up Solar power based projects in the State. The gestation period of the projects is 24 months. The incentives and exemptions provided in the Solar policy are detailed in *Annexure 2.3.2*

The projects registered, commissioned and deregistered as of 31 March 2015 are detailed in the **Table 2.3.3**

**Table 2.3.3**

Year	Number of projects registered	Capacity of projects registered (MW)	Projects commissioned		Projects deregistered	
			No.	MW	No.	MW
2010-11	-	-	-	-	-	-
2011-12	1	2.00	1	2.00	-	-
2012-13	32	334.95	17	35.21	4	120.00
2013-14	31	141.32	23	306.83	2	120.00
2014-15	30	529.23	10	109.18	2	7.00
<b>Total</b>	<b>94</b>	<b>1007.50</b>	<b>51</b>	<b>453.22</b>	<b>8</b>	<b>247.00</b>

(Source: Information as provided by the Department and compiled by the Audit)

**As of 31 March 2015, only 45 per cent of registered capacity projects were commissioned due to non availability of land and non-compliance of policy provisions.**

It is seen from the above table that as of 31 March 2015 only 45 per cent of the registered capacity projects could be commissioned. Further, during 2014-15, though the registered projects increased by nearly three times from 141 MW to 529 MW, the commissioned capacity growth declined by 64 per cent from 307 MW to 109 MW as compared to 2013-14.

Further eight projects with proposed capacity of 247 MW (25 per cent) out of total 94 registered projects (1007.50 MW capacity) were deregistered during 2012-13 to 2014-15. We observed in test check that four<sup>2</sup> projects were deregistered and in

<sup>2</sup> Eshwin Enterprises (P) Ltd , THDC , Waree Enterprises, ADS Projects (P) Ltd.

another 17<sup>3</sup> projects no progress was achieved due to non-availability of land. The Department failed to coordinate with other departments for facilitating the allotment of land to the developers. This was the main reason for the delay in commissioning and deregistration of the projects.

The Department (July 2015) accepted the audit observations stating that non availability of land and non compliance of the policy provisions by the developers are the main reason for the slow progress.

Though the reasons for delay in project implementation and deregistration are known to the Department, it did nothing to remove the bottlenecks. Thus despite a whopping RE potential of Solar energy available in the State as pointed out in Table 2.3.1, a meager 3 *per cent* is tapped at present.

### *Other irregularities*

**2.3.10** Other shortcomings observed in the implementation process of the solar power projects are as under:

#### *(a) Non convening of Project Clearance and Implementation Board Meetings*

As per Clause 7 Part B of Solar policy, for removal of difficulties in implementation of the projects and Inter Departmental coordination, were to be referred to the Project Clearance and Implementation Board (PCIB) constituted under the chairmanship of Chief Secretary, GoMP. However in four test checked deregistered projects we observed that applications were cancelled due to non-availability of land. Further, in 17 test checked projects, we observed that these could not be commissioned due to non-availability of land as discussed in Paragraph 2.3.9. Despite this, no PCIB meetings were convened by the Department to overcome the difficulties in land allotment for the projects during 2010-11 to 2014-15.

Principal Secretary in exit conference accepted the audit observation and assured that necessary compliance as mentioned in the policy provisions regarding convening of PCIB meeting in future would be made.

#### *(b) Lack of monitoring due to non maintenance of electricity generation data*

As per Clause 5 (c), 5 (d) Part B of the Solar energy policy, the developers were required to submit the monthly and annual generation data to the Department and a data bank of the same was required to be maintained by the Department. We observed that the Department did not maintain the generation data of any projects commissioned. This exhibits that monitoring of the projects commissioned was not done by the Department as per the policy.

**Department did not convene any PCIB meetings to overcome the difficulties in land allotment process.**

**Department did not maintain the generation data of commissioned solar power projects indicating weak monitoring.**

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<sup>3</sup> Swan Power P Ltd (2), M&B Switch Gear, Staple Energy P Ltd, Ujas Energy (3), Kailash Dev build, Management Multi Trade, Waree, Welspun, Avanti Power P Ltd, Sai Prakash Power India Ltd, Saranga Renewable Energy, Barod Renewable Energy, Shriji Polymers, Eastman International

During exit conference, the Principal Secretary accepted the audit observation and assured that necessary compliance as mentioned in the policy provisions would be made.

**(c) Non availability of Power Purchase Agreements (PPA)**

As per clause 12 (b) Part A of Solar energy policy, PPA was to be entered within five months from the date of administrative approval between developer and the Madhya Pradesh Power Management Company Ltd. (MPPMCL). The Department did not have any information available with them on signing of PPA by the developers as they failed to monitor the same even though required under the Solar energy policy. We independently collected the information on signing of PPAs from MPPMCL. From the information furnished, it was observed that PPAs of only 17 out of the 51 project cases (33 per cent) were entered with MPPMCL. Out of remaining 34 projects commissioned, 24 cases were commissioned more than one year back. This was indicative of the fact that power from 34 commissioned projects (66 per cent) was not being drawn by GoMP/MPPMCL even though these projects were commissioned.

During exit conference, the Principal Secretary accepted the audit observation and assured that necessary compliance as mentioned in the policy provisions regarding maintenance of PPAs would be made in future.

**Implementations of Grid connected Wind power projects**

**2.3.11** GoMP issued (January 2012) a comprehensive policy for implementation of Grid connected Wind power projects with an objective to encourage participation of private sector to set up Wind power projects in the State. The Department invites proposal for allotment of projects on Government and Private land from time to time. The gestation period of the projects is 36 months. The incentives and exemptions provided in the Wind policy are detailed in *Annexure-2.3.2*.

The projects registered, commissioned and deregistered as of 31 March 2015 are detailed in the **Table 2.3.4**.

**Table 2.3.4**

Year	Projects Registered (No.)	Capacity registered (MW)	Projects commissioned (No.)	Commissioned projects Capacity (MW)	Projects deregistered (No.)	Capacity of deregistered projects (MW)
Upto 2009-10	13	582.70	1	15.00	8	306.50
2010-11	12	318.65	4	46.50	-	-
2011-12	8	268.75	5	100.50	-	-
2012-13	14	254.10	2	9.60	-	-
2013-14	40	1676.35	3	37.40	22	526.85
2014-15	83	4096.00	18	456.30	-	-
<b>TOTAL</b>	<b>170</b>	<b>7196.55</b>	<b>33</b>	<b>665.30</b>	<b>30</b>	<b>833.35</b>

(Source: Information provided by the Department and compiled by audit)

As of 31 March 2015, only nine per cent of registered capacity projects were commissioned due to long gestation period of the Projects.

It is seen from the above table that, the number of projects registered and commissioned has substantially picked up in the last two years. However, as of 31 March 2015, 665.30 MW capacity projects (nine per cent) out of 7196.55 MW capacity registered projects could only be commissioned mainly due to the long gestation period of the projects.

Further, 30 projects with capacity of 833.35 MW (12 per cent of total registered projects) were deregistered during 2010-15 due to non-submission of performance guarantee. Thus the mortality rate of the projects was high.

The Principal Secretary stated during exit conference that major registration in the wind projects had been done during the last two years and implementation period of the projects is about three years, hence in the next couple of years the commissioning would take place. It was also stated that Government was expecting an implementation rate of around 60 to 70 per cent in the coming years.

#### *Other irregularities*

**2.3.12** Other shortcomings observed in the implementation process of Wind power projects are as under:

##### *(a) Lack of monitoring due to non-maintenance of electricity generation data and commissioning reports*

Department did not maintain the generation data of commissioned projects in violation of the policy provisions.

Clause 6.3 Part B of the Wind policy requires that after commissioning of the project, every developer was required to essentially submit the monthly data of energy generated from the projects to the Department. We observed that the Department had neither maintained the data, nor made any effort to obtain the generation data in any of the projects so commissioned. Further in four<sup>4</sup> projects out of 11<sup>5</sup> commissioned test checked projects, even the commissioning reports of the projects were also not maintained by the Department. This exhibits that monitoring of the projects was not conducted by the Department as per the policy.

##### *(b) Undue favour to the Developer*

As per clause 3.1.3 of the Wind policy, the developer has to deposit performance guarantee to ensure timely completion of the project on Government land at the rate of ₹ One lakh per MW. We observed that in the case of one project of 30 MW capacity under implementation, the performance guarantee of ₹ 30 lakh was not obtained from the developer.

During the exit conference, the Principal Secretary assured that the matter would be reviewed and factual position would be intimated.

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<sup>4</sup> Renewable Energy Generation P Ltd, Gamesa Wind Turbine Ltd, Siddhant Wind Energy Ltd, , Enercon India Ltd

<sup>5</sup> Betul Wind Farm Ltd, Renewable Energy Generation P Ltd, Gamesa Wind Turbine Ltd, Siddhant Wind Energy Ltd, Southern Wind Farm Ltd, Enercon India Ltd, Chouksey Energy Infra Power Ltd, Wind world India Ltd, Suzlon Ltd (3 cases)

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## Non-Commissioning of Small Hydel Projects

**2.3.13** GoMP issued (November 2011) a comprehensive policy for implementation of Grid connected Small Hydel Project (SHP) with an objective to encourage participation of private sector to set up such projects in the State. The Department invites Request for Proposals from developers in order to set up the projects of maximum 25 MW capacity. The gestation period of the project ranges from 35 to 48 months from the date of execution of Hydel Power Development Agreement between the Developer and the Department. The incentives and exemptions provided in the Small Hydel policy are detailed in *Annexure 2.3.2*.

The projects registered, commissioned and deregistered as of 31 March 2015 are detailed in the **Table 2.3.5**

**Table 2.3.5**

Year	Registration		Commissioned <sup>6</sup>		Deregistered	
	No.	Capacity (MW)	No.	Capacity (MW)	No.	Capacity (MW)
Upto 2010-11	-	-	-	-	-	-
2011-12	1	0.50	-	-	-	-
2012-13	63	224.75	-	-	19	44.80
2013-14	19	86.15	-	-	-	-
2014-15	4	4.60	-	-	-	-
<b>Total</b>	<b>87</b>	<b>316.00</b>	<b>-</b>	<b>-</b>	<b>19</b>	<b>44.80</b>

(Source: Information provided by the Department and compiled by audit)

**No Small Hydel power project was commissioned by the Department during 2010-15.**

It may be seen from the above table that as of 31 March 2015, 87 Projects of 316 MW were registered, out of which no project was commissioned by the Department mainly due to long gestation period of the project. However, during above period, 19 projects having capacity of 44.80 MW (14 per cent) were deregistered due to non-availability of the land and disinterest of the developers. Thus, the potential for RE through SHP is yet to be realised in the State.

During the exit conference, the Principal Secretary agreed to the audit observations. Fact remains that the Small Hydel energy potential could not be harnessed due to non-addition of any capacity during last five years.

## Non- registration in Biomass based power projects

**2.3.14** GoMP issued (October 2012) a comprehensive policy for implementation of Grid connected Biomass power projects with an objective to encourage participation of private sector to set up Biomass based power projects in the State. Applications were invited by the Department for allotment of new projects from time to time. Commissioning of the project was to be completed within the stipulated time limit of 24 months from the date of administrative approval. The incentives and exemptions provided in the Biomass policy are detailed in *Annexure 2.3.2*

<sup>6</sup> Excludes SHP projects of 70.45 MW installed in the State by Private parties and Narmada Valley Development Authority.



The projects registered, commissioned and deregistered as of 31 March 2015 are detailed in the **Table 2.3.6**.

**Table 2.3.6**

Year	Projects registered (No.)	Capacity registered (MW)	Projects Commissioned (No.)	Capacity commissioned (MW)	Projects deregistered	
					(No.)	Capacity (MW)
Up to 2009-10	29	280.00	5	12.95	-	-
2010-11	17	186.00	3	7.05	16	152.00
2011-12	-	-	3	10.75	3	32.00
2012-13	2	5.20	2	1.45	-	-
2013-14	-	-	3	23.20	1	10.00
2014-15	-	-	-	-	-	-
<b>Total</b>	<b>48</b>	<b>471.20</b>	<b>16</b>	<b>55.40</b>	<b>20</b>	<b>194.00</b>

(Source: Information provided by Department and compiled by audit)

No new Biomass project was registered during the period 2013-15.

It is seen from the above table that no new projects were registered during the last two years. Also, as of 31 March 2015, only 16 projects with capacity of 55.40 MW (12 per cent) out of registered 48 projects of 471.20 MW capacity were commissioned. Further, 20 projects with proposed capacity of 194 MW (41 per cent) out of the total registered projects of 471.20 MW were deregistered. This shows the lack of interest of the developers in the Biomass based power projects in the State, the main reasons of which were stated to be the non-availability of the raw materials and insufficient tariff for the energy generated through Biomass energy. However, we did not notice any tangible action taken by the Department/Government to the identified causes for lukewarm response by potential developers.

During the exit conference, the Principal Secretary accepted the audit observation.

Thus the objective of Biomass policy to encourage the participation of private sector to setup Biomass based projects has not been achieved.

### **Other Irregularities**

**2.3.15** Other shortcomings observed in the implementation of Biomass based projects are as under:

#### **(a) Undue benefit to the developers**

Undue benefit was extended to six developers by not collecting performance guarantee amounting to ₹ 72 lakh.

As per clause 4.3 of the Biomass policy, to ensure the commitment to commissioning of the project, the developer has to deposit the performance guarantee at the rate of ₹ One lakh per MW within a month from project allotment. During test check of six<sup>7</sup> out of 12 cases under implementation, we observed that performance guarantee aggregating to ₹ 72 lakh was not paid by the developers.

<sup>7</sup> Betul Non conventional Energy P Ltd, Hema Sri Agro Power Projects, Jain Renewable Energy P Ltd, SR Renewable Energy, Shyam Agro Nagpur (P) Ltd, Shalivahan Green Energy, Jain Energy (P) Ltd

However the Department did not take any action for collection of the said performance guarantee, resulting in extension of undue benefit to the developers.

During the exit conference, while accepting the audit observation, the Principal Secretary assured to review the reasons thereof.

**(b) Lack of monitoring due to non maintenance of Generation data:**

Department neither maintained the generation data nor monitoring the functioning of the commissioned projects.

As per clause 12.2 A of the Biomass policy, monthly data of the electricity generated certified by the Distribution/Transmission Company, was to be submitted by the developers to the Department. However, in test checked five<sup>8</sup> commissioned projects we observed that generation data was not maintained by the Department. This exhibits that monitoring of the projects commissioned was not conducted by the Department as per the policy.

During exit conference, the Principal Secretary accepted the audit observation and assured that necessary compliance as mentioned in the policy provisions regarding maintenance of electricity generation in future would be made.

**Recommendation:**

The Company should evaluate the policy framework for renewable energy and its implementation to fine tune the provisions in accordance with constraints observed.

**Off-grid based Renewable Energy Projects**

The Company undertakes the implementation of Off-grid based RE programmes which includes installation of Solar Photovoltaic Power plant (SPVPP), Street Light Systems (SLS), Home Light Systems (HLS), Solar Water Heating Systems (SWHS), Solar Water Pump and Remote village electrification Programme (RVE) in the State. In addition, the Biogas plants for domestic use is also one of the component of the Off-grid renewable energy. However the implementation of Biogas plant is not undertaken by the Company.

**Financial Management**

***Under-utilisation of Funds from MNRE, GoMP and Beneficiaries***

**2.3.16** For the implementation of various Off-grid programmes, the funds are received from the MNRE as Central Financial Assistance (CFA), from the State Government and from the beneficiaries. During the period 2010-11 to 2014-15, the funds received from MNRE, GoMP and Beneficiaries are detailed in the **Table 2.3.7.**

<sup>8</sup> Arya Energy Ltd, Orient Green Power, Anant Urja P Ltd, Lanxess P Ltd, Pragya Energy P Ltd.

Table 2.3.7

(₹ in crore)

Year	MNRE		GoMP		Beneficiary	
	Fund recd	Exp	Fund recd	Exp	Fund recd	Exp
2010-11 <sup>9</sup>	27.02	23.03	27.46	17.90	17.48	7.95
2011-12	21.84	8.55	6.36	4.95	49.92	5.50
2012-13	7.05	9.12	17.61	5.27	15.50	8.36
2013-14	2.16	19.27	35.82	18.46	78.28	33.46
2014-15	23.56	15.70	9.29	26.08	33.34	52.12
<b>Total</b>	<b>81.63</b>	<b>75.67</b>	<b>96.54</b>	<b>72.66</b>	<b>194.52</b>	<b>107.39</b>

(Source: Information furnished by Company and compiled by Audit)

Beneficiary funds of ₹ 87.13 crore were lying unutilised with the Company as on 31 March 2015.

It is seen from the above table that utilisation of available funds during 2010-11 to 2014-15 was 93 *per cent* in case of MNRE funds and 75 *per cent* in case of GoMP funds. However, the utilisation of the beneficiary fund was significantly low. Out of the available beneficiary funds of ₹ 194.52 crore during 2010-11 to 2014-15, the Company could utilize only ₹ 107.39 crore (55 *per cent*), leaving beneficiary funds of ₹ 87.13 crore unutilised as on 31 March 2015. The reasons for under utilisation of the funds are discussed in the Paragraph 2.3.18 and 2.3.19.

During the exit conference the Principal Secretary accepted the audit observation. The fact remains that the beneficiaries were deprived of RE benefits even after depositing fund with the Company.

#### Recommendation:

The Company should expedite utilization of beneficiary funds.

#### Policy and Planning

**2.3.17** GoMP issued (October 2006) Energy Policy of the State for a period of five years. On expiry of this policy, the GoMP has not framed any specific policy and annual targets for installation of Off-grid solar applications. Hence the Company followed the operational guidelines issued by MNRE for implementation of Off-grid programmes.

No specific policy or any targets were framed for Off-grid System Installations.

As no targets for Off-grid installations were fixed, the same were being installed on the basis of adhoc demands as received from beneficiaries. Hence, due to non-formulation of the State specific policy and non-fixation of the targets, the full potential for Off-grid installations in the State could not be harnessed.

During the exit conference, the Principal Secretary accepted the audit observation.

#### Project Implementation

The status of the various Off-grid RE systems sanctioned by MNRE and achievement there against during 2010-11 to 2014-15 are detailed in the **Table 2.3.8.**

<sup>9</sup>The fund received figure for the year 2010-11 includes opening balances of ₹ 6.28 crore, 6.18 crore, and ₹ 4.93 crore from MNRE, GoMP and Beneficiary respectively.

**Table 2.3.8**

	Various Off Grid RE Programmes					
	SPVPP (No.)	(SLS) (No.)	(HLS) (No.)	(SWHS) (lakh litre per day)	SPWP (No.)	RVE (No. of villages)
<b>Planned to be installed</b>	1565	1287	16213	81.69	2191	223
<b>Achievement</b>	592	1263	15932	18.69	1919	220

(Source: Information provided by the Company and compiled by audit)

It is be seen from the above table that during the period 2010-11 to 2014-15, the Company's achievement was remarkably good under the RVE programme (98 per cent), SLS (98 per cent), HLS (98 per cent) and under the SPV Water Pump (88 per cent). However in respect of SPVPP and SWHS, the achievement was mere 38 per cent, and 23 per cent respectively. Thus in these programmes, the RE potential was not tapped fully despite the interest evinced by beneficiaries themselves as further discussed in Paragraph 2.3.18 and 2.3.19.

#### **Recommendation:**

The Company should formulate the policy framework for Off-grid programmes to ensure a need based and target driven approach.

#### **Short achievement in Solar Photovoltaic Power Plant programme**

**2.3.18** With an objective to reduce dependency on conventional energy and in order to utilise the existing roof space of home, office buildings for RE generation, the Company promotes installation of roof-top Solar Photovoltaic Power Plants (SPVPP) on roof. The capacity of such plants varies between 1 KW to 100 KW.

As per MNRE guidelines, for implementation on Off-grid and decentralized Solar applications (June 2010), MNRE provides financial support through a 30 per cent subsidy, GoMP provides 20 per cent subsidy while the remaining 50 per cent is borne by the beneficiary.

During the period 2010-11 to 2014-15, the Company received ₹ 18.42 crore (MNRE), ₹ 15.34 crore (GoMP) and ₹ 67.72 crore from beneficiary for installation of SPVPP. Against the same, the Company could spent an amount of ₹ 70.03 crore. SPVPP beneficiary contribution of ₹ 34.08 crore was lying idle with the Company as on 31 March 2015.

Sanctions conveyed by MNRE and the SPVPPs commissioned by the Company during 2010-11 to 2014-15 are detailed in **Table 2.3.9**.

**Table 2.3.9**

Year	Sanctions conveyed for SPVPP		SPVPP commissioned by Company	
	No.	Capacity (kWp)	No.	Capacity (kWp)
2010-11	200	1845	67	525
2011-12	937	3020	36	216
2012-13	428	1860	57	369
2013-14	Nil	Nil	402	1343
2014-15	Nil	Nil	30	608
<b>Total</b>	<b>1565</b>	<b>6725</b>	<b>592</b>	<b>3061</b>

(Source: Information as provided by the Company and compiled by the Audit)

It is evident from above table that during 2010-11 to 2014-15, the Company could commission mere 38 *per cent* of the SPVPPs in terms of the numbers sanctioned and 45 *per cent* in terms of sanctioned capacity by MNRE.

**Due to frequent cancellation of work orders, 62 *per cent* of MNRE sanctioned SPVPP systems could not be installed and beneficiary share of ₹ 34.08 crore remained unutilised.**

We observed that for the commissioning of sanctioned SPVPP's, two firms to whom the initial work orders were issued (January 2013 to April 2013) did not take up the work, leading to cancellation of their work orders. The subsequent work orders (August 2013 to March 2014) were issued to another firm to carry out the left over work were also once again cancelled, as the new firm also left the work midway.

The Company failed to carry out any assessment of the reasons for the non-working on the part of suppliers and did not take any corrective action to ensure successful completion of works. As a result, 62 *per cent* of the SPVPPs in terms of the numbers sanctioned by MNRE during the period 2010-11 to 2014-15 could not be installed up to 31 March 2015.

The Company replied (June 2015) that funds could not be utilised due to delay in tendering process. The Principal Secretary during exit conference accepted the observation and assured to tackle the Contract management issues affecting the implementation of Off-grid Installation.

The fact remains that the beneficiaries remained deprived of RE benefit even after depositing money with the Company.

#### **Recommendation:**

The Company should improve the Contract management and increase the vendor base for timely installation of the RE systems.

#### **Non-installation of Solar Water Heater Systems**

**2.3.19** MNRE is implementing the scheme for installation of Solar water heater, through State Nodal Agencies, Government PSUs, Local Bodies and Private entities.

Under the scheme, MNRE provided CFA in the form of 30 *per cent* capital subsidy on the cost of the system while the remaining 70 *per cent* cost was to be borne by the beneficiary. However, disbursement of subsidy has been discontinued by MNRE w.e.f. October 2014. Hence as of now, implementation of Solar water heater is being done through 100 *per cent* beneficiary fund.

During the period 2010-11 to 2014-15, the Company received an amount of ₹ 7.61 crore from MNRE (₹ 2.88 crore) and beneficiaries (₹ 4.73 crore), out of which only ₹ 1.98 crore was spent, leaving an unspent balance of ₹ 5.63 crore (74 *per cent*) of MNRE (₹ 1.09 crore) and beneficiary (₹ 4.54 crore) share as of March 2015.

The details of sanctions received and installation of Solar water heating systems under the Solar water heater programme during 2010-11 to 2014-15 is depicted in **Table 2.3.10**.

**Table 2.3.10**

Year	Sanctioned capacity (litres per day in lakh)	Capacity achieved (litres per day in lakh)
2010-11	15.00	2.25
2011-12	-	6.80
2012-13	8.75	5.32
2013-14	57.95	3.51
2014-15	-	0.78
<b>Total</b>	<b>81.70</b>	<b>18.66</b>

(Source: Information as provided by the Company and compiled by the Audit)

It may be seen from the above table that during the years 2010-2015, the Company could install only 18.66 lakh litre per day capacity (22.84 per cent) of SWHS against 81.70 litre per day of capacity sanctioned by MNRE. This was despite the availability of funds as beneficiaries' contribution amounting to ₹ 4.54 crore was lying unutilised with the Company for more than one year.

In test check of two work orders we observed that the firm to whom installation of 40000 litre per day capacity SWHS was allotted for one site,<sup>10</sup> did not take up the work at all and another firm to whom an aggregate capacity of 209700 litre per day work for 36 sites was awarded could complete work at only 10<sup>11</sup> sites. In both the cases, though the suppliers' contracts were cancelled (October 2014) and there earnest money was forfeited, the Company failed to retender the work despite lapse of one year period. As a result, the beneficiaries were deprived of the RE benefits even though they had paid an advance of ₹ 1.08 crore.

During the exit conference, the Principal Secretary accepted the audit observation.

The fact remains that the Company failed to install the systems even after retaining the beneficiary fund for more than a year.

### **Improper monitoring and maintenance of Off-grid systems**

**2.3.20** As per clause 10 of the MNRE guidelines for Off-grid and decentralized solar applications (June 2010), the Company officials were required to perform ground truthing of the systems installed at the beneficiary sites on random sample basis. Also as per the guidelines, provisions for two years warranty as well as comprehensive maintenance contract for a period of three years after expiry of warranty period were to be incorporated in the purchase order issued to the suppliers of the systems. The suppliers were also required to submit the quarterly comprehensive maintenance certificate (CMC) on functioning of the systems to the Company.

We observed that no such ground truthing on random sample basis was done by the Company officials. During field visit of four<sup>12</sup> DREO offices and Joint

<sup>10</sup>Bannmore site

<sup>11</sup>(1)Kasturba Gandhi girls Hostel Parasiya, Tamiya, Diet, Amarwara, (2) Hanuman mandir Chhindwara (3) Cooperative Dairy federation Barwah, Barwani,Dudhi and Jhabua and Teekamgarh

<sup>12</sup>Chhindwara, Shivpuri, Bhopal, Raisen

physical verification by audit team along with Company officials of 38 out of 61 installed SPVPP systems, it was noticed that 26 systems (68 *per cent*) were working, four systems (11 *per cent*) were not working and 8 systems (21 *per cent*) though working but were facing problems in spares/batteries etc. which remained unattended by the suppliers as on the date of inspection. It was also observed that the suppliers were not regular in submitting the quarterly comprehensive maintenance certificate in any of the test checked DREO offices.

During the exit conference, the Principal Secretary accepted the audit observation.

Thus the Company failed to monitor the suppliers engaged for maintenance and also failed to ensure long term sustainability of the installed systems which resulted in poor survival/ functioning of installed systems and deprivation of intended benefits of RE to the beneficiaries.

