

**Report of the  
Comptroller and Auditor General of India  
on  
Public Sector Undertakings**

**for the year ended 31 March 2012**

**Government of Bihar**  
*Report No. 1 of the Year 2013*

## TABLE OF CONTENTS

Particulars	Reference to	
	Paragraph (s)	Page (s)
Preface	-	v
Overview	-	vii-xii
<b>CHAPTER-1</b>		
<b>Overview of State Public Sector Undertakings</b>	<b>1</b>	-
Introduction	1.1-1.3	1
Audit Mandate	1.4-1.6	1-2
Investment in State PSUs	1.7-1.9	2-3
Budgetary outgo, grants/subsidies, guarantees and loans	1.10-1.11	3-4
Reconciliation with Finance Accounts	1.12-1.13	4-5
Performance of PSUs	1.14-1.19	5-7
Arrears in finalisation of accounts	1.20-1.25	7-8
Winding-up of non-working PSUs	1.26-1.28	8-9
Accounts Comments and Internal Audit	1.29-1.34	9-12
Recoveries at the instance of audit	1.35	12
Status of placement of Separate Audit Reports	1.36	12-13
Disinvestment, Privatisation and Restructuring of PSUs	1.37	13
Reforms in Power Sector	1.38-1.39	14-15
<b>CHAPTER – II</b>		
<b>Performance Audit relating to Government Company</b>		
<b>Performance Audit on Bihar State Text Book Publishing Corporation Limited</b>	<b>2</b>	-
Executive summary		
Introduction	2.1	18-19
Organisational set-up	2.2	19-20
Scope of Audit	2.3	20
Audit Objectives	2.4	20
Audit criteria	2.5	20
Audit methodology	2.6	21

Particulars	Reference to	
	Paragraph (s)	Page (s)
Audit Findings	2.7	21
Modernisation/up-gradation of Printing Press	2.8	21-23
Purchase of Paper	2.9	23-24
Printing & Supply of textbooks	2.10-2.12	24-26
Marketing & Sales Performance	2.13	26-29
Financial Management	2.14	29-31
Manpower	2.15	31-32
Internal Control & Internal Audit	2.16-2.17	32
Conclusion		33
Recommendations		33
<b>CHAPTER – III</b>		
<b>Performance Audit relating to Statutory corporation</b>		
<b>Performance Audit on Power Transmission Activity of Bihar State Electricity Board</b>	<b>3</b>	<b>-</b>
Executive Summary		
Introduction	3.1-3.2	37
Power Sector Reforms in Bihar	3.3	37-38
Scope and Methodology of Audit	3.4	38
Audit Objectives	3.5	38-39
Audit Criteria	3.6	39
Brief description of transmission process	3.7	39-40
Audit Findings	3.8	40
Planning and Development	3.9-3.10	40-43
Project management of transmission system	3.11-3.15	43-46
Performance of transmission system	3.16-3.24	47-52
Grid Management	3.25-3.31	52-56
Energy Accounting and Audit	3.32	56-57
Financial Management	3.33-3.37	57-59
Material Management	3.38-3.41	59-61
Monitoring and Control	3.42-3.44	61-63

Particulars		Reference to	
		Paragraph (s)	Page (s)
Conclusion			63-64
Recommendations			64
<b>CHAPTER – IV</b>			
<b>Transaction Audit Observations</b>			
<b>Government Companies</b>			
<b>Bihar State Hydroelectric Power Corporation Limited</b>			
Unfruitful expenditure		4.1	65-66
Irregular Payment to employees		4.2	66-67
<b>Bihar State Road Development Corporation Limited and Bihar Rajya Pul Nirman Nigam Limited</b>			
Avoidable payment of interest		4.3	67-69
<b>Statutory Corporation</b>			
<b>Bihar State Electricity Board</b>			
Loss to the Board on account of non-claiming of TDS		4.4	69-71
Theft of Electricity in the Government residential buildings		4.5	71-73
Short collection of revenue		4.6	73-74
Loss of revenue due to delay in enhancement of load		4.7	74-75
Loss of revenue due to incorrect categorisation of consumers		4.8	75-76
Revenue loss due to non-conversion of the consumer's category		4.9	76-77
Avoidable expenditure in procurement of Distribution Transformers		4.10	77-78
Loss to the Board		4.11	79-80
<b>General</b>			
Response to inspection reports, draft paragraphs and Performance Audits		4.12	80-81
<b>ANNEXURES</b>			
1	Statement showing particulars of up-to-date Paid-up capital, Loans outstanding and Manpower as on 31 March 2012 in respect of Government companies and Statutory corporations	1.7	83-88

Particulars		Reference to	
		Paragraph (s)	Page (s)
2	Summarised financial results of Government companies and Statutory corporations for the latest year for which accounts were finalised	1.14 and 1.34	89-95
3	Statement showing equity/loans received out of budget, grants and subsidy received/receivable, guarantees received, waiver of dues, loans written off and loans converted into equity during the year and guarantee commitment at the end of March 2012	1.10	96-97
4	Statement showing investments made by the State Government in PSUs whose accounts are in arrears	1.23	98-100
5	Statement of financial position of Statutory corporations	1.14	101-102
6	Statement of working results of Statutory corporations	1.14	103-104
7	Statement showing voltage-wise capacity additions planned, actual additions and shortfall during five years up to 2011-12	3.10	105-106
8	Statement showing Loss of revenue due to delay in enhancement of Load	4.7	107
9	Statement of department wise outstanding Inspection Reports (IRs)	4.12	108
10	Statement of department wise draft paragraphs/Performance Audits, reply to which are awaited	4.12	109
Glossary of Abbreviations			110-111

## Preface

This Report deals with the results of audit of Government companies and Statutory corporations, including Bihar State Electricity Board and has been prepared for submission to the Government of Bihar under Section 19A of the Comptroller & Auditor General's (CAG) (Duties, Powers and Conditions of Service) Act, 1971, as amended from time to time.

2. Audit of accounts of Government companies is conducted by the CAG under the provisions of Section 619 of the Companies Act, 1956.

3. In respect of Bihar State Road Transport Corporation and Bihar State Electricity Board which are Statutory corporations, the Comptroller and Auditor General of India is the sole auditor. As per the State Financial Corporations (Amendment) Act 2000, CAG has the right to conduct the audit of accounts of Bihar State Financial Corporation in addition to the audit conducted by the Chartered Accountants appointed by the Corporation out of the panel of auditors approved by the Reserve Bank of India. In respect of Bihar State Warehousing Corporation, the CAG has the right to conduct the audit of their accounts in addition to the audit conducted by the Chartered Accountants appointed by the State Government in consultation with the CAG. In respect of Bihar Electricity Regulatory Commission, the CAG is the sole auditor. The Audit Reports on annual accounts of all these corporations are forwarded separately to the State Government.

4. The cases mentioned in this Report are those which came to notice in the course of audit during the year 2011-12 as well as those which came to notice in earlier years but were not dealt with in the previous Reports. Matters relating to the period subsequent to 2011-12 have also been included, wherever necessary.

5. Audit in relation to the materials included in this Report has been conducted in conformity with the Auditing Standards issued by the CAG.

## 1. Overview of State Public Sector Undertakings

*Audit of Government companies is governed by Section 619 of the Companies Act, 1956. The Accounts of Government companies are audited by Statutory Auditors appointed by CAG of India. These Accounts are also subject to supplementary audit conducted by CAG of India. Audit of Statutory corporations is governed by their respective legislations. As on 31 March 2012, the State of Bihar had 26 working PSUs (22 Companies and four Statutory corporations) and 40 non-working PSUs (all companies), which employed 0.18 lakh employees. The State working PSUs had registered a Turnover of ₹7,811.28 crore for 2011-12 as per their latest finalised Accounts. This Turnover was equal to 2.98 per cent of State GDP. The PSUs had aggregate losses of ₹ 2,619.35 crore as per their latest finalised Accounts as of 30 September 2012.*

### **Investments in PSUs**

*As on 31 March 2012, the investment (Capital and long term loans) in 66 PSUs was ₹12,374.75 crore. Power Sector had accounted for 79.52 per cent of total investment in 2011-12. The Government contributed ₹ 3,587.11 crore towards Equity, Loans and Grants / Subsidies during 2011-12.*

### **Performance of PSUs**

*As per the latest finalised Accounts, out of 26 working PSUs, 14 PSUs had earned Profit of ₹149.70 crore and 10 PSUs had incurred Loss of ₹ 2,744.16 crore. The major contributors to Profit were Bihar State Road Development Corporation*

*Limited (₹75.45 crore) and Bihar Rajya Pul Nirman Nigam Limited (₹ 37.89 crore). Heavy Losses were incurred by Bihar State Electricity Board (₹2,662.38 crore).*

*Audit noticed various deficiencies in the functioning of PSUs. A review of latest Audit Reports of CAG shows that the State working PSUs incurred losses to the tune of ₹2,424.87 crore and infructuous investment of ₹ 53.87 crore were attributable to deficiencies in financial management, planning and implementation of their activities.*

### **Quality of Accounts**

*The quality of Accounts of PSUs needs improvement. During the year 2011-12, all 21 Accounts of the companies received were given qualified certificates. The compliance of companies with the Accounting Standards was poor as there were 25 instances of non-compliance in nine Accounts during the year.*

### **Arrears in Accounts and winding up**

*Out of 26 Working PSUs, 25 PSUs had arrears of 191 Accounts as of 30 September 2012. The extent of arrears was one to 22 years. There were 40 non-working PSUs including seven under liquidation.*

*(Chapter-I)*

## 2. Performance Audit relating to Government Company

A Performance Audit on ‘Bihar State Text Book Publishing Corporation Limited’ was conducted. Executive summary of the audit findings is given below:

### *Introduction*

*The Bihar State Text Book Publishing Corporation Limited (Company) was incorporated in April 1965 as a wholly owned State Government Company under the Companies Act, 1956. The main objectives of the Company are to publish, print, sell and supply textbooks in all languages for primary and secondary education in the State of Bihar.*

### *Modernisation of Printing Press*

*The Company had a Printing Press with installed capacity to print 100.50 lakh books in a year. The capacity of the Press decreased over the years due to (a) old age of machines (b) lack of proper maintenance (c) non-replacement of worn-out parts (d) heavy breakdown, and (e) interrupted running due to sub-standard production. The Printing Press had become almost non-operational and needed complete revival through modernisation or up-gradation process. However, the Management due to its dilly-dallying attitude had failed to take any concrete measures to modernise/up-grade/replace the obsolete Printing Press despite availability of surplus fund. This deprived the benefits of new technology to the Company and it had to get the books printed from Private Printers.*

### *Purchase of Paper*

*The required text papers were being purchased by the Company and supplied to the Private Printers. The papers were procured during 2010-12 from Hindustan Paper Corporation Limited (HPCL), a Government of India Enterprise without inviting any tender. The Company had neither entered into any rate contract nor executed agreement with HPCL for purchase and supply of papers. In the absence of agreement, the Company failed to get 842 reels found damaged, repaired or replaced by HPCL.*

### *Delay in Printing & Supply of Books*

*The Company could not complete the printing and supply of the books under Sarva Shiksha Abhiyan, a Centrally Sponsored Scheme pursued by Bihar Shiksha Pariyojana Parishad as per supply orders which deprived the students of the facility of getting the books in time. The Company had taken excessive time from three months to 12 months during the period 2007-08 to 2011-12 for finalisation of placement of orders to the Private Printers for printing of books under the scheme. Printers were required to supply the textbooks within the time schedule mentioned in the work order. However, there were delays ranging between 36 and 170 days during the period 2009-10 to 2011-12 on part of the Printers in printing and supply of the textbooks to the Set-makers. The Bihar Shiksha Pariyojana Parishad deducted an amount of ₹ 3.13 crore on account of delay in supply of textbooks during 2009-10 and 2010-11 and ₹ 15.72 crore due to supply of poor quality of textbooks during 2007-08 to 2010-11. The Company, however, failed to invoke provisions of the agreement with the Printers for imposition of penalty.*

### *Marketing & Sales Performance*

*The Company had not formulated any concrete marketing policy for optimising the sale of books under General Sales. The accumulation of obsolete books under Sarva Shiksha Abhiyan and General Sales amounted to ₹ 9.07 crore.*

### *Financial Management*

*The Financial Management of the Company was deficient. The system of preparation of Cash/Funds Flow statements was not in vogue in the Company. Accounts of the Company were in arrears since 1998-99. Bank Reconciliation Statement was not prepared. The periodicity/age-wise and party-wise details of creditors and loans & advances were not available. The*



*Company had made payments of Service Tax of ₹ 2.39 crore to a Set-maker against the provisions.*

***Conclusion & Recommendations***

*Though the basic activity of the Company was to print and publish textbooks, its own Printing Press was non-functional since long and despite availability of funds no effective measures were taken to modernise/up-grade the Press. As a result, the Company had to resort to the services of Private Printers. The Company failed to realise the cost of damaged papers from HPCL in the absence of any formal agreement. There were delays in supply of textbooks to BSPP leading to payment of penalty by the Company. Due to deficient marketing policy and planning there were huge accumulations of obsolete books. The Internal Control System as prevalent in the Company was deficient.*

*We have made six recommendations which included, effective pursuance by the Company to modernise/up-grade its Printing Press to avoid dependency on Private Printers for printing and supply of textbooks; improving planning of assessing quantities of books to be published and supplied and adherence to time schedule for printing and distribution before start of academic period; formulating an effective marketing policy for optimising the sale of books; making efforts to realise the penalty from the defaulting printers/Set-makers on account of poor quality/late supply of textbooks; to recover the Service Tax as per the provisions of the contract and to strengthen the financial and Internal Control System.*

*(Chapter-II)*

### 3. Performance Audit relating to Statutory Corporation

‘Performance Audit on Power Transmission Activity of Bihar State Electricity Board’ was conducted. Executive summary of the audit findings is given below:

#### **Introduction**

Transmission of electricity and Grid operations in Bihar are managed and controlled by Bihar State Electricity Board (Board). As on 31 March 2007, the Board had a transmission network of 5559.05 Circuit Kilometer (Ckm) and 67 Extra High Tension (EHT) Sub-stations (SSs) which rose to 6400 Ckm and 86 SSs with installed capacity of 7078 Mega volt ampere (Mva), by 31 March 2012. The quantity of energy transmitted increased from 7371.44 Million Units (MUs) in 2007-08 to 10799.30 MUs in 2011-12. The performance audit of the Board was conducted to assess the economy, efficiency and effectiveness of its transmission activities.

#### **Planning and Development**

The Board did not prepare any State Electricity Plan (SEP) during the period covered under Performance Audit. Further, year-wise Short Term plan for addition/augmentation in the transmission system of Bihar was also not prepared by the Board. However, Detailed Project Reports for strengthening of transmission system in Bihar was prepared by the Power Grid Corporation of India Limited (PGCIL) on behalf of the Board. Further, the Board also took decision for construction of five SSs and five transmission lines during the above period.

#### **Capacity Additions**

The capacity creation of SSs and lines did not meet the targets, as only 19 SSs and 841.16 Ckm of EHT lines were constructed during the five year period against the target of 30 SSs and 2202.30 Ckm of EHT lines. The shortfall was due to delay in completion of the projects.

#### **Project Management**

The Board could not complete its projects as per schedule. We noticed instances of

time overrun ranging from four to 78 months and cost overrun of ₹ 2.71 crore during the period 2007-2012. Shortfall in achievement of targeted additions were attributable to delay in finalisation of tenders, delay in getting approvals from railways, delays in approval of drawings and designs, delay in land acquisition, etc.

#### **Operation and Maintenance**

The overall transmission capacity was in excess of the requirement for every year. The Board failed to ensure the maximum and minimum voltages as per the norms. Out of 38 feeders in Patna Zone, eight feeders were loaded above 366 amps. Out of eight 220 KV SSs (three single bus bar SSs and five double bus bar SSs), Bus Bar Protection Panel (BBPP) was provided at four SSs only.

#### **Maintenance**

##### **Performance of Power Transformers**

Out of 16 transformers failed during the period covered in the Performance Audit, two caught fire and burnt due to failure of the installed protection system, four transformers failed due to failure of buchholz and differential relay, two failed due to failure of winding, and the remaining eight failed due to internal defects which could have been avoided by conducting periodical test and proper maintenance.

#### **Transmission losses**

The transmission losses ranged between 5.13 per cent and 9.75 per cent and exceeded the norms of four per cent of CEA and BERC in all the five years up to 2011-12. The quantum of transmission loss suffered by the Board in excess of the norms for the period 2007-08 to 2011-12 was 1830.29 MUs valued at ₹ 710.40 crore. The reasons for excess transmission loss included non-accounting of energy consumed by sub-station transformers and excessive

transformation losses by the old power transformers.

#### **Grid Management**

Out of 86 SSSs and one generator, only eight (9.3 per cent) Remote Terminal Units were found utilised as on June 2012. Further, the Board received 135 (A type), 71 (B type) and 79 (C type) messages from Eastern Region Load Dispatch Centre for violation of Grid norm during 2007-12.

#### **Financial Management**

We noticed that the Board failed to increase the contract demand of consumer as per provisions of the tariff order which resulted in short billing and loss of revenue of ₹11.67 crore

Further, the Board delayed the process of entering into agreement with the consumer which deprived the Board to earn revenue of ₹8.08 crore.

#### **Material Management**

The Board had huge quantity of the closing stock which indicated that the procurement policy of the Board was defective. During the period from 2007-08 to 2011-12, the closing stock in terms of months consumption ranged between 19 to 59 months.

#### **Non-conducting of Physical verification of stocks in stores**

The Physical Verification (PV) of the stores was not being conducted annually and was conducted only in 2007-08 and 2011-12. Further, the Board had not taken action to conduct survey reports and dispose of the scrap/obsolete material, which could have earned revenue.

#### **Monitoring and control**

Management Information System (MIS) implemented for monitoring the operations of SSSs was incomplete. The

Board failed to finalise the tender in time for dismantling the cable and sustained the loss of ₹ 1.50 crore on account of theft/damage of cable and security of cable.

#### **Conclusion and Recommendations**

The Board did not prepare year-wise plan for addition/augmentation in the Transmission System of Bihar. Operation of the transmission system was not efficient and effective, as a result, the transmission losses of the Board was in excess of the norms, the voltage level of SSSs were not maintained within the limits, feeders were found loaded beyond their Thermal Loading Limit. Disaster management facilities of the Board were not adequate. Energy accounting system of Board was not effective as existence of high percentage of losses and negative losses were found. Energy audit was not done by the Board. Huge quantity of closing stock indicated that the procurement policy of the Board was defective. Physical Verification of the stocks were not done annually and no action were taken to conduct survey and dispose of the scrap/obsolete material by the Board. The monitoring system of the Board was not effective as a result of which, transmission lines tripped several times.

The audit made seven recommendations which included preparation of short-term as well as perspective plan, compliance of the recommendation of the Task Force to avoid delays in construction, operation of the transmission system carried as per norms, implementing effective measures to reduce transmission losses, ensuring availability of adequate disaster management facility, reforming the purchase wing and monitoring activities.

(Chapter-III)

#### **4. Transaction audit observations**

Transaction audit observations included in the Report highlight deficiencies in the management of Public Sector Undertakings involving serious financial implications. The irregularities pointed out are broadly of the following nature:

*Loss/non-recovery of ₹ 29.04 crore in seven cases due to non-compliance with rules, directives, procedures, terms and conditions of contracts.*

*(Paragraphs 4.1, 4.2, 4.5, 4.6, 4.8, 4.9, and 4.11)*

*Loss of ₹ 0.47 crore in one case due to non-safeguarding of the financial interests of the organisation.*

*(Paragraph 4.10)*

*Loss of ₹ 16.47 crore in three cases due to inadequate/ deficient monitoring system.*

*(Paragraph 4.3, 4.4 and 4.7)*

**Gist of some of the important audit observations are given below:**

The **Bihar State Hydroelectric Power Corporation Limited** incurred unfruitful expenditure of ₹ 29.62 lakh and loss of revenue of ₹ 4.72 crore due to non-compliance with the directives of BERC.

*(Paragraph 4.1)*

Absence of system for ensuring proper assessment of tax liability in **Bihar State Road Development Corporation Limited and Bihar Rajya Pul Nirman Nigam Limited** led to short payment of advance income tax resulting in avoidable payment of interest of ₹ 1.39 crore.

*(Paragraph 4.3)*

**Bihar State Electricity Board's** failure in obtaining TDS certificates from the payee Banks and non-claiming of refund of TDS resulted in a loss of ₹ 12.87 crore to the Board.

*(Paragraph 4.4)*

**Bihar State Electricity Board's** failure to install working meters at the consumers' premises as well as to inspect consumer's premises to detect unauthorised use of electricity led to loss of revenue of ₹ 17.40 crore.

*(Paragraph 4.5)*

Inordinate delay on the part of **Bihar State Electricity Board** in enhancement of the load resulted in a revenue loss of ₹ 2.21 crore.

*(Paragraph 4.7)*

*(Chapter IV)*

# **CHAPTER I**

## **1. OVERVIEW OF STATE PUBLIC SECTOR UNDERTAKINGS**

## Chapter I

### 1. Overview 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 a commercial nature while keeping in view the welfare of the people. In Bihar, the State working PSUs registered a Turnover of ₹ 7,811.28 crore for 2011-12 as per their latest finalised accounts as of September 2012. This Turnover was equal to 2.98 *per cent* of the State Gross Domestic Product (GDP) for 2011-12. The major activities of State PSUs are concentrated in Power and Finance Sectors. The State PSUs incurred a Loss of ₹ 2,619.35 crore in the aggregate for 2011-12 as per their latest finalised Accounts. They had 0.18 lakh<sup>1</sup> employees as of 31 March 2012.