**Recommendation:**

The Company should strengthen monitoring mechanism of the installed Off-grid systems for ensuring their proper maintenance and functioning.

**Remote Village Electrification Programme**

**2.3.21** GoI sanctioned (2005-06) the Programme for Electrification of remote unelectrified villages through non-conventional energy. The objective of the programme was electrification of unelectrified remote villages where grid connectivity is either not feasible or not cost effective, through non-conventional energy sources. The programme was to be implemented through State nodal agencies with active involvement of district-level bodies, panchayati raj institutions, village councils, etc.

Central financial assistance of upto 90 *per cent* of the approved project cost was to be provided by MNRE. The balance 10 *per cent* of projects can be financed through contribution from beneficiaries, State plans, or other sources/development schemes

During the period from 2010-11 to 2014-15, available funds of ₹ 28.11 crore under the programme were nearly fully spent. During the period 2010-11 to 2014-15, the Company had electrified 220 out of 223 villages (98 *per cent*) sanctioned, and had commissioned 1263 out of 1287 street lights (98 *per cent*) sanctioned, and 15932 out of 16213 home lights (98 *per cent*) sanctioned. Thus the target set under RVE programme were almost achieved.

Further, during the field visit by the audit team along with the Company officials of six remote villages<sup>13</sup>, it was observed that regular maintenance of the systems was being done by the suppliers. In two villages beneficiaries were satisfied with the systems however, in other villages, the beneficiaries' complained about failure in batteries, dim light, and gradual decrease in efficiency of the systems over the years.

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<sup>13</sup> Satkunda, Gopisur , Panjeer, Jhirribhadea, Bhurakheda, Sirali

## Renewable Purchase Obligation (RPO)

### *Non-compliance to Renewal Purchase Obligation by the Obligated Entities*

**2.3.22** As per Madhya Pradesh Electricity Regulatory Commission (Co-generation and Generation of Electricity from Renewable Source of Energy) Regulations 2008, the renewable purchase obligation (RPO) targets in terms of minimum quantum of electricity to be purchased from RE sources by the Obligated Entity (OE) i.e. Power distribution Companies<sup>14</sup> (Discoms) of Madhya Pradesh were fixed.

Subsequently, under the revised regulations (November 2010) separate targets for energy to be purchased from solar and non-solar RE resources as a percentage of the annual energy requirement of OEs were specified as detailed in **Table 2.3.11**.

**Table 2.3.11**

S. No	Year	Solar (%)	Non Solar (%)	Total %
1	2010-11	--	0.80	0.80
2	2011-12	0.40	2.10	2.50
3	2012-13	0.60	3.40	4.00
4	2013-14	0.80	4.70	5.50
5	2014-15	1.00	6.00	7.00

*(Source: MPERC Regulation on REC 2010)*

If the OEs are not able to fulfill the above mentioned minimum RE purchase requirement, they have to purchase the Renewable Energy Certificates (REC) issued by the National Load Dispatch Center to the extent of shortfall. Further, if the OE does not purchase the RECs for shortfall, they will be liable to deposit such amount in a separate fund to be used by the OE as per the directions of MPERC.

The target fixed by MPERC for procurement of RE by Discoms in their total energy purchase and the actual RE purchased and shortfall therein during the period 2010-11 to 2014-15 are detailed in **Table 2.3.12**.

**Table 2.3.12**

Year	Total energy requirement (MU) <sup>15</sup>	RPO Target (MU)		RPO Achieved (MU)		Shortfall (MU)		REC not purchased by OE (₹ in crore)
		Solar	Non solar	Solar	Non solar	Solar	Non solar	Total
2010-11	38855.00	0.00	311.00	0.00	338.00	0.00	0.00	0.00
2011-12	40410.00	161.60	849.00	0.00	540.00	161.60	309.00	395.23
2012-13	44590.00	267.50	1516.00	5.27	684.00	262.23	832.00	625.94
2013-14	53677.40	429.40	2523.00	172.40	755.00	257.00	1768.00	927.82
2014-15#	56085.00	560.90	3365.00	398.25	800.57	162.65	2564.43	1064.21
<b>Total</b>	<b>233617.40</b>	<b>1419.40</b>	<b>8564.00</b>	<b>575.92</b>	<b>3117.57</b>	<b>843.48</b>	<b>5473.43</b>	<b>3013.20</b>

*(Source: Information provided by MPPMCL and compiled by Audit)*

*#Provisional figures*

<sup>14</sup> Madhya Pradesh Poorv Kshetra V. V. Co. Ltd, Jabalpur, Madhya Pradesh Madhya Kshetra V.V. Co. Ltd Bhopal, Madhya Pradesh Pashim Kshetra V. V. Co. Ltd, Indore

<sup>15</sup> Million Unit



**Discoms did not purchased the RECs aggregating to ₹ 3013.20 crore for shortfall in achieving RPO.**

It may be seen from the above table that during 2010-15, the RPO target for the OEs /Discoms was of 9983 MU from Solar (1419 MU) and Non solar (8564 MU) sources. However, as the generation of renewable energy in the state during this period was only 3693 MU, the OEs could achieve only 37 per cent of their RPO target resulting in shortfall of 6316.91 MU.

We observed that for the shortfall in achievement of RPO the OEs were required to purchase RECs aggregating to ₹ 3013.20 crore or deposit the amount in a separate fund as per MPERC regulations, however, neither any REC was purchased, nor was any amount deposited by the OEs in the separate fund.

The objective behind imposition of RPO was in greater public interest as this would have long impact on protection of environment and reducing the emission of greenhouse gases, which however, was not achieved.

#### **Recommendation:**

The Government should make efforts to increase the renewable energy generation in the State to meet the RPO requirement and Discoms should purchase the requisite RECs for the shortfall in RPO or maintain a separate fund as per MPERC regulations.

### **Conclusion and Recommendations**

#### **Grid connected Renewable Energy Projects**

- During 2010-11 to 2014-15, no specific targets for capacity addition were set for any of the renewal energy (RE) source and no long term/short term plans were prepared by the Department for development of RE. As a result, the potential of RE in the State could not be harnessed in a planned manner.

The Department should prepare RE source wise target oriented plans for the development of RE in the State.

- As of 31 March 2015, the projects of 453.22 MW in Solar (45 per cent), 665.30 MW (nine per cent) in Wind and 55.40 MW in Biomass (12 per cent) could only be commissioned against registered projects of 1007.50 MW, 7196.55 MW and 471.20 MW capacity respectively. Also no Small Hydel project was commissioned by the Department. Further, the projects of 247 MW in Solar (25 per cent), 833.35 MW (12 per cent) in Wind, 44.80 MW in Small Hydel (14 per cent) and 194 MW in Biomass (41 per cent) were deregistered.

The reasons for low commissioning and high deregistration were non-allotment of land, disinterest shown by the developers, non-availability of the raw materials, insufficient tariffs for energy and long gestation period of the projects etc.

The Department should evaluate the policy framework for renewable energy and its implementation to fine tune the provisions in accordance with constraints observed.

- Undue benefit of ₹ 1.02 crore was extended to seven developers of Wind and Biomass energy projects due to non-collection of performance guarantee for ensuring timely completion of projects on Government land.

### Off-grid Projects

- Due to non-fixation of the targets, the Off-grid systems were being installed on the basis of adhoc demands received from beneficiaries. As a result, the full potential for Off-grid installations in the State could not be assessed and developed in a planned manner.

The Company should formulate the policy framework for Off-grid programmes to ensure a need based and target driven approach.

- Due to failure to analyse the reasons for non-completion of work by the suppliers and to take corrective action, the Company could commission only 3061 kWp (45 per cent) out of the 6725 kWp capacity Solar Photovoltaic Power plants sanctioned by MNRE during 2010-15. As a result, the beneficiaries were deprived of renewable energy benefits though their share of ₹ 34.08 crore was lying unutilised with the Company.

The Company should improve the Contract management and increase the vendor base for timely installation of the systems.

- In the Joint physical verification by audit team along with Company officials of 38 installed Solar photovoltaic power plant systems (SPVPP), four systems were found not working and eight were facing technical problems which were not attended promptly by the suppliers due to non-monitoring and non-emphasizing the submission of quarterly maintenance certificates of the systems by the Company as per terms of maintenance agreements.

The Company should strengthen monitoring mechanism of the installed Off-grid systems for ensuring their proper maintenance and functioning.

- Due to insufficient generation of renewable energy in the State during 2010-15, there was a shortfall in meeting Renewable Purchase Obligation (RPO) target of 6316.91 MU. Also, the Power Distribution Companies did not purchase Renewable Energy Certificates (RECs) of ₹ 3013.20 crore for shortfall in RPO.

The Government should make efforts to increase the renewable energy generation to meet the RPO requirement and Discoms should purchase the requisite RECs for the shortfall in RPO as per MPERC regulations.

## CHAPTER-III

### 3 Transaction Audit Observations

The Chapter includes one long paragraph and 12 paragraphs based on test check of transactions of the State Government Companies.

#### Government Companies

#### Madhya Pradesh Poorv Kshetra Vidyut Vitaran Company Limited

### 3.1 Long Paragraph on Implementation of Financial Restructuring Plan of State Government in Madhya Pradesh Poorv Kshetra Vidyut Vitaran Company Limited

#### 3.1.1 Introduction

The Government of Madhya Pradesh (GoMP), in view of the poor financial health of Power Distribution Companies (Discoms) in the state and to make them financially viable and self-sustainable, approved (July 2011) the Financial Restructuring Plan (FRP) for three years period upto 2013-14 with the targeted financial revival period of six years up to 2016-17.

We examined the implementation of FRP in Madhya Pradesh Poorv Kshetra Vidyut Vitaran Company Limited (the Discom) and its impact on the financial health of the Discom.

#### 3.1.2 Organisational Setup

The Management of the Discom is vested with Board of Directors. The Managing Director of holding company (Madhya Pradesh Power Management Company Limited) is the Chairman of the Discom. The Managing Director of the Discom is the Chief Executive Officer (CEO) who is assisted by Executive Director (Works), Chief General Manager (HRD & Admn), Chief General Manager (RAPDRP), Chief General Managers (ADB/RGGVY), Chief General Manager (Purchases), Chief General Manager (Commercial) and Chief Finance Officer (Finance and Accounts). The organizational chart of Discom is given in *Annexure-3.1*.

#### 3.1.3 Audit Objectives

The objectives of audit were to assess whether:

- Suitable linkages were established between the financial assistance provided under FRP and improvement in the financial health of the Discom and financial performance of the Discom improved after implementation of FRP;
- Discom was able to achieve the targeted level of Average Rate of Revenue Realisation (ARRR) in FRP and wipe off the gap between ARRR and Average Cost of Supply (ACS);
- Discom complied with the targets of Aggregate Technical and Commercial (AT&C) losses set by Madhya Pradesh Electricity Regulatory Commission (MPERC);

- Discom improved collection efficiency and submitted proposals for recovery of arrears as specified in extended FRP; and
- Retendering and execution of left over works of Feeder Separation Programme were completed as per targets given in FRP.

### **3.1.4 Scope and methodology of audit**

We reviewed (April -May 2015) the records for the period from 2010-11 to 2014-15 relating to Financial Restructuring Plan of GoMP at Headquarters of the Discom. Audit findings were reported to the Discom and Government in July 2015. Replies of the Government/Discom were received in October 2015 and audit findings were discussed with Principal Secretary and Managing Director of the Discom in exit conference held on 16 October 2015. Replies and views of the Discom and Government have been suitably incorporated in the Report.

### **3.1.5 Audit Criteria**

The audit findings are based on the criteria drawn from the following sources:

- Financial Restructuring Plan approved by GoMP,
- Guidelines/orders/directions of GoMP and MPERC in relation to Financial Restructuring, and
- Tariff orders with reference to Annual Revenue Requirement (ARR) Proposals and True-up petitions issued by MPERC.

### **3.1.6 Implementation of Financial Restructuring Plan in the Discom**

Under the Financial Restructuring Plan, Government of Madhya Pradesh was to provide financial assistance by conversion of working and capital loan outstanding as on 31 March 2011 along with interest, electricity duty/cess payable to Government and cost of electricity purchased from Sardar Sarovar Project during 2011-12 to 2013-14 into perpetual loan with moratorium period of three years for interest. However, no targets for improvement in operational and financial performance were fixed under this phase of FRP.

#### **3.1.6.1 Extension of Financial Restructuring Plan (FRP)**

As the Discom did not improve its financial health on completion of three years period of FRP by 31 March 2014, GoMP approved (November 2014) extension of the existing FRP for another three years from 2014-15 to 2016-17. Under the extended FRP, the GoMP set the following targets for compliance by the Discom:

- Discom shall achieve the Average Rate of Revenue Realisation<sup>1</sup> (ARRR) at ₹ 3.59 per unit of electricity for 2014-15, ₹ 4.02 per unit for the year 2015-16 and ₹ 4.63 per unit for the year 2016-17 with an increase of 8 per cent, 12 per cent and 15 per cent respectively,

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<sup>1</sup> Per unit revenue realized against input units

- Discom shall reduce aggregate technical and commercial (AT&C) losses<sup>2</sup> to the prescribed levels fixed by MPERC,
- Discom shall improve its collection efficiency<sup>3</sup> at least to an extent of 95 per cent,
- Discom shall submit a proposal to the Finance Department by the end of November 2014 for recovery of arrears as at the end of 2013-14 and the recovery shall be made as per the targets fixed by the Finance Department.
- Re-tendering process in respect of feeder separation works where the contracts were terminated, shall be taken up to ensure that the works are completed within 18 months from the date of work order and in other cases the works are to be completed by the end of October 2015.

### 3.1.6.2 Financial Assistance to Discom under Financial Restructuring Plan

As provided in the FRP, the Discom converted outstanding short term and capital loans of GoMP, interest on loans, electricity duty and power purchase cost from Sardar Sarover Project as perpetual loan during 2011-12 to 2014-15 as shown in the following **Table 3.1.1**.

**Table 3.1.1**

Year	Short Term GoMP Loan	Capital Loan	Interest on Loans	Total Loan	Electricity duty amount	Power purchase cost of Sardar Sarover project	Total
2011-12	1271.12	1685.03	348.86	3305.01	464.49	-	3769.50
2012-13	-	-	-	-	382.84	265.05	647.89
2013-14	-	-	-	-	461.56	133.95	595.51
<b>Total for three years</b>							<b>5012.90</b>
2014-15	2214.38	382.66	367.20	2964.24	515.97	108.80	<b>3589.01</b>
<b>Total for four years</b>	<b>3485.50</b>	<b>2067.70</b>	<b>716.05</b>	<b>6269.25</b>	<b>1824.85</b>	<b>507.80</b>	<b>8601.91</b>

- Source: Information provided by the Discom

The financial position and working results of the Discom during the five years ending 31 March 2015 are given in the **Annexure 3.2**.

### 3.1.7. Audit findings

Audit findings relating to implementation and impact of FRP in the Discom have been discussed in following paragraphs.

### 3.1.8 Absence of linkages between FRP and financial improvement under first phase of FRP

GoMP did not set any targets for the Discom to improve operational and financial performance by utilising the financial assistance provided in the first phase of FRP

<sup>2</sup> [1-(billing efficiency\*collection efficiency)]\*100%. Billing efficiency= units sold/input units and collection efficiency = collected amount/billed amount.

<sup>3</sup> Amount collected excluding arrears/amount billed for units sold.

during 2011-12 to 2013-14. GoMP provided financial assistance of ₹ 5012.90 crore during this phase as detailed in **Table 3.1.1**.

As no targets for improvement in operational efficiency were set under first phase of FRP, there was no commitment for the Discom to improve its financial health through its operating activities. We observed that yearly losses of the Discoms increased from ₹ 973.80 crore in 2010-11 (before the year of FRP) to ₹ 1887.15 crore in 2013-14 (**Annexure 3.2**). The continuous yearly losses increased the negative net worth of the Discom from ₹ 2334.30 crore in 2010-11 to ₹ 5805.34 crore in 2013-14.

Due to non-fixation of targets under first phase of FRP, there was no onus on Discom to improve its financial health thereby GoMP had to release short term loan of ₹ 2214.38 crore besides financial assistance under FRP.

Consequently, GoMP had to release short term loan of ₹ 2214.38 crore to Discom during 2011-12 to 2013-14 to meet its working capital requirements indicating the Discom's continued dependence on the GoMP. Thus the objective of FRP to improve financial health of the Discom could not be achieved.

### 3.1.9 Persistent gap between Average Rate of Revenue Realisation and Average Cost of Supply

As per extended FRP, the Discom shall achieve the Average Rate of Revenue Realisation at ₹ 3.59 per unit of electricity for 2014-15, ₹ 4.02 per unit for the year 2015-16 and ₹ 4.63 per unit for the year 2016-17. However, no target was fixed for reduction in gap between Average Rate of Revenue Realisation (ARRR) and Average Cost of Supply (ACS).

The details of ARRR, ACS and gap between ARRR and ACS are given in the **Table 3.1.2** below.

**Table 3.1.2**

Sl. No	Description	2010-11	2011-12	2012-13	2013-14	2014-15 (Pro.)
1	Input units (in MUs)	10563	11749	13371	14526	16106
2	Billed units (in MUs)	7231	8178	9892	11087	12613
3	Total Income including revenue from sale of power (₹ in crore)	3363.90	3960.10	5268.07	5845.34	6952.64
4	Total expenses including value of purchase of power (₹ in crore)	4337.70	5182.40	6782.55	7898.16	8344.82
5	ARRR with reference to total income (3/1) ₹ per unit	3.18	3.37	3.94	4.02	4.32
6	ACS with reference to total expenses (4/1) ₹ per unit	4.11	4.41	5.07	5.44	5.18
7	Gap between ARRR and ACS per unit (5-6) ₹ per unit	(-) 0.93	(-) 1.04	(-) 1.07	(-) 1.42	(-) 0.86

It can be seen from above that the Discom achieved ARRR at ₹ 4.32 per unit against the envisaged target of ₹ 3.59 per unit of electricity for 2014-15. However, the gap between ARRR and ACS per unit increased from (-) ₹ 0.93 per unit in 2010-11 to (-) ₹ 1.42 per unit in 2013-14 due to substantial increase in total expenses including cost of power purchase compared to the increase in total income, however the same decreased to (-) ₹ 0.86 per unit in 2014-15 due to reduction in AT&C losses and improvement in collection efficiency. This indicated that gap between ARRR and ACS persisted over the years. Thus, fixing the ARRR target in terms of rupee per unit without linking to ACS in the extended FRP was not justified.

The gap between ARRR and ACS persisted over years in the absence of target under FRP.

In exit conference, Government accepted (October 2015) that linking of ARRR with ACS is required to bring down the gap to zero level and further stated that ACS was beyond the control of Discom as Central Electricity Regulatory Commission regulations on generation and transmission, coal pricing, lower grade of coal, and market conditions impacted the ACS. Hence Government decided to set targets for ARRR.

Fact remains that due to non linking the ARRR with ACS, there was no responsibility fixed on the Discom to reduce the gap between ARRR and ACS to zero level.

### Recommendation:

The Government should fix the target for reduction in gap between ARRR and ACS in the remaining period of FRP to give impetus to improvement in operational performance of the Discom.

#### 3.1.10 Non-achievement of target of reduction in AT&C losses

As per extended FRP, the Discom was to reduce AT&C losses to the levels fixed by MPERC. **Table 3.1.3** below indicates the AT&C losses of the Discom against targets fixed by MPERC for five years period from 2010-11 to 2014-15.

**Table 3.1.3**

Year	Total input units (MU)	Purchase cost of electricity <sup>4</sup> (₹)	Target fixed by MPERC (%)	Average achievement (%)	Loss absorbed by Discom (%) (5-4)	Value of absorbed loss (₹ in crore) (2*6)*3
1	2	3	4	5	6	7
2010-11	10563	2.70	30	34.87	4.87	138.89
2011-12	11749	3.37	27	31.76	4.76	188.47
2012-13	13371	3.84	24	26.02	2.02	103.72
2013-14	14526	4.01	23	23.68	0.68	39.61
2014-15	16106	4.12	20	21.69	1.69	112.14
<b>Total</b>						<b>582.83</b>

**Source: Information provided by the discom**

As may be seen from the above table that the Discom could not reduce AT&C losses up to the levels of target fixed by MPERC. The main reasons for high AT&C losses were theft of power, non-installation of meters for all consumers in rural areas and poor rate revenue realisation. As MPERC determines revenue requirement on the basis of specified AT&C losses, excess AT&C losses over targets valued at ₹ 582.83 crore for the five years up to 2014-15 had to be absorbed by the Discom.

Government replied (October 2015) that there was continuous reduction in AT&C losses year after year and efforts are being made to reduce it to the levels fixed by the commission. Fact remains that the Discom was not able to reduce AT&C losses to the levels fixed by the MPERC and thereby the Discom had to absorb the excess AT&C losses impacting the financial health of the Discom.

**Discom was not able to reduce AT&C losses to the levels fixed by the MPERC and thereby the Discom had to absorb the excess AT&C losses of ₹ 582.83 crore impacting the financial health of the Discom.**

<sup>4</sup> Purchase of electricity value/input units

**Recommendation:**

The discom should take concrete steps for controlling theft of power and improving billing efficiency to reduce AT&C losses to the level fixed by MPERC.

**3.1.11 Status of collection efficiency**

One of the conditions of extended FRP was that the Discom shall improve its collection efficiency at least to 95 per cent of the billed amount.

The details of net trade receivables and collection efficiency for the five years up to 2014-15 are given in **Table 3.1.4**.

**Table 3.1.4** (₹ in crore)

Sl. No.	Particulars	2010-11	2011-12	2012-13	2013-14	2014-15
1	Revenue from sale of power	3133.73	3753.65	5040.73	5645.64	6669.96
2	Gross receivables	3067.65	3022.56	3334.83	3432.28	3975.13
3	Provision for bad and doubtful debts	733.60	878.13	994.83	806.67	992.68
4	Net receivables	2334.05	2144.43	2340.00	2625.61	2982.45
5	Bad and doubtful debts written off during the year	49.98	35.81	305.55	585.06	9.27
6	Collection efficiency in percentage <sup>5</sup>	94.53	105.05	96.12	94.94	94.65

Source: Information provided by the discom

There was accumulation of revenue arrears of ₹ 2982.45 crore due to non-initiation of concrete action for their realization.

It can be seen above that the collection efficiency set in extended FRP was almost achieved but net receivables (arrears of revenue) increased from ₹ 2334.05 crore in 2010-11 to ₹ 2982.45 crore in 2014-15 indicating accumulation of arrears of revenue. This was due to non-initiation of concrete action against the defaulting consumers by disconnecting the supply of power, initiating action under Revenue Recovery Act, etc. This adversely impacted the liquidity position of the Discom.

We further noticed that Discom had written off ₹ 985.61 crore for five years up to 2014-15 towards bad debts against which MPERC in the tariff orders for the years 2010-11 to 2014-15 admitted nil amount for 2010-11 and 2011-12, only ₹ one crore each for 2012-13 and 2013-14 and ₹ two crore for 2014-15 due to non furnishing of details of bad and doubtful debts as sought by MPERC. Thus, the Discom had to absorb loss on account of bad debt of ₹ 981.61 crore which adversely affected the financial condition of the Discom.

In exit conference, Government stated that due to non realisation of billed amount in rural areas and certain long pending amounts from the permanently disconnected parties, the arrears could not be realised forcing the Discom to write off certain amounts.

The reply is not acceptable as due to non-furnishing of the requisite data to MPERC, the Discom had to absorb the disallowed amount.

<sup>5</sup> (total revenue + last year net trade receivables–current year net trade receivable)/ total revenue\*100



**Recommendation:**

The Discom should take effective action for recovery of arrears in a time bound manner to avoid huge accumulation of arrears and resultant bad debts.

**3.1.12 Delay in preparation of proposal to recover arrears of revenue**

The Discom submitted the proposal for realisation of arrears to Finance Department after the delay of 10 months.

As per extended FRP the Discom was to prepare a proposal for recovery of arrears of revenue and submit to Finance Department for approval by November 2014. At the end of the base year (2013-14) the arrears of revenue stood at ₹ 2625.61 crore. We observed that the Discom belatedly submitted the proposal in August 2015 after a delay of 10 months but approval of the same from Finance Department was yet to be received (October 2015).

Government replied (October 2015) that proposal was forwarded to Finance Department in August 2015 and approval was awaited. Fact remains that the Discom submitted the proposal belatedly resulting in delay in approval from Finance Department and in the meantime effective steps could not be taken for recovery of arrears amount.

**3.1.13 Delay in completion of feeder separation works**

As per extended FRP, the Discom was to complete the works of Feeder Separation Programme (FSP) by the end of October 2015. The Discom was also required to re-award all terminated contracts and complete the works within 18 months from date of award.

The Discom launched FSP in 2010 with the main objective of separating the agricultural feeders from common feeders to reduce AT&C losses. Accordingly, the works of separation of 1589 feeders of 11 KV line were awarded (November 2010 and August 2011) in 21 packages on turnkey basis with the completion period of 18 months i.e to be completed during May 2012 to February 2013.

Due to non-completion of Feeder Separation works, the objective of reduction in AT&C losses was not achieved.

The Discom terminated (December 2014) eight packages due to delay in execution of works, of which two packages were re-awarded in April 2015 and balance six packages were yet to be re-awarded (October 2015). Further, due to delay in execution of works by the turnkey contractors, the works of 477 feeders could not be taken up at all whereas works in respect of 300 feeders were partially completed as of October 2015. This resulted in non-completion of works in respect of 777 feeders defeating the objective of reduction in AT&C losses.

Government replied (October 2015) that due to paucity of funds and shortage of labour, the contractors could not complete the works on time. In exit conference, Government further stated that some contractors left works without execution. Fact remains that delay in re-awarding the left over works in terminated packages and delay in execution of works in on going packages resulted in non achievement of objective of reduction in AT&C losses.

**Recommendation:**

The Discom should ensure completion of Feeder separation project in a time bound manner by removing bottlenecks.

### 3.1.14 Non-achievement of envisaged objectives of FRP.

The Discom could not achieve the main objectives of efficiency gains to become commercially viable, progressively self-sustainable and less dependent on the Government as envisaged under FRP even after receipt of financial assistance of ₹ 8601.91 crore during first four years period (2011-12 to 2014-15) of implementation of FRP in the form of conversion of short term/long term liabilities payables to the Government into perpetual loan.

Discom failed to attain the envisaged objectives of FRP of improvement in financial health and becoming self sustainable.