**1.2** As on 31 March 2012, there were 66 PSUs as per the details given below and none of them was listed on the stock exchange(s).

Type of PSUs	Working PSUs	Non-working PSUs <sup>2</sup>	Total
Government companies <sup>3</sup>	22	40	62
Statutory corporations	4	-	4
<b>Total</b>	<b>26</b>	<b>40</b>	<b>66</b>

**1.3** The above 22 working Government companies include a Company, namely, Bihar Medical Services and Infrastructure Corporation Limited incorporated on 26 July 2010 under the Companies Act, 1956.

#### Audit Mandate

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

**1.5** The Accounts of the State Government companies (as defined in Section 617 of the Companies Act, 1956) are audited by Statutory Auditors,

<sup>1</sup> As per the details provided by 23 PSUs.

<sup>2</sup> Non-working PSUs are those which have ceased to carry on their operations.

<sup>3</sup> Includes 619-B Companies.

who are appointed by Comptroller & Auditor General of India (CAG) as per the provisions of Section 619(2) of the Companies Act, 1956. These Accounts are also subject to supplementary audit conducted by CAG as per the provisions of Section 619 of the Companies Act, 1956.

**1.6** Audit of Statutory corporations is governed by their respective legislations. Out of four Statutory corporations, CAG is the sole auditor for the Bihar State Electricity Board (BSEB) and Bihar State Road Transport Corporation (BSRTC). In respect of Bihar State Warehousing Corporation (BSWC) and Bihar State Financial Corporation (BSFC), the audit is conducted by Chartered Accountants and CAG.

### Investment in State PSUs

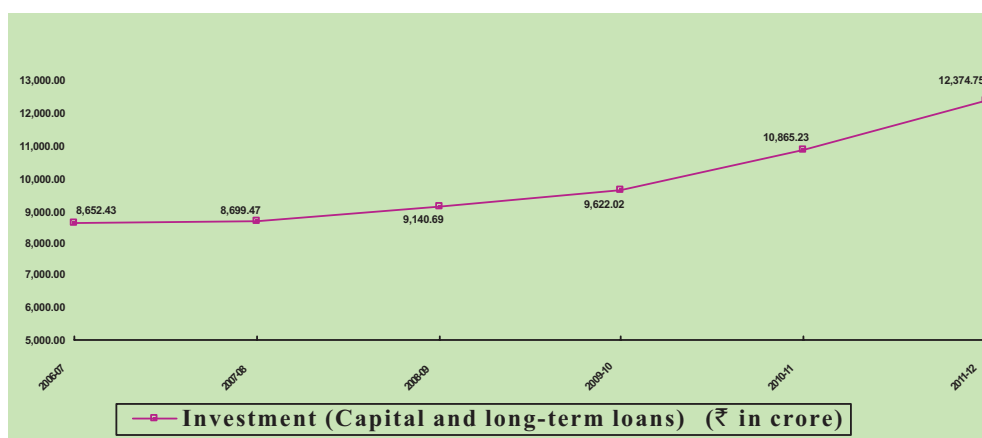
**1.7** As on 31 March 2012, the investment (Capital and Long-Term Loans) in State PSUs (including deemed Government companies) was ₹ 12,374.75 crore as per details given below:

(₹ in crore)

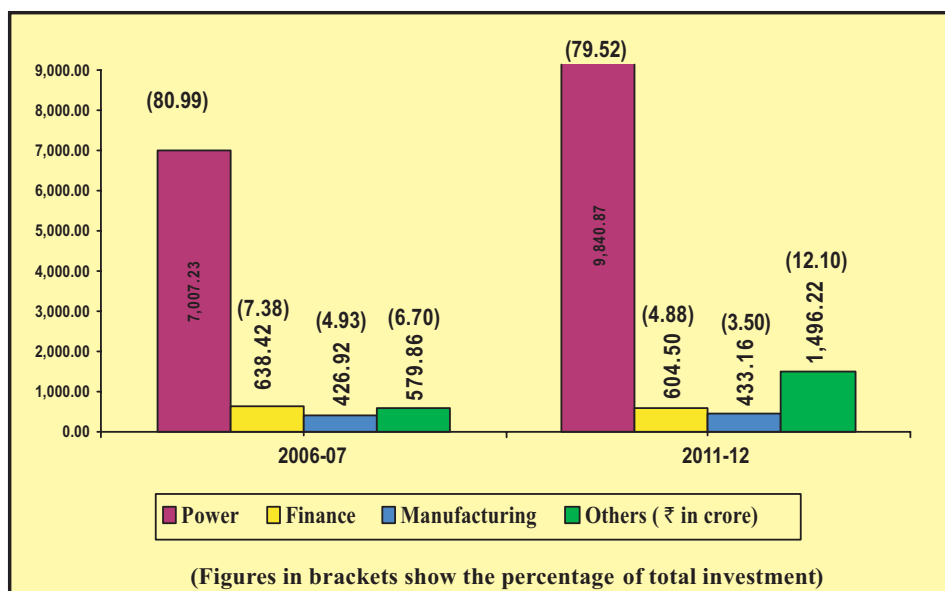
Type of PSUs	Government companies			Statutory corporations			Grand Total
	Capital	Long Term Loans	Total	Capital	Long Term Loans	Total	
Working PSUs	264.14	991.28	1,255.42	185.53	10,201.85	10,387.38	11,642.80
Non-working PSUs	183.97	547.98	731.95	-	-	-	731.95
<b>Total</b>	<b>448.11</b>	<b>1,539.26</b>	<b>1,987.37</b>	<b>185.53</b>	<b>10,201.85</b>	<b>10,387.38</b>	<b>12,374.75</b>

A summarised position of Government investment in State PSUs is detailed in *Annexure- 1*.

**1.8** As on 31 March 2012, of the total investment in State PSUs, 94.09 per cent was in working PSUs and the remaining 5.91 per cent in non-working PSUs. This total investment consisted of 5.12 per cent towards equity capital and 94.88 per cent in long-term loans. This investment has grown by 43.02 per cent from ₹ 8,652.43 crore in 2006-07 to ₹ 12,374.75 crore in 2011-12 as shown in the graph below:



**1.9** The investment in various important sectors and percentage thereof at the end of 31 March 2007 and 31 March 2012 are indicated below in the bar chart. The thrust of PSU investment was mainly on the Power sector during the past six years which increased by 40.44 per cent from ₹7,007.23 crore in 2006-07 to ₹9,840.87 crore in 2011-12 due to Loan and Grant extended to BSEB by State Government/Central Government/Others. However, the investment in other sectors had increased by 158.03 per cent in 2011-12 as compared to 2006-07. There was marginal increase in investment in manufacturing sector also.



### Budgetary outgo, Grants/subsidies, Guarantees and loans

**1.10** The details regarding Budgetary outgo towards equity, Loans, Grant/Subsidies, Guarantees issued, Loans written off, Loans converted into equity and interest waived in respect of State PSUs are given in *Annexure- 3*. The summarised details are given below for three years ended 2011-12.

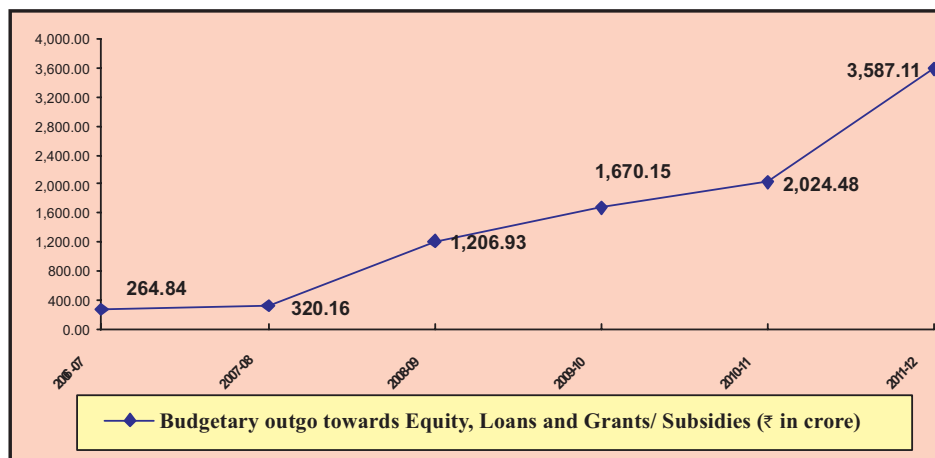
(₹ in crore)

Sl. No.	Particulars	2009-10		2010-11		2011-12	
		No. of PSUs	Amount	No. of PSUs	Amount	No. of PSUs	Amount
1.	Equity Capital outgo from budget	3	26.00	3	41.29	2	2.00
2.	Loans outgo from budget	3	770.36	3	879.69	4	1,464.87
3.	Grants/Subsidy outgo	3	873.79	3	1,103.50	1	2,120.24
4.	Total outgo <sup>4</sup>	8	1,670.15	7	2,024.48	6	3,587.11
5.	Interest/Penal interest written off	1	0.12	-	-	-	-
6.	Guarantees issued	-	-	1	194.58	-	-
7.	Guarantee Commitment	1	44.15	1	31.85	1	3.47

<sup>4</sup> Total outgo represents the total budgetary support to actual number of companies in form of equity, loans and grant/subsidy during the year.



**1.11** The details regarding budgetary outgo towards Equity, Loans and Grants/ Subsidies for past six years are given in a graph below.



The budgetary support in the form of Equity, Loans and Grants/ Subsidies by the State Government during the years 2006-07 to 2011-12 had been showing a varying trend. The budgetary support increased from ₹ 320.16 crore in 2007-08 to ₹ 3,587.11 crore in 2011-12. During the year 2011-12, Bihar State Electricity Board received a total Subsidy of ₹ 2,120.24 crore (59.11 per cent of the total budgetary support) from State Government. At the end of the year, Guarantees on Loans aggregating ₹ 249.58 crore were outstanding against four<sup>5</sup> PSUs. Guarantee commission of ₹ 8.87 lakh was payable to the State Government by Bihar State Financial Corporation since 1982-83.

### Reconciliation with Finance Accounts

**1.12** The figures in respect of Equity, Loans and Guarantees outstanding as per records of State PSUs should agree with that of the figures appearing in the Finance Accounts of the State. In case the figures do not agree, the concerned PSUs and the Finance Department should carry out reconciliation of differences. The position in this regard as on 31 March 2012 is stated below.

(₹ in crore)

Outstanding in respect of	Amount as per Finance Accounts <sup>6</sup>	Amount as per records of PSUs	Difference
Equity	420.83	527.20	106.37
Loans	15,502.99	10,958.28	4,544.71
Guarantees	890.07	249.58	640.49

**1.13** The Principal Accountant General had taken up (October 2011) the issue with the Chief Secretary and the Finance Secretary with the latest reminder in December 2012 to the Principal Secretary, Finance Department,

<sup>5</sup> Bihar State Backward Classes Finance & Development Corporation, Bihar State Minorities Finance Corporation Limited, Bihar State Electricity Board and Bihar State Financial Corporation.

<sup>6</sup> The information is in respect of 39 PSUs as appearing in Finance Accounts.

Government of Bihar, to reconcile the differences after examination. However, this has not yet been done. The Government and the PSUs should take concrete steps to reconcile the differences in a time bound manner.

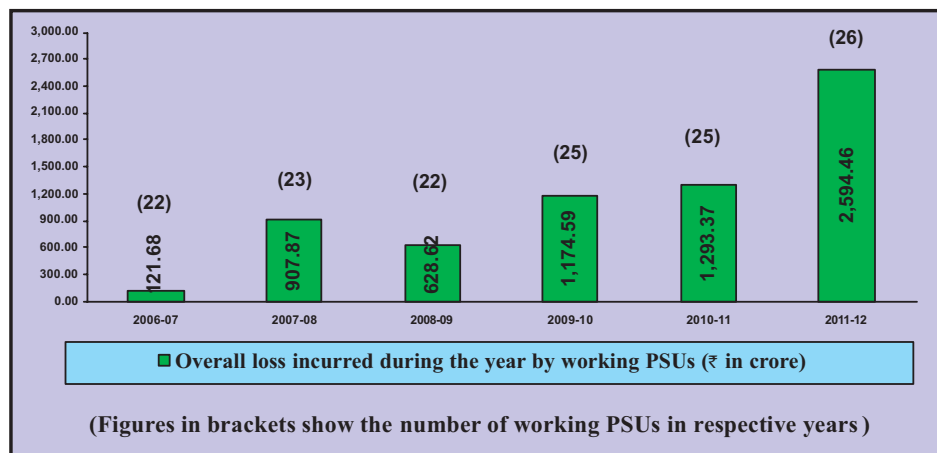
### Performance of PSUs

**1.14** The financial results of all the PSUs are given in *Annexure-2*. The financial position and working results of Statutory corporations are detailed in *Annexure 5 and 6* respectively. Ratio of PSUs Turnover to State GDP shows the minor role of PSUs contribution in the State Economy. Table below provides the details of working PSUs' Turnover and State GDP for the period 2006-07 to 2011-12.

(₹ in crore)						
Particulars	2006-07	2007-08	2008-09	2009-10	2010-11	2011-12
Turnover <sup>7</sup>	1,337.29	1,587.96	1,996.59	2,508.83	4,031.46	7,811.28
State GDP <sup>8</sup>	1,03,517	1,18,923	1,51,650	1,77,537	2,17,814	2,62,230
Percentage of Turnover to State GDP	1.29	1.34	1.32	1.41	1.85	2.98

The percentage of Turnover of PSUs to the State GDP remained stagnant between 1.29 per cent and 1.41 per cent during 2006-07 to 2009-10 and increased from 1.41 per cent in 2009-10 to 2.98 per cent during 2011-12. This was mainly due to increase in Turnover of seven<sup>9</sup> PSUs during 2011-12.

**1.15** Losses incurred by working PSUs during 2006-07 to 2011-12 are given below in a bar chart.



<sup>7</sup> Turnover as per the latest finalised accounts as of 30 September 2012.

<sup>8</sup> Figures of State GDP at current price, 2009-10 (provisional), 2010-11 (quick estimates) and 2011-12 (advance estimates).

<sup>9</sup> Seven PSUs viz. Bihar Rajya Pul Nirman Nigam Limited, Bihar State Road Development Corporation Limited, Bihar State Electronics Development Corporation Limited, Bihar State Beverages Corporation Limited, Bihar State Food & Civil Supplies Corporation Limited, Bihar State Electricity Board & Bihar State Warehousing Corporation as per latest finalised accounts on 30 September, 2012.

As per latest finalised Accounts, out of 26 working PSUs, 14 PSUs earned Profit of ₹ 149.70 crore and 10 PSUs incurred Loss of ₹ 2,744.16 crore. Out of the remaining two PSUs, one PSU submitted its first Accounts which consisted of only pre-operating expenses and another PSU<sup>10</sup> had not finalised its first Accounts so far (November, 2012). The major contributors of Profit were Bihar State Road Development Corporation Limited (₹75.45 crore) and Bihar Rajya Pul Nirman Nigam Limited (₹37.89 crore). The above included heavy losses incurred by Bihar State Electricity Board (₹ 2662.38 crore) as per their latest finalised accounts for the year 2011-12.

**1.15.1** The Losses of PSUs were mainly attributable to deficiencies in financial management, planning, implementation of their activities, their operations and monitoring. A review of latest Audit Reports of CAG shows that the State working PSUs incurred losses to the tune of ₹ 2,594.46 crore and infructuous investment of ₹ 21.48 crore. Year-wise details from Audit Reports are stated below.

(₹ in crore)

Particulars	2009-10	2010-11	2011-12	Total
Net Loss	1,174.59	1,293.43	2,594.46	5,062.48
Controllable losses as per CAG's Audit Report	33.21	1,539.24	852.42	2,424.87
Infructuous Investment	3.45	28.94	21.48	53.87

**1.16** The above Losses pointed out by Audit Reports of CAG are based on test check of records of PSUs. The actual controllable Losses could be much more. The above table indicates the need for effective management and control and ensuring accountability in the functioning of PSUs.

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

(₹ in crore)

Particulars	2006-07	2007-08	2008-09	2009-10	2010-11	2011-12
Return on Capital Employed (Per cent)	17.68	Nil	7.44	Nil	Nil	Nil <sup>11</sup>
Debt	8,012.25	8,152.92	8,614.53	9,037.60	10,240.33	11,741.11
Turnover <sup>12</sup>	1,337.29	1,587.96	1,996.59	2,508.83	4,031.46	7,811.28
Debt/Turnover Ratio <sup>13</sup>	5.99:1	5.13:1	4.33:1	3.60:1	2.54:1	1.50:1
Interest Payments	613.25	924.16	918.70	991.72	1,243.70	1,573.88
Accumulated Losses	1,686.94	2,956.74	3,593.15	4,617.88	7,212.86	9,819.49

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

<sup>10</sup> Bihar State Building Construction Corporation Limited.

<sup>11</sup> Nil indicates the negative return on Capital Employed.

<sup>12</sup> Turnover of working PSUs as per the latest finalised accounts as of 30 September 2012.

<sup>13</sup> Debt / Turnover Ratio represents Debt divided by Turnover.

**1.18** As per the latest finalised Accounts as of 30 September 2012, the Return on Capital Employed of all PSUs has decreased from 17.68 *per cent* in 2006-07 to negative return of 15.79 *per cent* in 2011-12. However, there was an improvement in Debt/Turnover Ratio from 5.99:1 in 2006-07 to 1.50:1 in 2011-12 due to increase in Turnover.

**1.19** The State Government had not formulated any Dividend Policy for PSUs to pay a minimum Dividend so as to ensure return on its investments. As per their latest finalised Accounts, 14 PSUs earned an aggregate Profit of ₹ 149.70 crore. However, only three Companies out of 14 viz. Bihar State Road Development Corporation Limited, Bihar Rajya Pul Nirman Nigam Limited and Bihar State Beverages Corporation Limited proposed a total Dividend of ₹ 3.52 crore.

### Arrears in finalisation of Accounts

**1.20** The Accounts of the Companies for every financial year are required to be finalised within six months from the end of the relevant financial year under Sections 166, 210, 230, 619 and 619-B of the Companies Act, 1956. Similarly, in case of Statutory corporations, their Accounts are finalised, audited and presented to the Legislature as per the provisions of their respective Acts. The table below provides the details of progress made by working PSUs in finalisation of accounts by September 2012.

Sl. No.	Particulars	2007-08	2008-09	2009-10	2010-11	2011-12
1.	Number of Working PSUs	22	23	25	25	26
2.	Number of Accounts finalised during the year	13	15	17	34	23 <sup>14</sup>
3.	Number of Accounts in arrears	197	205	213	186	191 <sup>15</sup>
4.	Average arrears <i>per</i> PSU (3/1)	8.95	8.91	8.52	7.44	7.35
5.	Number of Working PSUs with arrears in Accounts	22	23	25	23	25
6.	Extent of arrears (years)	1 to 19	1 to 20	1 to 21	1 to 21	1 to 22

**1.21** Out of 26 working PSUs, 25 PSUs had arrears of 191 Accounts as of 30 September 2012. The Accounts of 25 PSUs were in arrears for periods ranging from one to 22 years. The Average of arrears per PSU had shown marginal decrease from 8.95 *per* PSU in 2007-08 to 7.35 *per* PSU in 2011-12. The reasons for arrears in Accounts were delays in preparation/certification of Accounts, delays in holding of Annual General Meeting and shortage of manpower.

<sup>14</sup> Figure includes two Accounts finalised for the year 2010-11 of Bihar Educational Infrastructure Development Corporation Limited and Bihar Medical Services & Infrastructure Corporation Limited which were not considered as arrear of Accounts as on 30 September 2011.

<sup>15</sup> Arrears in respect of Bihar Air Products Limited has been excluded due to change in the status of the Company as non -Government company.

**1.22** In addition to above, there were also arrears in finalisation of Accounts by non-working PSUs. Out of 40 non-working PSUs, seven were in the process of liquidation as of 31 March 2012. Of the remaining 33 non-working PSUs, the extent of arrears of accounts was from 16 to 35 years.

**1.23** The State Government had invested ₹ 2,353.47 crore (Equity: ₹ 97.72 crore, Loans: ₹ 1,900.57 crore, Grants: ₹ 91.76 crore and others: ₹ 263.42 crore) in 27 PSUs during the years for which Accounts had not been finalised as detailed in *Annexure- 4*. In the absence of finalised Accounts and their subsequent audit, it could not be ensured whether the Investments and Expenditure incurred had been properly accounted for and the purpose for which the amount was invested had been achieved. Thus, Government's Investment in such PSUs remained outside the scrutiny of the State Legislature. Further, 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 Companies Act, 1956.

**1.24** The administrative departments have the responsibility to oversee the activities of these entities and to ensure that the Accounts are finalised and adopted by these PSUs within the prescribed period. The Principal Accountant General brought the position of arrears of Accounts to the notice of the concerned administrative departments and officials of the Government (October 2012). No significant remedial measures were taken. As a result of this, the net worth of these PSUs could not be assessed in audit.

**1.25** In view of above state of arrears, it is recommended that the Government should expedite the clearance of arrears in finalisation of Accounts and monitor the timely finalisation of Accounts in conformity with the provisions of Companies Act, 1956.

#### **Winding up of non-working PSUs**

**1.26** There were 40 non-working PSUs (all companies) as on 31 March 2012. Of these, seven PSUs were under liquidation process as on 31 March 2012. The non-working PSUs should be closed down as their continuance is not going to serve any purpose. During 2011-12, one<sup>16</sup> non-working PSU incurred an expenditure of ₹ 0.12 crore towards salary, wages, establishment expenditure, etc.

---

<sup>16</sup> Bihar State Fruits & Vegetables Development Corporation Limited.

1.27 The stages of closure in respect of non-working PSUs as on 31 March 2012 are given below:

Sl. No.	Particulars	Companies	Statutory corporations	Total
1.	Total No. of non-working PSUs	40	-	40
2.	Of (1) above, the Number under			
(a)	Liquidation by Court (liquidator appointed)	3 <sup>17</sup>	-	3
(b)	Closure, i.e. closing orders/ instructions issued but liquidation process not yet started.	4 <sup>18</sup>	-	4

1.28 During the year 2011-12, no PSU was finally wound up. The companies which have taken the route of winding up by Court order are under liquidation for a period of more than 12 years. The process of voluntary winding up under the Companies Act, 1956 is much faster and needs to be adopted / pursued vigorously. It is recommended that the Government should take a decision regarding winding up of the remaining 33 non-working PSUs where no decision about their continuation or otherwise has been taken after they became non-working.

#### Accounts Comments and Internal Audit

1.29 Twelve working companies forwarded their 21 Accounts to the Principal Accountant General during the year 2011-12<sup>19</sup>. Of these, 12 Accounts of nine companies were selected for supplementary audit. The Audit Reports of Statutory Auditors appointed by CAG and the supplementary audit of CAG indicated that the quality of maintenance of Accounts needs to be improved substantially. The details of aggregate monetary implications of comments of Statutory Auditors and CAG are given below.

(₹ in crore)

Sl. No.	Particulars	2009-10		2010-11		2011-12	
		No. of Accounts	Amount	No. of Accounts	Amount	No. of Accounts	Amount
1.	Decrease in Profit	2	1.71	4	5.59	6	64.86
2.	Increase in Loss	10	16.63	9	17.17	4	17.19
3.	Non-disclosure of material facts	1	0.15	Nil	Nil	1	3.71

1.30 During the year 2011-12, all the 21 Accounts received had been given qualified certificates. The compliance by companies with the

<sup>17</sup> Kumardhubi Metal Casting & Engineering Limited, Bihar State Leather Industries Development Corporation Limited and Bihar State Finished Leathers Corporation Limited.

<sup>18</sup> Bihar State Handloom & Handicrafts Corporation Limited, Bihar State Small Industries Corporation Limited, Bihar State Pharmaceuticals & Chemicals Development Corporation Limited and Bihar State Textiles Corporation Limited.

<sup>19</sup> From October 2011 to September 2012.

Accounting Standards needs enforcing as there were 25 instances of non-compliance in nine Accounts<sup>20</sup> during the year.

**1.31** Some of the important comments in respect of Accounts of Companies finalised during the year 2011-12 are stated below:-

**Bihar State Educational Infrastructure Development Corporation Limited (2010-11)**

Interest earned on State Government fund was treated in the Accounts as Company's own revenue in contravention of Accounting Standard-9 and resulted in under-statement of Liabilities and over-statement of Profit by ₹ 10.84 crore.

**Bihar State Road Development Corporation Limited (2010-11)**

The Company treated the interest earned on deposits made out of funds provided by the State Government for execution of specific projects as its own income which resulted in under-statement of Current Liabilities and over-statement of Income and Profit by ₹ 33.88 crore.

**Bihar Rajya Pul Nirman Nigam Limited (2009-10)**

Depreciation on staging & shuttering was either not charged or under charged which resulted in understatement of Depreciation and over-statement of Profit by ₹ 6.76 crore.

**Bihar State Hydroelectric Power Corporation Limited (1998-99)**

The advances pending for adjustment against different suppliers since long has not been provided for in the Accounts which resulted in over-statement of Loans & Advances and under-statement of Provision and Loss by ₹ 7.82 crore.

**1.32** Similarly, two working Statutory corporations forwarded two Accounts to PAG during the year 2011-12. The Accounts of Bihar State Financial Corporation and Bihar State Electricity Board were selected for audit. The Audit Reports of Statutory Auditors and the audit of CAG indicate that the quality of maintenance of Accounts needs to be improved substantially. The details of aggregate monetary implications of comments of Statutory auditors and CAG are given below:

---

<sup>20</sup> Bihar State Road Development Corporation Limited (2010-11), Bihar Rajya Pul Nirman Nigam Limited (2008-09), (2009-10) & (2010-11), Bihar State Hydro Electric Power Corporation Limited (1997-98), (1998-99) & (1999-2000), Bihar State Credit & Investment Corporation Limited (2004-05), Bihar State Educational Infrastructure Development Corporation Limited (2010-11).



(₹ in crore)

Sl. No.	Particulars	2009-10		2010-11		2011-12	
		No. of Accounts	Amount	No. of Accounts	Amount	No. of Accounts	Amount
1.	Decrease in profit	1	1.74	2	17.34	1	0.33
2.	Increase in loss	2	3,475.34	2	9,267.22	1	1,888.94
3.	Non-disclosure of material facts	1	7.08	Nil	Nil	Nil	Nil
4.	Errors of classification	1	2.47	1	7.85	Nil	Nil

**1.33** Some of the important comments in respect of Accounts of Statutory corporations finalised during the year 2011-12 are stated below.

#### **Bihar State Electricity Board (2011-12)**

- Non charging of shortages of 68263.56 MT of coal as consumption resulted in over-statement of stock and under-statement of Loss by ₹ 18.79 crore each.
- Non-accountal of Delayed Payment Surcharge since 2006-07 on accrual basis and subsequent provisions for doubtful debts for the same resulted in under-statement of debtors by ₹ 2,771.06 crore, under-statement of provisions by ₹ 1,221.80 crore and over-statement of loss by ₹ 1,549.26 crore.
- Non provision of time barred claim of ₹ 12.87 crore being the amount of Advance Tax deducted at source pertaining to the year 2008-09 and 2009-10 resulted in over-statement of Loans and Advances and under-statement of Loss by ₹ 12.87 crore.
- Non-accountal of ₹ 382.82 crore being the amount of subsidy receivable from Agriculture Department, Government of Bihar in respect of loss suffered by the Board for additional power supply to drought affected villages in the year 2009-10 and 2010-11 resulted into under-statement of Subsidy receivable from Government and over-statement of Loss by ₹ 382.82 crore each.
- Non-provisioning of Current Liabilities amounting to ₹ 307.20 crore being the amount claimed by Patna Municipal Corporation from the Board on account of Holding tax resulted in under-statement of Current Liabilities and loss for the year by ₹ 307.20 crore.

#### **Bihar State Financial Corporation (2010-11)**

Non-accountal of rent receivable waived off in March 2011 resulted in over statement of rent receivable and Profit by ₹ 0.25 crore each.

**1.34** The Statutory Auditors (Chartered Accountants) are required to furnish a detailed report on various aspects including Internal controls/ Internal audit systems in the companies that are audited by them in accordance with the directions issued by the CAG under Section 619(3)(a) of the



Companies Act, 1956 and to identify areas which needed improvement. An illustrative resume of important comments made by the Statutory Auditors on possible improvement in the Internal audit/ Internal control systems in respect of 10 Companies<sup>21</sup> for the year 2010-11 and 12 Companies<sup>22</sup> for the year 2011-12 are given below:

Sl. No.	Nature of comments made by Statutory Auditors	Number of companies where recommendations were made	Reference to serial number of the companies as per Annexure-2
1.	Non-fixation of minimum/maximum limits of store and spares	06	A-3, A-8, A-9, A-12, A-17, C-17
2.	Absence of Internal audit system commensurate with the nature and size of business of the company	11	A-3, A-6, A-8, A-9, A-11, A-12, A-16, A-17, A-18, A-20, C-17
3.	Non-maintenance of proper records showing full particulars including quantitative details, situations, identity number, date of acquisitions, depreciated value of fixed assets and their locations	10	A-3, A-4, A-6, A-8, A-9, A-11, A-16, A-17, A-20, C-17

#### Recoveries at the instance of audit

**1.35** During the course of propriety audit in 2011-12, recoveries to be made amounting to ₹ 4.82 crore were pointed out to BSEB, of which, an amount of ₹ 2.71 crore were admitted by BSEB. An amount of ₹ 2.54 crore pertaining to the period prior to 2010-11 was recovered during the year 2011-12.

#### Status of placement of Separate Audit Reports

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

Sl. No.	Name of Statutory corporation	Year up to which SARs placed in Legislature	Year for which SARs not placed in Legislature		
			Year of SAR	Date of issue to the Government	Reasons for delay in placement in Legislature
1.	Bihar State Electricity Board	2005-06	2006-07 2007-08 2008-09 2009-10 2010-11	26 May 2009 15 April 2010 29 April 2011 26 September 2011 01 March 2012	
2.	Bihar State Warehousing Corporation	2007-08	2008-09	28 February 2011	

<sup>21</sup> Serial Number A-3, A-4, A-8, A-9, A-11, A-12, A-13, A-14, A-17 and A-18 as per Annexure- 2.

<sup>22</sup> Serial Number A-3, A-4, A-6, A-8, A-9, A-11, A-12, A-16, A-17, A-18, A-20 and C-17 as per Annexure- 2.

Sl. No.	Name of Statutory corporation	Year up to which SARs placed in Legislature	Year for which SARs not placed in Legislature		
			Year of SAR	Date of issue to the Government	Reasons for delay in placement in Legislature
3.	Bihar State Financial Corporation	2009-10	2010-11	24 September 2012	No reasons for non-placement of SARs made available by the Government.
4.	Bihar State Road Transport Corporation	1973-74	1974-75 to 2002-03 (29)	9 June 1997 2 September 1998 2 September 1998 4 December 1998 18 April 2000 19 March 2004 19 October 2004 12 April 2005 07 October 2005 24 September 2007 26 October 2007 25 January 2010	

Delay in placement of SARs weakens the legislative control over Statutory corporations and dilutes the latter's financial Accountability. The Government should ensure prompt placement of SARs in the Legislature. The issue of delay in placement of SARs before the State Legislature was also brought to the notice of Hon'ble Chief Minister, Bihar by the CAG in December 2010. There was no improvement in respect of placement of SARs of Bihar State Road Transport Corporation. The Principal Accountant General brought the issue to the attention of the Principal Secretary, Finance Department, Government of Bihar (May 2011) with the latest reminder in December 2012.

### Disinvestment, Privatisation and Restructuring of PSUs

**1.37** The State Government did not undertake the exercise of disinvestment and restructuring of any of its PSUs during 2011-12. Further, subsequent to the formation of Jharkhand State, restructuring of all the PSUs was to be taken up. The decision on the division of assets and liabilities as well as of the Management of 12 PSUs was taken in September 2005. The implementation, however, has been done only in the case of five PSUs<sup>23</sup> (September 2012).

<sup>23</sup> Bihar Rajya Beej Nigam Limited, Bihar State Hydroelectric Power Corporation Limited, Bihar State Text Book Publishing Corporation Limited, Bihar State Warehousing Corporation and Bihar State Mineral Development Corporation Limited.

**Reforms in Power Sector**

**1.38** The State has Bihar Electricity Regulatory Commission (BERC) formed in April 2002 under Section 17(1) of Electricity Regulatory Commission Act, 1998 with the objective of rationalisation of electricity tariff, advising in matters relating to electricity generation, transmission and distribution in the State and issue of licenses. During 2011-12, BERC issued Tariff Order for the financial year 2012-13 and orders/regulations pertaining to the Fuel and Power Purchase Cost Adjustment (FPPCA) charges for the period from October 2009 to January 2012. It also issued orders/regulations, regarding, Truing up of the Aggregate Revenue Requirement (ARR) for the years 2006-07 to 2009-10, matters pertaining to the Standard Bid Document, Amendment to the BERC (Fees, Fines and Charges) Regulations, 2005 and Delegation of Financial Powers Regulations, 2011.

**1.39** A Memorandum of Understanding (MOU) was signed (September 2001) between the Union Ministry of Power and the State Government as a joint commitment for implementation of reforms programme in Power Sector with identified milestones. The progress achieved so far in respect of important milestones is stated below:

Sl. No.	Milestone	Targeted Completion Schedule	Achievement as at March 2012															
1.	State Electricity Regulatory Commission	December 2001	BERC has been constituted vide Government of Bihar notification No. 1284 dated 15 April, 2002. The Commission had notified last tariff order for the year 2012-13 on 30 March 2012 and was effective from 01 April 2012															
2.	Rural Electrification Programme	October 2012	The village electrification work was being executed by Central Agencies (NHPC & PGCIL) as well as BSEB. Out of 22,484 villages, 17,791 (79.13 per cent) villages have been electrified (31 March 2012). The details are as under:- <table border="1"> <thead> <tr> <th>Implementing agency</th> <th>Total coverage under 10<sup>th</sup> &amp; 11<sup>th</sup> Plan (Revised)</th> <th>Achievement (Energised &amp; Taken over)</th> </tr> </thead> <tbody> <tr> <td>PGCIL</td> <td>15,960</td> <td>14,387</td> </tr> <tr> <td>NHPC</td> <td>3,736</td> <td>3,062</td> </tr> <tr> <td>BSEB</td> <td>2,788</td> <td>342</td> </tr> <tr> <td><b>Total</b></td> <td><b>22,484</b></td> <td><b>17,791</b></td> </tr> </tbody> </table>	Implementing agency	Total coverage under 10 <sup>th</sup> & 11 <sup>th</sup> Plan (Revised)	Achievement (Energised & Taken over)	PGCIL	15,960	14,387	NHPC	3,736	3,062	BSEB	2,788	342	<b>Total</b>	<b>22,484</b>	<b>17,791</b>
Implementing agency	Total coverage under 10 <sup>th</sup> & 11 <sup>th</sup> Plan (Revised)	Achievement (Energised & Taken over)																
PGCIL	15,960	14,387																
NHPC	3,736	3,062																
BSEB	2,788	342																
<b>Total</b>	<b>22,484</b>	<b>17,791</b>																
3.	Reorganisation of the Board	December 2001	The Government of Bihar decided (March 2012) to form five new Companies i.e Bihar State Power (Holding) Company Limited, Bihar State Power Transmission Company Limited, Bihar State Power Generation Company Limited, South Bihar Power Distribution Company Limited and North Bihar Power Distribution Company Limited. These companies have commenced their business with effect from 01 November 2012.															
4.	100 per cent metering of all 11 KV distribution feeders and 100 per cent metering of all consumers	31 March, 2013	The installation of meters in 11 KV distribution feeders (84 per cent) and 71 per cent metering of all consumers completed till September 2012.															

Sl. No.	Milestone	Targeted Completion Schedule	Achievement as at March 2012																								
5.	Energy audit	Not Available	<p>(i) M/s. Power Finance Corporation, a central PSU has appointed (May 2011) M/S Pranat Engineering Limited under Restructured Accelerated Power Development Reform Programme (RAPDRP) scheme to conduct third party energy audit. Experience gathered from it would be applied for non-APDRP area.</p> <p>(ii) BSEB was installing ring fencing meters, system meters and consumer meters in all 64 towns covered under RAPDRP and 7 towns covered under ADB plan. The status on 30 September 2012 is as below:-</p> <table border="1"> <thead> <tr> <th></th> <th>Target</th> <th>Installed</th> </tr> </thead> <tbody> <tr> <td>Ring Fencing (33KV)</td> <td>6</td> <td>6</td> </tr> <tr> <td>Ring Fencing (11KV)</td> <td>164</td> <td>164</td> </tr> <tr> <td>Feeder Meter (33KV)</td> <td>131</td> <td>131</td> </tr> <tr> <td>Feeder Meter (11KV)</td> <td>272</td> <td>272</td> </tr> <tr> <td>Consumer Meter (33KV)</td> <td>20</td> <td>17</td> </tr> <tr> <td>Consumer Meter (11KV)</td> <td>238</td> <td>238</td> </tr> <tr> <td>DT Meter</td> <td>7563</td> <td>5164</td> </tr> </tbody> </table>		Target	Installed	Ring Fencing (33KV)	6	6	Ring Fencing (11KV)	164	164	Feeder Meter (33KV)	131	131	Feeder Meter (11KV)	272	272	Consumer Meter (33KV)	20	17	Consumer Meter (11KV)	238	238	DT Meter	7563	5164
	Target	Installed																									
Ring Fencing (33KV)	6	6																									
Ring Fencing (11KV)	164	164																									
Feeder Meter (33KV)	131	131																									
Feeder Meter (11KV)	272	272																									
Consumer Meter (33KV)	20	17																									
Consumer Meter (11KV)	238	238																									
DT Meter	7563	5164																									
6.	Reduction in transmission and distribution (T&D) losses up to 15.5 per cent	Not Available	T&D losses of the Board for the year 2010-11 were 43.59 per cent which increased to 44.05 per cent during the year 2011-12.																								
7.	Three per cent return on fixed assets	March 2004	The Board did not achieve three per cent return on fixed assets upto the year 2011-12.																								
8.	Distribution Information Management System	Not Available	Distribution and Information Management System was operational through Supervisory Control and Accelerated Data Acquisition (SCADA) System in Patna and in rest of Bihar through RAPDRP which was under progress. (September 2012)																								
9.	Minimum agriculture tariff of 50 paise per unit	Not Available	<p>The State Electricity Regulatory Commission (SERC) has approved tariff rates for the financial year 2012-13 for Irrigation and Agricultural Services -I (IAS-I) and Irrigation and Agricultural Services -II (IAS-II) as under:-</p> <p><b>IAS-I (Unmetered)</b>  Rural Feeder - ₹ 120/HP/Month  Urban Feeder - ₹ 145/HP/Month</p> <p><b>IAS-I (Metered)</b>  Rural Feeder - ₹ 1.00/unit  Urban Feeder - ₹ 1.50/unit</p> <p><b>Subject to Monthly minimum charge</b>  Rural Feeder - ₹ 85/HP/Month  Urban Feeder - ₹ 130/HP/Month</p> <p><b>FPPCA – Not applicable</b></p> <p><b>IAS-II – State tubewell &amp; LI (Unmetered)</b>  Rural Feeder - ₹ 900/HP/Month  Urban Feeder - ₹ 1000/HP/Month</p> <p><b>IAS-II – (Metered)</b>  Rural Feeder - ₹ 6.00/unit  Urban Feeder - ₹ 7.00/unit</p> <p>FPPCA charges as applicable will be charges extra. (September 2012)</p>																								

# **CHAPTER III**

## **3. PERFORMANCE AUDIT RELATING TO STATUTORY CORPORATION**

### **3. PERFORMANCE AUDIT ON POWER TRANSMISSION ACTIVITY OF BIHAR STATE ELECTRICITY BOARD**

## Chapter-III

### 3. Performance Audit on Power Transmission Activity of Bihar State Electricity Board

#### Executive Summary

##### *Introduction*

*Transmission of electricity and Grid operations in Bihar are managed and controlled by Bihar State Electricity Board (Board). As on 31 March 2007, the Board had a transmission network of 5559.05 Circuit Kilometer (Ckm) and 67 Extra High Tension (EHT) Sub-stations (SSs) which rose to 6400 Ckm and 86 SSs with installed capacity of 7078 Mega volt ampere (Mva), by 31 March 2012. The quantity of energy transmitted increased from 7371.44 Million Units (MUs) in 2007-08 to 10799.30 MUs in 2011-12. The performance audit of the Board was conducted to assess the economy, efficiency and effectiveness of its transmission activities.*

##### *Planning and Development*

*The Board did not prepare any State Electricity Plan (SEP) during the period covered under Performance Audit. Further, year-wise Short Term plan for addition/augmentation in the transmission system of Bihar was also not prepared by the Board. However, Detailed Project Reports for strengthening of transmission system in Bihar was prepared by the Power Grid Corporation of India Limited (PGCIL) on behalf of the Board. Further, the Board also took decision for construction of five SSs and five transmission lines during the above period.*

##### *Capacity Additions*

*The capacity creation of SSs and lines did not meet the targets, as only 19 SSs and 841.16 Ckm of EHT lines were constructed during the five year period against the target of 30 SSs and 2202.30 Ckm of EHT lines. The shortfall was due to delay in completion of the projects.*

##### *Project Management*

*The Board could not complete its projects as per schedule. We noticed instances of time overrun ranging from four to 78 months and cost overrun of ₹ 2.71 crore during the period 2007-2012. Shortfall in achievement of targeted additions were attributable to delay in finalisation of tenders, delay in getting approvals from railways, delays in approval of drawings and designs, delay in land acquisition, etc.*

##### *Operation and Maintenance*

*The overall transmission capacity was in excess of the requirement for every year. The Board failed to ensure the maximum and minimum voltages as per the norms. Out of 38 feeders in Patna Zone, eight feeders were loaded above 366 amps. Out of eight 220 KV SSs (three single bus bar SSs and five double bus bar SSs), Bus Bar Protection Panel (BBPP) was provided at four SSs only.*

##### *Maintenance*

##### *Performance of Power Transformers*

*Out of 16 transformers failed during the period covered in the Performance Audit, two caught fire and burnt due to failure of the installed protection system, four transformers failed due to failure of buchholz and differential relay, two failed due to failure of winding, and the remaining eight failed due to internal defects which could have been avoided by conducting periodical test and proper maintenance.*

##### *Transmission losses*

*The transmission losses ranged between 5.13 per cent and 9.75 per cent and exceeded the norms of four per cent of CEA and BERC in all the five years up to 2011-12. The quantum of transmission*

loss suffered by the Board in excess of the norms for the period 2007-08 to 2011-12 was 1830.29 MU valued at ₹ 710.40 crore. The reasons for excess transmission loss included non-accounting of energy consumed by sub-station transformers and excessive transformation losses by the old power transformers.