Since the Discom is not able to improve its own resources, it is meeting its revenue expenditure by utilising its capital including the capital receipts of the perpetual loan provided under FRP. Consequently, the negative net worth of the Discom increased from ₹ 2334.30 crore in 2010-11 to ₹ 6714.21 crore in 2014-15 and accumulated loss increased from ₹ 4338.22 crore in 2010-11 to ₹ 10074.46 crore in 2014-15 indicating the Discom's un-sustainability on its own resources. Thus the objectives of FRP to make the Discom self-sustainable and commercially viable could not be attained.

#### Recommendation:

The Discom should improve its operational and financial performance for becoming commercially and financially viable without depending on State Government.

#### Conclusion and Recommendations

- In the first phase of Financial Restructuring Programme (FRP) implemented during 2011-12 to 2013-14, the Government of Madhya Pradesh (GoMP) did not set any targets for the Discom to improve its operational and financial performance. As a result, due to poor financial health of the Discom, GoMP had to release short term loan of ₹ 2214.38 crore besides financial assistance of ₹ 5012.90 crore under FRP.

- In the extended FRP (2014-17), GoMP fixed target for Average Rate of Revenue Realisation (ARRR) without linking it to reduction in gap between ARRR and Average Cost of Supply (ACS). As a result, gap between ARRR and ACS persisted even after implementation of FRP.

The Government should fix the target for reduction in gap between ARRR and ACS in the remaining period of FRP to give impetus to improvement in operational performance of the Discom.

- The Discom failed to reduce AT&C losses to the level fixed by Madhya Pradesh Electricity Regulatory Commission (MPERC) as stipulated in extended FRP. Resultantly, the Discom had to absorb the excess AT&C losses of ₹ 582.83 crore which adversely affected its financial condition.

The discom should take concrete steps for controlling theft of power and improving billing efficiency to reduce AT&C losses to the level fixed by MPERC.

- The revenue arrears of the Discom increased from ₹ 2334.05 crore in 2010-11 to ₹ 2982.45 crore in 2014-15 due to non-initiation of concrete action for recovery of arrears. Further, out of ₹ 985.61 crore written off as bad debts by the Discom.

MPERC did not allow ₹ 981.61 crore in the tariff orders due to failure of discom to provide details thereof.

The Discom should take effective action for recovery of arrears in a time bound manner to avoid huge accumulation of arrears and resultant bad debts.

- As against the condition of FRP, the Discom failed to complete the feeder separation works in 777 feeders out of 1589 feeders due to delay in re-awarding the terminated works and delay in execution of ongoing works under Feeder Separation Programme (FSP).

The Discom should ensure completion of Feeder Separation Programme in a time bound manner by removing bottlenecks.

- The Discom could not achieve the objectives of improvement in financial health and becoming commercially viable even after completion of four years period of FRP. As a result, the Discom continued to be dependent on GoMP despite receipt of financial assistance of ₹ 8602 crore during 2011-12 to 2014-15.

The Discom should improve its operational and financial performance for becoming commercially and financially viable without depending on State Government.

### 3.2 Short recovery of liquidated damages

#### **Adoption of incorrect methodology resulted in short recovery of liquidated damages amounting to ₹ 4.47 crore from the contractor**

Madhya Pradesh Poorv Kshetra Vidyut Vitaran Company Limited (Company) awarded (February 2009 to September 2012) the works of construction of new 11 KV line, low tension (LT) line distribution substations and extension of service lines including house wiring for Below Poverty Line (BPL) consumers in Chhatarpur, Tikamgarh, Panna and Sagar Districts to five contractors on turnkey basis under Rajiv Gandhi Gramin Vidyutikaran Yojana (RGGVY) at the total cost of ₹ 200.48 crore. The scope of the work included joint survey of lines, construction of new 11 KV line and installation of distribution transformers including house wiring for BPL households in the villages.

As per the terms and conditions of the agreements, the contractors were to complete the work within 18 months from the date of award of work. The contractor were liable to pay liquidated damages (LD) at the rate of half *per cent* of the contract price for each calendar week of delay in completion of the work, limited to a maximum of five *per cent* of the total contract price.

We observed that the contractors could not complete the work within the stipulated time of 18 months and the works remained incomplete as of March 2015. As, all the contractors had delayed the execution of the work for more than 10 weeks, LD at the rate of five *per cent* of the contract price amounting to ₹ 10.02 crore was recoverable from the contractors. The Company, however, recovered (up to August 2015) LD amounting to ₹ 5.55 crore only worked out on the basis of five *per cent* of the value of bills submitted by the contractors for the work executed instead of five *per cent* on the total contract price. Thus, due to

incorrect methodology adopted for recovery, LD amounting to ₹ 4.47 crore was short recovered from the contractors (*Annexure-3.3*).

The Management replied (September 2015) that as per the clause of LD given in the contract, a sum of half *per cent* of the contract price for each calendar week of delay or part thereof shall be paid by the contractor as LD and accordingly they had recovered.

The reply is not correct as the Company imposed LD at the rate of five *per cent* of the amount of bills submitted by the contractor instead of the contract value.

Thus, due to adoption of incorrect methodology, LD amounting to ₹ 4.47 crore was short recovered from the contractor.

The matter was reported to the Government in May 2015; their reply had not been received (October 2015).

### **3.3 Loss of interest due to not opting for Corporate Liquid Term Deposit (CLTD) Scheme**

**By not opting for CLTD in the current account and consequently due to idle surplus funds in the current account, the Company lost interest income of ₹ 1.98 crore**

Madhya Pradesh Poorv Kshetra Vidyut Vitaran Company Limited, (Company) has been maintaining nine Current Accounts to meet both capital and revenue expenditures including seven accounts with State Bank of India. The State Bank of India offers Corporate Liquid Term Deposit (CLTD) Scheme for Institutions having current account in the bank. As per CLTD, a minimum deposit of ₹ 50000 is required to be maintained in CLTD at all times. Interest is paid at the basic term deposit interest rates for the number of days of CLTD subject to the minimum period of 7 days. In case of need, the required amount is automatically withdrawn from CLTD in multiples of ₹ 5000 without limit on the number of withdrawals and credited to the current account to honour cheques/payments. Thus, in view of the provisions of CLTD, no minimum balance was required in current account except ₹ 50000 in CLTD.

We observed (May 2015) that in respect of one current account<sup>6</sup> the Company did not opt for CLTD scheme, nor were the surplus funds transferred in short term deposits. As there was no restriction on number of withdrawals, the Company could have opted for CLTD scheme for the said current account which would have earned interest with liquidity of funds.

Due to not opting for such scheme, the minimum balances in the current account on a day in each of the month of the period i.e. April 2013 to March 2015 ranged between ₹ 0.57 crore to ₹ 37.86 crore. Similarly, the maximum balance in the current account on a day in each of the month of the same period ranged between ₹ 42.25 crore to ₹ 136.29 crore. The Company earned no interest on these fund lying in current account. Had the Company opted for CLTD scheme in the current

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<sup>6</sup> Current Account Number 00000010238007069

account, it would have earned interest income of ₹ 1.98 crore as worked out by audit.

Thus, as a result of not opting for CLTD in the current account and consequently due to idle surplus funds in the current account, the Company lost interest income of ₹ 1.98 crore<sup>7</sup> (*Annexure 3.4*).

The Government stated (August 2015) that the concerned current account had since been converted (July 2015) into CLTD Scheme. The fact however, remains that due to delayed option for CLTD the Company lost interest income of ₹ 1.98 crore.

### **3.4 Loss of Revenue due to withdrawal of demand**

#### **The Company incurred loss of revenue of ₹ 3.85 crore due to withdrawal of minimum charges billed on a consumer**

As per Rule 1.6 of the General Terms and Conditions of High Tension Tariff of Retail Supply Tariff order issued by Madhya Pradesh Electricity Regulatory Commission from time to time, the consumer shall be billed for guaranteed annual minimum consumption based on number of units per kVA of contract demand specified for his category, irrespective of whether any energy is consumed or not during the year.

Madhya Pradesh Poorv Kshetra Vidyut Vitaran Company Limited, (Company) entered (October 2008) into an agreement with Airport Authority of India (Consumer) at Khajurao, Madhya Pradesh for supply of electricity. According to the agreement, 33 KV dedicated line was constructed and notice was issued (June 2011) to the consumer informing construction of dedicated line and readiness for supply of required capacity of load/electricity.

As per clause 2 of the agreement, between the Company and consumer, commencement of the agreement shall, date either from the actual date on which the consumer has begun to take electrical energy or the day immediately following the expiry of specified notice period of intimation of 90 days, whichever is earlier. In the event of non availing the supply by the consumer as per the terms, he/it shall be liable to pay minimum charges as specified in the applicable tariff. As per clause 27, the agreement shall remain in force for a period of two years, unless terminated, it will be deemed to continue upon the same terms and conditions from year to year. Further, after the initial period of two years, the agreement shall be terminable by either party by giving at least one month notice.

We noticed (March 2015) that the consumer did not draw the load connected to the dedicated line even after completion (August 2011) of notice period of 90 days. The Company started billing on the basis of the minimum charges since September 2011 onwards. The consumer however did not pay the minimum charges billed by the Company. As a result the amount recoverable from consumer accumulated to ₹ 3.85 crore for the period September 2011 to January, 2015. Meanwhile, the CGM (Commercial) on the request (January 2014) of

<sup>7</sup> At the rate of 6 per cent per annum for idle days.

Consumer, directed (October 2014) the Chief Engineer (CE) to cancel the sanctioned load along with the agreement and withdraw the entire minimum billing done. Accordingly, the CE cancelled (January 2015) the agreement of the consumer and withdrew the billing of entire amount of ₹ 3.85 crore.

The withdrawal of billing was thus against the provisions of the tariff order and the provisions of agreement. This resulted in loss to the Company and undue favour to the consumer to the extent of ₹ 3.85 crore.

The Management replied (May 2015) that the agreement dated 15 October 2008 could not be commenced due to erroneous issue of 3 months power availability notice and cancelled on the request of the consumer which was received prior to the expiry of the said erroneous notice period. No loss has been sustained to the Company as the consumer has not consumed any energy and is making payment of maintenance charges of 33 kV line and also line losses on the 33 kV line. The demand of ₹ 3.85 crore has been withdrawn as no such demand can be sustained after cancellation of load sanction and agreement.

The Reply is not acceptable as the clause 2(a) of agreement states that the agreement shall commence either from the actual date on which the consumer has begun to take energy under this agreement or the day immediately following the expiry of notice period of 90 days. The Executive Engineer (O&M) Khajuraho issued (June 2011) notice stating that the supply of energy in accordance with the agreement was available. Thus, the agreement commenced with effect from September 2011 i.e. 90 days after the date of notice and accordingly Company started billing also. The fact remains that the Consumer requested (November 2011) after the commencement of agreement in September 2011 for the cancellation of the same.

The matter was reported to the Government in May 2015; their reply had not been received (October 2015).

### **Madhya Pradesh State Electronic Development Corporation Limited**

#### ***3.5 Avoidable expenditure on electricity***

**The Company incurred avoidable expenditure of ₹ 1.21 crore on electricity due to improper assessment of required connected load.**

Madhya Pradesh State Electronics Development Corporation Limited (Company) in order to promote Information Technology (IT) industry in the State of Madhya Pradesh had set up an IT Park in Gwalior District. Company entered (October 2012) into an agreement for a period of two years with Madhya Pradesh Madhya Kshetra Vidyut Vitaran Company Limited (MPMKVVCL) for supply of electricity to Information Technology (IT) Park with initial Contracted Demand (CD) of 200 Kilo Volt Ampere (kVA). The terms and conditions of the agreement provided for increase in electricity demand in phased manner maximum up to 500 kVA and 1500 kVA from September 2013 and April 2014 respectively on the assumption that IT Park would be fully occupied within a period of 18 months.

As per paragraph 7.9 of Madhya Pradesh Electricity Supply Code 2004 (Code), no application for reduction of contract demand shall be entertained within the period

of first two years from the date of contract. However, there is no such restriction for the submission of application for the enhancement of load in the Supply Code.

We observed (January 2015) that MPMKVVCL supplied power to the IT Park and raised bills for minimum fixed charges based on 90 *per cent* of 200 kVA from November 2012 to August 2013, 500 kVA from September 2013 to March 2014 and 1500 kVA from April 2014 together with energy charges as per the tariff applicable, though the actual demand recorded was 26 kVA to 71 kVA during the period September 2013 to December 2014. The Company reassessed (October 2014) the CD and envisaged reduction of the CD to 200 kVA viewing that utilisation of 1500 kVA load was not possible due to non utilisation of space in IT Park as expected. The Company therefore requested (November 2014) MPMKVVCL to reduce the load to 200 kVA. MPMKVVCL accordingly, reduced the load from 1500 kVA to 200 kVA in January 2015 and started billing for electricity charges on the basis of 200 kVA.

We further observed that the clause of the agreement stipulating increase in CD in phased manner up to 500 kVA and 1500 kVA, was unwarranted, as increase in CD was possible at any time subsequently. Whereas decrease in CD was not possible in the first two years of the agreement in terms of the Supply Code.

Thus, due to faulty agreement clause stipulating increase the CD in a phased manner without correlating it to the actual demand of electricity to the IT Park, the Company incurred extra expenditure of ₹ 1.21 crore on account of minimum demand charges (*Annexure 3.5*) for the period August 2013 to December 2014 with reference to optimum contracted load up to 200 kVA.

Management replied (May 2015) that the demand was estimated by Madhya Pradesh Housing & Infrastructure Board and accordingly Company had applied for the connection based on their estimate and assuming that IT Park would be fully occupied within a period of 18 months after the construction was completed. It was also stated that the point made by audit is noted to take care in future.

The reply is not acceptable as the Company had set up the IT Park and Madhya Pradesh Housing Board was the construction agency only. The Company, keeping in view the provision of the Code, should have entered into agreement for minimum CD and applied for increase in CD from time to time according to increase in the occupancy in IT Park and demand of electricity by the occupants.

The matter was reported to the Government in May 2015; their reply had not been received (October 2015).

### **3.6 Allotment of land in deviation from IT policy**

**Land was allotted to the IT Companies at lower rate in deviation from the IT Policy, which resulted in loss of ₹ 128.85 crore to the Government and undue favour to the IT Companies to that extent.**

The Government of Madhya Pradesh (GoMP) with an objective to increase the investment inflow in Information Technology industries and to maximise direct and indirect employment in the State had notified (January 2000) an Information

Technology (IT) policy, which was revised from time to time considering the developments/requirements in the IT industries. The GoMP under the IT policy had earmarked large chunks of land including private land for allotment to IT Companies at reasonable rates.

The IT policy (April 2006 and September 2012) contained many incentives to the IT industry including rebate in cost of land. As per the policy, Government land was to be made available to IT industries, at the rate of 25 *per cent* of the prevalent Collector guideline rate subject to availability of land and with the condition of investment by IT industries in fixed capital within a period of three years. Madhya Pradesh State Electronics Development Corporation Ltd (Company) was entrusted with the responsibility as nodal agency for implementation of IT projects of GoI and GoMP.

The GoMP entered (April 2012) into Memorandum of Understandings (MoUs) with Tata Consultancy Services (TCS) and Infosys Limited respectively for allotment of 100 acre and 130.08 acre land in Indore on lease basis for 33 years at the premium of ₹ 20 lakh per acre (total cost ₹ 46.01 crore). Subsequently, the GoMP entered into lease agreements (October 2012) with the two IT companies for allotment of the said land at the premium of ₹ 20 lakh per acre on lease basis for 99 years.

We noticed (March 2014) that the cost of the land allotted to TCS and Infosys Limited was ₹ 699.44<sup>8</sup> crore according to Collector guidelines rate. Therefore, the cost of land recoverable from the IT Companies should have been ₹ 174.86 crore at the rate of 25 *per cent* of prevalent Collector guidelines rate. However, the land was leased to IT companies at the cost of ₹ 46.01 crore only, resulting in allotment of land at the additional rebate of ₹ 128.85 crore. Thus, rebate granted in cost of land was 93.42 *per cent* against the rebate of 75 *per cent* permissible as per the Policy.

We further noticed that as per clause V (8) (e) of IT policy 2006 the Companies generating employment for more than 500 persons would be provided further concession on the rate of land with the approval of cabinet. The clause V (8) (f) of the IT policy 2006 provided for allotment of land to IT Companies on lease basis for 33 years with the provision of further renewal. In the revised IT policy 2012 notified on 6 September 2012, provision of further concession on the rate of land for the Companies generating employment for more than 500 persons was withdrawn, evidently because of indefinite provision in the IT policy 2006 regarding further concession and a scope of application of unmitigated discretion in allowing quantum of further concession. However, the period of lease was increased to 99 years in the IT Policy 2012.

We noticed that in the lease deeds executed between the GoMP and IT Companies in October 2012, the provision of the revised IT policy 2012 regarding allotment of land on 99 years lease basis was followed but the provision of allotment of land at the rate of 25 *per cent* of prevalent Collector guideline rate, was not followed. We also noticed that the basis of deciding the rate of ₹ 20 lakh per acre of land

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<sup>8</sup> ₹ 640.38crore for 210.68 acre private land i.e. ₹ 640.38/210.68 = ₹ 3.04 crore per acre, total land 230.08 acre land \*3.04=699.44 crore



was not specified either in the MoUs/ lease deeds or other documents produced to us. Thus, the land was allotted to the IT Companies at much lower rate by deviating from the IT policy 2012. This resulted in loss of ₹ 128.85 crore to the Government and undue favour to the IT Companies to that extent.

We further observed (June 2015) that construction on the said land was at a nascent stage as only boundary wall of premises had been constructed, as against the condition of investment by them in fixed capital within a period of three years.

The Management replied (July 2015) that the land allotted to TCS and Infosys was decided by State Cabinet and the clause V (8) (e) of the IT policy 2006 provided further concession on rate of land with the approval of cabinet in respect of the Companies providing employment to more than 500 persons.

The reply is not acceptable as the IT policy 2006 and 2012 provided for allotment of land to IT Industry at the rate of 25 *per cent* of Collector guidelines rates and no basis for allotment of land at further concession was disclosed. The policy of further concession on the rate of land as per the IT policy 2006 was withdrawn in the IT policy 2012 (issued in September 2012), that is before entering into the lease agreements with the IT Companies in October 2012.

The matter was reported to the Government in June 2015; their reply had not been received (October 2015).

### **Madhya Pradesh Paschim Kshetra Vidyut Vitaran Company Limited**

#### ***3.7 Under recovery of workers welfare cess***

**The Company short recovered workers welfare cess of ₹ 49.39 lakh from the bills of contractors for supply portion and thereby extended un-intended benefit to the Contractors.**

Section 3 of the Building and Other Construction Workers Welfare Cess Act, 1996 provides for levy and collection of a cess on the cost of construction incurred by the organization. Accordingly, Government of India notified (September 1996) levy of cess at the rate of one *per cent* of the cost of construction incurred by employer.

Rule 8 of the Building and Other Construction Workers Welfare Cess Rules, 1998 provides that failure to pay any amount of cess to Madhya Pradesh Bhavan Evam Anya Nirman Karmakar Kalyan Mandal (Board) within the specified time entails payment of interest on the unpaid amount at the rate of two *per cent*, for the delay of every month or a part of a month thereof.

Rule 9 of the Rules, 1998 further provides for levy of penalty of amount not exceeding the amount of cess in case of non-payment of cess within specified time. As per Rule 3 of Rules 1998, the cost of construction shall include all expenditure incurred by the employer in connection with building and other construction excluding cost of land and compensation under Workmen's Compensation Act.

Madhya Pradesh Paschim Khsetra Vidyut Vitaran Company Limited, (Company) awarded (September 2011 and March 2012) works separately for supply and erection portion for construction of 11 KV line and low Tension line under two major schemes viz., Rajiv Gandhi Grameen Vidyutikaran Yojana (RGGVY) and Feeder Separation Programme (FSP) on turnkey basis.

We noticed (October 2014) from the records of Shahjapur circle office of the Company that the Circle office had deducted labour welfare cess at the rate of one *per cent* on the cost of erection only from running bills of the contractors and remitted to the authority concerned but excluded the cost of supply (materials) for the purpose of levy of cess. As per Rule 3 of Building and Other Construction Workers Welfare Cess Rules 1998, cost of construction includes all expenditure<sup>9</sup> except cost of land and compensation. Therefore, cess was to be collected on cost of supply (material) also.

This has resulted in under recovery of cess of ₹ 49.39 lakh from the contractor's bills and short remittance to the Board on the works undertaken by the Company and thereby extending unintended benefit to the contractors to that extent because of failure to deduct cess on the cost of supply. The Company also became liable for the payment of interest at the rate of two *per cent* per month and penalty of ₹ 49.39 lakh.

The Government replied (June 2015) that Building and Other Construction Workers Welfare Cess Act is applicable only to the construction contracts and not to the contract of supply/ sale of material. Thus, there was no requirement of payment of cess on the bills relating to the works of supply of material. It was further stated that the definition of building or other construction works was only restricted to erection and construction contracts and did not include other contracts like contract of supply or sales of material. Government also stated that the contract as well as work order for the supply of material work and erection work are two separate contracts and that has been held in various judicial pronouncements if two separate contracts/ works order executed for supply and construction portion, both cannot be treated as one and contract of supply shall be treated as contract of sale and not the construction contract.

The reply is not acceptable since the company had awarded the contracts (Supply and Erection) against one common bid document. Further, Hon'ble High Court of Madhya Pradesh in its judgment (May 2012) in the case of M/s GVPR Engineers Limited Versus State of Madhya Pradesh, stated that, the cess should be levied on the total cost of construction even though the project is divided into parts (i.e. supply and erection portion). Rule 3 of Rules 1998, also states that the cess should be levied on the total cost of the construction including material cost. Hence, the Rules do not distinguish supply and erection portion of a work- for the purpose of levy of labour welfare cess. The Court cases referred in the reply are not in the context of applicability of workers welfare cess, hence not relevant to the audit observation.

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<sup>9</sup> Including construction regarding transmission and distribution of power as referred in section 2(d) of the Building and Other Construction Workers Act, 1996

## Madhya Pradesh Road Development Corporation Limited

### 3.8 Payment of extra bonus to concessionaires

**Allowing construction period more than the recommended/considered period in the project feasibility report by the consultants resulted in payment of extra bonus to concessionaires to the extent of ₹ 12.21 crore.**

Madhya Pradesh Road Development Corporation Limited (Company) executes road works under public private partnership on Built Operate and Transfer (BOT) basis using different modes of financing the projects. The Company for development of Sitamau-Basai-Suwasara Road (SBSR) having length of 34.97 km and Ashoknagar-Vidhisha Road (AVR) having length of 35.68 km, engaged two separate Consultant for preparation of feasibility reports (FR) for the two road projects respectively. Thus, the total concession period was dependent on volume of traffic whereas no specific period was fixed for construction. The Consultants in the feasibility reports recommended/considered construction period of 12 and 18 months for the two roads respectively.

The Company thereafter entered (December 2011 and March 2013) into concession agreements (CA) with two separate contractors for execution of SBSR and AVR projects on toll plus annuity basis. As per the terms and conditions of the CAs, the project period was 15 years from the appointed date<sup>10</sup> which included two years (730 days) as construction period and remaining 13 years for operation and maintenance of the roads. The terms and conditions of CAs further provided for payment of annuity of ₹ 3.69 crore and ₹ 5.04 crore to the concessionaires on six monthly basis (total 26 annuities) during the period of operation and maintenance of SBSR and AVR respectively besides the toll collection by them.

As per clause 15.1 of the CA the commercial operation date (COD) shall be the date on which provisional certificate of completion for the road is issued by the Independent Engineer<sup>11</sup>. As per clause 28.1 of the CAs, if concessionaire achieves COD prior to the scheduled completion date then the concessionaire shall be entitled to receive a bonus for early completion of the project equal to the product of average daily annuity and the number of days by which the COD preceded the schedule date of completion.

We noticed that the concessionaires completed the project works ahead of scheduled completion date by 401 and 470 days (*Annexure 3.6*) for which the Company paid bonus of ₹ 8.00 crore and ₹ 12.80 crore to the concessionaires for SRBR and AVR projects respectively. The scheduled completion period of two years for these two road projects having road length of about 35 km, was not only on higher side considering that the Company allowed two years construction period for the other road projects having length of 63.80 km to 119.36 km, but was also clearly against the recommended/considered period of 12 months and 18 months by the consultants.

<sup>10</sup> Appointed date is the date on which the financial closure is obtained by the concessionaire and treated as start day for the work.

<sup>11</sup> Independent Engineer is appointed by the Company for supervising the works of Concessionaire and reporting to the Company.

Thus, allowing construction period of two years in the CAs, by postponing the completion period by 12 months and 6 months respectively for two road projects was without having regard to length of the road and detrimental to the interests of the Company. Consequently, the concessionaire became entitled for extra payment of bonus of ₹ 7.28 crore and ₹ 4.93 crore (*Annexure 3.6*) respectively for the road projects.

The Management replied (June 2015) that Concession agreement provides for the construction period of two years across the projects. Since the bidding is open and transparent the construction period was made open upfront which has resulted into the financial quote received accordingly. Management further stated that if construction period was taken one year then number of annuities would be increased from 26 to 28 and hence, reducing the construction period from two years to one year would not result in saving. Management also enclosed a comparative statement indicating that the proposition adopted in Concession Agreement followed by MPRDC was better and beneficial to MPRDC.

The reply is not acceptable because the contractor's quote depends on definite parameters whereas in this case early completion and payment of bonus was not definite as early completion was dependent on various internal and extraneous factors, hence unpredictable at the time of quoting of rates. Further, if the number of annuities were increased to cover the extended period of operation and maintenance, the Concessionaire would have quoted different amount for each annuity considering the present value of 28 installments instead of 26 installments of annuity and targeted return on their investment in addition to this, the Company would have got benefit of operation and maintenance of roads for extra period of one year/six months also which would neutralise the extra installments of annuity.

Thus, because of keeping schedule completion period more than the period recommended/considered by the consultants, period of early completion was increased and resultantly Concessionaire became entitled for extra bonus.

The matter was reported to the Government in May 2015; their reply had not been received (October 2015).

### ***3.9 Non-recovery of interest as per the clause in concession agreement resulting in loss***

**Non-recovery of interest as per the clause in concession agreement for delayed payment of premium resulted in loss of interest of ₹ 3.17 crore besides non recovery of ₹ 43.20 crore from the concessionaire.**

Madhya Pradesh Road Development Corporation Limited (Company) was notified as State Highway Authority of Madhya Pradesh with the prime responsibility of developing network of State Highways in Public Private Partnership. The Company on behalf of the Government of Madhya Pradesh, executed (November, 2010) a concession agreement (CA) with Transstroy Bhopal Bypass Tollways Private Ltd (Concessionaire) for construction, operation and maintenance of Bhopal-Bypass Road on Build, Operate and Transfer (BOT) basis, under BOT (Toll) model wherein annual premium was payable by the Concessionaire to the Company.

As per clause 15.1 of the CA toll collection was to start from the commercial operation date (COD) of the Road. As per clause 26.2.1, the Concessionaire was liable to pay a premium of ₹ 21 crore per annum for the first year on COD and in the subsequent years of the CA, within seven days of the start of each year with an increase of five *per cent* as compared to the immediately preceding year. Further, as per clause 27.1.1, the Concessionaire has sole and exclusive right to demand, collect an appropriate fee from the users on and from the COD till expiry of CA.

As provided in clause 36.2.1, in case of non-deposition of premium by Concessionaire, the Company might issue suspension orders for toll collection. During the period of suspension, the Company could on behalf of the Concessionaire, collect all fee and revenues under the agreement and deposit the same in the Escrow Account and also be entitled to make withdrawals from the Escrow Account for meeting the costs incurred by it for remedying and rectifying the cause of suspension.

We observed (April 2015) that the Concessionaire started collection of toll from the users from the COD of the project i.e. May 2013. The Concessionaire, however, did not pay the premium amount of ₹ 17.84 crore<sup>12</sup> in the first year on due date i.e. May 2013 and subsequently paid it in installments with delays ranging between 53 and 172 days. Further, the Concessionaire paid (May 2014) only ₹ two crore against the due amount of ₹ 22.05 crore for the second year and also not paid ₹ 23.15 crore for third year so far (June 2015). Non-payment of premium resulted in violation of clause 26.2.1 and also attracted the payment of interest for the period of delay calculated at a rate equal to five *per cent* above the Bank Rate as per the clause 47.5 of the CA.

However, on failure of the Concessionaire to pay the premium, the Company did not issue any order for suspending toll collection by the Concessionaire, nor claimed interest for the period of delays in payment of premium as per the clause 47.5 of the CA. Thus, there was no deterrent to the contractor to pay the amount of premium on due dates.

The Management replied (June 2015) that various notices have been issued to the concessionaire for depositing of premium. It further stated that after suspension of toll, MPRDC had to take over toll collection for which manpower would be required and clause 47.5 of the CA provides for penal interest at a rate equal to five *per cent* above the Bank Rate for delayed payment of dues for either party. However, this being the BOT project wherein there was no Government support in form of viability gap funding and change of scope of work was yet to be finalized, penal interest at this juncture had not been imposed. The cost of change of scope as estimated by the Independent Engineer was ₹ 16.24 crore (approximately) for which Concessionaire requested to adjust the same from premium.

The reply is not acceptable as the non-finalisation of change of scope does not prevent Company from the recovery of premium and penal interest from the Concessionaire as per the provisions of CA and cost of deployment of manpower

<sup>12</sup>Premium for first year ₹ 21 crore for 365 days, however, the COD was issued on 26 May 2013 i.e. in the first year there was only 310 days. Hence, ₹ 21\*310 days/365 days = ₹ 17.84 crore

could be met from toll collection in case of suspension of toll collection by the Concessionaire.

Thus, as a result of not suspending toll collection by the Concessionaire and non-recovery of interest on delayed payment of premium, the Company incurred loss of interest of ₹ 3.17 crore<sup>13</sup> (*Annexure-3.7*) besides the premium amount of ₹ 43.20 crore remained unrecovered from the due date of 7 April 2014 and 7 April 2015 respectively.

The matter was reported to the Government in May 2015; their reply had not been received (October 2015).

### **3.10 Unjustified payment of bonus to concessionaires**

**The concessionaire agreement did not specify any maximum limit on payment of bonus for early completion of projects and allowed construction period more than that recommended by the consultants resulting in payment of extra bonus of ₹ 85.02 crore.**

Madhya Pradesh Road Development Corporation Limited (Company) was notified as State Highway Authority by the Government of Madhya Pradesh (GoMP) with the prime responsibility of developing network of State highways in Madhya Pradesh. The Company adopted built, operate and transfer (BOT) model based on model concession agreement (MCA) approved by the Government of India (GoI) for executing projects under toll, toll *plus* annuity, toll *plus* premium and annuity modes.

The Company entered (November 2011 to February 2013) into nine concession agreements (CAs) with different concessionaires for construction of road projects on annuity mode. As per the terms of the CAs, the total project period was 15 years which included two years (730 days) for construction and 13 years for operation and maintenance of the projects. For incentivising the concessionaire, it also provided for payment of bonus equal to the average daily annuity amount for the days preceded to the scheduled completion period in the event concessionaire achieves completion of work (COD)<sup>14</sup> earlier than the scheduled completion date.

The concessionaires for nine road projects completed the projects<sup>15</sup> ahead of the scheduled completion date by 98 days to 501 days (*Annexure 3.8*). For early completion of works the concessionaires became entitled for bonus in terms of the CAs. We observed that the terms and conditions of the CAs did not define any maximum limit on payment of bonus. The concessionaires of the nine road projects were paid total bonus of ₹ 155.65 crore (*Annexure 3.8*) for early completion of the works. The amount of bonus accounted for 13.12 *per cent* of the total cost of the nine road projects. Thus, a ceiling of total bonus may be inserted to discourage unrealistically rapid contract implementation by the contractor.

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<sup>13</sup> Interest rate of 9 *per cent* adopted based on interest rate on FDR.

<sup>14</sup> Provisional COD would be issued on completion of 75 *per cent* of value of work as specified in agreement.

<sup>15</sup> This includes those projects also in respect of which provisional completion certificate were issued.

We further observed that in four out of the nine road projects, the scheduled completion period of two years was against the recommended/ considered period of 12 months by the consultants in feasibility reports of the projects. In respect of these projects, the works were completed much ahead by 135 days to 501 days of the scheduled completion dates (*Annexure 3.8*). Thus, allowing construction period of two years in the CAs and thereby postponing the completion period by 12 months for these four road projects, was without any basis and detrimental to the interests of the Company. Consequently, the concessionaires of the four road projects became entitled for payment of bonus/ extra bonus of ₹ 85.02 crore, amounting to 16.53 *per cent* of total cost. As such, the payment of bonus to the concessionaires was unreasonably very excessive at the cost of Government exchequer.

The Management replied (June 2015) that the provisions of bonus had been clearly mentioned in the concession agreement for approved annuity projects and it was an incentive to the concessionaire for completing the projects speedily and getting the bonus in lieu thereof. It was further stated that since the bidding was open and transparent and all the terms and conditions were made open upfront which determined the financial quotes.

The reply is not acceptable as the CAs did not specify any maximum limit on payment of bonus for early completion of the projects resulting in payment of bonus up to the extent of 26 *per cent* of the cost of projects and the period specified for construction of the roads was more than the period recommended by the consultants, resulting in payment of extra bonus to the concessionaires. The reply that all the terms and conditions are made open upfront which determine the financial quotes, is also not acceptable because contractor's quote depends on definite parameters whereas in this case early completion and payment of bonus was not definite as early completion was dependent on various internal and extraneous factors, hence unpredictable at the time of quoting of rates.

The matter was reported to the Government (May 2015); their reply has not been received (October 2015).

**Madhya Pradesh Madhya Kshetra Vidyut Vitaran Company Limited and Madhya Pradesh Paschim Kshetra Vidyut Vitaran Company Limited**

### ***3.11 Non recoupment of shortages of transformer oil***

**Power Distribution Companies did not recoup ₹ 4.27 crore against shortfall in receipt of transformer oil from the failed distribution transformers received in the Area Stores.**

Distribution Transformers (DTRs) procured by the electricity distribution Companies for the purpose of stepping down the electricity voltage is installed at the point of distribution of electricity to consumers. The DTRs contain transformer oil in it for cooling down temperature of winding and acting as an insulator between windings in transformer. The failed DTRs are brought to the Area Stores where the transformer oil from the DTRs is removed. After repairing the DTRs, reclaimed/fresh transformer oil is refilled up to the required level. The

capacity of DTRs ranged from 25 KVA to 200 KVA having different capacity of oil tanks.

As per the order (October 2012) of Madhya Pradesh Madhya Kshetra Vidyut Vitaran Company Limited (MPMKVVCL), failed DTRs beyond guarantee period for the reasons other than accidents, theft etc. and such DTRs having less transformer oil than the prescribed limit (i.e. below LT bushing) would be accepted in the Area Store. It has been further provided in the order that a committee would examine and decide the quantity of oil received from the failed DTRs. Further the GM/DGM (Stores) were required to recover cost at prescribed rate for shortfall in transformer oil from the distribution circle (DC) in charge. According to capacity of DTRs, the transformer oil required to be received from failed DTRs are as under:

Capacity of DTR	Full capacity of Transformer oil (in litre)	Transformer oil required to be received up to LT bushing level (in litre)
200 KVA	265	198
100 KVA	165	123
63 KVA	150	112
25 KVA	61	45

We noticed shortcomings in recovery of shortages in transformer oil from failed DTRs received in Area Stores at Gwalior and Ujjain as detailed below:

(A) In case of Area Store, Gwalior under MPMKVVCL, as against the required 404894 litres of transformer oil to be received from 3473 failed DTRs, the Area Store, Gwalior received 277958 litre of transformer oil during the years 2012-13 and 2013-14. Thus, there was shortfall of 126936 litre transformer oil valued at ₹ 53.31 lakh<sup>16</sup> in the failed transformers. As against this, shortfall of 8231 litre valued at ₹ 1.45 lakh<sup>17</sup> only was recovered. Thus, shortfall 118705 litre transformer oil valued at ₹ 51.86 lakh was yet to be recovered.

The Committee established for this purpose was required to examine quantity of oil in respect of failed DTRs on the same day of arrival in the Area Store. We did not find any evidence that the Committee formed for the purpose had examined the reasons for shortfall in transformer oil. The Area Store also did not seek recoupment of the total shortfall in transformer oil as of June 2015.

Management replied (August 2014) that reasons for shortages of oil were due to breaking of bushings and leakage from the body and there was no norms for the loss of oil due to leakage on the floor. The reply is not acceptable as there was no evidence that the Committee formed for the purpose had examined the quantity of transformer oil received from the failed DTRs and reasons for shortfall therein.

<sup>16</sup> Calculated at the least rate of ₹ 42 per litre obtained in the auctions during the years 2012-13 to 2014-15

<sup>17</sup> ₹ 13988 for 1678 litre for the year 2012-13 and ₹ 131310 for 6553 litre for the year 2013-14 respectively.



(B) In the Area Store, Ujjain under Paschim Kshetra Vidyut Vitaran Company Limited (MPPKVCL), against the required 1749938 litre of transformer oil to be received from 14632 failed DTRs, the Area Store received 856688 litre of transformer oil during the years 2012-13 to 2014-15. Thus, there was shortfall of 893250 litre transformer oil valued at ₹ 3.75 crore in the failed transformers. The Executive Engineer, Area Store, Ujjain intimated (July 2015) non-formation of any committee for determination of shortage of transformer oil.

Thus, in case of area store Gwalior, the Committee, did not determine shortage of transformer oil from failed DTRs and in case of area store Ujjain no committee was formed for this purpose. The two Area Stores also failed to recover shortages of transformer oil valued at ₹ 4.27 crore from the distribution circle/responsible officials.

The matter was reported to the Government/Company (July 2015); their reply has not been received (October 2015).

### **Dada Dhuniwale Khandwa Power Limited**

#### **3.12 Improper management of Company affairs**

#### **Company without formal assurance of coal linkage continued its operation which has resulted in avoidable expenditure of ₹ 1.03 crore**

The Dada Dhuniwale Khandwa Power Limited (Company) was incorporated (February 2010) as a joint venture (JV) of Madhya Pradesh Power Generating Company Limited (MPPGCL) and Bharat Heavy Electricals Limited (BHEL) to build, own and operate 1600 MW (2x800 MW) super critical<sup>18</sup> coal based thermal power plant at Khandwa, Madhya Pradesh.

The promoter of the Company applied (January 2010) for long term coal linkage for the power plant to Ministry of Coal (MoC), GoI. However, the MoC stated (February 2012) that there might not be any scope for fresh coal linkages for 12<sup>th</sup> plan period (2012-17) projects. The Company thereafter amended (January 2013) the objective clause of the Memorandum of Association by inserting development and mining of coal as an objective and filed (January 2013) an application to MoC for allotment of coal block but same was not considered (August 2013) for allotment of coal block made by MoC in August 2013.

In view of no progress expected in the project, Board of Directors (BoD) of the Company decided (February 2014) to stop land acquisition process as there was no assurance of coal block and directed Managing Director to submit a detailed road map including possible winding up of the Company.

We observed (January 2015) that no concrete step for deriving a detailed road map including probable winding up, was taken. Thus, the expenditure of ₹ 1.03 crore incurred by the Company during the period September 2013 to March 2015 proved unproductive and could have been avoided by taking timely action after

<sup>18</sup> It employs higher temperature and pressure resulting in better efficiency, reduced fuel and less greenhouse emissions.

MoC's decision on non-possibility of fresh coal linkage during 2012-17 in February 2012 and non-considering of application by MoC for allotment of coal block in August 2013. After pointed out by the Audit the Board of Directors of the Company finally recommended (March 2015) for winding up the Company as the Company has not received any coal linkage. The Company was however, yet to be wound up (July 2015).

Government/Management replied (July 2015) that the project development was stalled due to non-availability of coal. As numerous efforts for getting coal linkage since the last 5 years, were not fructifying and there was remote possibility of getting coal allocation in the future also, the Board of the JVC in their meeting held on 27 March 2015 recommended to finally wind up the JVC instead of incurring further expenditure.

The reply is not acceptable as the Board of Directors of the Company noted (August 2013) that the prospect of getting a coal linkage was bleak and in view of no progress expected in the project, Board of Directors (BoD) of the Company decided (February 2014) to stop land acquisition process also but did not take steps for winding up of the Company resulting in the avoidable expenditure.

### **Narmda Basin Projects Company Limited**

#### **3.13 Loss of interest due to non-investment of surplus funds**

#### **Company failed to invest its idle funds in fixed deposits (FD) as envisaged in the Memorandum of the Company and lost opportunity to earn interest of ₹ 1.15 crore**

The Narmada Basin projects Company Limited (Company) was incorporated (October 2011) with the objective to promote and operate schemes for irrigation, water supply and drainage. The authorised share capital of the company was ₹ 50 crore out of which share capital amount of ₹ five crore was credited (March 2012) into the Company's current account by the Government of Madhya Pradesh. As per the memorandum of association defining the objective of the Company, it may invest any money not for the time being required for any of the purposes of the Company in any short term instrument of Nationalised Banks.

We observed (June 2015) that the Company incurred (March 2012) an expenditure of ₹ 31.38 lakh towards preliminary expenses and the balance amount of ₹ 4.69 crore of the above capital was retained in the current account since then, till the funds (₹ 4.69 crore) were eventually invested in Bank fixed deposits on 15 February 2015. As the Company was in planning stage and therefore there was no immediate requirement of the fund, the Company could have invested its idle fund in Fixed Deposits in timely manner. The Company however failed to invest its idle funds of ₹ 4.69 crore in FDs as envisaged in the memorandum of the Company. As a result, it lost opportunity to earn interest of ₹ 1.15 crore<sup>19</sup> for the period from April 2012 to February 2015.

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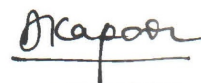
<sup>19</sup> Calculated at the interest rate of 8.5 per cent earned by the Company on its FD.

We further observed that failing to take note of surplus funds lying in current account was on account of delayed finalisation of annual accounts of the Company for the years 2011-12, 2012-13 and 2013-14 in December 2014/January 2015. This diluted the internal control system and deprived the Management of the Company of the opportunity to take timely action to invest surplus fund in interest earning fixed deposits.

The Management replied (July 2015) that most of the time, the post of the Managing Director (MD) was vacant and from 2013 onwards only the post of MD was filled up and the surplus funds available with the Company had been deposited in FD's.

The reply is not acceptable as the funds were lying idle in the current account and the Company invested its surplus fund belatedly on 15 February 2015 only.

The Matter was reported to the Government (July 2015); their reply has not been received (October 2015).



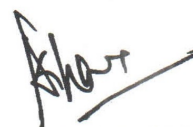
**(DEEPAK KAPOOR)**

**Accountant General**

**(Economic and Revenue Sector Audit)  
Madhya Pradesh**

**Bhopal  
The 11 February 2016**

**Countersigned**



**(SHASHI KANT SHARMA)**

**Comptroller and Auditor General of India**

**New Delhi  
The 12 February 2016**

**Annexure-1.1**  
**Summarised financial position and working results of Government Companies and Statutory Corporations as per their latest finalised financial statements/accounts**

(Referred to in paragraph 1.1 & 1.15)

(Figures in columns (5) to 12 are ₹ in crore)

Sl. no.	Sector/Name of the company	Period of Accounts	Year in which accounts finalised	Paid-up capital <sup>1</sup>	Loans outstanding at the end of year	Accumulated Profit(+) /loss (-)	Turnover	Net profit (+)/ Loss (-)	Net impact on Audit comments <sup>2</sup>	Capital Employed <sup>3</sup>	Return on capital employed <sup>4</sup>	Percentage of return on capital employed	Manpower
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)
<b>A. Working Government Companies</b>													
<b>AGRICULTURE &amp; ALLIED</b>													
1	Madhya Pradesh State Agro Industries Development Corporation Limited	2012-13	2014-15	3.29	0.05	50.51	1238.85	35.28	(-) 0.69	60.11	35.44	58.96	510
2	Madhya Pradesh Rajya Van Vikas Nigam Limited	2013-14	2014-15	39.32	--	186.12	110.39	80.50	(-) 12.64	222.45	80.50	36.19	725
	<b>Sector wise total</b>	--	--	<b>42.61</b>	<b>0.05</b>	<b>236.63</b>	<b>1349.24</b>	<b>115.78</b>	<b>(-) 13.33</b>	<b>282.56</b>	<b>115.94</b>	<b>41.03</b>	<b>1235</b>
<b>FINANCE</b>													
3	M.P. Andyogik Kendra Vikas Nigam (Bhopal) Limited	2013-14	2014-15	2.85	--	16.89	21.25	8.28	--	19.74	8.29	42.00	252
4	M.P. Andyogik Kendra Vikas Nigam(Indore) Limited	2013-14	2014-15	3.40	--	119.13	200.18	86.75	(-) 18.01	246.43	88.08	35.74	226
5	M.P. Andyogik Kendra Vikas Nigam(Jabalpur) Limited	2013-14	2014-15	2.83	--	8.11	3.16	1.90	--	10.94	1.90	17.37	63
6	M.P. Andyogik Kendra Vikas Nigam (Rewa) Limited	2012-13	2014-15	1.80	1.09	4.56	1.86	0.99	--	9.24	1.13	12.23	87
7	M.P. Andyogik Kendra Vikas Nigam (Ujjain) Limited	2014-15	2015-16	10.00	--	5.16	4.78	(-) 1.05	--	15.16	(-) 1.04	--	39
8	Industrial Infrastructure Development Corporation (Gwalior) M.P. Limited	2014-15	2015-16	1.75	--	3.80	10.39	4.38	--	5.55	4.38	78.92	169
9	M.P. Andyogik Kendra Vikas Nigam (Sagar) Limited	2013-14	2015-16	4.00	--	(-) 0.05	0.62	(-)0.02	--	3.95	(-) 0.01	--	27
10	Madhya Pradesh Pechhara Varg Tatha Apsankhyak Vita Eyaam Vikas Nigam Limited	2008-09	2014-15	7.55	44.88	0.16	2.41	0.06	--	52.59	0.06	0.11	16

Sl. no.	Sector/Name of the company	Period of Accounts	Year in which accounts finalised	Paid-up capital <sup>1</sup>	Loans outstanding at the end of year	Accumulated Profit/(+) /Loss (-)	Turnover	Net profit (+)/ Loss (-)	Net impact on Audit comments <sup>2</sup>	Capital Employed <sup>3</sup>	Return on capital employed <sup>4</sup>	Percentage of return on capital employed	Manpower
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)
11	Madhya Pradesh Aditya Vira Evam Vikas Nigam Limited	2003-04	2011-12	18.36	11.06	2.51	4.38	1.94	(-) 0.36	20.07	3.27	16.29	--
12	The Provident Investment Company Limited	2012-13	2014-15	0.50	--	--	3.27	0.84	--	27.19	0.85	3.13	18
13	Madhya Pradesh State Industrial Development Corporation Limited	2012-13	2014-15	81.09	479.68	(-) 583.37	6.96	10.14	(-) 0.55	(-) 22.50	10.16	--	82
	<b>Sector wise Total</b>	--	--	<b>134.13</b>	<b>536.71</b>	<b>(-) 423.10</b>	<b>259.26</b>	<b>114.21</b>	<b>(-) 18.92</b>	<b>388.36</b>	<b>117.07</b>	<b>--</b>	<b>979</b>
<b>INFRASTRUCTURE</b>													
14	Madhya Pradesh Police Housing Corporation Limited	2013-14	2014-15	4.58	161.24	35.90	17.63	9.10	--	201.60	9.10	4.51	312
15	Madhya Pradesh Road Development Corporation Limited	2013-14	2014-15	20.00	--	104.09	69.52	34.78	1.45	124.09	34.78	28.03	192
16	Narmada Basin Projects Company Limited	2013-14	2014-15	5.00	--	0.29	--	--	--	4.71	--	--	--
	<b>Sector wise Total</b>	--	--	<b>29.58</b>	<b>161.24</b>	<b>140.28</b>	<b>87.15</b>	<b>43.88</b>	<b>1.45</b>	<b>330.40</b>	<b>43.88</b>	<b>--</b>	<b>504</b>
<b>MANUFACTURING</b>													
17	Pithampur Auto Cluster Limited	2014-15	2015-16	12.12	--	(-) 7.36	8.77	1.28	--	59.56	1.28	2.15	32
18	Madhya Pradesh State Electronics Development Corporation Limited	2012-13	2014-15	21.91	17.12	(-) 6.91	21.91	3.06	0.11	43.26	3.06	7.07	59
19	Crystal I.T. Park Indore Limited.	2014-15	2015-16	0.05	--	(-) 0.08	--	--	--	(-) 0.03	--	--	--
20	SanRavidas Madhya Pradesh HasthaShilpEvam Hah KarghaVikas Nigam Limited	2013-14	2014-15	1.26	0.37	2.55	53.55	0.07	(-) 4.40	24.48	0.07	0.29	270
21	Madhya Pradesh State Mining Corporation Limited	2013-14	2014-15	2.20	--	163.73	241.53	66.12	--	228.95	66.13	28.88	350
22	MP AMRL (Semaria) Coal Company Limited	2014-15	2015-16	1.00	--	(-) 0.66	--	(-) 0.18	--	0.34	(-) 0.18	--	--
23	MP AMRL (Morga) Coal Company Limited	2014-15	2015-16	1.00	--	(-) 0.33	0.01	(-) 0.01	--	0.67	(-) 0.01	--	--
24	MP AMRL (Bichampur) Coal Company Limited	2014-15	2015-16	1.00	--	(-) 6.03	--	(-) 5.18	--	(-) 5.03	(-) 1.55	30.82	--

Sl. no.	Sector/Name of the company	Period of Accounts	Year in which accounts finalised	Paid-up capital <sup>1</sup>	Loans outstanding at the end of year	Accumulated Profit(+)/Loss (-)	Turnover	Net profit (+)/ Loss (-)	Net impact on Audit comments <sup>2</sup>	Capital Employed <sup>3</sup>	Return on capital employed <sup>4</sup>	Percentage of return on capital employed	Manpower
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)
25	MP AMRL (MarkBarka) Coal Company Limited	2014-15	2015-16	1.00	--	(-) 1.28	--	(-) 0.85	--	(-) 0.28	(-) 0.09	32.14	--
26	MP Jaypee Coal Limited	2014-15	2015-16	10.00	52.10	(-) 6.07	--	(-) 5.11	--	56.03	(-) 5.11	--	--
27	MP Monnet Mining Company Limited	2014-15	2015-16	2.00	--	0.37	--	--	--	1.63	--	--	164
28	MP Jay Pee Minerals Limited	2014-15	2015-16	61.22	135.00	(-) 90.02	207.61	(-) 88.67	--	106.20	(-) 88.67	--	--
29	MP Jay Pee Coal fields Limited	2014-15	2015-16	10.00	--	(-) 9.66	--	(-) 9.26	--	0.34	(-) 9.26	--	--
30	M.P. Sainik Coal Mining Pvt. Ltd	2014-15	2015-16	33.30	0.64	(-) 0.73	--	(-) 0.02	--	33.21	(-) 0.02	--	12
	<b>Sector wise Total</b>	--	--	<b>158.06</b>	<b>205.23</b>	<b>37.52</b>	<b>533.38</b>	<b>(-) 38.75</b>	<b>(-) 4.29</b>	<b>549.33</b>	<b>(-) 34.35</b>	<b>--</b>	<b>887</b>
<b>POWER</b>													
31	Madhya Pradesh UjjaVikas Nigam Limited	2013-14	2014-15	0.69	1.43	--	18.05	--	11.59	2.25	--	--	202
32	Madhya Pradesh Power Transmission Company Limited	2014-15	2015-16	2553.14	2031.73	(-) 236.17	2346.36	120.81	(-) 31.74	4348.70	256.70	5.90	5006
33	Madhya Pradesh Poorv Kshetra Vidyut Vitaran Company Limited	2013-14	2014-15	1598.08	9596.71	(-) 8824.44	5845.30	(-) 1887.15	(-) 48.11	3488.04	(-) 1577.73	--	17359
34	Madhya Pradesh Paschim Kshetra Vidyut Vitaran Company Limited	2013-14	2014-15	1945.38	2436.73	(-) 7733.55	7046.46	(-) 1810.95	25.23	(-) 2105.74	(-) 1534.93	72.89	14621
35	Madhya Pradesh Madhya Kshetra Vidyut Vitaran Company Limited	2013-14	2014-15	1841.73	9200.56	(-) 8673.05	4914.00	(-) 2113.02	(-) 72.89	(-) 2255.29	(-) 1684.06	--	12170
36	Madhya Pradesh Power Generating Company Limited	2014-15	2015-16	5325.55	10401.39	(-) 3047.01	6508.07	(-) 896.82	(-) 10.03	12761.04	341.05	2.67	5785
37	Shahpura Thermal Power Company Limited	2014-15	2015-16	0.05	3.35	0.02	0.01	0.01	--	3.42	0.01	0.29	--
38	Madhya Pradesh Power Management Company Limited [I]	2013-14	2014-15	5358.38	4.63	--	18898.00	--	--	5363.03	163.97	3.06	763
39	Dada Dhuni Wale Khandwa Power Limited.	2014-15	2015-16	45.00	--	0.75	0.02	0.01	--	45.75	0.01	0.02	07
40	Bansagar Thermal Power Company Limited	2014-15	2015-16	0.05	23.00	(-) 2.81	1.84	(-) 0.98	--	20.24	1.84	9.09	16
41	Shri Singaji Power Project Limited	2014-15	2015-16	0.05	--	(-) 0.01	--	--	--	0.04	--	--	03