#### **Grid Management**

Out of 86 SSs and one generator, only eight (9.3 per cent) Remote Terminal Units were found utilised as on June 2012. Further, the Board received 135 (A type), 71 (B type) and 79 (C type) messages from Eastern Region Load Dispatch Centre for violation of Grid norm during 2007-12.

#### **Financial Management**

We noticed that the Board failed to increase the contract demand of consumer as per provisions of the tariff order which resulted in short billing and loss of revenue of ₹ 11.67 crore

Further, the Board delayed the process of entering into agreement with the consumer which deprived the Board to earn revenue of ₹ 8.08 crore.

#### **Material Management**

The Board had huge quantity of the closing stock which indicated that the procurement policy of the Board was defective. During the period from 2007-08 to 2011-12, the closing stock in terms of months consumption ranged between 19 to 59 months.

#### **Non-conducting of Physical verification of stocks in stores**

The Physical Verification (PV) of the stores was not being conducted annually and was conducted only in 2007-08 and 2011-12. Further, the Board had not taken action to conduct survey reports and dispose of the scrap/obsolete material, which could have earned revenue.

#### **Monitoring and control**

Management Information System (MIS) implemented for monitoring the operations of SSs was incomplete. The Board failed to finalise the tender in time for dismantling the cable and sustained the loss of ₹ 1.50 crore on account of theft/damage of cable and security of cable.

#### **Conclusion and Recommendations**

The Board did not prepare year-wise plan for addition/augmentation in the Transmission System of Bihar. Operation of the transmission system was not efficient and effective, as a result, the transmission losses of the Board was in excess of the norms, the voltage level of SSs were not maintained within the limits, feeders were found loaded beyond their Thermal Loading Limit. Disaster management facilities of the Board were not adequate. Energy accounting system of Board was not effective as existence of high percentage of losses and negative losses were found. Energy audit was not done by the Board. Huge quantity of closing stock indicated that the procurement policy of the Board was defective. Physical Verification of the stocks were not done annually and no action were taken to conduct survey and dispose of the scrap/obsolete material by the Board. The monitoring system of the Board was not effective as a result of which, transmission lines tripped several times.

The audit made seven recommendations which included preparation of short-term as well as perspective plan, compliance of the recommendation of the Task Force to avoid delays in construction, operation of the transmission system carried as per norms, implementing effective measures to reduce transmission losses, ensuring availability of adequate disaster management facility, reforming the purchase wing and monitoring activities.



## Introduction

**3.1** With a view to supply reliable and quality power to all by 2012, the Government of India (GoI) prepared the National Electricity Policy (NEP) in February 2005 which stated that the Transmission System required adequate and timely investment besides efficient and coordinated action to develop a robust and integrated power system for the country. It also, *inter-alia*, recognised the need for development of National and State Grids with the coordination of Central/ State Transmission Utilities.

Transmission of electricity and Grid operations in Bihar are managed and controlled by Bihar State Electricity Board (Board) which is mandated to provide an efficient, adequate and properly coordinated Grid management and transmission of energy. The Board reports to Energy Department of Government of Bihar. The Board was constituted in 1958 under Section 5 of the Electricity Supply Act, 1948. The Board is engaged in the business of generation, transmission and distribution of electricity in the State of Bihar. In terms of Section 172 of the Electricity Act, 2003, the Board constituted under the repealed laws shall be deemed to be the State Transmission Utility (STU) and a licensee under the provisions of the Act for a period of one year from 10 June 2003 i.e. the appointed date. On the request of Government of Bihar from time to time Ministry of Power, Government of India has agreed (August 2012) to extend the time upto 31 December 2012 to continue the Board to function as a STU and Distribution licensee.

**3.2** The Management of the Board is vested in the Board of Members with seven members appointed by the State Government. The day-to-day operations are carried out by the Chairman of the Board with the assistance of Member (Administration), Member (Finance and Revenue), Member (Transmission), Member (Generation) and Secretary. During 2007-08, 7371.44 Million Units (MUs) of energy was transmitted by the Board which increased to 10799.30 MUs in 2011-12, i.e. an increase of 47.18 *per cent* during 2007-12. As on 31 March 2012, the Board had transmission network of 6400 Circuit Kilometer (Ckm) and 86 sub-stations (SSs) with installed capacity of 7078 Mega volt ampere (Mva) (2450 Mva at 220/132 KV and 4628 Mva at 132/33 KV), capable of annually transmitting 15023.40 MUs at 220 KV. The turnover of the Board was ₹ 5268.79 crore in 2011-12, which was equal to two *per cent* of the State Gross Domestic Product. The number of employees in the Board was 10278 as on 31 March 2012.

### Power Sector Reforms in Bihar

**3.3** As part of the Power Sector Reforms, the Bihar State Electricity Board (Board) was to be unbundled. The Government of Bihar (GoB) decided (March 2012) to form and operate five Companies i.e Bihar State Power (Holding) Company Limited, Bihar State Power Transmission Company Limited, Bihar State Power Generation Company Limited, South Bihar Power Distribution Company Limited and North Bihar Power Distribution Company Limited. These companies have commenced their business with effect from 01 November 2012.



A Performance Audit on Incomplete Transmission Schemes of Bihar State Electricity Board was included in the Report of the Comptroller and Auditor General of India (Commercial), Government of Bihar for the year ended 31 March 2003. The Report was discussed by COPU in July 2010.

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

**3.4** The Performance Audit conducted during April 2012 to July 2012 covered the five years period from 2007-08 to 2011-12. Audit examination involved scrutiny of records of different wings at the Head Office of the Board, State Load Dispatch Centre (SLDC), five<sup>1</sup> out of seven Circles and eight<sup>2</sup> out of 16 Transmission Divisions located in the State.

The Board constructed 19 Sub-stations (SSs) (capacity: 940 Mva) and 28 lines (capacity: 841.16 Ckm) (including 15 SSs and 24 lines constructed by Power Grid Corporation of India Limited (PGCIL) on behalf of the Board), as well as augmented existing transformation capacity by 1660 Mva during the Performance Audit period. Out of four SSs and four lines (length 52 Ckm) constructed by the Board, two SSs (capacity: 80 Mva), four lines (Length: 52 Ckm) and augmentation of existing transformation capacity by 170 Mva were examined. Selection of the sample was done on the basis of capacity of the working SSs in the Divisions using random selection method.

The methodology adopted for attaining audit objectives with reference to audit criteria consisted of explaining audit objectives to the top management in the entry conference, scrutiny of records at Head Office and selected units, interaction with the audited entity's personnel, analysis of data with reference to audit criteria, raising of audit queries, discussion of audit findings with the Management and issue of draft Performance Audit to the Management/ Government for comments.

### **Audit Objectives**

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

- Perspective Plan was prepared in accordance with the guidelines of the National Electricity Policy/ Plan and Bihar Electricity Regulatory Commission (BERC) and assessment of impact of failure to plan, if any;
- The transmission system was developed and commissioned in economical, efficient and effective manner;
- Operation and maintenance of transmission system was carried out in economical, efficient and effective manner;
- Disaster Management System was set up to safeguard its operations against unforeseen disruptions;

---

<sup>1</sup> Electric Transmission Circle, Patna, Muzaffarpur, Biharsharif, Gaya and Dehri-on-sona.

<sup>2</sup> Electric Transmission Division, Khagaul, Patna, Muzaffarpur, Motihari, Hazipur, Biharsharif, Gaya and Dehri-on-sona.

- Effective Energy Accounting and Audit was in place;
- There was an effective and efficient Financial Management system with emphasis on timely raising and collection of bills;
- Efficient and effective system of inventory control mechanism was in existence; and
- There was a monitoring system in place to review performance of Sub-stations and lines as per Grid Code Standards, preparation of Management Information System (MIS) Reports.

### Audit Criteria

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

- Provisions of National Electricity Policy / Plan and National Tariff Policy;
- Perspective Plan and Project Reports of the Board;
- Standard procedures for award of contracts with reference to principles of economy, efficiency, effectiveness, equity and ethics;
- Report of the Task force constituted by the Ministry of Power to analyse critical elements in transmission project implementation;
- Manual of Transmission Planning Criteria (MTPC) such as Thermal Loading Limit of 366 ampere for ACAR Panther conductor,
- Code of Technical Interface (CTI)/ Grid Code consisting of planning, operation, connection codes viz. Voltage level of 198-245 KV and 119-145 KV for 220 KV and 132 KV SSs respectively, Control Measures such as installation of Bus Bar Protection Panels, etc.;
- Norms/Guidelines with respect to transmission loss issued by BERC/Central Electricity Authority (CEA);
- Report of the Committee constituted by the Ministry of Power recommending the “Best Practices in Transmission”; and
- Reports of Eastern Region Power Committee (ERPC)/ Eastern Region Load Dispatch Centre (ERLDC).

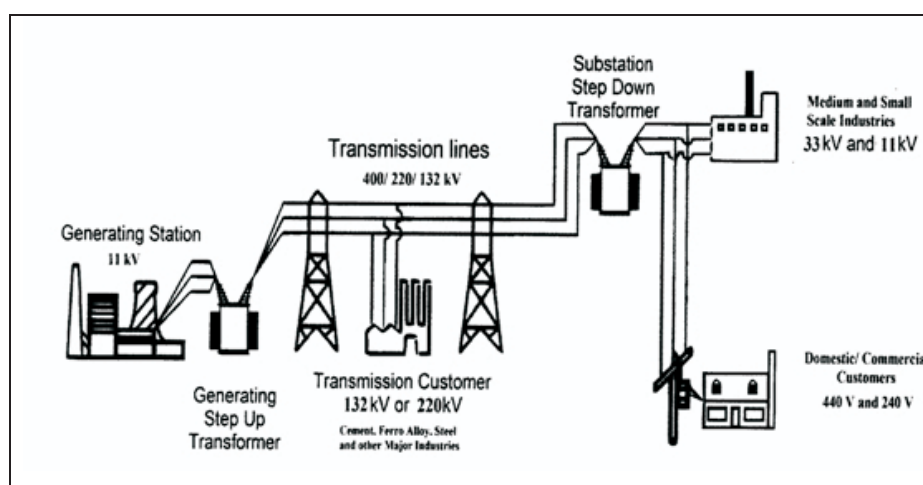
### Brief description of transmission process

**3.7** Transmission of electricity is defined as bulk transfer of power over long distances at high voltages, generally at 132 KV and above. Electric power generated at relatively low voltages in power plants is stepped up to high voltage power before it is transmitted to reduce the loss in transmission and to increase efficiency in the Grid. Sub-stations (SSs) are facilities within the high voltage electric system used for stepping-up/ stepping down voltages from one level to another, connecting electric systems and switching equipment in and out of the system. The step-up transmission SSs

at the generating stations use transformers to increase the voltages for transmission over long distances.

Transmission lines carry high voltage electric power. The step down transmission SSs, thereafter, decreases voltages to sub transmission voltage levels for distribution to consumers. The distribution system includes lines, poles, transformers and other equipment needed to deliver electricity at specific voltages.

Electrical energy cannot be stored; hence generation must be matched to demand of power. Therefore, every transmission system requires a sophisticated system of control called Grid management to ensure balancing of power generation closely with the demand. A pictorial representation of the transmission process is given below:



### **Audit Findings**

**3.8** We explained the audit objectives to the Board during an ‘Entry Conference’ held on 18 April 2012. Subsequently, audit findings were reported to the Board and the State Government in September 2012 and discussed in an ‘Exit Conference’ held on 29 November 2012. The Exit Conference was attended by Deputy Secretary, Energy Department, Government of Bihar, Chairman and other officials of the Board. The views expressed by the Board have been considered while finalising this Performance Audit. The audit findings are discussed in the subsequent paragraphs.

### **Planning and Development**

#### *National Electricity Policy/Plan*

**3.9** The Central Transmission Utility (CTU) and the State Transmission Utilities (STUs) have the key responsibility of network planning and development based on the National Electricity Plan in coordination with all concerned agencies. At the end of Tenth Plan (March 2007), the transmission system in the country at 765/HVDC/400/230/220/KV stood at

1.98 lakh circuit kilometres (Ckm) of transmission lines which was planned to be increased to 2.93 lakh Ckm by the end of Eleventh Plan i.e. March 2012. The National Electricity Plan assessed the total inter-regional transmission capacity at the end of 2006-07 as 14100 mega watt (MW) and further planned to add 23600 MW in Eleventh Plan bringing the total inter-regional capacity to 37,700 MW.

Similarly, the Board's transmission network at the beginning of 2007-08 consisted of 67 Extra High Tension (EHT) SSs with a transmission capacity of 4478 Mva and 5559.05 Ckm of EHT transmission lines. The transmission network as on 31 March 2012 consisted of 86 EHT SSs with transformation capacity of 7078 Mva and 6400 Ckm of EHT transmission lines with an increase of 28.36, 58 and 15.13 *per cent* respectively over the year 2007-08.

**The Board neither prepared any State Electricity Plan (SEP) nor year-wise Short Term plan for addition/augmentation in the transmission system of Bihar**

The STU was responsible for planning and development of the intra-state transmission system. Assessment of demand is an important pre-requisite for planning capacity addition. We observed that the Board did not prepare any State Electricity Plan (SEP) during the period covered under Performance Audit. Further, year - wise Short Term plan for addition/augmentation in the transmission system of Bihar was also not prepared by the Board. However, for strengthening the sub-transmission system in Bihar, Detailed Project Reports (Phase-II, Part-I and Part-II) containing planning for additions in the capacity of sub-stations and transmission lines during 2007-08 to 2011-12 was prepared by the Power Grid Corporation of India Limited (PGCIL) on behalf of the Board containing plan for construction of 25 SSs (1740 Mva), 50 lines (1967.30 Ckm) and augmentation of capacity of 1630 Mva. Further, the Board also took decision for construction of five SSs and five transmission lines (length: 235 Ckms) during the above period.

The Board, in reply, accepted (October 2012) that year-wise plan/augmentation of transmission system in Bihar was not prepared by the Board, but based on the study done by PGCIL a comprehensive plan for strengthening of Transmission System of Bihar was prepared which was to be completed over a period of 18 to 30 months from execution of the agreement.

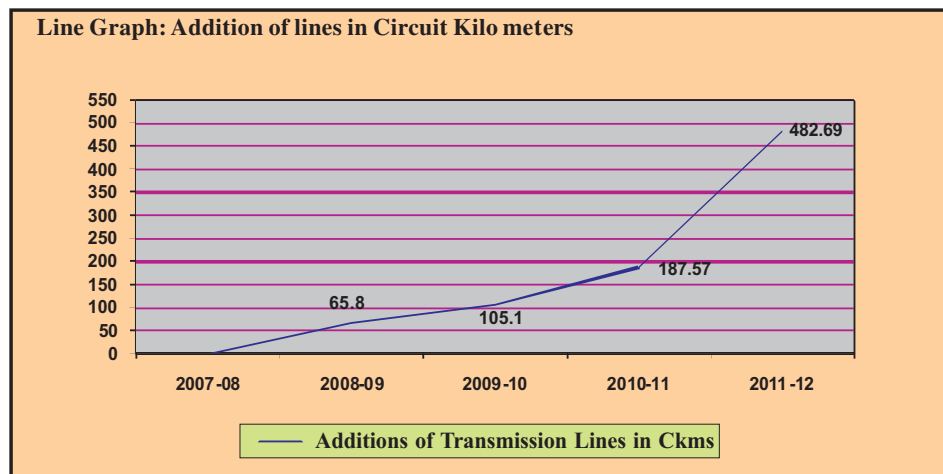
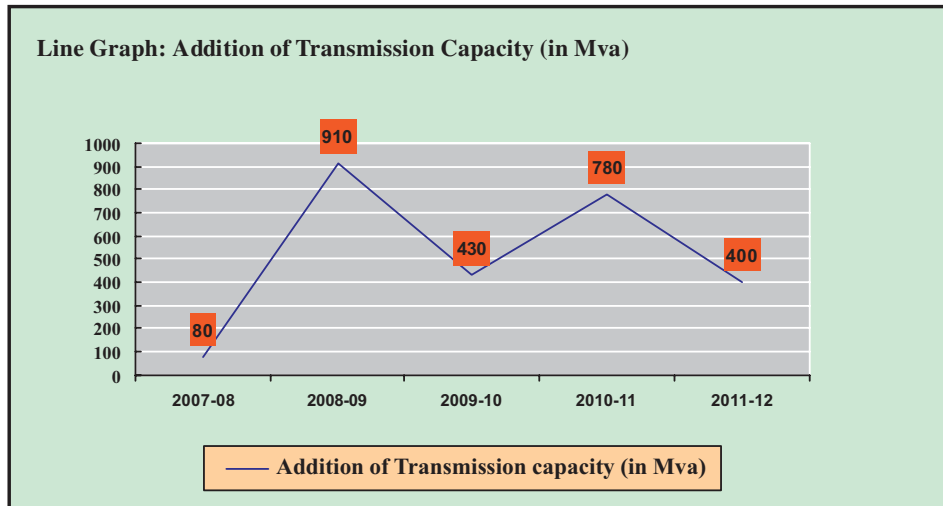
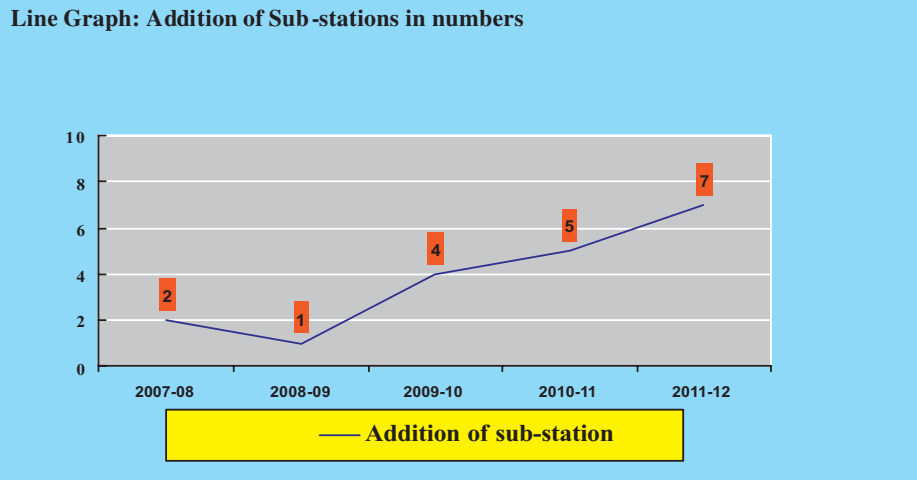
### ***Transmission network and its growth***

**3.10** The transmission capacity of the Board at EHT level during 2007-08 to 2011-12 is given in *Annexure – 7*.

It can be seen from the annexure that the year-wise planning for addition of sub-stations, capacity augmentation and new transmission lines was not done by the Board.

We observed that against the targeted construction of 30 EHT SSs and laying of 2202.30 Ckm of EHT lines (including 25 SSs and 1967.30 Ckm of line to be constructed by the PGCIL), the Board/PGCIL constructed 19 EHT SSs and 841.16 Ckm EHT lines during the five year period with an achievement of 63 per cent and 38 per cent respectively. The transmission

capacity of 2600 Mva was added against 4060 Mva planned (3370 Mva by PGCIL and 690 Mva by the Board) for addition for the five year period ending 2011-12.



Our audit scrutiny revealed that shortfall in achievement of targeted additions was attributable to delay in completion of the projects due to various reasons such as delay in acquisition of land, Right of way problem, delay in getting approvals from railways, delay in finalisation of tenders, etc. The reasons are discussed in detail in paragraph no. 3.12, 3.13 and 3.14.

The Board accepted (October 2012) that there were some shortfall and time overrun in targeted addition which was mainly due to issues not controllable by the Board viz. delay in land acquisition, hindrance from local people and ROW problem. The reasons viz. delay in finalisation of tenders, getting approvals from railways, approval of drawings and designs etc., were controllable and could have been avoided by better coordination and timely action.

### **Project management of transmission system**

**3.11** A transmission project involves various activities from concept to commissioning. Major activities in a transmission project are (i) Project formulation, Appraisal and Approval Phase and (ii) Project Execution Phase. For reduction in project implementation period, the Ministry of Power, Government of India constituted a Task Force on transmission projects (February 2005) with a view to:

- analyse the critical elements in transmission project implementation,
- implementation from the best practices of CTU and STUs, and
- suggest a model transmission project schedule for 24 months' duration.

The Task Force suggested and recommended (July 2005) the following remedial actions to accelerate the completion of Transmission systems.

- Undertake various preparatory activities such as surveys, design & testing, processing for forest and other statutory clearances, tendering activities, etc. in advance/parallel to project appraisal and approval phase and go ahead with construction activities once Transmission Line Project sanction/approval is received;
- Splitting the transmission projects into clearly defined packages in such a way that the packages can be procured and implemented requiring least coordination and interfacing and at same time it attracts competition facilitating cost effective procurement; and
- Standardise designs of tower fabrication so that six to 12 months can be saved in project execution.

**3.12** We observed that all the construction projects were carried out by the Board on turnkey basis wherein the contractors were required to undertake various preparatory activities such as surveys, design & testing, processing for forest and other statutory clearances, etc. contrary to the recommendation of the task force which ultimately resulted in delay in completion of the projects.