Sl. no.	Sector/Name of the company	Period of Accounts	Year in which accounts finalised	Paid-up capital <sup>1</sup>	Loans outstanding at the end of year	Accumulated Profit/(+) /Loss (-)	Turnover	Net profit (+)/ Loss (-)	Net impact on Audit comments <sup>2</sup>	Capital Employed <sup>3</sup>	Return on capital employed <sup>4</sup>	Percentage of return on capital employed	Manpower
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)
<b>Sector wise Total</b>				<b>18668.10</b>	<b>33699.53</b>	<b>(-) 28516.27</b>	<b>45578.15</b>	<b>(-) 6588.09</b>	<b>(-) 125.95</b>	<b>21671.48</b>	<b>(-) 4033.14</b>	<b>--</b>	<b>55932</b>
<b>SERVICE</b>													
42	M.P. Trade and Investment Facilitation Corporation Limited	2013-14	2014-15	0.80	666.98	12.15	6.53	4.32	--	679.93	4.33	0.64	30
43	Madhya Pradesh LaghuUdyog Nigam Limited	2012-13	2014-15	2.83	--	87.58	259.16	27.75	(-) 15.02	90.41	27.75	30.69	332
44	SEZ Indore Limited	2013-14	2014-15	31.39	--	13.97	--	(-) 12.39	(-) 1.07	<b>68.91</b>	(-) 12.29	--	--
45	Madhya Pradesh State Civil Supplies Corporation Limited	2013-14	2014-15	8.47	--	135.98	12542.48	(-) 1.66	123.03	4087.98	1407.02	34.42	917
46	Madhya Pradesh State Tourism Development Corporation Limited	2012-13	2015-16	24.97	0.51	(-) 2.05	125.67	1.96	(-) 24.73	484.88	2.08	0.43	2059
47	Aral Indore City Transport Services Limited	2013-14	2014-15	0.25	--	3.34	11.99	(-) 0.12	--	23.88	(-) 0.12	--	--
48	Jabalpur City Transport Services Limited	2014-15	2015-16	0.25	--	1.08	0.62	0.43	--	1.33	0.43	32.33	--
49	Bhopal City Link Limited	2009-10	2014-15	0.30	--	0.89	0.41	0.03	(-) 0.08	1.19	0.03	2.52	14
50	Ujjain City Transport Services Limited	First A/c not received											
51	Karni City Transport Services Limited	2010-11	2011-12	0.15	--	(-) 0.01	--	(-) 0.01	--	0.15	(-) 0.01	--	--
52	Madhya Pradesh VikramUdyogpuri (Ujjain) Limited	2014-15	2015-16	112.86	--	1.58	3.57	3.28	--	114.44	3.28	2.87	01
53	Madhya Pradesh Plastic Park Development Cor. LTD	2013-14	2014-15	0.16	--	0.01	0.06	0.01	--	13.33	47.26	0.08	05
54	Pithampur Jal Prabandhan Company Ltd	First A/c not received											
55	Madhya Pradesh Jal Nigam Maryadit	2013-14	2014-15	25	--	(-) 1.82	1.67	(-) 1.31	--	23.18	(-) 3.52	--	61
<b>Sector wise Total</b>				<b>207.43</b>	<b>667.49</b>	<b>252.70</b>	<b>12952.16</b>	<b>22.29</b>	<b>82.13</b>	<b>5589.61</b>	<b>1476.24</b>	<b>--</b>	<b>3419</b>
<b>Total A (All Sector wise working Government Companies)</b>				<b>--</b>	<b>--</b>	<b>(-) 28272.24</b>	<b>60759.30</b>	<b>(-) 6330.68</b>	<b>(-) 78.91</b>	<b>28811.74</b>	<b>(-) 2314.36</b>	<b>---</b>	<b>62956</b>

Sl. no.	Sector/Name of the company	Period of Accounts	Year in which accounts finalised	Paid-up capital <sup>1</sup>	Loans outstanding at the end of year	Accumulated Profit/(+) /Loss (-)	Turnover	Net profit (+)/ Loss (-)	Net impact on Audit comments <sup>2</sup>	Capital Employed <sup>3</sup>	Return on capital employed <sup>4</sup>	Percentage of return on capital employed	Manpower
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)
<b>B. Working Statutory Corporation</b>													
<b>AGRICULTURE &amp; ALLIED</b>													
<b>1</b>	Madhya Pradesh State Ware Housing and Logistics Corporation	2013-14	2014-15	8.06	174.30	<b>220.42</b>	182.53	46.16	--	584.88	47.26	8.08	1382
	<b>Sector wise Total</b>	--	--	<b>8.06</b>	<b>174.30</b>	<b>220.42</b>	<b>182.53</b>	<b>46.16</b>	<b>--</b>	<b>584.88</b>	<b>47.26</b>	<b>8.08</b>	<b>1382</b>
<b>FINANCE</b>													
<b>2</b>	Madhya Pradesh Financial Corporation	2014-15	2015-16	371.14	883.09	(-) 208.97	112.48	16.27	(-) 13.30	1105.17	92.41	8.36	185
	<b>Sector wise Total</b>	--	--	<b>371.14</b>	<b>883.09</b>	<b>(-) 208.97</b>	<b>112.48</b>	<b>16.27</b>	<b>(-) 13.30</b>	<b>1105.17</b>	<b>92.41</b>	<b>8.36</b>	<b>185</b>
<b>SERVICE</b>													
<b>3</b>	Madhya Pradesh State Road Transport Corporation	2007-08	2008-09	141.81	716.84	(-) 1024.52	210.05	(-) 13.62	--	(-) 144.80	(-) 3.52	--	300
	<b>Sector wise Total</b>	--	--	<b>141.81</b>	<b>716.84</b>	<b>(-) 1024.52</b>	<b>210.05</b>	<b>(-) 13.62</b>	<b>--</b>	<b>(-) 144.80</b>	<b>(-) 3.52</b>	<b>--</b>	<b>300</b>
<b>Total B (All Sector wise working Statutory Corporations)</b>		--	--	<b>521.01</b>	<b>1774.23</b>	<b>(-) 1013.07</b>	<b>505.06</b>	<b>48.81</b>	<b>(-) 13.30</b>	<b>1545.25</b>	<b>136.15</b>	<b>--</b>	<b>1867</b>
<b>Grand Total (A+B)</b>		--	--	<b>19760.92</b>	<b>37044.48</b>	<b>(-) 29285.31</b>	<b>61264.36</b>	<b>(-) 6281.87</b>	<b>(-) 92.21</b>	<b>30356.99</b>	<b>(-) 2178.21</b>	<b>---</b>	<b>64823</b>
<b>C. Non working Government Companies</b>													
<b>AGRICULTURE &amp; ALLIED</b>													
<b>1</b>	Madhya Pradesh Lift Irrigation Corporation Limited	2003-10	2010-11	5.92	--	(-) 6.33	Under liquidation	0.04	--	(-) 0.36	0.04	--	Under liquidation
<b>2</b>	Madhya Pradesh State Dairy Development Corporation Limited	2001-02	2002-03	--	--	--	Under liquidation	--	--	--	--	--	Under liquidation
<b>Sector wise Total</b>				<b>5.92</b>	<b>--</b>	<b>(-) 6.33</b>	<b>--</b>	<b>0.04</b>	<b>--</b>	<b>(-) 0.36</b>	<b>0.04</b>	<b>--</b>	<b>--</b>
<b>FINANCE</b>													
<b>3</b>	Madhya Pradesh Film Development Corporation Limited	2009-10	2010-11	1.04	--	--	Under liquidation	--	--	1.02	--	--	Under liquidation
<b>4</b>	Madhya Pradesh Panchayati Raj VrihadEvamGramm Vikas Nigam Limited	2005-06	2006-07	0.16	--	<b>0.02</b>	Under liquidation	0.03	--	0.16	0.03	--	Under liquidation



Sl. no.	Sector/Name of the company	Period of Accounts	year in which accounts finalised	Paid-up capital <sup>1</sup>	Loans outstanding at the end of year	Accumulated Profit/(+) /loss (-)	Turnover	Net profit (+)/ Loss (-)	Net impact on Audit comments <sup>2</sup>	Capital Employed <sup>3</sup>	Return on capital employed <sup>4</sup>	Percentage of return on capital employed	M manpower
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)
<b>INFRASTRUCTURE</b>													
<b>Sector wise Total</b>		--	--	<b>1.20</b>	--	<b>0.02</b>	--	<b>0.03</b>	--	<b>1.18</b>	<b>0.03</b>	--	--
5	Madhya Pradesh State Industries Corporation Limited	2011-12	2014-15	13.14	--	(-) 59.63	0.06	(-) 8.69	--	--	(-) 8.69	--	Under liquidation
6	Madhya Pradesh Rajya Setu Nigam Limited	1989-90	1993-94	5.00	--	(-) 2.15	Under liquidation	(-) 1.13	--	2.87	(-) 1.13	--	Under liquidation
<b>Sector wise Total</b>		--	--	<b>18.14</b>	--	--	<b>0.06</b>	<b>(-) 9.82</b>	--	--	<b>(-) 9.82</b>	--	--
<b>MANUFACTURING</b>													
7	Opel Telecommunication Limited	2009-10	2010-11	23.97	46.6	(-) 131.76	Under liquidation	(-) 29.21	--	(-) 24.48	(-) 27.07	--	Under liquidation
8	Madhya Pradesh State Textile Corporation Limited	2007-08	2012-13	6.86	87.84	(-) 112.13	0.01	(-) 4.14	--	(-) 17.42	(-) 0.32	--	03
9	Madhya Pradesh Vidyut Yantra Limited	---	---	1.50	--	0.04	Under liquidation	--	--	1.50	--	--	--
<b>Sector wise Total</b>		--	--	<b>32.33</b>	<b>134.44</b>	<b>(-) 243.85</b>	<b>0.01</b>	<b>(-) 33.35</b>	--	--	<b>(-) 27.39</b>	--	<b>03</b>
<b>Total C (All sector wise non working Government Companies)</b>		--	--	<b>57.59</b>	<b>134.44</b>	<b>(-) 311.94</b>	<b>0.07</b>	<b>(-) 43.10</b>	--	--	<b>(-) 37.14</b>	--	<b>03</b>
<b>Grand Total (A+B+C)</b>		--	--	<b>19818.51</b>	<b>37178.92</b>	<b>(-) 29597.25</b>	<b>61264.43</b>	<b>(-) 6324.97</b>	<b>(-) 92.21</b>	<b>30320.28</b>	<b>(-) 2215.35</b>	--	<b>64826</b>

<sup>1</sup> Paid up capital includes share application money.

<sup>2</sup> Impact of accounts comments include the impact of comments of Statutory Auditors and CAG and is denoted by (+) increase in net profit /decrease in loss and (-) decrease in profit/ increase in loss.

<sup>3</sup> Capital Employed includes Share Holders Fund plus Long Term Borrowing {Except Statutory Corporations where Capital employed represents net fixed assets ( including capital work in progress) plus working capitals}

<sup>4</sup> Return on capital employed has been worked out by adding profit and interest charged to profit and loss account.

**Annexure 1.2**  
**Statement showing investments made by State Government in PSUs whose**  
**accounts are in arrears**

(Referred to in paragraph 1.11)

(Figures in columns 4 & 6 to 8 are ₹ in crore)

Sl. No.	Name of the Public Sector Undertaking	Year up to which accounts finalised	Paid up capital	Period of accounts pending finalisation	Investment made by State Government during the year of which accounts are in arrears		
					Equity	Loans	Grants
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
<b>A Working Government Companies</b>							
1	Madhya Pradesh Rajya Van Vikas Nigam Limited	2013-14	39.32	2014-15	--	--	39.39
2	M.P. Audyogik Kendra Vikas Nigam (Indore) Limited	2013-14	3.40	2014-15	--	--	34.11
3	M.P. Audyogik Kendra Vikas Nigam (Sagar) Limited	2013-14	4.00	2014-15	--	--	2.50
4	Madhya Pradesh Pichhara Varg Tatha Alpsankhyak Vitta EvamVikas Nigam Limited	2008-09	7.55	upto 2013-14	2.60	--	1.44
				2014-15	0.50	--	0.50
5	Madhya Pradesh Adivasi Vitta Evam Vikas Nigam Limited	2003-04	18.36	upto 2013-14	6.33	--	14.80
				2014-15	--	--	3.50
6	Madhya Pradesh State Industrial Development Corporation Limited	2012-13	81.09	2013-14	--	50.00	--
				2014-15	--	50.00	--
7	Madhya Pradesh Police Housing Corporation Limited	2013-14	4.58	2014-15	--	27.50	--
8	Madhya Pradesh Poorv Kshetra Vidyut Vitaran Company Limited	2013-14	1598.08	2014-15	48.6	1315.11	56.5
9	Madhya Pradesh Pashchim Kshetra Vidyut Vitaran Company Limited	2013-14	1945.38	2014-15	120.00	276.52	129.21
10	Madhya Pradesh Madhya Kshetra Vidyut Vitaran Company Limited	2013-14	1841.73	2014-15	76.50	178.50	78.57
11	M.P. Trade and Investment Facilitation Corporation Limited	2013-14	0.80	2014-15	--	--	3.50
12	Madhya Pradesh State Tourism Development Corporation Limited	2012-13	24.97	2013-14	--	--	51.50
				2014-15	--	--	47.84
13	Madhya Pradesh Jal Maryadit	2013-14	25.00	2014-15	15.00	--	--
<b>Total A (Working Government Companies)</b>			<b>5594.26</b>		<b>269.53</b>	<b>1897.63</b>	<b>463.36</b>
<b>B Working Statutory corporations</b>							
-	-	-	-	-	--	--	--
<b>Total B (Working Statutory Corporations)</b>			<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>
<b>Grand Total (A + B)</b>			<b>5594.26</b>		<b>269.53</b>	<b>1897.63</b>	<b>463.36</b>

**Annexure-2.1.1**

**Statement showing the details of installed capacity (thermal and hydel) and financial details**

(Referred to in paragraph 2.1.1)

**A. Details of Station wise and Unit wise installed thermal capacity and commissioning**

Sl.No	Unit	MW	Commissioning Date	Remarks
<b>I. Amarkantak Thermal Power Station, Chachai</b>				
1	I	120	11-09-1977	This unit is out since 12.01.2015 due to major accident in turbine and this unit is not in production.
2	II	120	31-03-1978	This unit is out since 30.04.2014 due to high vibration in turbine and this unit is not in production.
3	III	210	09-09-2008	-
<b>Total</b>		<b>450</b>		
<b>II. Sanjay Gandhi Thermal Power Station, Birsinghpur</b>				
1	I	210	07-10-1993	-
2	II	210	26-05-1994	-
3	III	210	01.09.1999	-
4	IV	210	01-04-2000	-
5	V	500	28.08.2008	-
<b>Total</b>		<b>1340</b>		
<b>III. Satpura Thermal Power Station, Sarni</b>				
1	I	62.5	6-10-1967	Decommissioned on 7-1-2014
2	II	62.5	21-03-1968	Decommissioned on 5-12-13
3	III	62.5	14-05-1968	Decommissioned on 1-10-12
4	IV	62.5	10-07-1968	Decommissioned on 5-12-13
5	V	62.5	21-03-1970	Decommissioned on 1-2-13
6	VI	200	27-06-1979	-
7	VII	210	20-09-1980	-
8	VIII	210	25-01-1983	-
9	IX	210	27-02-1984	-
10	X	250	18-08-2013	-
11	XI	250	16-03-2014	-
<b>Total</b>		<b>1642.50</b>		
<b>IV. Shree Singhaji Thermal Power Project, Khandwa</b>				
1	I	600	01-02-2014	
2	II	600	28-12-2014	
<b>Total</b>		<b>1200</b>		
<b>Grand Total (MW)</b>		<b>4632.50</b>		
<b>(-) decommissioned capacity (MW)</b>		<b>312.50</b>		
<b>Net Thermal generating capacity (MW)</b>		<b>4,320.00</b>		

**B. Details of Station wise/ unit wise installed hydel capacity and commissioning dates**

Sl.No	Unit	MW	Commissioning Date	Remarks
<b>I Gandhi Sagar</b>				
1	I	23	19.11.1960	
2	II	23	19.11.1960	
3	III	23	19.11.1960	
4	IV	23	16.08.1963	
5	V	23	03.11.1966	
<b>Total</b>		<b>115</b>		
<b>II Pench</b>				
1	I	80	09.09.1986	
2	II	80	09.03.1987	
<b>Total</b>		<b>160</b>		
<b>III Bargi</b>				
1	I	45	03.06.1988	
2	II	45	29.11.1988	
<b>Total</b>		<b>90</b>		
<b>IV Ban Sagar Tons</b>				
1	I	105	03.08.1992	
2	II	105	30.08.1992	
3	III	105	30.08.1992	
<b>Total</b>		<b>315</b>		
<b>V Tons Phase II</b>				
1	I	15	28.08.2002	
2	II	15	01.09.2002	
<b>Total</b>		<b>30</b>		
<b>V Tons Phase III</b>				
1	I	20	18.07.2001	
2	II	20	26.08.2001	
3	III	20	02.09.2002	
<b>Total</b>		<b>60</b>		
<b>V Tons Phase IV</b>				
1	I	10	20.08.2006	
2	II	10	30.08.2006	
<b>Total</b>		<b>20</b>		
<b>VI Madhikheda</b>				
1	I	20	28.08.2006	
2	II	20	09.09.2006	
3	III	20	19.08.2007	
<b>Total</b>		<b>60</b>		
<b>VII Birsinghpur</b>				
1	I	20	01.11.1991	
<b>Total</b>		<b>20</b>		
<b>VIII Rajghat</b>				
1	I	15	15.10.1999	
2	II	15	29.09.1999	
3	III	15	03.11.1999	
<b>Total</b>		<b>45</b>		
<b>Grand Total of Hydel Capacity (MW)</b>		<b>915</b>		

**C. Statement showing the details of revenue generated, cost incurred and profit/loss suffered (₹ in crore) during the years 2010-11 to 2014-15 by MPPGCL**

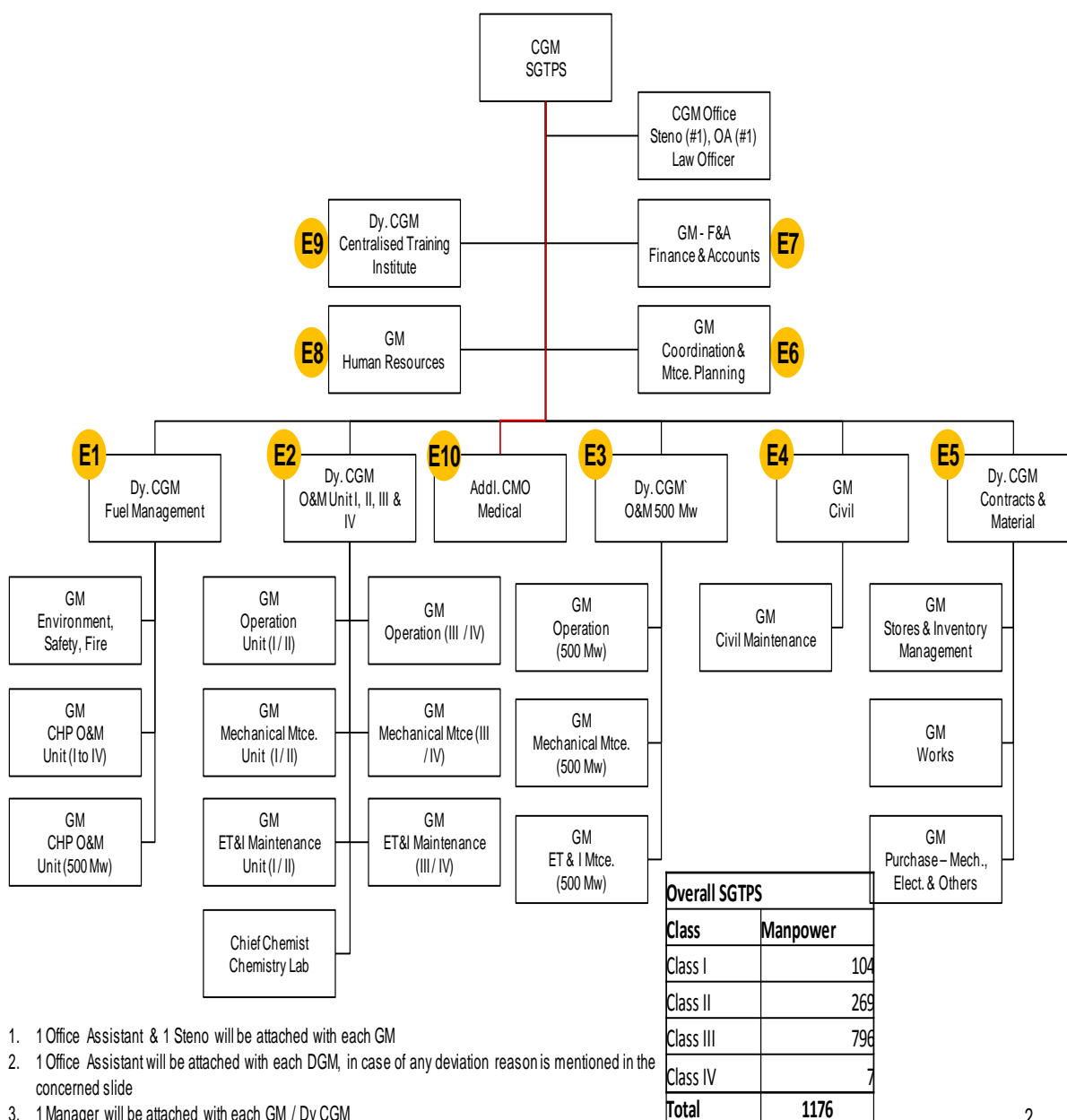
<b>Year</b>	<b>Revenue generated</b>	<b>Cost incurred</b>	<b>Loss suffered</b>
2010-11	3662.09	3859.62	197.53
2011-12	4885.10	4935.93	50.83
2012-13	5386.13	5396.46	10.33
2013-14	5544.96	5930.70	385.74
2014-15	6337.28	7438.06	1100.78
<b>Total</b>	<b>25,815.56</b>	<b>27,560.77</b>	<b>1,745.21</b>

## Annexure-2.1.2

## Organisational Structure of SGTPS

(Referred to in paragraph 2.1.2)

## Organisational structure of SGTPS



- 1 Office Assistant & 1 Steno will be attached with each GM
2. 1 Office Assistant will be attached with each DGM, in case of any deviation reason is mentioned in the concerned slide
3. 1 Manager will be attached with each GM / Dy CGM
4. In case of any further expansion in future an additional post of Dy. CGM (O & M) may be considered

**Annexure-2.1.3**

**Statement showing the details of generation targets and actual power generated by  
SGTPS during 2010-11 to 2014-15**

*(Referred to in paragraph 2.1.6)*

**(In MUs)**

Year	Targets			MPP GCL	Production			Shortfall		
	SGTPS				SGTPS			SGTPS		
	PH I	PH II	PH III		PH I	PH II	PH III	PH I	PH II	PH III
2010-11	2058	3553	3553	16715	1910.8	2144.93	3665.85	147.2	1408.07	-112.85
2011-12	2100	2325	3755	18345	2037.7	2499	3726.47	62.3	-174	28.53
2012-13	2771	2944	3727	19575	2602.07	2532.46	3495.14	168.93	411.54	231.86
2013-14	2513	2556	3769	19339	2296.13	2012.73	3643.98	216.87	543.27	125.02
2014-15	2706	2274	3479	19582	1779.48	1827.49	3215.78	926.52	446.51	263.22
	<b>12148</b>	<b>13652</b>	<b>18283</b>		<b>10626.18</b>	<b>11016.61</b>	<b>17747.22</b>	<b>1521.82</b>	<b>2635.39</b>	<b>535.78</b>
<b>Total</b>	<b>44083.000</b>				<b>39390.010</b>			<b>4692.990</b>		

## Annexure 2.1.4

Statement showing the details of Station Heat Rate (SHR) and resultant excess coal consumed and excess cost incurred by PH-I during 2010-11 to 2014-15

(Referred to in paragraph 2.1.10)

Sl.no	1	2	3	4	5	6	7	8	9	10	11	12	13
Year	Energy Generated (MU)	MPERC Norms for SHR (Kcal/Kwh)	Actual SHR (Kcal/Kwh)	Excess heat consumed (Kcal)	Coal Calorific Value (Kcal/kg)	Quantity of coal consumed in generating excess heat (Kg/Kwh) (4/5)	Excess coal consumed due to high SHR during the year (MT) (1*6*1000)	Cost of Coal per MT (₹)	Total Excess cost incurred (₹) (7*8)	Excess SHR utilised in percentage (%) (4/2)*100	Desired Thermal Efficiency as per MPERC target of SHR (%)	Actual Thermal efficiency of the Power House (%)	Fall in Thermal efficiency of the Power House (11-12)
2010-11	1910.842	2700	2889.67	189.67	3698.00	0.051	98006.869	2015.86	197568127	7.025	31.85	29.76	2.09
2011-12	2037.696	2650	2973.71	323.71	3892.00	0.083	169481.648	3648.50	618353791	12.215	32.45	28.92	3.53
2012-13	2602.070	2600	3050.30	450.30	3955.67	0.114	296210.786	4009.15	1187553472	17.319	33.08	28.19	4.89
2013-14	2296.128	2600	3047.60	447.60	3831.92	0.117	268206.772	3670.95	984573649	17.215	33.08	28.22	4.86
2014-15	1779.483	2600	3029.05	429.05	3628.92	0.118	210389.642	3670.95	772329857	16.502	33.08	28.39	4.69
<b>Total</b>							<b>1042293.588</b>		<b>3760379076</b>				



**Annexure 2.1.5**

**Statement showing the details of fuel oil consumption in PH I during 2010-11 to 2014-15**

*(Referred to in paragraph 2.1.11)*

<b>Year</b>	<b>Generation (MU)</b>	<b>Oil Consumption norm (ml/Kwh) as per MPERC</b>	<b>Oil Consumption as per norms (Kilo Ltrs)</b>	<b>Actual Oil Consumed (Kilo Ltrs)</b>	<b>Excess Oil Consumed (Kilo Ltrs)</b>	<b>Average Oil Cost ` Per Kilo Ltr</b>	<b>Total Cost (₹)</b>
2010-11	1910.8	1.15	2197.42	5710.000	3512.580	32845.88	115373781
2011-12	2037.7	1.15	2343.36	5096.000	2752.650	43591.05	119990904
2012-13	2602.07	1.15	2992.38	4687.000	1694.620	50256.03	85164874
2013-14	2296.128	1.15	2640.55	3134.600	494.050	56817.46	28070666
2014-15	1779.483	1.15	2046.41	3166.000	1119.590	60430.2	67657048
<b>Total excess fuel oil consumption (in Kilo Liters)</b>							<b>9,573.49</b>
<b>Avoidable expenditure incurred due to excess fuel oil consumption</b>							<b>41,62,57,272</b>

## Annexure 2.1.6

Statement showing the excess Auxiliary Power Consumption in PH I during 2010-11 to 2014-15  
(Referred to in paragraph 2.1.12)

Sl. no.	Particulars	2010-11	2011-12	2012-13	2013-14	2014-15	
		PH-I	PH-I	PH-I	PH-I	PH-I	
1	Energy Generated (MU)	1910.84	2037.7	2602.09	2296.13	1779.483	
2	Actual Auxiliary consumption (MU)	218.834	207.667	257.1	232.229	192.586	
3	Actual Auxiliary consumption (%)	11.45	10.19	9.88	10.11	10.82	
4	MPERC Norms for Auxiliary consumption (%)	8.25	8.00	8.00	9.00	9.00	
5	Excess Auxiliary consumption (%)	3.20	2.19	1.88	1.11	1.82	
6	Excess Auxiliary consumption (MU)	61.190	44.651	48.933	25.577	32.433	
7	Per unit Generation cost on sent out basis (₹ )	1.91	3.13	3.52	3.26	3.79	
8	Value of excess auxiliary consumption (₹ )	116872900	139757630	172244160	83381020	122921070	
9	<b>Total (₹ )</b>						<b>635176780</b>

**Annexure 2.1.7**

**Statement showing the coal loss due to the excess presence of unburnt coal in Bottom and Fly ash during 2010-11 to 2014-15 in PH I**  
(Referred to in paragraph 2.1.14)

Year	Month	Qty of ash generated (Mt)		Ave % of unburnt coal in Bottom ash	Ave % of unburnt coal in Fly ash	Qty of unburnt coal (Mt) in ash above maximum permissible limit (4 % in bottom ash and < 1 % in fly ash)			Coal cost per MT	Total value of coal lost (₹)
		Bottom ash	Fly ash			coal present in bottom ash (Mt)	coal present in fly ash (Mt)	Total coal (Mt)		
2010-11	April	18378	61259	11.5	2.33	1378.350	811.682	2190.032	2015.80	4414666.00
	May	18838	62794	7.8	1.275	715.844	0.000	715.844	2015.80	1442998.34
	June	16465	54883	12.125	2.6	1337.781	878.128	2215.909	2015.80	4466829.87
	July	16296	54320	10.825	1.85	1112.202	461.720	1573.922	2015.80	3172711.97
	Aug	8199	40996	13.80	2.25	803.502	512.450	1315.952	2015.80	2652696.04
	Sept	3955	19776	18.80	2.95	585.340	385.632	970.972	2015.80	1957285.36
	Oct	4197	20985	13.30	2.05	390.321	220.343	610.664	2015.80	1230975.48
	Nov	13068	43561	11.4	1.45	967.032	0.000	967.032	2015.80	1949343.11
	Dec	19777	65923	13.1	1.475	1799.707	0.000	1799.707	2015.80	3627849.37
	Jan	23588	78626	9.9	1.35	1391.692	0.000	1391.692	2015.80	2805372.73
	Feb	20354	67845	10.2	1.175	1261.948	0.000	1261.948	2015.80	2543834.78
	Mar	22459	74862	10.325	1.275	1420.532	0.000	1420.532	2015.80	2863507.90
	<b>Total</b>	<b>185574</b>	<b>645830</b>			<b>13164.251</b>	<b>3269.954</b>	<b>16434.205</b>		<b>33128070.94</b>
2011-12	April	12450	62251	12.7	2.25	1083.150	778.138	1861.288	3648.50	6790907.44
	May	13065	65324	12.475	1.925	1107.259	604.247	1711.506	3648.50	6244428.73
	June	16774	55913	11.175	1.775	1203.535	433.326	1636.860	3648.50	5972084.62
	July	8755	43776	12.10	2.025	709.155	448.704	1157.859	3648.50	4224448.56
	Aug	3949	34855	11.73	1.93	305.060	322.409	627.469	3648.50	2289320.65
	Sept	2918	24566	10.95	1.75	202.801	184.245	387.046	3648.50	1412137.33
	Oct	1687	7334	7.60	1.50	60.732	0.000	60.732	3648.50	221580.70
	Nov	9762	48959	5.975	1.35	192.800	171.357	364.156	3648.50	1328623.17

	Dec	17626	70502	6.28	1.375	400.992	264.383	665.374	3648.50	2427617.04
	Jan	14262	57049	6.5	1.225	356.550	0.000	356.550	3648.50	1300872.68
	Feb	12794	56862	6.825	1.525	361.431	298.526	659.956	3648.50	2407849.47
	Mar	18328	63199	7.45	1.85	632.316	537.192	1169.508	3648.50	4266948.11
	<b>Total</b>	<b>132370</b>	<b>590590</b>			<b>6615.779</b>	<b>4042.524</b>	<b>10658.303</b>		
2012-13	April	19495	68165	8.7	3.075	916.265	1414.424	2330.689	4009.15	9344080.80
	May	16465	66075	8.5	1.6	740.925	396.450	1137.375	4009.15	4559906.98
	June	21326	69018	6.95	1.5	629.117	345.090	974.207	4009.15	3905741.99
	July	13627	53512	8.975	2.2	677.943	642.144	1320.087	4009.15	5292427.80
	Aug	6940	45835	14.175	2.1	706.145	504.185	1210.330	4009.15	4852394.52
	Sept	9455	43373	13.05	1.525	855.678	227.708	1083.386	4009.15	4343455.98
	Oct	18308	59055	6.5	1.88	457.700	516.731	974.431	4009.15	3906641.05
	Nov	18499	61476	10.1	1.525	1128.439	322.749	1451.188	4009.15	5818030.37
	Dec	21448	71492	9	2.45	1072.400	1036.634	2109.034	4009.15	8455433.66
	Jan	18411	68189	9.675	2.675	1044.824	1142.166	2186.990	4009.15	8767970.96
	Feb	15209	54493	11.15	2.825	1087.444	994.497	2081.941	4009.15	8346812.76
	Mar	24307	65873	7.5	2.6	850.745	1053.968	1904.713	4009.15	7636280.12
	<b>Total</b>	<b>203490</b>	<b>726556</b>			<b>10167.625</b>	<b>8596.746</b>	<b>18764.371</b>		
2013-14	April	17841	66844	7.825	2.15	682.418	768.706	1451.124	3670.95	5327004.57
	May	31988	77322	9.2	1.7	1663.376	541.254	2204.630	3670.95	8093086.50
	June	17678	50455	9.475	1.925	967.871	466.709	1434.579	3670.95	5266268.70
	July	9752	37508	8.675	1.975	455.906	365.703	821.609	3670.95	3016085.56
	Aug	11304	35853	10.63	2.20	748.890	430.236	1179.126	3670.95	4328512.59
	Sept	14294	55359	9.225	2.40	746.862	775.026	1521.888	3670.95	5586772.92
	Oct	11409	38092	9.775	3.375	658.870	904.685	1563.555	3670.95	5739731.31
	Nov	20537	59252	11.825	3.05	1607.020	1214.666	2821.686	3670.95	10358269.14
	Dec	19677	64537	7.15	3.1	619.826	1355.277	1975.103	3670.95	7250502.52
	Jan	16823	64631	7.95	2.475	664.509	953.307	1617.816	3670.95	5938920.73
	Feb	16971	62096	5.15	2.60	195.167	993.536	1188.703	3670.95	4363667.44
	Mar	22377	73439	6.98	2.35	665.716	991.427	1657.142	3670.95	6083286.34

	<b>Total</b>	<b>210651</b>	<b>685388</b>			<b>9676.429</b>	<b>9760.532</b>	<b>19436.960</b>		<b>71352108.31</b>
2014-15	April	18507	53736	6.85	2.15	527.450	617.964	1145.414	4048.00	4636633.85
	May	28485	71833	7.625	2.325	1032.581	951.787	1984.369	4048.00	8032723.69
	June	15752	49786	8.775	2.175	752.158	584.986	1337.144	4048.00	5412756.89
	July	17745	62636	9.225	2.175	927.176	735.973	1663.149	4048.00	6732428.16
	Aug	7636	18051	5.6	1.5	122.176	90.255	212.431	4048.00	859920.69
	Sept	7716	19619	6.325	1.55	179.397	107.905	287.302	4048.00	1162996.47
	Oct	22748	56001	6.725	2	619.883	560.010	1179.893	4048.00	4776206.86
	Nov	15409	51364	5.525	1.775	234.987	398.071	633.058	4048.00	2562619.80
	Dec	18045	58683	7.1	2.025	559.395	601.501	1160.896	4048.00	4699306.00
	Jan	13397	40172	8.4	1.34	589.468	136.585	726.053	4048.00	2939061.73
	Feb	20722	58953	11.625	2.875	1580.053	1105.369	2685.421	4048.00	10870585.22
	Mar	15680	44712	9.05	2.225	791.840	547.722	1339.562	4048.00	5422546.98
		<b>Total</b>	<b>201842</b>	<b>585546</b>			<b>58107786.33</b>	<b>7916.564</b>	<b>6438.127</b>	
<b>Grand Total</b>								<b>79648.529</b>		<b>276703961.08</b>

**Annexure 2.1.8**  
**Statement showing the summary of Generation loss suffered in PH I due to**  
**frequent failure of coal mills during 2010-11 to 2014-15**  
*(Referred to in paragraph 2.1.16)*

Year	Loss of generation (in MU)			Gen cost (per unit) on sent basis	Total (₹ )
	unit 1	unit 2	Total		
2010-11	74.337	67.433	141.77	1.91	270780700
2011-12	52.437	44.323	96.76	3.13	302858800
2012-13	81.796	97.444	179.24	3.52	630924800
2013-14	56.427	82.895	139.322	3.26	454189720
2014-15	45.192	56.692	101.884	3.79	386140360
<b>Total</b>	<b>310.189</b>	<b>348.787</b>	<b>658.976</b>		<b>2044894380</b>
<b>Statement showing the details of excess fuel oil consumed due to poor performance of coal mills in PH-I during 2011-11 to 2014-15</b>					
Year	HFO	LDO	Total	cost per Kl	Total (₹ )
<b>2010-11</b>	1255.6	142	1397.6	32845.88	45905401.89
<b>2011-12</b>	548.6	0	548.6	43591.05	23914050.03
<b>2012-13</b>	888.9	0	888.9	50256.03	44672585.07
<b>2013-14</b>	83.9	0	83.9	56817.46	4766984.894
<b>2014-15</b>	152.2	23.7	175.9	60430.2	10629672.18
<b>Total</b>	<b>2929.2</b>	<b>165.7</b>	<b>3094.9</b>		<b>129888694.1</b>

**Note : - HFO: Heavy Fuel Oil**  
**LDO: Light Diesel Oil**

**Annexure 2.1.9**

**Statement showing the details of generation loss suffered ( in MUs) in three PHs due to controllable reasons during 2010-11 to 2014-15**  
*(Referred to in paragraph 2.1.20, 2.1.30 and 2.1.41)*

Year	Power Houses (PH)			Total
	PH I	PH II	PH III	
2010-11	1052.076	576.596	186.279	1814.951
2011-12	704.891	573.016	245.441	1523.348
2012-13	658.571	679.94	67.13	1405.641
2013-14	433.02	493.843	26.538	953.401
2014-15	604.964	544.351	270.721	1420.036
Total	3453.522	2867.746	796.109	
<b>Grand Total of generaiton loss (MU)</b>				<b>7117.377</b>
(-) the partial loss incurred due to receipt of poor quality coal received during rainy season (July to September) in the years 2010-11 to 2014-15				298.19
<b>Total Partial loss of generation</b>				<b>6819.187</b>

## Annexure 2.1.10

Statement showing the details of Station Heat Rate (SHR) and resultant excess coal consumed and excess cost incurred in PH-II during 2010-11 to 2014-15  
(Referred to in paragraph 2.1.23)

Sl.no	1	2	3	4	5	6	7	8	9	10	11	12	13
Year	Energy Generated (MU)	MPERC Norms for SHR (Kcal/Kwh)	Actual SHR (Kcal/Kwh)	Excess heat consumed (Kcal)	Coal Calorific Value (Kcal/kg)	Quantity of coal consumed in generating excess heat (Kg/Kwh) (4/5)	Excess coal consumed due to high SHR during the year (MT) (1*6*1000)	Cost of Coal per MT (₹)	Total Excess cost incurred (₹) (7*8)	Excess SHR utilised in percentage (%) (4/2)*100	Desired Thermal Efficiency as per MPERC target of SHR (%)	Actual Thermal efficiency of the Power House (%)	Fall in Thermal efficiency of the Power House (11-12)
2010-11	2144.929	2700	2744.18	44.18	3688.00	0.012	25694.947	2015.86	51797415	1.636	31.81	31.34	0.47
2011-12	2499.001	2650	2712.37	62.37	3978.00	0.016	39181.170	3648.50	142952497	2.354	32.45	31.71	0.74
2012-13	2532.456	2600	2721.20	121.20	3950.87	0.031	77687.595	4009.15	311461223	4.662	33.08	31.60	1.48
2013-14	2012.734	2600	3054.60	454.60	3824.92	0.119	239217.781	3670.95	878156515	17.485	33.08	28.15	4.93
2014-15	1827.494	2600	3347.61	747.61	3636.25	0.206	375731.259	3670.95	1379290664	28.754	33.08	25.69	7.39
<b>Total</b>							<b>757512.751</b>		<b>2763658313</b>				



**Annexure 2.1.11**

**Statement showing the details of fuel oil consumption in PH II during 2010-11 to 2014-15**

(Referred to in paragraph 2.1.24)

Year	Generation (MU)	Oil Consumption norm (ml/Kwh) as per MPERC	Oil Consumption as per norms (Kilo Ltrs)	Actual Oil Consumed (Kilo Ltrs)	Excess Oil Consumed (Kilo Ltrs)	Average Oil Cost ₹ Per Kilo Ltr	Total Cost (₹)
2010-11	2144.929	1.00	2144.929	3489.580	1344.651	32845.88	44166245
2011-12	2499.001	1.00	2499.001	5048.520	2549.519	43591.05	111136210
2012-13	2532.456	1.00	2532.4563	4727.000	2194.544	50256.03	110289069
2013-14	2012.734	1.15	2274.38942	2986.400	712.011	56817.46	40454634
2014-15	1827.494	1.00	1827.49442	3297.140	1469.646	60430.2	88811002
<b>Total excess fuel oil consumption (in Kilo Liters)</b>							<b>8,270.37</b>
<b>Avoidable expenditure incurred due to excess fuel oil consumption</b>							<b>39,48,57,160</b>

**Annexure 2.1.12**  
**Statement showing the excess Auxiliary Power Consumption in PH II during 2010-11 to 2014-15**  
*(Referred to in paragraph 2.1.25)*

Sl. no.	Particulars	2010-11	2011-12	2012-13	2013-14	2014-15	
		PH-II	PH-II	PH-II	PH-II	PH-II	
1	Energy Generated (MU)	2144.929	2499.001	2532.456	2012.734	1827.494	
2	Actual Auxiliary consumption (MU)	218.834	251.655	264.633	229.469	214.948	
3	Actual Auxiliary consumption (%)	10.20	10.07	10.45	11.40	11.76	
4	MPERC Norms for Auxiliary consumption (%)	8.25	8	8	9	9	
5	Excess Auxiliary consumption (%)	1.95	2.07	2.45	2.40	2.76	
6	Excess Auxiliary consumption (MU)	41.877	51.735	62.037	48.323	50.474	
7	Per unit Generation cost on sent out basis (₹ )	1.91	3.13	3.52	3.26	3.79	
8	Value of excess axuxiliary consumption (₹ )	79985070	161930550	218370240	157532980	191296460	
9	<b>Total (₹ )</b>						<b>809115300</b>

**Annexure 2.1.13**

**Statement showing the coal loss due to the excess presence of unburnt coal in Bottom and Fly ash during 2010-11 to 2014-15 in PH II**  
(Referred to in paragraph 2.1.26)

Year	Month	Qty of ash generated (Mt)		Ave % of unburnt coal in Bottom ash	Ave % of unburnt coal in Fly ash	Qty of unburnt coal (Mt) in ash above maximum permissible limit (4 % in bottom ash and < 1 % in fly ash)			Coal cost per MT	Total value of coal lost (₹)
		Bottom ash	Fly ash			coal present in bottom ash (Mt)	coal present in fly ash (Mt)	Total coal (Mt)		
2010-11	April	24223	80744	4.725	1.43	175.617	343.162	518.779	2015.80	1045754.20
	May	24497	81656	3.35	0.675	0.000	0.000	0.000	2015.80	0.00
	June	17934	59781	5.825	0.7	327.296	0.000	327.296	2015.80	659762.27
	July	5763	19211	6.675	0.825	154.160	0.000	154.160	2015.80	310756.23
	Aug	5062	25311	8.85	1.40	245.507	101.244	346.751	2015.80	698980.67
	Sept	4577	22887	4.55	0.90	25.174	0.000	25.174	2015.80	50744.74
	Oct	7271	36356	4.30	0.75	21.813	0.000	21.813	2015.80	43970.65
	Nov	16495	54984	3.825	0.75	0.000	0.000	0.000	2015.80	0.00
	Dec	22289	74298	3.3	0.65	0.000	0.000	0.000	2015.80	0.00
	Jan	25214	84047	3.65	0.675	0.000	0.000	0.000	2015.80	0.00
	Feb	23870	79566	3.95	0.675	0.000	0.000	0.000	2015.80	0.00
	Mar	21621	72071	3.65	0.625	0.000	0.000	0.000	2015.80	0.00
	<b>Total</b>	<b>198816</b>	<b>690912</b>			<b>949.566</b>	<b>444.406</b>	<b>1393.972</b>		<b>2809968.76</b>
2011-12	April	14248	71240	4.7	0.725	99.736	0.000	99.736	3648.50	363886.80
	May	8131	40665	4.9	1.125	73.179	50.831	124.010	3648.50	452451.40
	June	18189	60630	3.925	1.175	0.000	106.103	106.103	3648.50	387114.97
	July	11226	56130	3.78	0.85	0.000	0.000	0.000	3648.50	0.00
	Aug	3519	31058	4.25	0.85	8.798	0.000	8.798	3648.50	32097.68
	Sept	5394	45407	4.95	0.925	51.243	0.000	51.243	3648.50	186960.09
	Oct	16803	73055	4.63	0.88	105.019	0.000	105.019	3648.50	383160.91

	Nov	11890	59448	4.475	1	56.478	0.000	56.478	3648.50	206058.16
	Dec	17224	68895	4.25	0.925	43.060	0.000	43.060	3648.50	157104.41
	Jan	15764	63054	4.825	0.925	130.053	0.000	130.053	3648.50	474498.37
	Feb	13788	61278	5.35	1.075	186.138	45.959	232.097	3648.50	846804.08
	Mar	19958	68820	6.3	1.475	459.034	326.895	785.929	3648.50	2867461.96
	<b>Total</b>	<b>156134</b>	<b>699680</b>			<b>1212.737</b>	<b>529.787</b>	<b>1742.524</b>		<b>6357598.81</b>
2012-13	April	16924	59174	6.15	1.7	363.866	414.218	778.084	4009.15	3119455.47
	May	15353	61610	5.525	0.825	234.133	0.000	234.133	4009.15	938675.32
	June	18476	59792	5.275	0.975	235.569	0.000	235.569	4009.15	944431.46
	July	8916	35014	9.225	1.6	465.861	210.084	675.945	4009.15	2709964.90
	Aug	7394	48834	12.225	2.15	608.157	561.591	1169.748	4009.15	4689693.19
	Sept	13200	60549	11.275	1.875	960.300	529.804	1490.104	4009.15	5974049.45
	Oct	20013	64555	9.325	1.43	1065.692	274.359	1340.051	4009.15	5372465.47
	Nov	18346	60967	8.275	1.15	784.292	91.450	875.742	4009.15	3510981.04
	Dec	18744	62479	8.575	1.95	857.538	593.551	1451.089	4009.15	5817631.46
	Jan	17354	64273	8.725	1.975	819.977	626.662	1446.638	4009.15	5799789.74
	Feb	16776	60107	11.05	1.25	1182.708	150.268	1332.976	4009.15	5344098.73
	Mar	26053	70604	10.55	1.75	1706.472	529.530	2236.002	4009.15	8964465.41
	<b>Total</b>	<b>197549</b>	<b>707958</b>			<b>9284.564</b>	<b>3981.516</b>	<b>13266.079</b>		<b>53185701.63</b>
2013-14	April	19101	71567	10.975	1.825	1332.295	590.428	1922.723	3670.95	7058218.16
	May	33430	80808	8.275	1.4	1429.133	323.232	1752.365	3670.95	6432842.46
	June	18230	52030	6.7	1.2	492.210	104.060	596.270	3670.95	2188877.36
	July	12747	49027	9.475	1.675	697.898	330.932	1028.831	3670.95	3776785.32
	Aug	9923	31471	11.50	1.85	744.225	267.504	1011.729	3670.95	3714004.74
	Sept	9700	37567	9.35	1.65	518.950	244.186	763.136	3670.95	2801432.26
	Oct	4077	13611	15.3	1.475	460.701	64.652	525.353	3670.95	1928545.51
	Nov	11381	32835	5.15	1.55	130.882	180.593	311.474	3670.95	1143405.48
	Dec	20574	67476	<b>3.825</b>	1.15	0.000	101.214	101.214	3670.95	371551.53
	Jan	17210	66117	3.35	1.05	0.000	33.059	33.059	3670.95	121356.10

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	Feb	16550	60556	6.725	1.40	450.988	242.224	693.212	3670.95	2544744.76
	Mar	11451	37580	4.50	1.00	57.255	0.000	57.255	3670.95	210180.24
	<b>Total</b>	<b>184374</b>	<b>600645</b>			<b>6314.536</b>	<b>2482.082</b>	<b>8796.618</b>		<b>32291943.93</b>
2014-15	April	15054	43710	6.525	1.38	380.114	163.913	544.026	4048.00	2202217.25
	May	16518	41655	7.75	2	619.425	416.550	1035.975	4048.00	4193626.80
	June	16123	50957	6.55	1.2	411.137	101.914	513.051	4048.00	2076828.42
	July	6905	24372	7.55	1.55	245.128	134.046	379.174	4048.00	1534894.33
	Aug	19027	44981	8.7	2.125	894.269	506.036	1400.305	4048.00	5668435.65
	Sept	17307	44006	7.025	1.175	523.537	77.010	600.547	4048.00	2431015.27
	Oct	24423	60127	5.7	1.3	415.191	180.381	595.572	4048.00	2410875.46
	Nov	20393	67977	6.625	1.275	535.316	186.937	722.253	4048.00	2923680.14
	Dec	16182	52624	<b>9.25</b>	0.925	849.555	0.000	849.555	4048.00	3438998.64
	Jan	18678	56006	4	0.9	0.000	0.000	0.000	4048.00	0.00
	Feb	21703	61743	4.1	<b>1.05</b>	21.703	30.872	52.574	4048.00	212821.58
	Mar	15625	44554	3.95	2.15	0.000	512.371	512.371	4048.00	2074077.81
	<b>Total</b>	<b>207938</b>	<b>592712</b>			<b>4895.374</b>	<b>2310.030</b>	<b>7205.403</b>		<b>29167471.34</b>
<b>Grand Total</b>								<b>32404.596</b>		<b>123812684.47</b>

**Annexure 2.1.14**  
**Statement showing the summary of Generation loss suffered in PH II due to**  
**frequent failure of coal mills during 2010-11 to 2014-15**

*(Referred to in paragraph 2.1.28)*

Year	Loss of generation (in MU)			Gen cost (per unit) on sent basis	Total (₹ )
	unit 3	unit 4	Total		
2010-11	69.345	44.055	113.4	1.91	216594000
2011-12	49.745	38.729	88.474	3.13	276923620
2012-13	179.7965	152.4746	332.2711	3.52	1169594272
2013-14	96.448	50.261	146.709	3.26	478271340
2014-15	85.888	49.442	135.33	3.79	512900700
<b>Total</b>	<b>481.2225</b>	<b>334.9616</b>	<b>816.1841</b>		<b>2654283932</b>

**Statement showing the details of excess fuel oil consumed due to poor performance of coal mills in PH-II during 2011-11 to 2014-15**

Year	HFO	LDO	Total	cost per Kl	Total (₹ )
<b>2010-11</b>	166.03	2.8	168.83	32845.88	5545369.92
<b>2011-12</b>	239.6	72.25	311.85	43591.05	13593868.94
<b>2012-13</b>	1155.62	53.7	1209.32	50256.03	60775622.2
<b>2013-14</b>	787.4	0	787.4	56817.46	44738068
<b>2014-15</b>	63.2	0	63.2	60430.2	3819188.64
<b>Total</b>	<b>2411.85</b>	<b>128.75</b>	<b>2540.6</b>		<b>128472117.7</b>

**Annexure 2.1.15**

**Statement showing the details of Station Heat Rate (SHR) and resultant excess coal consumed and excess cost incurred in PH-III during 2010-11 to 2014-15**  
(Referred to in paragraph 2.1.33)