Notwithstanding the elaborated guidelines given by the Task Force for timely completion of the projects, the Board failed to execute several SSs and Lines during 2007-12 as detailed below:

Capacity in KV	Total No. constructed		Delay in construction (Numbers)		No. test checked by Audit		Time overrun <sup>3</sup> (Range in months)		Cost overrun (₹ in crore)	
	SSs	Lines	SSs	Lines	SSs	Lines	SSs	Lines	SSs	Lines
220	01	02	01	02	-	-	-	-	-	-
132	18	26	17	26	02	04	72 to 78	4 to 72	4.12	2.71
<b>Total</b>	19	28	18	28	02	04			4.12	2.71

Out of total 19 SSs and 28 transmission lines constructed during the period covered in Performance Audit, 15 SSs and 24 transmission lines were constructed by PGCIL on behalf of the Board, out of which 14 SSs and 24 transmission lines were completed with a delay ranging from two to 38 months. The Board constructed remaining four SSs and transmission lines each during above period with delay ranging between four to 78 months.

Reasons for delay in construction of SSs and Transmission Lines as observed in audit were delay in approval of survey and soil investigation report by the Board, Right of way (ROW) problems, delay in acquisition of land, delay in finalisation of tenders and award of work orders, delay in execution of the projects by the contractors, not seeking timely clearances from Railways, etc. Besides, the standardised designs for tower fabrication was not prepared by the Board, also delayed the projects.

Some of the instances of time and cost overrun in construction of SSs, transmission lines and other construction projects are discussed in details below:

#### *Time and cost overrun in construction of Sub-station at Sherghati*

**3.13** For construction of 40 Mva SS at Sherghati and its associating 132 KV line from Gaya to Sherghati on turnkey basis, Notice Inviting Tender (NIT) with an estimated cost of ₹ 14 crore was floated in December 2003. As per terms and conditions of the NIT, the validity period of the bid was 180 days from the date of opening of technical and financial part of bid. In response to the NIT, one bid (M/s Alstom India Ltd.) was received (January 2004). The price quoted by the bidder was ₹ 18.46 crore. The Board instead of finalising the tender within the validity period of 180 days (upto July 2004), invited (December 2004) the firm for negotiation and requested the firm to extend the quoted validity period which was not accepted by the bidder citing the reasons of increase in the cost of materials. The Board decided (June 2005) to go for a fresh tendering process with revised estimated cost of ₹ 21.50 crore but no bid was received in response to second tender. The Board again invited tender (July 2006) and the work was finally awarded (May 2008) at a cost of ₹ 22.14 crore. The work was

<sup>3</sup> Test checked in audit.



scheduled to be completed within 18 months from the date of award of work. The work was completed in January 2012 with a delay of more than six years from the date of validity period of first NIT. Further, there was delay of 14 months from the scheduled date of completion as per work order. This resulted in cost overrun of ₹ 3.68 crore.

**Non-finalisation of tender within validity period of bid resulted in delay in completion of SS by six years and cost overrun by ₹ 3.68 crore**

We observed that the Board failed to take decision within the validity period at the time of first tender regarding award of work to single tenderer, whose quoted rate was higher than the estimated price

Thus, due to failure in finalisation of tender within validity period, the project was delayed by more than three and half years even before commencement of execution and also the Board had to incur an extra expenditure on the project.

The Board stated (October 2012) that there was single bid received and rate was very high with discrepancy in price part. The firm was ultimately called for rate negotiation but the firm declined to reduce the rate and the tender was cancelled. The reply does not explain as to why the first tender was not finalised within the validity period of bid. Further, the estimated price given in NIT was for idea purpose only and comparison of the bid with the same was not proper. The discrepancy with respect to price part in bid was also clarified by the bidder before expiry of validity period and finally the work was awarded to single tenderer in May 2008.

#### ***Unplanned construction of Sub-station at Masaurhi***

**3.14** For construction of a SS of 40 Mva capacity at Masaurhi, the Board issued a work order (August 2000) to M/s Bhojpur Construction Pvt. Ltd. (Contractor) at a cost of ₹ 5.12 crore. Material for the work was to be supplied by the Board. As per the work order the scheduled completion period of work was 15 months i.e. October 2001.

After completing one third of the work, the Contractor stopped (November 2001) the work due to non-availability of structure, design of foundation and drawings of transformer/breaker, delay in payment of bills, etc. In March 2005, the Board, after receiving a sum of ₹ five crore from Government of Bihar, again requested the contractor to execute the left over work. The Contractor demanded a price escalation which was refused by the Board. The Board decided to construct the SS departmentally and the same was completed (May 2008) at a cost of ₹ 6.86 crore.

**By awarding the work without proper planning, the construction work of SS was delayed by more than six years which resulted in cost overrun of ₹ 1.74 crore**

We observed that there was lapse on the part of Government of Bihar in providing the fund which resulted in delays in execution. Besides, the Board also started the work without ensuring the required designs/drawings and equipments which indicated improper planning on the part of the Board.

Thus, awarding of the work without proper planning, the work of SS was delayed by more than six years which resulted in cost overrun of ₹ 1.74 crore.



The Board stated (October 2012) that due to various reasons such as non-availability of power transformer, paucity of fund, difficulty in transportation of construction materials, etc., the construction programme of Masaurhi SS was extended several times and could not be commissioned in time and suffered cost overrun due to price hike of materials. The fact remains that the commencement of execution of the projects without ensuring availability of adequate funds and equipments indicated improper planning on the part of the Board.

*Avoidable expenditure*

**3.15** As per agreement signed (May 2006) between Government of Bihar (GoB), PGCIL, Ministry of Power, Government of India (GoI) and the Board, the work of Renovation and Modernisation (R&M) of 220/132 KV Grid sub-station at Biharsharif was to be carried out by the Board. Total fund available for the above work was ₹ 26.89 crore. The Board awarded (September 2008) the work of R&M of sub-station at Biharsharif to M/s Techno Electric and Engineering Company Ltd. at a total cost of ₹29.26 crore. The scope of work included installation of one new 20 Mva 132/33 KV Transformer valuing ₹ 2.01 crore which was to be installed for exclusive utilisation in providing 33 KV supply to substation transformer (630 Kva×2) for lighting and other auxiliary purpose.

Further, as per above agreement, the work of augmentation of capacity of existing SSs in Bihar was being carried out by the PGCIL which included replacement of existing lower capacity transformers with higher capacity transformers. Accordingly, a 7.5 Mva 132/33 KV transformer was replaced (July 2008) with a new 20 Mva transformer at Sultanganj SS by PGCIL and as a result of the said replacement, the existing transformer of 7.5 Mva became idle and was kept in stores without any use till date (November 2012).

**Due to failure in taking prudent decision to utilise 7.5 Mva 132/33 KV spare transformer, the Board had to incur an avoidable expenditure of ₹ 2.01 crore**

We observed that the expenditure incurred on installation of a new transformer at Biharsharif could have been avoided by utilising the 7.5 Mva transformer (replaced at Sultanganj) for providing 33 KV supply to substation transformer at Biharsharif.

Thus, due to failure in taking prudent decision regarding utilisation of 7.5 Mva 132/33 KV spare transformer, the Board had to incur an avoidable expenditure of ₹ 2.01 crore.

The Board stated (October 2012) that the replaced transformer was very old and was in no way reliable for auxiliary supply to SS and kept as standby to meet the emergency. The reply is not based on the facts as the transformer was in normal condition and the same was sent (December 2009) to Hathidah SS for utilisation but could not be transported due to route constraints. Thus, it became idle due to imprudent decision taken by the Board and the Board incurred avoidable expenditure.

### Performance of transmission system

**3.16** The performance of the Board mainly depends on efficient maintenance of its EHT transmission network for supply of quality power with minimum interruptions. In the course of operation of Sub-stations and lines, the supply-demand profile within the constituent sub-systems is identified and system improvement schemes are undertaken to reduce line losses and ensure reliability of power by improving voltage profile. These schemes are for augmentation of existing transformer capacity, installation of additional transformers, laying of additional lines and installation of capacitor banks. The performance of the Board with regard to O&M of the system is discussed in the succeeding paragraphs.

#### *Transmission capacity*

**3.17** The Board, in order to evacuate the power from the Generating Stations and to meet the load growth in different areas of the State, constructs lines and SSs at different EHT voltages. A Transformer converts AC voltage and current to a different voltage and current at a very high efficiency. The voltage levels can be stepped up or down to obtain an increase or decrease of AC voltage with minimum loss in the process. The evacuation is normally done at 220 KV. However, the Board also evacuates the power at 132 KV. The transmission capacity (220 KV and 132 KV) created *vis-à-vis* the transmitted capacity (peak demand met) at the end of each year by the Board during the five years ending March 2012 was as follows :

Transmission capacity (in Mva)				
Year	Installed	After leaving 30 per cent towards margin	Peak demand including non-coincident demand	Excess/shortage (3-4)
1	2	3	4	5
2007-08	4558	3191	1244	1947
2008-09	5468	3828	1348	2480
2009-10	5898	4129	1508	2621
2010-11	6678	4675	1664	3011
2011-12	7078	4955	1712	3243

(Source: Information provided by the Board)

From the above table it would be observed that the overall transmission capacity was in excess of the requirement for the last five years ending March 2012. The existing transmission capacity excluding 30 per cent towards redundancy worked out to an excess of 3243 Mva at the end of March 2012. Further, in case of 15 test checked SSs constructed during 2007-12, the maximum load met during 2007-12 by seven<sup>4</sup> numbers of 132/33 KV sub-stations ranged between 5.8 MW and 10 MW (15 to 30 per cent of installed capacity) for a period ranging from three months to 60

<sup>4</sup> SSs at Belaganj, Dhaka, Masaurhi, Attaula karpj, Tekari, Hulasganj, Sheetalpur.

months. Thus, existence of extra/idle capacity in the transmission network and at the same time prevalence of overloads in eight feeders of Patna Zone as well as high voltages in 38 SSs of Patna and Muzaffarpur Zones, reflected unscientific planning in creation of transmission network.

The Board stated (October 2012) that installed capacity had been shown by adding capacity of 220/132 KV and 132/33 KV and the peak load is met mainly by capacity at 132/33 KV. The reply is not convincing as the peak load met by the Board also included power supplied to EHT consumers at 132 KV level which was fed from 220/132 KV SSs.

### ***Sub-stations***

#### ***Adequacy of Sub-stations***

**3.18** The Manual on Transmission Planning Criteria (MTPC) stipulates the permissible maximum capacity for different SSs i.e., 320 Mva for 220 KV and 150 Mva for 132 KV SSs. Scrutiny of the maximum capacity levels of SSs revealed that three<sup>5</sup> 220 KV and one<sup>6</sup> 132 KV SSs exceeded the permitted levels.

MTPC also prescribes that every SS of capacity 132 KV and above should have at least two transformers. Further, the Transmission Planning and Security Standards prescribed by MTPC indicated that the size and number of transformers in the SS shall be planned in such a way that in the event of outage of any single transformer the remaining transformer(s) could still supply 80 per cent of the load. However, we observed that only one transformer was found installed in Begusarai 220/132 KV SS, Vaishali and Biharsharif 132/33 KV SS.

The Board stated (October 2012) that MTPC provided general guidelines for optimum sizing of Grid capacity and exceeding the capacity was not a major issue. The reply, however, does not take cognizance of the fact that the capacity and number of transformers in the substations as prescribed by MTPC was for better and secure operation of Grid and should be followed for effective operation of transmission system.

#### ***Voltage management***

**3.19** The Licensees using intra-state transmission system should make all possible efforts such as installation of Capacitors, Reactors, Flexible Alternating Current Transmission system etc. to ensure that grid voltage always remains within limits. As per Indian Electricity Grid code STUs should maintain voltage ranges between 380-420 KV, 198-245 KV and 119-145 KV in 400 KV, 220 KV and 132 KV lines respectively.

The examination of the records of 220/132 KV bus voltages in five and three divisions of the Patna and Muzaffarpur Zone respectively for the

---

<sup>5</sup> Biharsharif, Bodh Gaya and Dehri-on-sone.

<sup>6</sup> Jakkanpur.

period from April 2007 to March 2012 revealed that in three 220/132 KV SSs the voltages recorded ranged between 252 KV and 177 KV while in 35 132/33 KV SSs voltage recorded ranged between 154 KV and 98 KV. Thus, the Board failed to ensure the maximum and minimum voltages as per the norms which caused frequent tripping of various transformers installed at SSs.

The Board stated (October 2012) that the voltage was regulated by On Load Tap Changer (OLTC) of transformer and capacitor bank installed at three SSs. Further, the Board also accepted that reactors for stepping down the voltage profile in case of high voltage condition has not been installed in Board's system and was depended on PGCIL's system.

### *Lines*

#### *EHT lines*

**3.20** As per MTPC, permissible line loading cannot normally be more than the Thermal Loading Limit (TLL). The TLL limits the temperature attained by the energized conductors and restricts sag and loss of tensile strength of the lines. The TLL limits the maximum power flow of the lines. As per MTPC the TLL of 132 KV line with ACSR<sup>7</sup> Panther 210 sq. mm. conductor should be 366 amps.

**Loading on lines beyond permissible limit resulted in voltage fluctuations, line losses and interruption / breakdowns in feeders**

Scrutiny of the line loadings on the 132 KV feeders revealed that, eight feeders out of 38 feeders in Patna Zone were loaded above 366 amps (367 to 450 amps). Loading of the lines beyond capacity resulted in voltage fluctuations in seven SSs, higher transmission losses in two feeders ranging from five *per cent* to 28.5 *per cent* and 77 interruptions / breakdowns in overloaded 132 KV feeders during the Performance Audit period.

The Board stated (October 2012) that in case of new transmission lines the average loading was done around 70 to 75 MW except in case of very extraordinary situation the loading pattern is maintained within the limits.

#### *Bus Bar Protection Panel (BBPP)*

**3.21** Bus bar is used as an application for inter connection of the incoming and outgoing transmission lines and transformers at an electrical Sub-station. BBPP limits the impact of the bus bar faults on the entire power network which prevents unnecessary tripping and selective to trip only those breakers necessary to clear the bus bar fault. As per Grid norms and Best Practices in Transmission System, BBPP is to be kept in service for all 220 KV Sss to maintain system stability during Grid disturbances and to provide faster clearance of faults on 220 KV buses. We observed that out of eight 220 KV SSs (three single bus bar SSs and five double bus bar SSs) where BBPP was required to be installed, the Board provided the panel only at four SSs.

---

<sup>7</sup> Aluminum Conductor Steel Reinforced.

**Maintenance**

**Performance of Power Transformers (PTRs)**

**3.22** Power Transformers are one of the most important and cost-intensive components of electrical energy supply networks. Thus, it is of special interest to prolong their life duration while reducing their maintenance expenditure. In order to gather detailed information about the operational conditions of PTRs, various kinds of oil analysis like the standard oil Dissolved Gas Analysis (DGA) tests are generally conducted. For PTRs' insulation, a combination of an insulating liquid and a solid insulation impregnated therewith are used. For an evaluation of the actual condition of this insulating system usually a DGA is used, as failures inside the PTRs lead to a degradation of the liquid insulation in such a way that the compound of the gases enables identification of cause of the failure.

The table below indicates status of failure of transformers during the years 2007-08 to 2011-12:

Year	No. of transformers at the beginning of the year	No. of transformers failed	No. of transformers failed within guarantee period	No. of transformers failed within normal working life	Expenditure on repair and maintenance (₹ in crore)
2007-08	111	06	Nil	06	6.26
2008-09	126	01	Nil	01	8.09
2009-10	139	01	Nil	01	10.33
2010-11	159	01	Nil	01	7.75
2011-12	176	07	Nil	07	8.03

*(Source: Information furnished by the Board)*

It would be seen from the table that 16 transformers failed during the period covered in the Performance Audit. Out of 16 transformers two (one 220/132 KV of 150 Mva capacity in March 2008 and another 132/33 KV of 20 Mva August 2010) caught fire and burnt due to failure of the installed protection system, four transformers failed (July-2008, August-2009, August-2011 and October 2011) due to failure of buchholz relay and differential relay, two failed (November-2007 and December 2007) due to failure of winding, one failed (May 2011) due to poor insulation and the remaining seven failed due to internal defects which could have been avoided by conducting periodical test.

**There was no system in place to conduct periodical test of working transformer to ensure their perfectness**

We observed that there was no system in place to conduct periodical test of working transformer to ensure the perfectness of various parameters. During test check of transformers installed at six<sup>8</sup> 220/132 KV SS, DGA test was done only once (July 2008) in SSS at Bodh Gaya. Instead of conducting periodical test, the Board conducts test only after failure of a transformer to assess the damaged parts of the transformers. Reasons for non-conducting of

<sup>8</sup> Biharsharif, Bodh Gaya, Dehri-on-Sone, Fatuha, Khagaul and Gopalganj.

periodical test were non-availability of required infrastructure and adequate shut-downs. Further, as per schedule, maintenance of the transmission equipments was to be taken up twice in a year i.e. summer and winter. However, in none of the SSs schedule maintenance was taken up during Performance Audit period.

The Board stated (October 2012) that Break Down Voltage (BDV) test is carried out to assess the insulation level. In case of low BDV value, filtration of oil is carried out and after that the oil samples are sent periodically in recognised Government laboratory. The reply of the Board was not based on the facts as test was carried out only once in one SS at Bodh Gaya.

### *Working of hot lines division/sub divisions*

**3.23** Regular and periodic maintenance of transmission system is of utmost importance for its un-interrupted operation. Apart from scheduled patrolling of lines, following techniques are prescribed in the Report of the Committee under chairmanship of Dr. S Mukhopadhyay for up-dating the best practices of Transmission in the country for maintenance of lines:

- Hot Line Maintenance.
- Hot Line Washing.
- Hot line Puncture Detection of Insulators.
- Preventive Maintenance by using portable earthing hot line tools.
- Vibration Measurement of the line.
- Thermo-scanning.
- Pollution Measurement of the equipment.

**None of the hot line techniques (except utilisation of Thermo-vision cameras) was available with the Board**

The Hot Line Technique (HLT) envisages attending to maintenance works like hot spots, tightening of nut and bolts, damages to the conductor, replacement of insulators, etc. of SSs and lines without switching off. This includes thermo scanning of all the lines and SSs towards preventive maintenance. HLT was introduced in India in 1958. We observed that none of the above mentioned hot line technique (except utilisation of Thermo-vision cameras) was available with the Board for regular and periodic maintenance during Performance Audit period. Further, separate hot line divisions/sub-divisions in the Board was not found in existence.

The Board accepted (October 2012) the fact and stated that Board would consider setting up of hot line maintenance division and creating the infrastructure.

### *Transmission losses*

**3.24** While energy is carried from the generating station to the consumers through the Transmission & Distribution (T&D) network, some energy is lost which is termed as T&D loss. Transmission loss is the difference between energy received from the generating station/Grid and energy sent



for Distribution. The details of transmission losses from 2007-08 to 2011-12 are given in table below:

Particulars	Unit	Year				
		2007-08	2008-09	2009-10	2010-11	2011-12
Power received for transmission	MUs	7961.30	8584.69	9836.58	10882.86	11965.88
Net power transmitted	MUs	7371.44	8144.14	9217.97	9898.16	10799.30
Actual Transmission loss	MUs	589.86	440.55	618.61	984.70	1166.58
	percentage	7.41	5.13	6.29	9.05	9.75
Transmission loss as per the CEA norm	percentage	4	4	4	4	4
Transmission loss as per BERC norms	percentage	4	4	4	4	4
Transmission loss in excess of BERC norm	MUs	271.48	97.01	225.26	548.50	688.04
	Rate per Unit in ₹	2.96	3.12	3.03	3.87	4.64
	₹ in crore	80.36	30.27	68.25	212.27	319.25

*(Source: Annual Accounts of the Board, Tariff orders of BERC and information furnished by the Board)*

**Failure to keep the transmission losses under CEA and BERC norms resulted in excess loss of 1830.29 MUs valued at ₹ 710.40 crore for the period 2007-08 to 2011-12**

As would be noticed the transmission losses ranged between 5.13 *per cent* and 9.75 *per cent* and exceeded the CEA and BERC norms of four per cent in all the five years up to 2011-12. The value of transmission loss suffered by the Board in excess of the norms for the period 2007-08 to 2011-12 was 1830.29 MUs valued at ₹ 710.40 crore.

Audit observed that the reasons for excessive transmission loss included idle charging of transmission lines to avoid theft of conductors, non-accounting of energy consumed by sub-station transformers used for sub-station lighting/auxiliary consumption due to non-installation of meters and excessive transformation losses by the old power transformers.

The Board stated (October 2012) that the figures of power received for transmission as per tie-flow plus own generation was less than the figures shown by audit and if the same was considered, the loss would be in the range of 3 to 6 *per cent*. We have, however, taken the figure for power received for transmission from Annual Accounts and the same has been considered for calculation of losses.

## **Grid Management**

### *Maintenance of Grid and performance of SLDC*

**3.25** Transmission and Grid Management are essential functions for smooth evacuation of power from generating stations to the State transmission utilities/consumers. Grid Management ensures moment-to-moment power balance in the inter-connected power system to take care of reliability, security, economy and efficiency of the power system. Grid

management in India is carried out in accordance with the standards/directions given in the Grid Code issued by CEA. National Grid consists of five regions viz., Northern, Eastern, Western, North Eastern and Southern Grids, each of these having a Regional Load Dispatch Centre (RLDC), an apex body to ensure integrated operation of the power system in the concerned region. The Bihar State Load Dispatch Centre (SLDC), a constituent of Eastern Regional Load Dispatch Centre (ERLDC), Kolkata, ensures integrated operation of power system in the State. The State Government notified (February 2007) that the SLDC shall be operated by the Board. The SLDC is not assisted by any Area Load Dispatch Centre (ALDCs) for data acquisition and transfer to SLDC and supervisory control of 132 KV and 33 KV equipments.