Sl.no	1	2	3	4	5	6	7	8	9	10	11	12	13
Year	Energy Generated (MU)	MPERC Norms for SHR (Kcal/Kwh)	Actual SHR (Kcal/Kwh)	Excess heat consumed (Kcal)	Coal Calorific Value (Kcal/kg)	Quantity of coal consumed in generating excess heat (Kg/Kwh) (4/5)	Excess coal consumed due to high SHR during the year (MT) (1*6*1000)	Cost of Coal per MT (₹)	Total Excess cost incurred (₹) (7*8)	Excess SHR utilised in percentage (%) (4/2)*100	Desired Thermal Efficiency as per MPERC target of SHR (%)	Actual Thermal efficiency of the Power House (%)	Fall in Thermal efficiency of the Power House (11-12)
<b>2010-11</b>	3665.852	2425	2574.00	149.00	3818.00	0.039	143062.323	2015.86	288393614	6.144	35.46	33.41	2.05
<b>2011-12</b>	3726.468	2425	2511.00	86.00	3896.00	0.022	82257.764	3648.50	300117451	3.546	35.46	34.25	1.21
<b>2012-13</b>	3495.144	2425	2652.00	227.00	3957.00	0.057	200504.849	4009.15	803854016	9.361	35.46	32.43	3.03
<b>2013-14</b>	3643.980	2425	2569.00	144.00	3777.00	0.038	138928.546	3670.95	509999748	5.938	35.46	33.48	1.98
<b>2014-15</b>	3215.976	2425	2456.00	31.00	3656.00	0.008	27268.943	3670.95	100102927	1.278	35.46	35.02	0.44
<b>Total</b>							<b>592022.425</b>		<b>2002467755</b>				

## Annexure 2.1.16

Statement showing the coal loss due to the excess presence of unburnt coal in Bottom and Fly ash during 2010-11 to 2014-15 in PH III  
(Referred to in paragraph 2.1.35)

Year	Month	Qty of ash generated (Mt)		Ave % of unburnt coal in Bottom ash	Ave % of unburnt coal in Fly ash	Qty of unburnt coal (Mt) in ash above maximum permissible limit (1.5 % in bottom ash and < 1 % in fly ash)			Coal cost per MT	Total value of Coal (₹)
		Bottom ash	Fly ash			coal present in bottom ash (Mt)	coal present in fly ash (Mt)	Total coal (Mt)		
2010-11	April	11540	38466	3.15	0.50	248.110	0.000	248.110	2015.86	500155.02
	May	23585	78616	2.45	0.45	341.983	0.000	341.983	2015.86	689388.84
	June	23254	77512	2.3	0.45	302.302	0.000	302.302	2015.86	609398.51
	July	17382	57939	2.55	0.4	269.421	0.000	269.421	2015.86	543115.02
	Aug	17234	86169	3.05	0.50	353.297	0.000	353.297	2015.86	712197.29
	Sept	15103	75517	3.00	0.55	302.060	0.000	302.060	2015.86	608910.67
	Oct	16264	81319	2.90	0.60	309.016	0.000	309.016	2015.86	622932.99
	Nov	25552	85172	1.65	0.5	166.088	0.000	166.088	2015.86	334810.16
	Dec	28472	94905	3.3	0.5	654.856	0.000	654.856	2015.86	1320098.02
	Jan	29374	97913	3.2	0.55	646.228	0.000	646.228	2015.86	1302705.18
	Feb	28380	94599	2.8	0.55	510.840	0.000	510.840	2015.86	1029781.92
	Mar	30055	100184	2.9	0.5	-330.605	0.000	-330.605	2015.86	-666453.40
	<b>Total</b>	<b>266195</b>	<b>968311</b>			<b>3773.596</b>	<b>0.000</b>	<b>3773.596</b>		<b>7607040.22</b>
2011-12	April	29663	98875	3.5	0.55	741.575	0.000	741.575	3648.50	2705636.39
	May	26926	89754	3.7	0.65	727.002	0.000	727.002	3648.50	2652466.80
	June	26654	88848	3.35	0.55	626.369	0.000	626.369	3648.50	2285307.30
	July	23924	79746	3.50	0.6	598.100	0.000	598.100	3648.50	2182167.85
	Aug	17518	66129	3.60	0.55	455.468	0.000	455.468	3648.50	1661775.00



	Sept	21245	44986	3.4	0.7	509.880	0.000	509.880	3648.50	1860297.18
	Oct	28530	81514	3.90	0.65	827.370	0.000	827.370	3648.50	3018659.45
	Nov	15049	75246	3	0.55	300.980	0.000	300.980	3648.50	1098125.53
	Dec	23732	94928	2.95	<b>0.5</b>	462.774	0.000	462.774	3648.50	1688430.94
	Jan	18067	72268	3.25	0.55	406.508	0.000	406.508	3648.50	1483142.61
	Feb	13165	58509	2.55	0.55	204.058	0.000	204.058	3648.50	744503.79
	Mar	21722	74903	2.45	0.55	314.969	0.000	314.969	3648.50	1149164.40
	<b>Total</b>	<b>266195</b>	<b>925706</b>			<b>6175.052</b>	<b>0.000</b>	<b>6175.052</b>		<b>22529677.22</b>
2012-13	April	24956	87260	2.1	0.45	274.516	0.000	274.516	4009.15	1100575.82
	May	17953	72043	2.05	0.5	188.507	0.000	188.507	4009.15	755750.83
	June	26647	86235	2.1	0.6	293.117	0.000	293.117	4009.15	1175150.02
	July	22027	86500	2.4	0.55	308.378	0.000	308.378	4009.15	1236333.66
	Aug	784	5179	2.95	0.55	15.288	0.000	15.288	4009.15	61291.89
	Sept	8851	40600	2.6	0.6	141.616	0.000	141.616	4009.15	567759.79
	Oct	28117	90697	2.95	0.44	548.282	0.000	548.282	4009.15	2198142.78
	Nov	21012	69830	2.85	0.65	388.722	0.000	388.722	4009.15	1558444.81
	Dec	26998	89993	2.8	0.45	485.964	0.000	485.964	4009.15	1948302.57
	Jan	24070	89148	2.15	0.45	276.805	0.000	276.805	4009.15	1109752.77
	Feb	17624	63147	1.6	0.4	105.744	0.000	105.744	4009.15	423943.56
	Mar	27863	75509	2.25	0.45	348.288	0.000	348.288	4009.15	1396336.83
	<b>Total</b>	<b>246902</b>	<b>856141</b>			<b>3375.226</b>	<b>0.000</b>	<b>3375.226</b>		<b>13531785.31</b>
2013-14	April	22926	85897	2	0.4	229.260	0.000	229.260	3670.95	841602.00
	May	36818	88996	2	0.45	368.180	0.000	368.180	3670.95	1351570.37
	June	25258	72088	1.85	0.4	214.693	0.000	214.693	3670.95	788127.27
	July	17047	65566	2	0.4	170.470	0.000	170.470	3670.95	625786.85
	Aug	22097	70084	1.70	0.40	154.679	0.000	154.679	3670.95	567818.88
	Sept	19779	76603	1.8	0.40	158.232	0.000	158.232	3670.95	580861.76
	Oct	21854	72969	1.7	0.45	152.978	0.000	152.978	3670.95	561574.59
	Nov	27041	78018	1.6	0.45	162.246	0.000	162.246	3670.95	595596.95
Dec	26092	85575	<b>1.5</b>	0.45	130.460	0.000	130.460	3670.95	478912.14	

	Jan	21030	80793	1.5	0.55	105.150	0.000	105.150	3670.95	386000.39	
	Feb	19541	71500	1.75	0.50	146.558	0.000	146.558	3670.95	538005.25	
	Mar	27994	91873	1.60	0.60	167.964	0.000	167.964	3670.95	616587.45	
	<b>Total</b>	<b>287477</b>	<b>939962</b>			<b>2160.870</b>	<b>0.000</b>	<b>2160.870</b>		<b>7932443.89</b>	
2014-15	April	31532	91558	1.5	0.55	157.660	0.000	157.660	4048.00	638207.68	
	May	36023	90842	1.6	0.6	216.138	0.000	216.138	4048.00	874926.62	
	June	23531	74370	1.65	0.6	152.952	0.000	152.952	4048.00	619147.67	
	July	21890	77267	1.7	0.55	153.230	0.000	153.230	4048.00	620275.04	
	Aug	37586	88856	1.7	0.6	263.102	0.000	263.102	4048.00	1065036.90	
	Sept	30869	78487	1.6	0.65	185.214	0.000	185.214	4048.00	749746.27	
	Oct	30565	75247	1.75	0.7	229.238	0.000	229.238	4048.00	927953.40	
	Nov	19719	65732	1.9	0.65	177.471	0.000	177.471	4048.00	718402.61	
	Dec	24436	79465	<b>2.2</b>	1.1	293.232	0.000	293.232	4048.00	1187003.14	
	Jan	25089	75229	1.9	0.65	225.801	0.000	225.801	4048.00	914042.45	
	Feb	19480	55420	1.85	<b>0.65</b>	165.580	0.000	165.580	4048.00	670267.84	
	Mar	0	0	4.35	1.2	0.000	0.000	0.000	4048.00	0.00	
		<b>Total</b>	<b>300720</b>	<b>852473</b>			<b>2219.617</b>	<b>0.000</b>	<b>2219.617</b>		<b>8985009.62</b>
	<b>Grand Total</b>								<b>17704.360</b>		<b>60585956.27</b>

**Annexure 2.1.17**

**Statement showing the details of payments made to SLDC due to improper scheduling and non adherence to Grid discipline**

*(Referred to in paragraph 2.1.36)*

Year	Month	Scheduled kWh	Actual kWh	Deviation/UI charges paid	Caping amount paid	Additional Deviation charges	Net Amount Paid (₹ )
<b>2014-15</b>	APRIL	307, 831, 250	305, 301, 303	3328265	185905	52468	3566638
	MAY	293, 946, 250	290, 581, 769	4676273	-672178	129475	4133570
	JUNE	259, 095, 000	255, 132, 943	12876742	-2688506	4287376	14475612
	JULY	260, 526, 250	257, 260, 443	13538465	-189405	2744595	16093655
	AUGUST	282, 805, 000	280, 226, 499	1766010	-622578	1122784	2266216
	SEPTEMBER	284, 422, 500	280, 989, 876	10408351	-1362273	1067951	10114029
	OCTOBER	288, 545, 000	286, 547, 231	7520503	-606758	1968589	8882334
	NOVEMBER	253, 553, 750	251, 596, 689	3448051	-72094	2042825	5418782
<b>Total</b>							<b>64950836</b>
<b>2013-14</b>	MAY	307, 900, 000	303, 663, 341	6372428	50917	3004	6426349
	JULY	261, 643, 750	259, 796, 137	203520	-2315	0	201205
	AUGUST	269, 007, 500	268, 912, 706	116668	-62545	6185	60308
	SEPTEMBER	299, 488, 750	298, 771, 351	2422445	-139758	16545	2299232
	OCTOBER	280, 451, 250	278, 562, 549	4713400	30847	1679	4745926
	NOVEMBER	278, 052, 500	275, 171, 738	6778512	-104446	8345	6682411
	DECEMBER	287, 771, 250	283, 276, 345	12034433	-130328	8077	11912182
	JAN	286, 311, 250	285, 300, 128	2712416	13588	3915	2729919
	FEB	164, 402, 500	162, 632, 429	4959860	-108749	0	4851111
	MAR	302, 533, 000	297, 952, 478	9177371	-1511373	278521	7944519
<b>Total</b>							<b>47853162</b>
<b>2012-13</b>	AUGUST	19, 921, 250	16, 557, 232	6716366	-370988	17848	6363226
	SEPTEMBER	141, 915, 000	135, 925, 098	8150071	-263122	6210	7893159
	OCTOBER	323, 046, 000	319, 819, 308	5532831	-70970	1949	5463810
	NOVEMBER	265, 239, 500	260, 848, 778	8876078	-4782	17631	8888927
	DECEMBER	334, 063, 500	331, 335, 416	4887872	-115208	18417	4791081
	JAN	343, 589, 500	340, 242, 475	6989757	-360009	40926	6670674
<b>Total</b>							<b>40070877</b>
<b>Grand Total</b>							<b>152874875</b>

## Annexure 2.1.18

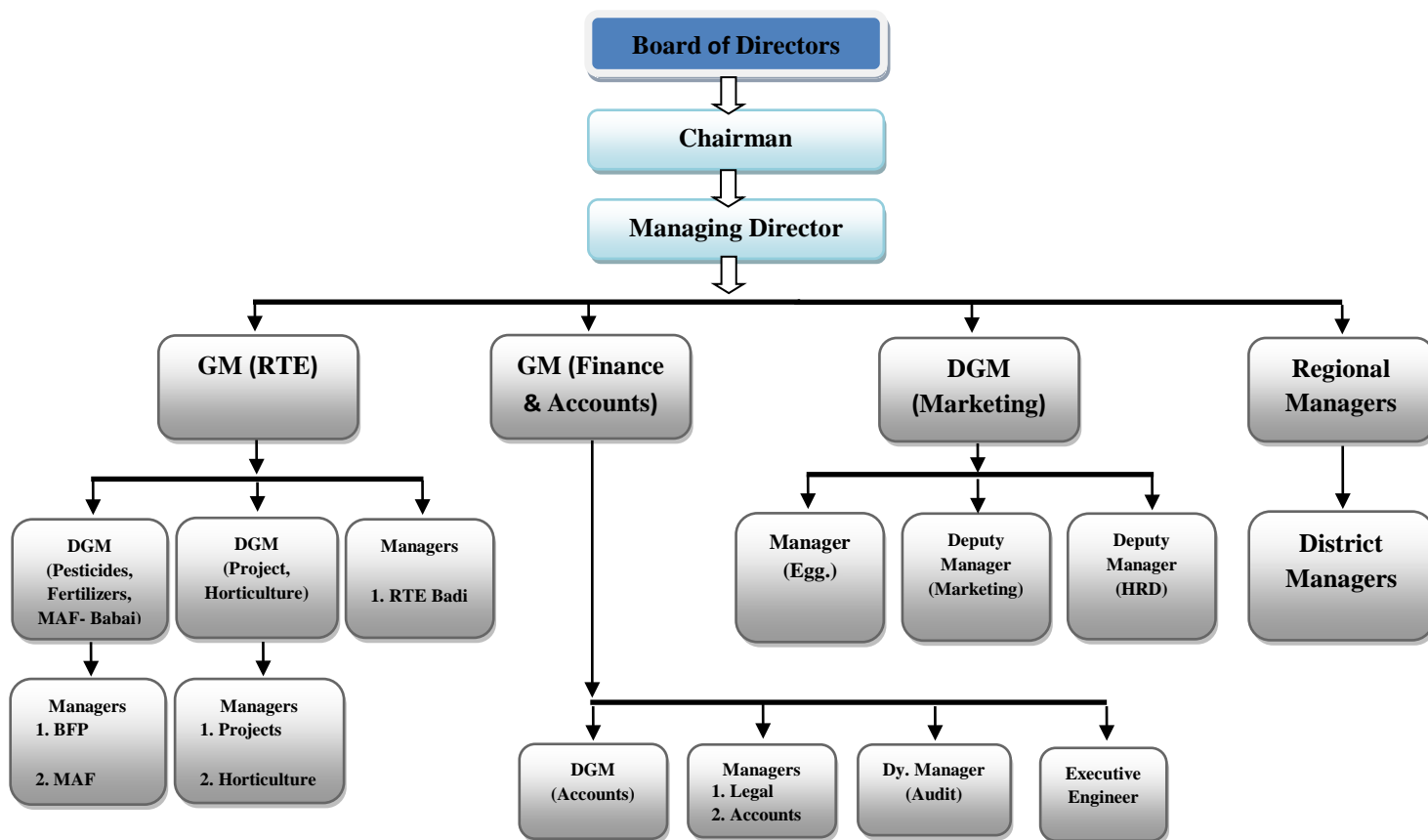
Statement showing the generation loss (MU) incurred due to poor quality of coal supplied by the liaising contractor  
(Referred to in paragraph 2.1.45)

Total generation loss (MU)					Poor quality coal received during rainy season				Total generation loss due to poor quality coal after excluding rainy season	Generation cost p.u on sent out basis	Value (₹)
YEAR	PH-I	PH-II	PH-III	TOTAL	PH I	PH II	PH III	Total			
2010-11	107.45	195.81	59.49	362.750	3.980	24.200	42.880	71.060	291.690	1.91	557127900
2011-12	61.12	183.67	10.82	255.610	2.790	57.300	1.770	61.860	193.750	3.13	606437500
2012-13	153.2	185.34	14.5	353.040	27.430	61.320	3.100	91.850	261.190	3.52	919388800
2013-14	125.46	85.93	13.85	225.240	15.290	11.050	0.000	26.340	198.900	3.26	648414000
2014-15	52.5	170.2	32.39	255.090	11.180	21.230	14.670	47.080	208.010	3.79	788357900
<b>TOTAL</b>				<b>1451.730</b>				<b>298.190</b>	<b>1153.540</b>		<b>351,97,26,100</b>

**Annexure-2.2.1**

**Organisation Chart of Madhya Pradesh State Agro-Industries Development Corporation Limited**

(Referred to paragraph 2.2.2)



## Annexure-2.2.2

## Financial Position of the Company for the years 2010-11 to 2013-14

(Referred to paragraph 2.2.6)

(₹ in Lakh)

Sl. No.	Particulars	2010-11	2011-12	2012-13	2013-14 (Provisional)
	<b>Liabilities</b>				
	<b>Shareholders' funds</b>				
1	Paid-up Capital	329.50	329.50	329.50	329.50
2	Reserve & Surplus	1,004.74	3,342.33	5,676.98	10,797.31
<b>3</b>	<b>Total</b>	<b>1,334.24</b>	<b>3,671.83</b>	<b>6,006.48</b>	<b>11,126.81</b>
	<b>Non-current Liabilities</b>				
4	Long term borrowings	202.63	164.39	5.48	5.47
5	other long term liabilities	6,159.85	4,859.58	7,844.38	6,292.70
6	Long term provisions	50.00	50.00	772.00	920.15
<b>7</b>	<b>Total Non-current Liabilities</b>	<b>6,412.48</b>	<b>5,073.97</b>	<b>8,621.86</b>	<b>7,218.32</b>
8	Current Liabilities & Provisions	31,602.36	37,181.24	28,691.68	27,649.02
	<b>Total Liabilities</b>	<b>39,349.08</b>	<b>45,927.04</b>	<b>43,320.02</b>	<b>45,994.15</b>
	<b>Assets</b>				
	<b>Non-current Assets</b>				
10	Gross Block	1,109.59	1,158.08	1,167.85	441.54
11	Less: Depreciation	724.39	755.20	790.77	0.00
<b>12</b>	<b>Net Block</b>	<b>385.20</b>	<b>402.88</b>	<b>377.08</b>	<b>441.54</b>
13	Non-current Investment	30.80	30.80	144.00	144.00
14	Deffered tax Assets	3.93	107.13	336.70	336.70
15	Long term loans and advances	246.79	250.01	247.30	1,913.33
16	Other non current Assets	15.95	15.95	38.59	9.79
<b>17</b>	<b>Total Non-current Assets</b>	<b>682.67</b>	<b>806.77</b>	<b>1,143.67</b>	<b>2,845.36</b>
18	Current Assets	38,666.41	45,120.27	42,176.35	43,148.79
	<b>Total Assets</b>	<b>39,349.08</b>	<b>45,927.04</b>	<b>43,320.02</b>	<b>45,994.15</b>
	Capital Employed	1,536.87	3,836.22	6,011.96	11,132.28
	Interest paid	18.90	18.90	15.85	0.00
	Total return on capital employed	1,516.05	3,059.72	2,340.47	5,120.32
	Percentage return on capital employed	98.65	79.76	38.93	46.00
	<b>Net Worth</b>	<b>1,536.87</b>	<b>3,836.22</b>	<b>6,011.96</b>	<b>11,132.28</b>

**Annexure-2.2.3**

**Working results of the Company for the years 2010-11 to 2013-14**

(Referred to paragraph 2.2.6)

(₹ in Lakh)

Sl. No.	Particulars	2010-11	2011-12	2012-13	2013-14 (Provisional)
<b>Revenue</b>					
<b>Operational Income</b>					
1	Sales	93,696.70	1,24,698.96	1,22,091.02	1,28,958.79
2	Services	253.72	224.20	231.41	201.84
3	Other Operating Income	51.55	89.45	315.15	215.92
<b>4</b>	<b>Revenue from Operations</b>	<b>94,001.97</b>	<b>1,25,012.61</b>	<b>1,22,637.58</b>	<b>1,29,376.55</b>
5	Interest Income	404.23	866.29	1,203.50	1,609.36
6	Misc. Income	16.73	15.43	44.46	11.52
<b>7</b>	<b>Other Income</b>	<b>420.96</b>	<b>881.72</b>	<b>1,247.96</b>	<b>1,620.88</b>
<b>8</b>	<b>Total Revenue</b>	<b>94,422.93</b>	<b>1,25,894.33</b>	<b>1,23,885.54</b>	<b>1,30,997.43</b>
<b>Expenditure</b>					
9	Purchases and Material Consumed	89,398.77	1,18,517.05	1,16,598.41	1,22,416.41
10	Employee Benefit Expense	1,904.21	2,069.45	2,835.88	2,697.13
11	Depreciation and amortisation Expenses	36.45	33.85	39.08	18.04
12	Finance Cost	18.90	18.90	15.86	-
13	Other Expenses	492.04	626.34	868.13	740.53
<b>14</b>	<b>Total Expenditure</b>	<b>91,850.37</b>	<b>1,21,265.59</b>	<b>1,20,357.36</b>	<b>1,25,872.11</b>
15	Profit/ Loss before Tax	2,572.56	4,628.74	3,528.18	5,125.32
16	Profit/ Loss excluding Interest Income	2,168.33	3,762.45	2,324.68	3,515.96
17	Tax Expenses	1,056.45	1,567.78	1,187.66	-
18	Prior period and exceptional items	0.06	1.24	0.05	5.00
19	Profit and loss after tax	1,516.05	3,059.72	2,340.47	5,120.32
20	Provision for General Reserve	164.72	306.13	-	-
21	Dividend	329.44	612.26	-	-
22	Dividend tax	53.45	104.05	-	-
<b>23</b>	<b>Net profit transferred to Reserve and Surplus</b>	<b>968.44</b>	<b>2,037.28</b>	<b>2,340.47</b>	<b>5,120.32</b>

## Annexure-2.2.4

## Statement showing non-utilisation of Subsidies/ Advance by the Company

(Referred to paragraph 2.2.10)

Sl. No	Head	Particulars	Amount(in ₹)
1	Subsidy	Subsidy payable –Biogas	61651442
2	-do-	Bullock Cart	15000
3	-do-	P.P. Equipment	165663
4	-do-	Culture	161314
5	-do-	Macro Management Scheme	6141278
6	-do-	Horticulture- Vegetables Seed Dev.	2172724
7	-do-	Bee Keeping (General)	1271873
8	-do-	Bee Keeping (SSC)	240000
9	-do-	Bee Keeping (ST)	546000
10	-do-	Horticulture-Green House	696000
11	-do-	Tractor	75000
12	-do-	ICDP Central (Rice) Scheme	1926900
13	-do-	BD Implements	44678
14	-do-	Sunflower-Seed	159248
15	-do-	Sprinkler	656917
16	-do-	On ID Implements	361356
17	-do-	Sugar Cane	209656
18	-do-	Drip Irrigation	258628
19	-do-	Power Tiller	502165
20	-do-	Dir. Fisheries BPL	10784697
21	-do-	Govt. subsidies, Grant & Adv (CR)	18307987
22	-do-	Food Processing	13980000
23	-do-	Horticulture Banana Seed	21758
24	-do-	Exporter for Transportation	500000
<b>Sub-Total (A)</b>			<b>12,08,50,284</b>
1	Advance	Hort. Dept.	32211475
2	-do-	Hort. Mission for Lahsun Seed	1374409
3	-do-	Hort. for Adv.& Publicity	1330000
4	-do-	BD Implement	2375000
5	-do-	Foot Value Replacement	667710
6	-do-	Director Agri. Engg.	1425483
7	-do-	Well Boring	170473
8	-do-	Grant in Aid Food Processing	500000
9	-do-	Assistance for Food Park (Hort.)	21531875
10	-do-	Assistance for Food Park Ind.	749762
11	-do-	Assistance to Nodal Agency (Hort.)	4950000
12	-do-	EDP Programme (Hort.)	4916745
13	-do-	Food Processing Seminar 2010-11	12028062
14	-do-	Director Agri. Engg. Bhopal	42335594
15	-do-	Hort. For Development Programme	500000
16	-do-	Lab Equipment	21664
17	-do-	Customer	98497372
18	-do-	RTE Food	2500000
19	-do-	Hostel Construction	244000
<b>Sub-Total (B)</b>			<b>22,83,29,624</b>
<b>Grand Total (A+B)</b>			<b>34,91,79,908</b>



**Annexure-2.2.5**

**Statement showing non-utilisation/ disbursement of Subsidies/ Advance by the Company for more than 8 years**

*(Referred to paragraph 2.2.10)*

<b>Sl. No.</b>	<b>Particulars</b>	<b>Amount (₹ in lakh) 2013-14</b>
1	Subsidy for Macro Management Scheme	61.41
2	Subsidy for Horticulture-Vegetables Seed Dev.	21.73
3	Subsidy for Bee Keeping (General)	12.72
4	Subsidy for Bee Keeping (SC)	2.40
5	Subsidy for Bee Keeping (ST)	5.46
6	Subsidy for Horticulture-Green House	6.96
7	Subsidy for Sugar Cane	2.09
8	Subsidy for Drip Irrigation	2.58
9	Govt. subsidies Grants & Advances (CR)	183.07
10	Subsidy to Exporters for Transportation	5.00
11	Advance for Bullock Drawn implements	23.75
12	Advance for Foot Value Replacement	6.68
13	Advance for Industrial Development Programme	5.00
14	Advance for RT Food	25.00
<b>Total</b>		<b>363.85</b>

## Annexure-2.2.6

## Statement showing details of utilization of available land for cultivation at Mechanised Agricultural Farm during 2010-11 to 2014-15

*(Referred to paragraph 2.2.22)*

Year	Crop	Season	Area (in hectare)			
			Available land	Land Utilised	Shortfall	Percentage of Land Utilised
2010-11	Paddy	Kharif	376.47	109.76	266.71	29.16
	Wheat	Rabi	376.47	195.21	181.26	51.85
2011-12	Paddy	Kharif	376.47	108.54	267.93	28.83
	Wheat	Rabi	376.47	182.25	194.22	48.41
2012-13	Paddy	Kharif	376.47	92.34	284.13	24.53
	Wheat	Rabi	376.47	156.33	220.14	41.53
2013-14	Paddy	Kharif	376.47	83.84	292.63	22.27
	Wheat	Rabi	376.47	155.92	220.55	41.42
2014-15	Paddy	Kharif	376.47	90.72	285.75	24.10
	Wheat	Rabi	376.47	176.17	200.30	46.80

**Annexure-2.2.7**

**Statement showing details of EMD called for auction of Orchards/trees**

(Referred to paragraph 2.2.24)

Name of the Orchard	Year	Area (in hectare)	No. of Trees	EMD (in ₹)
Mango Orchard	2011-12	33.21	1418	75,000/-
Mango Orchard		21.46	958	35,000/-
Mango Orchard		32.40	1260	1,75,000/-
Mango Orchard		19.04	468	2,500/-
Kathal	2012-13	10.53	779	1,00,000/-
Kathal		7.29	443	75,000/-
Mango Orchard		33.21	1418	1,00,000/-
Mango Orchard		21.46	958	75,000/-
Mango Orchard		32.40	1200	1,00,000/-
Mango Orchard		19.04	468	50,000/-
Eucalyptus Trees	2013-14	N.A.	1517	50,000/-

**Statement showing details of Bid value vis-à-vis EMD called for auction of Orchards/Trees**

Name of the Orchard	Area (in hectare)	Year	Name of Bidder	Bid Value (₹)	EMD (₹)
Mango Orchard	19.04	2012-13	Rajnikant Kuthariya	35,551/-	50,000/-
Mango Orchard	33.21	2012-13	Allabaksh Rain	11,55,555/-	1,00,000/-
Kathal Orchard	10.53	2012-13	Rahim Beg	7,02,796/-	1,00,000/-
Kathal Orchard	7.29	2012-13	Bhagwan Singh Yadav	4,54,000/-	1,75,000/-
Mango Orchard	21.46	2012-13	Mumtaj Beg	7,36,211/-	75,000/-
Mango Orchard	32.40	2012-13	Mumtaj Beg	14,14,414/-	1,00,000/-
Kathal Orchard	10.53	2010-11	Ashwini Mishra	2,11,000/-	70,000/-
Kathal Orchard	7.29	2010-11	Ashwini Mishra	1,66,000/-	40,000/-
Eucalyptus Trees	N.A.	2013-14	Nayan Industrial	21,01,000/-	50,000/-
Eucalyptus Trees	N.A.	2013-14	Mohit Traders	20,51,000/-	50,000/-
Eucalyptus Trees	N.A.	2013-14	Mohit Traders	17,01,000/-	50,000/-
Eucalyptus Trees	N.A.	2013-14	Liyakat Khan	12,01,000/-	50,000/-

## Annexure-2.2.8

## District Office wise details of unserviceable stock as per Physical Verification Reports as on 31 March 2014

(Referred to paragraph 2.2.27)

Sl. No.	Location	Amount (₹)
1	Jabalpur	131575
2	Narsinghpur	3056
3	Seoni	9207
4	Mandla	148600
5	Dindori	1728
6	Satna	49797
7	Sahdol	103128
8	Umaria	6556
9	Sidhi	53659
10	Rewa	124484
11	Gwalior	24005
12	Datia	3291
13	Shivpuri	8820
14	Guna/Ashoknagar	103059
15	Bhind	77076
16	Morena	78667
17	Hoshangabad	55898
18	Raisen	2801
19	Biaora	126243
20	Betul	898
21	Indore	808026
22	Khandwa	124
23	Khargone	2474
24	Barwani	1856
25	Dhar	7705
26	Jhabua	34331
27	Panna	183251
28	Tikamgarh	8065
29	Chhatarpur	109597
30	Ujjain	500229
31	Mandsour	193362
32	Ratlam	6116
33	Shajapur	36422
34	Dewas	10968
	<b>Total (A):</b>	<b>3015074</b>
35	BFP, Bhopal	2533701
36	WSI, Bhopal	459771
37	OMP, Gwalior	5373000
	<b>Total (B):</b>	<b>8366472</b>
	<b>Grand Total (A+B):</b>	<b>1,13,81,546</b>

**Annexure-2.2.9**

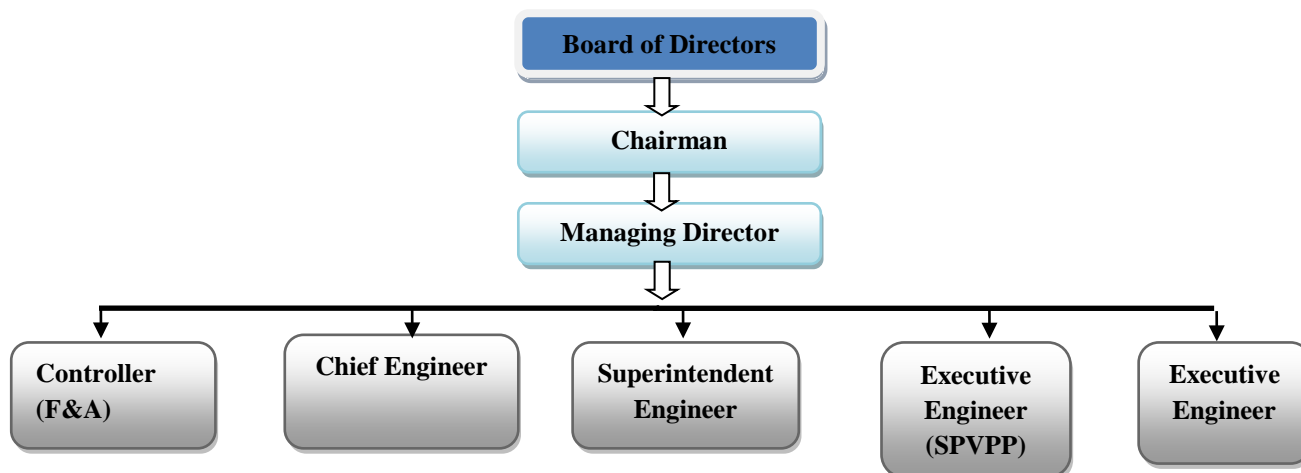
**District wise detail of shortage/ missing stock as per Physical Verification Reports as on 31 March 2014**

(Referred to paragraph 2.2.27)

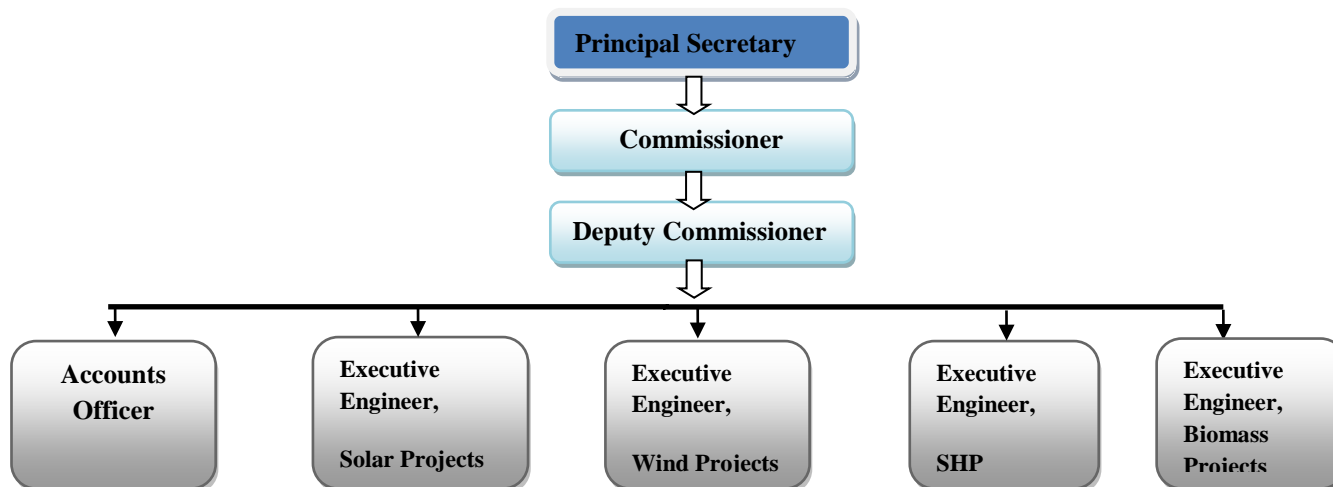
Sl. No.	Name of the District Office	Particulars of missing item	Quantity	Rate (₹)	Value (₹)
1	Sahdol/ Anuppur	Bio-fertilizers	51788 packets	16.00	8,28,608.00
2	Satna	Paddy puddler	150 units	10.00	15,000.00
3	Ratlam	Laso 25kg	9 bags	NA	NA
		Thyrum	1637 packets	NA	NA
4	Ujjain	Iron Board 3X2	50 units	500.00	25,000.00
5	Mandsore	Urea	299 bags	263.73	78,855.27
		Bio-gas axillaries	115 units	NA	NA
		Pipe	5062 meter	17.59	89,040.58
6	Biowara	Mustered seed	524 kg	1.00	524.00
7	Shajapur	Gate Valve	22 units	129.00	2,838.00
		Bio-gas lamp	10 units	244.00	2,440.00
		Cement	154 units	1.00	154.00
		DAP	108 bags	48.00	51,840.00
8	Mandla	Hand Ho	401 units	70.00	28,070.00
		Choff-cutter	1 unit	630.00	630.00
9	Hoshangabad	Tyre Tube	2 units	3543.00	7,086.00
<b>TOTAL:</b>					<b>11,30,085.85</b>

**Annexure-2.3.1**  
**Organisation Chart of the Company and the O/o Commissioner, New and Renewable Energy**  
**Department, GoMP**  
*(Referred to paragraph 2.3.3)*

**A. Madhya Pradesh Urja Vikas Nigam Limited, Bhopal**



**B. O/o Commissioner, New and Renewable Energy Department, GoMP**



**Annexure -2.3.2**

**Incentives and Exemptions provided in the Grid connected RE Policies**

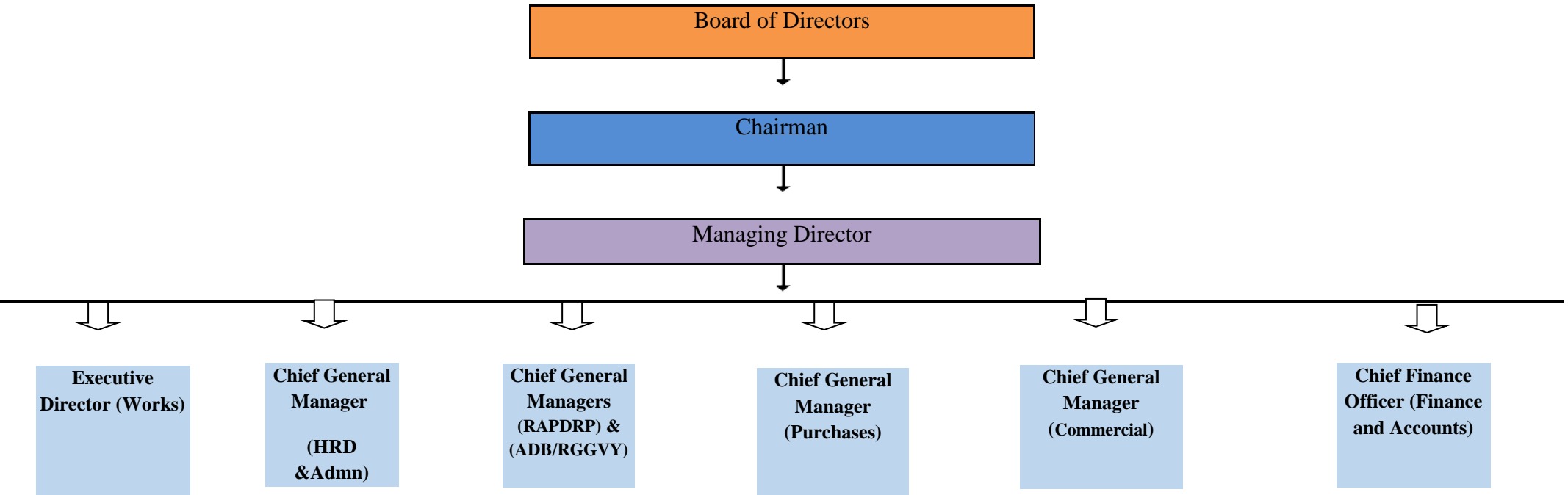
*(Referred to in paragraphs 2.3.7, 2.3.8, 2.3.9, 2.3.11, 2.3.13 and 2.3.14)*

<b>S.No</b>	<b>Facilities and Incentives</b>	<b>Solar</b>	<b>Wind</b>	<b>Small Hydel</b>	<b>Biomass</b>
1.	Electricity duty & Cess Exemption	Allowed for 10 years	Allowed for 10 years	Allowed for 10 years	Allowed for 10 years
2.	Wheeling Charges waiver	Four per cent	Four per cent	Four per cent	Four per cent
3.	Energy Banking	100 percent	100 percent	100 percent	NA
4.	Contract demand reduction	Allowed	NA	Allowed	Allowed
5.	Third Party Sale	Allowed	Allowed	Allowed	Allowed
6.	Industry Status	Granted	Granted	Granted	Granted
7.	Entry / VAT Exemption	Exemption allowed for Purchase of Solar Power Plants	Exemption allowed for Purchase of Wind Power Plants	Exemption allowed for Purchase of Machines/ Plants/	Exemption allowed for Purchase of Equipments
8.	50 per cent stamp duty exemption purchase of Private Land	Allowed	NA	NA	Allowed

**Annexure-3.1**

**Organisational Structure of Madhya Pradesh Poorv Kshetra Vidyut Vitaran Company Limited**

*(Referred to in paragraph 3.1.2)*





**Annexure-3.2**  
**Statement showing the financial position and working results of the Discom**  
*(Referred to in paragraph 3.1.6.2)*

(₹ in crore)

Particulars	2010-11	2011-12	2012-13	2013-14	2014-15
Revenue from sale of power	3133.73	3753.65	5040.73	5645.84	6669.96
Other revenue	230.17	206.43	227.34	199.50	282.68
<b>Income</b>	<b>3363.90</b>	<b>3960.08</b>	<b>5268.07</b>	<b>5845.34</b>	<b>6952.64</b>
Power Purchases	2858.10	3965.00	5140.88	5816.67	6638.39
Repairs and maintenance	29.10	44.90	52.86	86.50	66.00
Employment Costs	569.00	623.00	671.63	750.92	824.02
Administration & General	74.30	124.70	128.38	130.94	146.89
Interest	341.20	126.80	256.30	309.42	261.26
Depreciation	94.80	117.00	109.83	157.22	207.44
Others	371.20	181.00	422.67	646.48	200.82
<b>Total Expenses</b>	<b>4258.86</b>	<b>5182.34</b>	<b>6782.55</b>	<b>7898.16</b>	<b>8344.82</b>
Exceptional and extraordinary items	78.84	-55.43	-82.25	-165.67	-142.16
<b>Loss Before Tax (after exceptional and extraordinary items)</b>	<b>-973.80</b>	<b>-1166.83</b>	<b>-1432.23</b>	<b>-1887.15</b>	<b>-1250.02</b>
<b>Loss After Tax</b>	<b>-973.80</b>	<b>-1166.83</b>	<b>-1432.23</b>	<b>-1887.15</b>	<b>-1250.02</b>
Gross Fixed Assets	2600.22	3173.69	4268.93	5341.45	6114.13
Accumulated Depreciation	1391.55	1508.56	1618.40	1775.61	1983.06
<b>Net Fixed Assets</b>	<b>1208.67</b>	<b>1665.13</b>	<b>2650.53</b>	<b>3565.84</b>	<b>4131.07</b>
WIP	587.11	618.18	335.35	337.20	538.16
Current Assets	2902.52	2796.44	3055.64	3380.65	3823.87
Other Non-current Assets	431.35	602.96	664.09	690.83	624.92
<b>Total Assets</b>	<b>5129.67</b>	<b>5682.71</b>	<b>6705.61</b>	<b>7974.52</b>	<b>9118.03</b>
Equity	1014.91	1194.45	1391.44	1598.08	1790.21
Share application money	179.54	196.99	206.64	143.53	26.70

<b>Accumulated losses</b>	-4338.22	-5505.05	-6937.29	-8824.44	10074.46
<b>Reserves and Surplus (excluding accumulated losses)</b>	809.49	952.72	1153.58	1277.49	1543.34
<b>Long term Liabilities</b>	4279.44	5619.80	7385.57	9293.39	11322.78
<b>Current Liabilities</b>	3184.51	3223.80	3505.67	4486.47	4509.46
<b>Total Equity &amp; Liabilities</b>	<b>5129.67</b>	<b>5682.71</b>	<b>6705.61</b>	<b>7974.52</b>	<b>9118.03</b>
<b>Working capital (Current assets- Current Liabilities)</b>	-281.99	-427.36	-450.03	-1105.82	-685.59
<b>PAT/Revenue</b>	-29%	-30%	-27%	-32%	- 18%
<b>Current Ratio (Current assets/ Current liabilities)</b>	0.91	0.87	0.87	0.75	0.85
<b>Net worth (Total assets minus liabilities)</b>	-2334.30	-3160.90	-4185.64	-5805.34	-6714.21
<b>Return on net worth</b>	0.42	0.37	0.34	0.33	0.19
<b>Cost of purchase of power per unit (₹)</b>	2.70	3.37	3.84	4.01	4.12
<b>Sale value per unit: Revenue from sale of power/input units(₹)</b>	2.97	3.19	3.77	3.89	4.14
<b>Input units ( in MUs)</b>	10563	11749	13371	14526	16106

**Note: Figures for the year 2014-15 are provisional.**

Net worth: Total Assets – Long term and Short term Liabilities or Share capital including Share application money + Reserves & surplus including accumulated losses.

Current Ratio: Current Assets/ Current Liabilities

Return on net worth: Loss/net worth

**Annexure 3.3**

**Statement showing the short recovery of LD in respect of RGGVY scheme**  
(Referred to in paragraph 3.2) (₹ in lakh)

Name of the Contractor	Total Contract value	Maximum LD of 5% on total contract value leviable on contractors	LD actually recovered	Short recovery of LD
GVPR Engg	2448.88	122.444	86.14	36.304
Rohini Industries	4671.1	233.555	174.89	58.665
Eltel Power Pvt Ltd	4444.55	222.2275	9.76	212.4675
BS Transcom Ltd	2474.67	123.7335	120	3.7335
Easun Reyrolle Ltd Bangalore	6009.11	300.4555	164.34	136.1155
<b>Total</b>				<b>447.2855</b>

**Annexure – 3.4**  
**Statement Showing Loss of Interest due to non-investment of surplus funds**  
*(Referred to in paragraph 3.3)*

Surplus funds available			Amount to be invested ( in crore)	
From	To	Idle Days	Amount(₹ in crore)	Loss of Interest (₹ in lakh) (Amt*days*6% P.a.)
A/c No:- 00000010238007069				
02.04.13	17.04.13	16	10	2.63
19.06.13	03.07.13	16	7	1.84
27.08.13	14.09.13	19	20	6.25
16.09.13	30.09.13	16	10	2.63
01.10.13	19.10.13	19	40	12.49
13.11.13	13.12.13	31	25	12.74
16.12.13	07.01.14	23	50	18.90
20.02.14	31.03.14	16	10	2.63
13.03.14	31.03.14	20	50	16.44
01.04.14	25.04.14	26	45	19.23
01.05.14	21.05.14	21	20	6.90
03.06.14	25.06.14	23	15	5.67
12.07.14	12.08.14	31	30	15.29
11.10.14	29.10.14	18	20	5.92
09.12.14	31.03.15	113	37	68.73
<b>Total</b>				<b>198.29</b>

**Annexure 3.5**

**Statement Showing extra expenditure on account of minimum demand charges**

(Referred to in paragraph 3.5)

Month	Contract Demand (KVA)	Demand Billed (kVA)	Revised CD (kVA)	Revised CD Billed (kVA)	Difference (kVA)	Rate Of Fixed Charges (₹ per KVA)	Amount (₹)	TMM Minimum Energy Billed (units)	TMM Minimum Energy charges to be billed (Units) <sup>1</sup>	Difference (Units)	Rate of TMM (₹)	Amount (₹)	Total (₹)
Aug-13	500	450	200	180	270	310	83700	42250	12250	30000	5.34	160200	243900
Sep-13	500	450	200	180	270	310	83700	42970	12970	30000	5.34	160200	243900
Oct-13	500	450	200	180	270	310	83700	48530	18530	30000	5.34	160200	243900
Nov-13	500	450	200	180	270	310	83700	46770	16770	30000	5.34	160200	243900
Dec-13	500	450	200	180	270	310	83700	41580	11580	30000	5.34	160200	243900
Jan-14	500	450	200	180	270	310	83700	39300	9300	30000	5.34	160200	243900
Feb-14	500	450	200	180	270	310	83700	42320	12320	30000	5.34	160200	243900
Mar-14	500	450	200	180	270	310	83700	47250	17250	30000	5.34	160200	243900
Apr-14	1500	1350	200	180	1170	310	362700	138650	8650	130000	5.39	700700	1063400
May-14	1500	1350	200	180	1170	310	362700	138760	8760	130000	5.39	700700	1063400
Jun-14	1500	1350	200	180	1170	380	444600	131800	1800	130000	5.39	700700	1145300
Jul-14	1500	1350	200	180	1170	380	444600	131630	1630	130000	5.39	700700	1145300
Aug-14	1500	1350	200	180	1170	380	444600	145120	15120	130000	5.39	700700	1145300
Sep-14	1500	1350	200	180	1170	380	444600	138620	8620	130000	5.39	700700	1145300
Oct-14	1500	1350	200	180	1170	380	444600	131670	1670	130000	5.39	700700	1145300
Nov-14	1500	1350	200	180	1170	380	444600	134010	4010	130000	5.39	700700	1145300
Dec-14	1500	1350	200	180	1170	380	444600	134610	4610	130000	5.39	700700	1145300
							<b>4507200</b>					<b>7587900</b>	<b>12095100</b>

1 Basis of TMM energy charges to be billed 200 kva\*100 =20000- energy consumed during month

## Annexure – 3.6

## Statement showing completion period of project and extra payment of Bonus

(Referred to in paragraph 3.8)

Particulars	Sitamau-Basai-Suwasara Road	Ashoknagar-Vidhisha Road
Name of the Concessionaire	DBL Sitamau Suwasara Tollways Limited, Bhopal	DBL Ashoknagar-Vidhisha Tollways Limited, Bhopal
Date of agreement	05.12.2011	22.03.2013
Appointed date	04.05.2012	09.11.2013
Scheduled completion date	03.05.2014	08.11.2015
Provisional completion	28.03.2013	26.07.2014
Early completion	401 days	470 days
Actual amount Paid as Bonus	₹ 8 crore	₹ 12.80 crore
Annuity amount	₹ 3.69 crore	₹ 5.04 crore
Average daily annuity	₹ 199459	₹ 272432
Original Project period	03.05.2027	09.11.2028
Revised project Period	28.03.2026	26.07.2027
Consultants' recommended/considered construction period	12 months	18 months
Early completion on the basis of construction period as per consultants' recommendation/consideration	36 days	289 days
Amount which should have been paid as per consultant recommendation	₹ 0.72 crore	₹ 7.87 crore
Extra payment of bonus	₹ 7.28 crore	₹ 4.93 crore

**Annexure - 3.7**

**Statement showing the loss of interest due to delayed payment of premium**  
(Referred to in paragraph 3.9)

Start date	End date	Amount	No of days	Rate of Int	Loss of Interest
<b>1st year</b>					
26-May-13	18-Jul-13	177800000	53	9	2323578
19-Jul-13	24-Aug-13	107800000	37	9	983490
25-Aug-13	14-Nov-13	57800000	82	9	1168668
					<b>4475737</b>
<b>2nd year</b>					
08-Apr-14	21-May-14	220500000	44	9	<b>2392274</b>
22-May-14	30-Jun-15	200500000	405	9	<b>20022534</b>
<b>3rd year</b>					
08-Apr-15	30-Jun-15	231500000	84	9	<b>4794904</b>
		<b>Total Loss of Interest</b>			<b>31685449</b>

**Annexure 3.8**  
**Statement showing the excess payment of bonus**  
*(Referred to in paragraph 3.10)*

(₹ in crore)

MAJOR DISTRICT ROADS												
Sr no.	Name of project	Length (in km)	Date of concession agreement	Tpc (in crore) as per C.A	Bot model	Quoted annuity half yearly (crore)	Appointed date	COD	Early completion bonus for nine projects	No. of days taken to complete	No of days preceeded for schedule completion	Early Completion Bonus for four projects having construction period more than that of concessionaires recommendation
1	Bijwad-Kosmania-Haran-Deepganj	136	16-01-2012	200.03	A	19.53	07-07-2012	31-03-2014	9.97	632	98	0
	Kataphod-Nachalpur											
2	Betul-Atner	63.80	04-01-2012	83.92	A	8.17	26-07-2012	29-03-2014	5	611	119	0
	Harda-Chhipaner											
3	Garakota-Rehli -Devri	67.38	05-12-2011	101.25	A	8.51	12-09-2012	28-10-2013	14.79	411	319	0
	Rehli-Gorjhamar											
4	Debgular Jod-Arandia	94.46	30-11-2011	152.07	A	14.72	12-09-2012	30-04-2014	9.86	595	135	0
	Pipaliya-Manasa											
	Salsalai-Gulana to Gulai Railway Station											
5	Sausar-Mohgaon-Mordongri	86.11	30-01-2012	152.60	A	15.84	24-08-2012	29-03-2014	12.16	582	148	12.16
	Sonapipari-Umreth-Monari-Ambah											



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	Gadarwada to Tendukheda											
6	Alirajpur-Jobat	94.35	24-12-2012	132.92	A	12.91	01-05-2013	02-08-2014	18.91	458	135	18.91
	Babangaja-Pati -Bokrata											
	A B Road –Magarkhedi-Bamari											
	Singhana-Chikalda Road											
7	Bankhlafata-Dogawa via Borawa -Sarvardevala	65.4	28-01-2013	103.44	A	9.90	14-08-2013	31-03-2014	26.9	229	501	26.9
	Punasa-Mundi-Singhaji (Thermal Power Plant)Road &Singhaji Bridge Approach											
	Mundi -Devala-Khutala-Atoot NVDA											
8	NH-86 Junction (Tyonda)-Ganjbasoda	119.4	02-02-2013	134.52	A	14.25	03-10-2013	21-08-2014	30.8	322	135	0
	Kurawar-Iklera-Talen											
	Itkhedi-Raslakhedi											
	Aankhia-Barkheda-Dongargaon-Nazirabad											
	Lateri-Anandpur-Bhagwantpur											
9	Jaora- Piploda - Jalandharkheda &-Piploda Sailana	87.77	24-11-2012	125.4	A	12.06	29-06-2013	09-05-2014	27.05	314	416	27.05
	Raipuria-Petlabad-Bamania											
	Javad Road to Khoh											
	Soyat-Pidawa											
				<b>1186.15</b>				<b>Total</b>	<b>155.7</b>			<b>85.02</b>