### *Infrastructure for load monitoring*

**3.26** Remote terminal Units/Sub-station Management Systems (RTUs/SMSs) are essential for monitoring the efficiency of the transmission system and the loads during emergency in Load Dispatch Centres as per the Grid norms for all Sub stations.

**Only eight (9.3 per cent) RTUs were found utilised as on October 2012. As a result real time loads of SSs during emergency could not be monitored and benefit of system could not be achieved**

We observed that there were 86 (eight 220/132 KV SSs and 78 132/33 KV SSs) SSs and one<sup>9</sup> generator in the transmission network of the Board, out of which 27 (31 per cent) SSs and one generator were provided with RTUs for recording of real time data for efficient Energy Management System. Out of 27 RTUs installed, five RTUs were not integrated with the system due to non-availability of link. Further, 14 RTUs were not in working condition till October 2012. Thus, only eight (9.3 per cent) RTUs were found utilised as on October 2012. As a result real time loads of SSs during emergency could not be monitored and benefit of system could not be achieved.

The Board accepted (October 2012) the facts and stated that PGCIL had been requested to do engineering for integration of all running and upcoming SSs with data tele-metering and voice communication.

### *Grid discipline by frequency management*

**3.27** As per Grid Code, the transmission utilities are required to maintain Grid discipline for efficient functioning of the Grid. All the constituent members of the Grid are expected to maintain a system frequency between 49 and 50.5 Hertz (Hz) (49.2 and 50.3 Hz with effect from April 2009). Due to various reasons such as shortages in generating capacities, high demand, non-maintaining load generation balance, inadequate load monitoring and management, Grid frequency goes below or above the permitted frequency levels. To enforce the Grid discipline, the ERLDC issues three types of violation messages viz. A, B and C.

- Message 'A' is issued when the frequency is less than 49.2 Hz and over-drawal is more than 50 MW or 10 per cent of schedule whichever is less.

<sup>9</sup> Barauni Thermal Power Station.



- Message ‘B’ is issued when frequency is less than 49.2 Hz and over-drawal is between 50 and 200 MWs for more than ten minutes or 200 MWs for more than five minutes.
- Message ‘C’ (serious nature) is issued 15 minutes after the issue of message ‘B’ when frequency continues to be less than 49.2 Hz and over drawal is more than 100 MW or ten per cent of the schedule whichever is less.

**The Board violated the Grid norms during 2007-08 to 2010-11, however, the instances of violation of Grid norms reduced considerably during 2011-12**

We observed that the Board received 135 (A type), 71 (B type) and 79 (C type) messages during five years period ending March 2012. Of these, the Board received 131 messages in a year during 2009-10 which included 51 C type (serious nature) messages. The type A messages received by the Board during 2007-08 to 2011-12 ranged between four and 48. Thus, by drawing the power in excess of allocation, the Board violated the Grid norms during 2007-08 to 2010-11, however, the instances of violation of Grid norms reduced considerably during 2011-12.

### *Planning for power procurement*

**3.28** The Board draws long term supply plan taking into account the contracted generation capacity, allocation from central sector and future committed projects and evolve net additional requirement of power in consultation with the distribution wing. It also draws day ahead plan for assessing its day to day power requirement. The details of total requirement of the State, total power supplied and shortage of power for the five years 2007-08 to 2011-12 are given below:

(Figures in MUs)

Sl.No.	Details	2007-08	2008-09	2009-10	2010-11	2011-12
1	Total power requirement	11134	12874	14886	17213	19905
2	Total power supplied <sup>10</sup>	7371	8144	9218	9898	10799
3	Power short supplied	3763	4730	5668	7315	9106
4	Percentage of shortage	33.80	36.74	38.08	42.50	45.75

(Source: Report of 17<sup>th</sup> Electric Power Survey and information furnished by the Board)

It could be seen from the above that the percentage of shortage of power is on the increasing trend i.e., from 33.80 in 2007-08 to 45.75 per cent in 2011-12.

The Board stated (October 2012) that attempts were made to procure power from IPPs, new sugar mills coming in the State as well as construction of new units at BTPS & MTPS to meet shortage of power in the State.

### *Loss due to non-drawal of schedule allocated power*

**3.29** As per 17<sup>th</sup> Electric Power Survey of India, total anticipated power requirement for the year 2011-12 in Bihar was 19905 MUs. Further, during 2011-12, total power available to the Board was 12284.83 MUs which

<sup>10</sup> Including generation, short and long term purchases and drawal from Central Generating Stations.

included own generation, scheduled power allocated under Central Sector, power from individual power producers etc. Out of 12284.83 MUs of power available, the Board purchased 12144.44 MUs of power valuing ₹ 4393.44 crore at an average cost of ₹ 3.62/unit.

Scrutiny of records revealed that out of total 12144.44 MUs of power available through purchase, the Board did not draw 664.15 MUs of power which was considered as sale through Unscheduled Interchange (UI). Thus, 664.15 MUs of power valuing ₹ 209.95 crore was sold under UI at an average value of ₹ 3.16/unit which was purchased at an average cost of ₹ 3.62/unit.

We observed that although there was acute shortage of power in the State and the power supplied by the Board was 54.25 *per cent* of the requirement in 2011-12, the Board did not draw the scheduled allocated power and ultimately it was sold under UI at a loss of ₹ 0.46/unit.

Thus, due to non-drawal of scheduled allocated power, the Board suffered loss of ₹ 30.32 crore as compared to average cost of power purchase during 2011-12.

**Although there was acute shortage of power in the state, the Board did not draw the allocated power and suffered a loss of ₹ 30.32 crore**

The Board stated (October 2012) that power drawal depended on the system conditions and demand. Sometimes due to bad weather i.e. rain, cyclone, wind, breakdown of trunk lines, outage of power transformers, power demand crashes and drawal of power reduced. The reply is not acceptable as the reasons stated by the Board might be accepted for short duration whereas it was noticed that drawal of power by the Board was less than the schedule allocation continuously in nine months from June 2011 to March 2012.

### ***Disaster Management***

**3.30** Disaster Management (DM) aims at mitigating the impact of a major break down on the system and restoring it in the shortest possible time. As per the Best Practices, DM should be set up by all power utilities for immediate restoration of transmission system in the event of a major failure. It is carried out by deploying Emergency Restoration System, DG sets, vehicles, fire-fighting equipments, skilled and specialized manpower.

Disaster Management Centre, National Load Dispatch Centre, New Delhi will act as a Central Control Room in case of disasters. As a part of DM programme, mock drill for starting up generating stations during black start<sup>11</sup> operations was not carried out by the Board during Performance Audit period.

---

<sup>11</sup> The procedure necessary to recover from partial or a total black out.

### ***Inadequate facilities for DM***

**3.31** There is only one generating station (BTPS)<sup>12</sup> in the State. The black start facilities were, however, not available in the Station indicating the inadequacy in the preparedness for DM.

Diesel generating (DG) sets and synchrosopes<sup>13</sup> form part of DM facilities at EHT SSs connecting major generating stations. We observed that DG sets were available in all eight numbers 220 KV SSs (five numbers DG sets in working condition and three numbers not in working condition) while only three synchrosopes were available out of which one was not in use. Further, the Board did not identify vulnerable installations for provision of metal detectors and handing over the security of the sites to the Security Force to meet crisis arising due to terrorist attacks, sabotage and bomb threats.

The Board accepted (October 2012) the fact and stated that attempts were being made to rectify the above mentioned deficiencies.

### **Energy Accounting and Audit**

**3.32** Energy accounting and audit is necessary to assess and reduce the transmission losses. The transmission losses are calculated from the Meter Reading Instrument (MRI) readings obtained from Generation to Transmission (GT) and Transmission to Distribution (TD) Boundary metering points. As on 31 March 2012 there were 361 interface Boundary metering points between TD (327) and GT (34). While in test checked divisions, out of 14 GT points, 12 were provided with 0.2S class<sup>14</sup> meter and remaining with 0.5S class meter. Further, out of 242 TD points in test checked division 206 were provided with 0.2S class meters, 29 were with 0.5S class meters and seven were other meters with class not specified.

**Energy audit on the meter reading report for ascertaining the feeders with high losses and reasons thereof of various SSs was not conducted**

Further, analysis of data for three months period from January 2012 to March 2012 of eight divisions with 38, 132 KV feeders test checked indicated existence of high percentage of losses ranging between 5.9 to 94.69 per cent in 10 feeders, 0.04 to 3.33 per cent in 16 feeders and remaining 12 feeders had defective meters out of which seven were showing negative losses. It was also noticed that the negative losses were due to usage of different class of meters at input and output points, existence of defective meters and replacement of meters without compatibility to Current Transformers and Potential Transformers consequently energy accounting and transmission losses worked out by the Board seems un-realistic.

---

<sup>12</sup> Barauni Thermal Power Station.

<sup>13</sup> In an AC electrical power system it is a device that indicates the degree to which two systems (generators or power networks) are synchronised with each other.

<sup>14</sup> Class of meters shows the limits of the permissible error and expressed in *per cent* i.e. for 0.2S class meters, error should not be more than 0.2 *per cent* at power factor 1.

Further, we observed that the activities of the Board were limited to compilation of the information regarding energy received and transmitted. Energy audit on the meter reading report including analysis of the reports for ascertaining the feeders with high losses and reasons thereof of various SSs was not conducted during the period of Performance Audit.

The Board stated (October 2012) that decision was taken to replace all 0.5 class meters with 0.2 class meters. The Board also stated that 200 meters of 0.2 class had been procured out of which 150 had been installed. The reply was silent about existence of high percentage of losses and non-conducting of energy audit.

### Financial Management

**3.33** One of the major objectives of the National Electricity Policy, 2005 was ensuring financial turn-around and commercial viability of Power Sector. However, the Board was incurring losses during 2007-08 to 2011-12. The accumulated losses of the Board had increased by 303.94 *per cent* from ₹ 2109.41 crore in 2007-08 to ₹ 8520.71 crore in 2011-12. Since the Board has not compiled separate financial data in respect of transmission activity, analysis thereof could not be done in the Performance Audit.

#### *Billing of Extra High Tension consumers*

**3.34** Supply of electricity to Extra High Tension (EHT) consumers (132 KV level) and billing of the energy consumed by them were provided and monitored by the Transmission wing of the Board through seven transmission Circles. Further, Supply of the electricity and billing thereof were guided by the orders of the BERC issued from time to time. During Performance Audit, the system of supply of electricity and billing were scrutinized and following irregularities were noticed:

#### *Non-enhancement of contract demand of Railway Traction Service (RTS) consumers as per Tariff provisions*

**3.35** As per the terms and conditions of the Tariff Order issued in December 2010, the transformer capacity of HT consumer shall not be more than 150 *per cent* of the contract demand except Railways where it was fixed 200 *per cent* of the contract demand. It was further elaborated that if consumer found to be utilising transformer of higher capacity than admissible for his contracted load, it will fall under malpractice.

During scrutiny of the records of the Electric Transmission Circles, Patna, Gaya and Biharsharif, it was observed that the four RTS consumers at Danapur-Khagaul Point, Fatuha-Khusrupur Point, Jehanabad point and Mokama Point were having Transformers of 1×21.6 Mva each in violation of provisions of the tariff orders although the contract demand of the above consumer was only seven and half, seven, two and five Mva respectively. Hence as per the provisions of the tariff orders, the contract demand of the above consumers should have been 10.80 Mva to match the provisions of tariff of 200 *per cent* transformers capacity.

**Failure of Board to increase the contract demand of the consumer as per provisions of the tariff order resulted in loss of revenue of ₹ 11.67 crore**

We observed that the Board failed to increase the contract demand of the consumer as per provisions of the tariff order which resulted in short billing and loss of revenue of ₹ 11.67 crore<sup>15</sup>.

The Board stated (October 2012) that Railways were requested to enhance their contract demand as per new tariff but in spite of several requests Railways did not enhance their originally contract demand and stated that the above tariff was not acceptable to Railways. The reply of the Board was not convincing as tariff order issued by BERC was binding on all consumers including railways. Further, in case of new RTS connection at Chhapra in March 2011, the Railways has accepted the provisions of the tariff order and accepted the contract demand of 10.8 Mva.

#### ***Short Billing of demand charge***

**3.36** As per the provisions of the tariff, the Demand charge shall be billed on the basis of maximum demand recorded during the month or 85 per cent of the contract demand whichever is higher.

**Frequent resetting of recorded by meter resulted in short billing of ₹ 0.54 crore**

During scrutiny of the records related with the billing of Railways Traction Service (RTS) consumer (Contract Demand – 7500 KVA) from Karamnasa grid, it was observed that the meter recording the maximum demand was frequently reset and maximum demand recorded till the time of resetting was not utilised for the purpose of billing despite being the maximum during the months in violation of provisions of the tariff. This resulted in short billing of Demand Charges by ₹ 0.54 crore.

The Board stated (October 2012) that due to non-availability of supporting document in this respect billing could not be done. The Board also stated that efforts were being made to get the same from Railway Mugalsarai and as soon as the supporting document was made available, action would be taken accordingly. The reply is not convincing as the billing of contract demand should have been done on the basis of maximum demand recorded by the meter during the month.

#### ***Loss of revenue due to delay in agreement for a new connection to Railway Wheel Plant, Chhapra***

**3.37** As per para 4.78 of the Electric Supply Code (Code), issued by BERC in 2007, the Board shall take up the work of extension required to give supply after the payment of charges and execution of the agreement.

Further, as per clause 1 (b) of the standard form of agreement, the consumer shall commence to take the supply within three months of intimation from the Board to the effect that supply is available, failing which a monthly

---

<sup>15</sup> Loss on account of Energy Charge = ₹ 39894894 + ₹ 423540 + ₹ 27428508 + ₹ 11109434 = ₹ 78856376.  
Loss on account of Demand Charge = ₹ 6460080 + ₹ 8883600 + ₹ 14167000 + ₹ 8298541 = ₹ 37809221.  
Total loss on account of Energy Charge and demand Charge = ₹ 78856376 + ₹ 37809221 = ₹ 116665597 i.e. ₹ 11.67 crore.

charge of 50 *per cent* of the minimum guaranteed by the consumer will be levied after expiry of above period until the service is availed of.

Scrutiny of records revealed that the Board, for providing a new HTS-III connection with contract demand of 26.67 Mva for the Railway Wheel Plant at Chhapra, issued (August 2008) work order for construction of transmission line from Chhapra Sub-station to point of supply.

Further, the work of extension required to give supply was completed by the Board in October 2010. Thus, the Board was ready to provide new connection to the consumer with effect from November 2010 but agreement with the consumer was entered in June 2011 and billing was started from July 2011.

**Taking up extension work required to give supply without entering into agreement with the consumer deprived the Board to earn a revenue of ₹ 8.08 crore**

We observed that the Board started the work without entering into an agreement with the consumer in violation of the Code and also delayed the process of entering into agreement with the consumer by seven months from the date of completion of the work which deprived the Board to earn revenue of ₹ 8.08 crore during the period from March 2011 to June 2011.

The Board stated (October 2012) that information regarding sanction of contract demand and completion of construction of transmission line for signing of agreement was sent to Railway in May 2010 and November 2010. As the construction work of Rail Wheel factory was not completed, Railway authorities delayed the execution of agreement. The agreement between Board and Railway should have been signed before starting of construction of transmission line as per the provision of para 4.78 of the Electric Supply Code (Code).

### **Material Management**

**3.38** The key functions in material management are laying down inventory control policy, procurement of materials and disposal of obsolete inventory. The Board had not formulated any procurement policy and inventory control mechanism for economical procurement and efficient control over inventory. Procurement of the materials was done by the Board on the basis of the requirement sent by the field offices. Scrutiny of the records of the Board revealed the following:

**3.39** The details of consumption (per annum), consumption (per month) and closing stocks of the equipments (transformers, cables, breakers, tower members etc.) of transmission system for the period from 2007-08 to 2011-12 are detailed below:



(₹ in crore)

Year	Consumption (per annum)	Consumption (per month)	Net Closing stock (as per Balancesheet)	Closing stock in terms of months consumption
(1)	(2)	(3)	(4)	(5) = (4)/(3)
2007-08	12.97	1.08	20.82	19
2008-09	6.77	0.56	21.95	39
2009-10	24.26	2.02	40.90	20
2010-11	25.79	2.15	54.80	25
2011-12	11.72	0.98	58.22	59

*Source: Information furnished by the Board*

**Huge quantity of the closing stock indicated that the procurement policy of the Board was defective**

It is evident from the huge quantity of the closing stock that the procurement policy of the Board was defective. During the period from 2007-08 to 2011-12, the closing stock in terms of months consumption ranged between 19 months and 59 months. Further, the Board had neither made any ABC analysis, nor fixed any standard minimum level or reorder level of their material requirement.

The Board stated (October 2012) that the equipments being vital for system are purchased once for coming three to four years for requirement in case of emergency and since the above equipments were not easily available in the market, the manufacturers had to design and manufacture as per required specification. Hence, it was general practice in the Board to keep stock of such emergency equipments in order to avoid outage. The reply is not convincing as the Board had neither made any ABC analysis, nor fixed any standard minimum level or reorder level of their material requirement and the closing stock in terms of months consumption ranged between 19 to 59 months which indicated defective procurement policy.

***Non-conducting of physical verification of stocks in the stores***

**3.40** As per Para 7.141 of the Financial and Accounts Code of the Board, the verification of the stock would be a continuous process by a special staff of stock verifiers. The Board would draw out a programme of verification annually and fix mandays for each store.

There were Seven Transmission Stores under the control of the Board. The Physical Verification (PV) of the stores was, however, not being conducted annually in compliance with the provisions of the Financial and Accounts Code. During 2007-08 to 2011-12, PV was conducted only in 2007-08 and 2011-12. The PV was last conducted in Patna circle store (including sub stores) in January 2008 and in Muzaffarpur store in April 2011.

Further, the reconciliation of the above stock could not be made as the PV of all the stores was not being done annually. The Board had not taken action to conduct survey reports and dispose of the scrap/obsolete material, which could have earned revenue and resulted in creation of space for stocking of other materials.

### *Excess purchase of materials*

**3.41** For operation and maintenance of the transmission system of the Board, necessary equipments (Current Transformer, Potential Transformer, Circuit Breaker, etc.) were purchased centrally by the Board on the basis of the requirements received from the field offices.

The Board placed (July 2009) a purchase order (PO) for supply of 184 Current Transformers (CTs) of 132 KV capacity which included 72 of CT of 600/300/150/1-1-1-1 Amp specification.

We observed that the requirement received from the field offices was not properly analysed. As against requirement of 21 CTs in three circles<sup>16</sup>, the Board inflated the requirement to 57 CTs without recording any justification for the same.

Test check of records of Circle Store under ETC, Patna, revealed that out of 48 CTs received, 47 purchased for ₹ 0.47 crore were lying idle without use from March 2010 to March 2012 and the guarantee period of the above CTs had also expired.

Thus, purchase of 47 CTs of ₹ 0.47 crore without requirement resulted in blockade of funds for last two years.

The Board stated (October 2012) that the requirement submitted by the Dehri-on-sona was for 15 sets i.e. 45 CTs. Hence, there was no failure in analysing the requirement by the Board. The reply was not based on facts, as the requirement sent by Dehri-on-sona was for five sets only (two sets for Dehri SS, one set each for Sonenagar SS, Karmanasa SS and Dumraon SS). The reply was silent about non-utilisation of CTs in ETC Patna.

### **Monitoring and Control**

**3.42** The performance of the SSs and lines of 400/220/132 KV on various parameters like Maximum and Minimum voltage levels, breakdowns, voltage profiles should be recorded /maintained as per the Grid code standards. We observed that the year-wise cumulative performance of the SSs and lines were neither being maintained nor consolidated for evaluation of annual performance of the SSs and lines.

Further, the field Divisions of Transmission lines and Sub-station (TL&SS) units compile the monthly MIS reports indicating the performance of the units as well as equipments installed. Verification of MIS reports of field

<sup>16</sup> 15 by ETC, Dehri-on-sona, three CTs by ETC, Patna and three by ETC, Gaya.



units revealed that details regarding programmed overhaul of equipments like Circuit Breakers, due dates of next oil change, On Load Tap Changer operations, dates of maintenance works, performance of SS batteries, performance of relays, were not being mentioned in the MIS report.

Schedule maintenance of various transmission lines and Grid Sub-stations was not being done by the Board. As a result the transmission lines tripped 432 times, including 196 trippings due to snapping of conductors, during 2007-08 to 2011-12. There were 76 trippings in 2007-08 which increased to 130 trippings (71 *per cent*) in 2011-12.

The Board stated (October 2012) that patrolling of transmission line was regularly done to locate any probability of faults viz. loose jumper, heated point, hardware failures etc. and any probability of fault detected was attended immediately. Further, with respect to tripping of lines, the Board stated that tripping was mainly due to sudden transient fault, loose jumper, disconnected jumpers, snapping of earth wire, etc. and due to sudden puncture of fitted disc insulator which caused earth fault. The reply of the Board is not convincing as all the reasons for tripping as mentioned by the Board could have been avoided by regular/effective patrolling and timely action on the detection of faults. The reply was silent about the deficiencies as pointed out in the MIS report

#### ***Review of the envisaged benefits of T&D schemes***

**3.43** The Board executed and commissioned 19 EHT SSs and erected a total length of 841 CKM of EHT lines during the last five year ending March 2012. While approving the T&D schemes, the Board envisaged benefits in terms of reduction in line losses, improvement in voltage levels and the load growth to be achieved by the new schemes. It was, however, observed that the Board failed to derive the envisaged benefit of the T&D schemes. We noticed that the transmission losses increased from 7.41 *per cent* in 2007-08 to 9.75 *per cent* in 2011-12. Voltage level of 220/132 and 132/33 KV level ranged between 252-177 KV and 154-98 KV respectively which violated the norms of Indian Electricity Grid Code. Thus, the Board failed to achieve the objectives envisaged in the schemes.

#### ***Theft of material due to poor monitoring***

**3.44** Circuit of 132 KV XLPE Cable (Cable) laid along Rajendra Bridge, Hathidah was being utilised for supplying power from Hathidah SS to BTPS via Simaria (from south Bihar to North Bihar). The Board decided (May 2008) to abandon and dismantle the cable and the same was to be kept in stores for further utilisation. Further, for safety of the cable till dismantling, a private security agency was engaged (November 2007). According to the terms of deployment, the agency was to be held responsible for any theft/loss. The work order for dismantling the cable was allotted in January 2011 to two tenderers at a cost of ₹ 15.36 lakh each.

**The Board failed to finalise the tender in time for dismantling of cable resulting in loss of ₹ 1.50 crore on account of theft/damage and on security of cable**

Audit scrutiny revealed that from the date of decision of the Board to dismantle the cable (May 2008) and award of work (January 2011), 862 meters valuing ₹0.68 crore<sup>17</sup> was stolen and 519.5 meter valuing ₹ 0.41 crore was damaged by miscreants. Further, an amount of ₹ 0.41 crore was also incurred by the Board on payment for security of the cable. Thus, the Board failed to finalise the tender in time and took 32 months in awarding the work for dismantling of cable. As a result, the Board sustained the loss of ₹ 1.50 crore on account of theft/damage of cable ( ₹ 1.09 crore) and security of cable ( ₹ 0.41 crore).

Further, no action was taken by the Board to recover the loss due to theft/damage of cable from the private security agency, although it was provided in the terms of deployment.

The Board stated (October 2012) that several incidents of theft occurred which could not be stopped despite several attempts and the cable was damaged at several spots and was not repairable. The Board also accepted the fact there was delay in finalising the tender for dismantling of cable. The Board, however, did not offer any reply about recovery from the security agency for theft /loss as per terms and conditions of their deployment.

### **Conclusion**

- **The Board had not prepared year-wise plan for addition/augmentation in the Transmission System of Bihar. Instead, the planning was done by the Power Grid Corporation of India Limited on behalf of the Board.**
- **The Board did not comply with the recommendations of the Task Force on transmission projects constituted by Ministry of Power (MoP), Government of India (GoI), as a result, the projects could not be completed within stipulated time and led to cost and time overrun.**
- **Operation of the transmission system was not efficient and effective. As a result, the transmission losses of the Board were in excess of the norms, the voltage level of SSs were not maintained within the limits, 132 KV feeders were found loaded beyond their Thermal Loading Limit.**
- **The Board received several violation messages from the Eastern Region Load Dispatch Centre due to excess drawal of power. Disaster management facilities of the Board were not adequate. There was no system in place to take the periodical test of working transformers.**
- **Energy accounting system of Board was not effective as existence of high percentage of losses and negative losses were found.**

---

<sup>17</sup> (Calculated at the rate of ₹ 7919.737/meter as replacement cost quoted by supplier in July 2007).

Energy audit was not done by the Board and its activities were limited to compilation of energy reading reports.

- Huge quantity of closing stock indicated that the procurement policy of the Board was defective. Physical Verification of the stock was not done annually and no action was taken to conduct survey and dispose of the scrap/obsolete material by the Board.
- The monitoring system of the Board was not effective. The MIS report was ineffective as important information such as schedules for periodic maintenance of the equipments/lines was not mentioned.

#### **Recommendations**

- The Board should prepare short-term as well as perspective plan for strengthening of transmission system in Bihar.
- Effective steps should be taken to comply with the recommendations of the Task Force on transmission projects constituted by MoP, GoI, so as to avoid delay in completion of the projects.
- The Board should implement effective measures such as installation of accurate meters and conducting energy audits regularly to reduce the transmission losses in phased manner.
- Operation of the transmission system should be carried out on the basis of Grid code and should ensure the compliance of the various norms of the Grid code regarding voltage limits of SSs and Conductors.
- The Board should ensure availability and adequacy of Disaster management facilities in the transmission system.
- The Board should review its procurement policy in regard to stores so as to avoid huge accumulation of stock. Besides, physical verification of stores ought to be done annually in terms of Finance and Accounts Code.
- The Monitoring system of the Board should include preparation of schedules for periodic maintenance of the equipments and its execution.

# **CHAPTER III**

## **3. PERFORMANCE AUDIT RELATING TO STATUTORY CORPORATION**

### **3. PERFORMANCE AUDIT ON POWER TRANSMISSION ACTIVITY OF BIHAR STATE ELECTRICITY BOARD**

## Chapter-III

### 3. Performance Audit on Power Transmission Activity of Bihar State Electricity Board

#### Executive Summary

##### *Introduction*

*Transmission of electricity and Grid operations in Bihar are managed and controlled by Bihar State Electricity Board (Board). As on 31 March 2007, the Board had a transmission network of 5559.05 Circuit Kilometer (Ckm) and 67 Extra High Tension (EHT) Sub-stations (SSs) which rose to 6400 Ckm and 86 SSs with installed capacity of 7078 Mega volt ampere (Mva), by 31 March 2012. The quantity of energy transmitted increased from 7371.44 Million Units (MUs) in 2007-08 to 10799.30 MUs in 2011-12. The performance audit of the Board was conducted to assess the economy, efficiency and effectiveness of its transmission activities.*

##### *Planning and Development*

*The Board did not prepare any State Electricity Plan (SEP) during the period covered under Performance Audit. Further, year-wise Short Term plan for addition/augmentation in the transmission system of Bihar was also not prepared by the Board. However, Detailed Project Reports for strengthening of transmission system in Bihar was prepared by the Power Grid Corporation of India Limited (PGCIL) on behalf of the Board. Further, the Board also took decision for construction of five SSs and five transmission lines during the above period.*

##### *Capacity Additions*

*The capacity creation of SSs and lines did not meet the targets, as only 19 SSs and 841.16 Ckm of EHT lines were constructed during the five year period against the target of 30 SSs and 2202.30 Ckm of EHT lines. The shortfall was due to delay in completion of the projects.*

##### *Project Management*

*The Board could not complete its projects as per schedule. We noticed instances of time overrun ranging from four to 78 months and cost overrun of ₹ 2.71 crore during the period 2007-2012. Shortfall in achievement of targeted additions were attributable to delay in finalisation of tenders, delay in getting approvals from railways, delays in approval of drawings and designs, delay in land acquisition, etc.*

##### *Operation and Maintenance*

*The overall transmission capacity was in excess of the requirement for every year. The Board failed to ensure the maximum and minimum voltages as per the norms. Out of 38 feeders in Patna Zone, eight feeders were loaded above 366 amps. Out of eight 220 KV SSs (three single bus bar SSs and five double bus bar SSs), Bus Bar Protection Panel (BBPP) was provided at four SSs only.*

##### *Maintenance*

##### *Performance of Power Transformers*

*Out of 16 transformers failed during the period covered in the Performance Audit, two caught fire and burnt due to failure of the installed protection system, four transformers failed due to failure of buchholz and differential relay, two failed due to failure of winding, and the remaining eight failed due to internal defects which could have been avoided by conducting periodical test and proper maintenance.*

##### *Transmission losses*

*The transmission losses ranged between 5.13 per cent and 9.75 per cent and exceeded the norms of four per cent of CEA and BERC in all the five years up to 2011-12. The quantum of transmission*

loss suffered by the Board in excess of the norms for the period 2007-08 to 2011-12 was 1830.29 MU valued at ₹ 710.40 crore. The reasons for excess transmission loss included non-accounting of energy consumed by sub-station transformers and excessive transformation losses by the old power transformers.

#### **Grid Management**

Out of 86 SSs and one generator, only eight (9.3 per cent) Remote Terminal Units were found utilised as on June 2012. Further, the Board received 135 (A type), 71 (B type) and 79 (C type) messages from Eastern Region Load Dispatch Centre for violation of Grid norm during 2007-12.

#### **Financial Management**

We noticed that the Board failed to increase the contract demand of consumer as per provisions of the tariff order which resulted in short billing and loss of revenue of ₹ 11.67 crore

Further, the Board delayed the process of entering into agreement with the consumer which deprived the Board to earn revenue of ₹ 8.08 crore.

#### **Material Management**

The Board had huge quantity of the closing stock which indicated that the procurement policy of the Board was defective. During the period from 2007-08 to 2011-12, the closing stock in terms of months consumption ranged between 19 to 59 months.

#### **Non-conducting of Physical verification of stocks in stores**

The Physical Verification (PV) of the stores was not being conducted annually and was conducted only in 2007-08 and 2011-12. Further, the Board had not taken action to conduct survey reports and dispose of the scrap/obsolete material, which could have earned revenue.

#### **Monitoring and control**

Management Information System (MIS) implemented for monitoring the operations of SSs was incomplete. The Board failed to finalise the tender in time for dismantling the cable and sustained the loss of ₹ 1.50 crore on account of theft/damage of cable and security of cable.

#### **Conclusion and Recommendations**

The Board did not prepare year-wise plan for addition/augmentation in the Transmission System of Bihar. Operation of the transmission system was not efficient and effective, as a result, the transmission losses of the Board was in excess of the norms, the voltage level of SSs were not maintained within the limits, feeders were found loaded beyond their Thermal Loading Limit. Disaster management facilities of the Board were not adequate. Energy accounting system of Board was not effective as existence of high percentage of losses and negative losses were found. Energy audit was not done by the Board. Huge quantity of closing stock indicated that the procurement policy of the Board was defective. Physical Verification of the stocks were not done annually and no action were taken to conduct survey and dispose of the scrap/obsolete material by the Board. The monitoring system of the Board was not effective as a result of which, transmission lines tripped several times.

The audit made seven recommendations which included preparation of short-term as well as perspective plan, compliance of the recommendation of the Task Force to avoid delays in construction, operation of the transmission system carried as per norms, implementing effective measures to reduce transmission losses, ensuring availability of adequate disaster management facility, reforming the purchase wing and monitoring activities.

## Introduction

**3.1** With a view to supply reliable and quality power to all by 2012, the Government of India (GoI) prepared the National Electricity Policy (NEP) in February 2005 which stated that the Transmission System required adequate and timely investment besides efficient and coordinated action to develop a robust and integrated power system for the country. It also, *inter-alia*, recognised the need for development of National and State Grids with the coordination of Central/ State Transmission Utilities.

Transmission of electricity and Grid operations in Bihar are managed and controlled by Bihar State Electricity Board (Board) which is mandated to provide an efficient, adequate and properly coordinated Grid management and transmission of energy. The Board reports to Energy Department of Government of Bihar. The Board was constituted in 1958 under Section 5 of the Electricity Supply Act, 1948. The Board is engaged in the business of generation, transmission and distribution of electricity in the State of Bihar. In terms of Section 172 of the Electricity Act, 2003, the Board constituted under the repealed laws shall be deemed to be the State Transmission Utility (STU) and a licensee under the provisions of the Act for a period of one year from 10 June 2003 i.e. the appointed date. On the request of Government of Bihar from time to time Ministry of Power, Government of India has agreed (August 2012) to extend the time upto 31 December 2012 to continue the Board to function as a STU and Distribution licensee.

**3.2** The Management of the Board is vested in the Board of Members with seven members appointed by the State Government. The day-to-day operations are carried out by the Chairman of the Board with the assistance of Member (Administration), Member (Finance and Revenue), Member (Transmission), Member (Generation) and Secretary. During 2007-08, 7371.44 Million Units (MUs) of energy was transmitted by the Board which increased to 10799.30 MUs in 2011-12, i.e. an increase of 47.18 *per cent* during 2007-12. As on 31 March 2012, the Board had transmission network of 6400 Circuit Kilometer (Ckm) and 86 sub-stations (SSs) with installed capacity of 7078 Mega volt ampere (Mva) (2450 Mva at 220/132 KV and 4628 Mva at 132/33 KV), capable of annually transmitting 15023.40 MUs at 220 KV. The turnover of the Board was ₹ 5268.79 crore in 2011-12, which was equal to two *per cent* of the State Gross Domestic Product. The number of employees in the Board was 10278 as on 31 March 2012.

### Power Sector Reforms in Bihar

**3.3** As part of the Power Sector Reforms, the Bihar State Electricity Board (Board) was to be unbundled. The Government of Bihar (GoB) decided (March 2012) to form and operate five Companies i.e Bihar State Power (Holding) Company Limited, Bihar State Power Transmission Company Limited, Bihar State Power Generation Company Limited, South Bihar Power Distribution Company Limited and North Bihar Power Distribution Company Limited. These companies have commenced their business with effect from 01 November 2012.



A Performance Audit on Incomplete Transmission Schemes of Bihar State Electricity Board was included in the Report of the Comptroller and Auditor General of India (Commercial), Government of Bihar for the year ended 31 March 2003. The Report was discussed by COPU in July 2010.

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

**3.4** The Performance Audit conducted during April 2012 to July 2012 covered the five years period from 2007-08 to 2011-12. Audit examination involved scrutiny of records of different wings at the Head Office of the Board, State Load Dispatch Centre (SLDC), five<sup>1</sup> out of seven Circles and eight<sup>2</sup> out of 16 Transmission Divisions located in the State.

The Board constructed 19 Sub-stations (SSs) (capacity: 940 Mva) and 28 lines (capacity: 841.16 Ckm) (including 15 SSs and 24 lines constructed by Power Grid Corporation of India Limited (PGCIL) on behalf of the Board), as well as augmented existing transformation capacity by 1660 Mva during the Performance Audit period. Out of four SSs and four lines (length 52 Ckm) constructed by the Board, two SSs (capacity: 80 Mva), four lines (Length: 52 Ckm) and augmentation of existing transformation capacity by 170 Mva were examined. Selection of the sample was done on the basis of capacity of the working SSs in the Divisions using random selection method.

The methodology adopted for attaining audit objectives with reference to audit criteria consisted of explaining audit objectives to the top management in the entry conference, scrutiny of records at Head Office and selected units, interaction with the audited entity's personnel, analysis of data with reference to audit criteria, raising of audit queries, discussion of audit findings with the Management and issue of draft Performance Audit to the Management/ Government for comments.

### **Audit Objectives**

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

- Perspective Plan was prepared in accordance with the guidelines of the National Electricity Policy/ Plan and Bihar Electricity Regulatory Commission (BERC) and assessment of impact of failure to plan, if any;
- The transmission system was developed and commissioned in economical, efficient and effective manner;
- Operation and maintenance of transmission system was carried out in economical, efficient and effective manner;
- Disaster Management System was set up to safeguard its operations against unforeseen disruptions;

---

<sup>1</sup> Electric Transmission Circle, Patna, Muzaffarpur, Biharsharif, Gaya and Dehri-on-sona.

<sup>2</sup> Electric Transmission Division, Khagaul, Patna, Muzaffarpur, Motihari, Hazipur, Biharsharif, Gaya and Dehri-on-sona.



- Effective Energy Accounting and Audit was in place;
- There was an effective and efficient Financial Management system with emphasis on timely raising and collection of bills;
- Efficient and effective system of inventory control mechanism was in existence; and
- There was a monitoring system in place to review performance of Sub-stations and lines as per Grid Code Standards, preparation of Management Information System (MIS) Reports.

### Audit Criteria

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

- Provisions of National Electricity Policy / Plan and National Tariff Policy;
- Perspective Plan and Project Reports of the Board;
- Standard procedures for award of contracts with reference to principles of economy, efficiency, effectiveness, equity and ethics;
- Report of the Task force constituted by the Ministry of Power to analyse critical elements in transmission project implementation;
- Manual of Transmission Planning Criteria (MTPC) such as Thermal Loading Limit of 366 ampere for ACAR Panther conductor,
- Code of Technical Interface (CTI)/ Grid Code consisting of planning, operation, connection codes viz. Voltage level of 198-245 KV and 119-145 KV for 220 KV and 132 KV SSs respectively, Control Measures such as installation of Bus Bar Protection Panels, etc.;
- Norms/Guidelines with respect to transmission loss issued by BERC/Central Electricity Authority (CEA);
- Report of the Committee constituted by the Ministry of Power recommending the “Best Practices in Transmission”; and
- Reports of Eastern Region Power Committee (ERPC)/ Eastern Region Load Dispatch Centre (ERLDC).

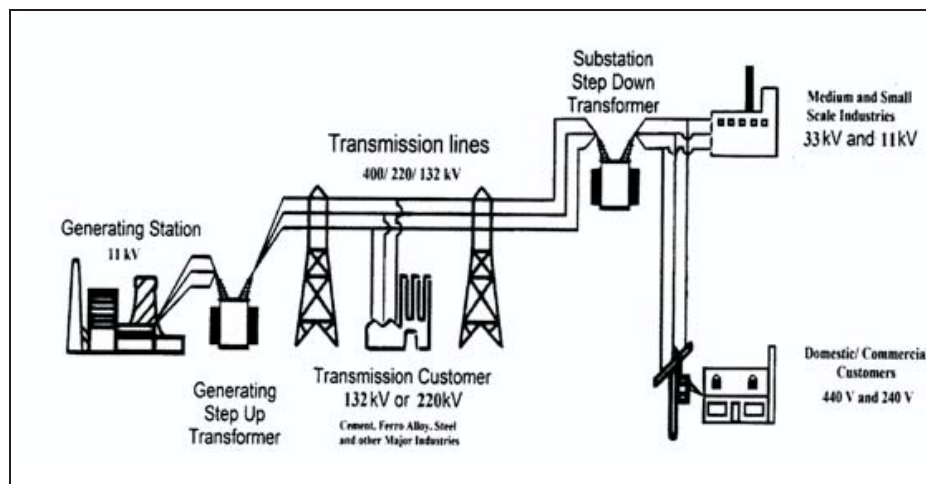
### Brief description of transmission process

**3.7** Transmission of electricity is defined as bulk transfer of power over long distances at high voltages, generally at 132 KV and above. Electric power generated at relatively low voltages in power plants is stepped up to high voltage power before it is transmitted to reduce the loss in transmission and to increase efficiency in the Grid. Sub-stations (SSs) are facilities within the high voltage electric system used for stepping-up/ stepping down voltages from one level to another, connecting electric systems and switching equipment in and out of the system. The step-up transmission SSs

at the generating stations use transformers to increase the voltages for transmission over long distances.

Transmission lines carry high voltage electric power. The step down transmission SSs, thereafter, decreases voltages to sub transmission voltage levels for distribution to consumers. The distribution system includes lines, poles, transformers and other equipment needed to deliver electricity at specific voltages.

Electrical energy cannot be stored; hence generation must be matched to demand of power. Therefore, every transmission system requires a sophisticated system of control called Grid management to ensure balancing of power generation closely with the demand. A pictorial representation of the transmission process is given below:



**Audit Findings**

**3.8** We explained the audit objectives to the Board during an ‘Entry Conference’ held on 18 April 2012. Subsequently, audit findings were reported to the Board and the State Government in September 2012 and discussed in an ‘Exit Conference’ held on 29 November 2012. The Exit Conference was attended by Deputy Secretary, Energy Department, Government of Bihar, Chairman and other officials of the Board. The views expressed by the Board have been considered while finalising this Performance Audit. The audit findings are discussed in the subsequent paragraphs.

**Planning and Development**

*National Electricity Policy/Plan*

**3.9** The Central Transmission Utility (CTU) and the State Transmission Utilities (STUs) have the key responsibility of network planning and development based on the National Electricity Plan in coordination with all concerned agencies. At the end of Tenth Plan (March 2007), the transmission system in the country at 765/HVDC/400/230/220/KV stood at

1.98 lakh circuit kilometres (Ckm) of transmission lines which was planned to be increased to 2.93 lakh Ckm by the end of Eleventh Plan i.e. March 2012. The National Electricity Plan assessed the total inter-regional transmission capacity at the end of 2006-07 as 14100 mega watt (MW) and further planned to add 23600 MW in Eleventh Plan bringing the total inter-regional capacity to 37,700 MW.

Similarly, the Board's transmission network at the beginning of 2007-08 consisted of 67 Extra High Tension (EHT) SSs with a transmission capacity of 4478 Mva and 5559.05 Ckm of EHT transmission lines. The transmission network as on 31 March 2012 consisted of 86 EHT SSs with transformation capacity of 7078 Mva and 6400 Ckm of EHT transmission lines with an increase of 28.36, 58 and 15.13 *per cent* respectively over the year 2007-08.

**The Board neither prepared any State Electricity Plan (SEP) nor year-wise Short Term plan for addition/augmentation in the transmission system of Bihar**

The STU was responsible for planning and development of the intra-state transmission system. Assessment of demand is an important pre-requisite for planning capacity addition. We observed that the Board did not prepare any State Electricity Plan (SEP) during the period covered under Performance Audit. Further, year - wise Short Term plan for addition/augmentation in the transmission system of Bihar was also not prepared by the Board. However, for strengthening the sub-transmission system in Bihar, Detailed Project Reports (Phase-II, Part-I and Part-II) containing planning for additions in the capacity of sub-stations and transmission lines during 2007-08 to 2011-12 was prepared by the Power Grid Corporation of India Limited (PGCIL) on behalf of the Board containing plan for construction of 25 SSs (1740 Mva), 50 lines (1967.30 Ckm) and augmentation of capacity of 1630 Mva. Further, the Board also took decision for construction of five SSs and five transmission lines (length: 235 Ckms) during the above period.

The Board, in reply, accepted (October 2012) that year-wise plan/augmentation of transmission system in Bihar was not prepared by the Board, but based on the study done by PGCIL a comprehensive plan for strengthening of Transmission System of Bihar was prepared which was to be completed over a period of 18 to 30 months from execution of the agreement.

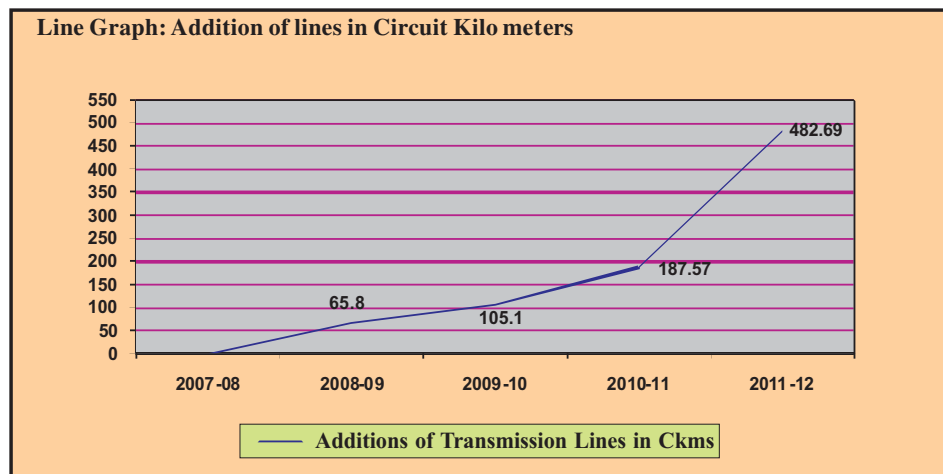
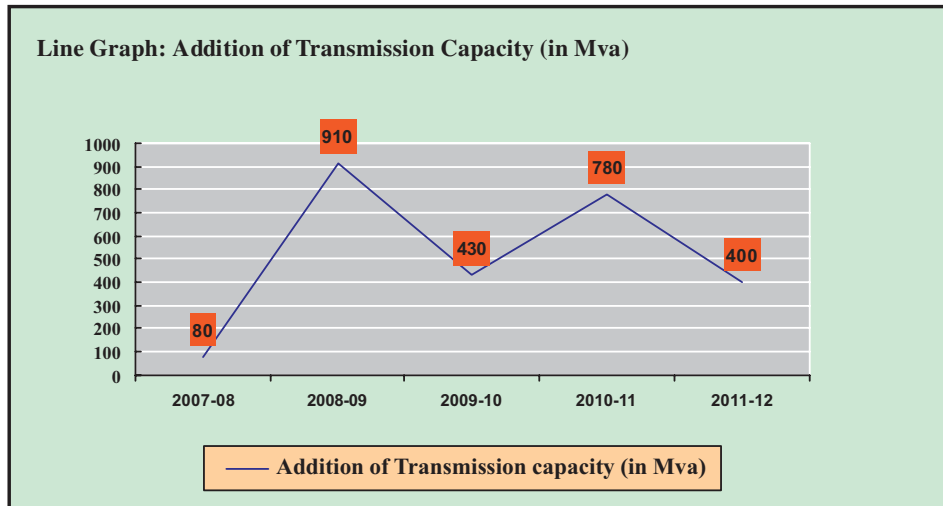
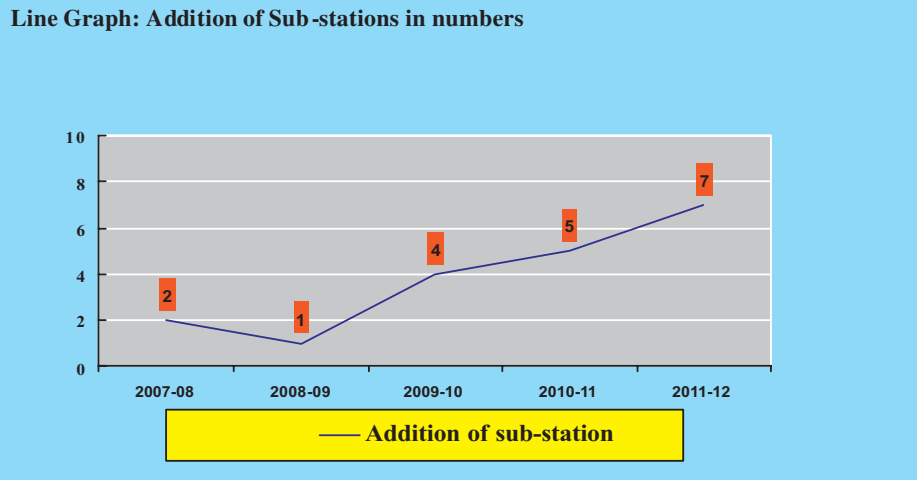
### ***Transmission network and its growth***

**3.10** The transmission capacity of the Board at EHT level during 2007-08 to 2011-12 is given in *Annexure – 7*.

It can be seen from the annexure that the year-wise planning for addition of sub-stations, capacity augmentation and new transmission lines was not done by the Board.

We observed that against the targeted construction of 30 EHT SSs and laying of 2202.30 Ckm of EHT lines (including 25 SSs and 1967.30 Ckm of line to be constructed by the PGCIL), the Board/PGCIL constructed 19 EHT SSs and 841.16 Ckm EHT lines during the five year period with an achievement of 63 per cent and 38 per cent respectively. The transmission

capacity of 2600 Mva was added against 4060 Mva planned (3370 Mva by PGCIL and 690 Mva by the Board) for addition for the five year period ending 2011-12.



Our audit scrutiny revealed that shortfall in achievement of targeted additions was attributable to delay in completion of the projects due to various reasons such as delay in acquisition of land, Right of way problem, delay in getting approvals from railways, delay in finalisation of tenders, etc. The reasons are discussed in detail in paragraph no. 3.12, 3.13 and 3.14.

The Board accepted (October 2012) that there were some shortfall and time overrun in targeted addition which was mainly due to issues not controllable by the Board viz. delay in land acquisition, hindrance from local people and ROW problem. The reasons viz. delay in finalisation of tenders, getting approvals from railways, approval of drawings and designs etc., were controllable and could have been avoided by better coordination and timely action.

### **Project management of transmission system**

**3.11** A transmission project involves various activities from concept to commissioning. Major activities in a transmission project are (i) Project formulation, Appraisal and Approval Phase and (ii) Project Execution Phase. For reduction in project implementation period, the Ministry of Power, Government of India constituted a Task Force on transmission projects (February 2005) with a view to:

- analyse the critical elements in transmission project implementation,
- implementation from the best practices of CTU and STUs, and
- suggest a model transmission project schedule for 24 months' duration.

The Task Force suggested and recommended (July 2005) the following remedial actions to accelerate the completion of Transmission systems.

- Undertake various preparatory activities such as surveys, design & testing, processing for forest and other statutory clearances, tendering activities, etc. in advance/parallel to project appraisal and approval phase and go ahead with construction activities once Transmission Line Project sanction/approval is received;
- Splitting the transmission projects into clearly defined packages in such a way that the packages can be procured and implemented requiring least coordination and interfacing and at same time it attracts competition facilitating cost effective procurement; and
- Standardise designs of tower fabrication so that six to 12 months can be saved in project execution.

**3.12** We observed that all the construction projects were carried out by the Board on turnkey basis wherein the contractors were required to undertake various preparatory activities such as surveys, design & testing, processing for forest and other statutory clearances, etc. contrary to the recommendation of the task force which ultimately resulted in delay in completion of the projects.

Notwithstanding the elaborated guidelines given by the Task Force for timely completion of the projects, the Board failed to execute several SSs and Lines during 2007-12 as detailed below:

Capacity in KV	Total No. constructed		Delay in construction (Numbers)		No. test checked by Audit		Time overrun <sup>3</sup> (Range in months)		Cost overrun (₹ in crore)	
	SSs	Lines	SSs	Lines	SSs	Lines	SSs	Lines	SSs	Lines
220	01	02	01	02	-	-	-	-	-	-
132	18	26	17	26	02	04	72 to 78	4 to 72	4.12	2.71
<b>Total</b>	19	28	18	28	02	04			4.12	2.71

Out of total 19 SSs and 28 transmission lines constructed during the period covered in Performance Audit, 15 SSs and 24 transmission lines were constructed by PGCIL on behalf of the Board, out of which 14 SSs and 24 transmission lines were completed with a delay ranging from two to 38 months. The Board constructed remaining four SSs and transmission lines each during above period with delay ranging between four to 78 months.

Reasons for delay in construction of SSs and Transmission Lines as observed in audit were delay in approval of survey and soil investigation report by the Board, Right of way (ROW) problems, delay in acquisition of land, delay in finalisation of tenders and award of work orders, delay in execution of the projects by the contractors, not seeking timely clearances from Railways, etc. Besides, the standardised designs for tower fabrication was not prepared by the Board, also delayed the projects.

Some of the instances of time and cost overrun in construction of SSs, transmission lines and other construction projects are discussed in details below:

#### *Time and cost overrun in construction of Sub-station at Sherghati*

**3.13** For construction of 40 Mva SS at Sherghati and its associating 132 KV line from Gaya to Sherghati on turnkey basis, Notice Inviting Tender (NIT) with an estimated cost of ₹ 14 crore was floated in December 2003. As per terms and conditions of the NIT, the validity period of the bid was 180 days from the date of opening of technical and financial part of bid. In response to the NIT, one bid (M/s Alstom India Ltd.) was received (January 2004). The price quoted by the bidder was ₹ 18.46 crore. The Board instead of finalising the tender within the validity period of 180 days (upto July 2004), invited (December 2004) the firm for negotiation and requested the firm to extend the quoted validity period which was not accepted by the bidder citing the reasons of increase in the cost of materials. The Board decided (June 2005) to go for a fresh tendering process with revised estimated cost of ₹ 21.50 crore but no bid was received in response to second tender. The Board again invited tender (July 2006) and the work was finally awarded (May 2008) at a cost of ₹ 22.14 crore. The work was

<sup>3</sup> Test checked in audit.

scheduled to be completed within 18 months from the date of award of work. The work was completed in January 2012 with a delay of more than six years from the date of validity period of first NIT. Further, there was delay of 14 months from the scheduled date of completion as per work order. This resulted in cost overrun of ₹ 3.68 crore.

**Non-finalisation of tender within validity period of bid resulted in delay in completion of SS by six years and cost overrun by ₹ 3.68 crore**

We observed that the Board failed to take decision within the validity period at the time of first tender regarding award of work to single tenderer, whose quoted rate was higher than the estimated price

Thus, due to failure in finalisation of tender within validity period, the project was delayed by more than three and half years even before commencement of execution and also the Board had to incur an extra expenditure on the project.

The Board stated (October 2012) that there was single bid received and rate was very high with discrepancy in price part. The firm was ultimately called for rate negotiation but the firm declined to reduce the rate and the tender was cancelled. The reply does not explain as to why the first tender was not finalised within the validity period of bid. Further, the estimated price given in NIT was for idea purpose only and comparison of the bid with the same was not proper. The discrepancy with respect to price part in bid was also clarified by the bidder before expiry of validity period and finally the work was awarded to single tenderer in May 2008.

#### ***Unplanned construction of Sub-station at Masaurhi***

**3.14** For construction of a SS of 40 Mva capacity at Masaurhi, the Board issued a work order (August 2000) to M/s Bhojpur Construction Pvt. Ltd. (Contractor) at a cost of ₹ 5.12 crore. Material for the work was to be supplied by the Board. As per the work order the scheduled completion period of work was 15 months i.e. October 2001.

After completing one third of the work, the Contractor stopped (November 2001) the work due to non-availability of structure, design of foundation and drawings of transformer/breaker, delay in payment of bills, etc. In March 2005, the Board, after receiving a sum of ₹ five crore from Government of Bihar, again requested the contractor to execute the left over work. The Contractor demanded a price escalation which was refused by the Board. The Board decided to construct the SS departmentally and the same was completed (May 2008) at a cost of ₹ 6.86 crore.

**By awarding the work without proper planning, the construction work of SS was delayed by more than six years which resulted in cost overrun of ₹ 1.74 crore**

We observed that there was lapse on the part of Government of Bihar in providing the fund which resulted in delays in execution. Besides, the Board also started the work without ensuring the required designs/drawings and equipments which indicated improper planning on the part of the Board.

Thus, awarding of the work without proper planning, the work of SS was delayed by more than six years which resulted in cost overrun of ₹ 1.74 crore.



The Board stated (October 2012) that due to various reasons such as non-availability of power transformer, paucity of fund, difficulty in transportation of construction materials, etc., the construction programme of Masaurhi SS was extended several times and could not be commissioned in time and suffered cost overrun due to price hike of materials. The fact remains that the commencement of execution of the projects without ensuring availability of adequate funds and equipments indicated improper planning on the part of the Board.

*Avoidable expenditure*

**3.15** As per agreement signed (May 2006) between Government of Bihar (GoB), PGCIL, Ministry of Power, Government of India (GoI) and the Board, the work of Renovation and Modernisation (R&M) of 220/132 KV Grid sub-station at Biharsharif was to be carried out by the Board. Total fund available for the above work was ₹ 26.89 crore. The Board awarded (September 2008) the work of R&M of sub-station at Biharsharif to M/s Techno Electric and Engineering Company Ltd. at a total cost of ₹29.26 crore. The scope of work included installation of one new 20 Mva 132/33 KV Transformer valuing ₹ 2.01 crore which was to be installed for exclusive utilisation in providing 33 KV supply to substation transformer (630 Kva×2) for lighting and other auxiliary purpose.

Further, as per above agreement, the work of augmentation of capacity of existing SSs in Bihar was being carried out by the PGCIL which included replacement of existing lower capacity transformers with higher capacity transformers. Accordingly, a 7.5 Mva 132/33 KV transformer was replaced (July 2008) with a new 20 Mva transformer at Sultanganj SS by PGCIL and as a result of the said replacement, the existing transformer of 7.5 Mva became idle and was kept in stores without any use till date (November 2012).

**Due to failure in taking prudent decision to utilise 7.5 Mva 132/33 KV spare transformer, the Board had to incur an avoidable expenditure of ₹ 2.01 crore**

We observed that the expenditure incurred on installation of a new transformer at Biharsharif could have been avoided by utilising the 7.5 Mva transformer (replaced at Sultanganj) for providing 33 KV supply to substation transformer at Biharsharif.

Thus, due to failure in taking prudent decision regarding utilisation of 7.5 Mva 132/33 KV spare transformer, the Board had to incur an avoidable expenditure of ₹ 2.01 crore.

The Board stated (October 2012) that the replaced transformer was very old and was in no way reliable for auxiliary supply to SS and kept as standby to meet the emergency. The reply is not based on the facts as the transformer was in normal condition and the same was sent (December 2009) to Hathidah SS for utilisation but could not be transported due to route constraints. Thus, it became idle due to imprudent decision taken by the Board and the Board incurred avoidable expenditure.



### Performance of transmission system

**3.16** The performance of the Board mainly depends on efficient maintenance of its EHT transmission network for supply of quality power with minimum interruptions. In the course of operation of Sub-stations and lines, the supply-demand profile within the constituent sub-systems is identified and system improvement schemes are undertaken to reduce line losses and ensure reliability of power by improving voltage profile. These schemes are for augmentation of existing transformer capacity, installation of additional transformers, laying of additional lines and installation of capacitor banks. The performance of the Board with regard to O&M of the system is discussed in the succeeding paragraphs.

#### *Transmission capacity*

**3.17** The Board, in order to evacuate the power from the Generating Stations and to meet the load growth in different areas of the State, constructs lines and SSs at different EHT voltages. A Transformer converts AC voltage and current to a different voltage and current at a very high efficiency. The voltage levels can be stepped up or down to obtain an increase or decrease of AC voltage with minimum loss in the process. The evacuation is normally done at 220 KV. However, the Board also evacuates the power at 132 KV. The transmission capacity (220 KV and 132 KV) created *vis-à-vis* the transmitted capacity (peak demand met) at the end of each year by the Board during the five years ending March 2012 was as follows :

Transmission capacity (in Mva)				
Year	Installed	After leaving 30 per cent towards margin	Peak demand including non-coincident demand	Excess/shortage (3-4)
1	2	3	4	5
2007-08	4558	3191	1244	1947
2008-09	5468	3828	1348	2480
2009-10	5898	4129	1508	2621
2010-11	6678	4675	1664	3011
2011-12	7078	4955	1712	3243

(Source: Information provided by the Board)

From the above table it would be observed that the overall transmission capacity was in excess of the requirement for the last five years ending March 2012. The existing transmission capacity excluding 30 per cent towards redundancy worked out to an excess of 3243 Mva at the end of March 2012. Further, in case of 15 test checked SSs constructed during 2007-12, the maximum load met during 2007-12 by seven<sup>4</sup> numbers of 132/33 KV sub-stations ranged between 5.8 MW and 10 MW (15 to 30 per cent of installed capacity) for a period ranging from three months to 60

<sup>4</sup> SSs at Belaganj, Dhaka, Masaurhi, Attaula karpj, Tekari, Hulasganj, Sheetalpur.

months. Thus, existence of extra/idle capacity in the transmission network and at the same time prevalence of overloads in eight feeders of Patna Zone as well as high voltages in 38 SSs of Patna and Muzaffarpur Zones, reflected unscientific planning in creation of transmission network.

The Board stated (October 2012) that installed capacity had been shown by adding capacity of 220/132 KV and 132/33 KV and the peak load is met mainly by capacity at 132/33 KV. The reply is not convincing as the peak load met by the Board also included power supplied to EHT consumers at 132 KV level which was fed from 220/132 KV SSs.

### ***Sub-stations***

#### ***Adequacy of Sub-stations***

**3.18** The Manual on Transmission Planning Criteria (MTPC) stipulates the permissible maximum capacity for different SSs i.e., 320 Mva for 220 KV and 150 Mva for 132 KV SSs. Scrutiny of the maximum capacity levels of SSs revealed that three<sup>5</sup> 220 KV and one<sup>6</sup> 132 KV SSs exceeded the permitted levels.

MTPC also prescribes that every SS of capacity 132 KV and above should have at least two transformers. Further, the Transmission Planning and Security Standards prescribed by MTPC indicated that the size and number of transformers in the SS shall be planned in such a way that in the event of outage of any single transformer the remaining transformer(s) could still supply 80 per cent of the load. However, we observed that only one transformer was found installed in Begusarai 220/132 KV SS, Vaishali and Biharsharif 132/33 KV SS.

The Board stated (October 2012) that MTPC provided general guidelines for optimum sizing of Grid capacity and exceeding the capacity was not a major issue. The reply, however, does not take cognizance of the fact that the capacity and number of transformers in the substations as prescribed by MTPC was for better and secure operation of Grid and should be followed for effective operation of transmission system.

#### ***Voltage management***

**3.19** The Licensees using intra-state transmission system should make all possible efforts such as installation of Capacitors, Reactors, Flexible Alternating Current Transmission system etc. to ensure that grid voltage always remains within limits. As per Indian Electricity Grid code STUs should maintain voltage ranges between 380-420 KV, 198-245 KV and 119-145 KV in 400 KV, 220 KV and 132 KV lines respectively.

The examination of the records of 220/132 KV bus voltages in five and three divisions of the Patna and Muzaffarpur Zone respectively for the

---

<sup>5</sup> Biharsharif, Bodh Gaya and Dehri-on-sone.

<sup>6</sup> Jakkanpur.

period from April 2007 to March 2012 revealed that in three 220/132 KV SSs the voltages recorded ranged between 252 KV and 177 KV while in 35 132/33 KV SSs voltage recorded ranged between 154 KV and 98 KV. Thus, the Board failed to ensure the maximum and minimum voltages as per the norms which caused frequent tripping of various transformers installed at SSs.

The Board stated (October 2012) that the voltage was regulated by On Load Tap Changer (OLTC) of transformer and capacitor bank installed at three SSs. Further, the Board also accepted that reactors for stepping down the voltage profile in case of high voltage condition has not been installed in Board's system and was depended on PGCIL's system.

### *Lines*

#### *EHT lines*

**3.20** As per MTPC, permissible line loading cannot normally be more than the Thermal Loading Limit (TLL). The TLL limits the temperature attained by the energized conductors and restricts sag and loss of tensile strength of the lines. The TLL limits the maximum power flow of the lines. As per MTPC the TLL of 132 KV line with ACSR<sup>7</sup> Panther 210 sq. mm. conductor should be 366 amps.

**Loading on lines beyond permissible limit resulted in voltage fluctuations, line losses and interruption / breakdowns in feeders**

Scrutiny of the line loadings on the 132 KV feeders revealed that, eight feeders out of 38 feeders in Patna Zone were loaded above 366 amps (367 to 450 amps). Loading of the lines beyond capacity resulted in voltage fluctuations in seven SSs, higher transmission losses in two feeders ranging from five *per cent* to 28.5 *per cent* and 77 interruptions / breakdowns in overloaded 132 KV feeders during the Performance Audit period.

The Board stated (October 2012) that in case of new transmission lines the average loading was done around 70 to 75 MW except in case of very extraordinary situation the loading pattern is maintained within the limits.

#### *Bus Bar Protection Panel (BBPP)*

**3.21** Bus bar is used as an application for inter connection of the incoming and outgoing transmission lines and transformers at an electrical Sub-station. BBPP limits the impact of the bus bar faults on the entire power network which prevents unnecessary tripping and selective to trip only those breakers necessary to clear the bus bar fault. As per Grid norms and Best Practices in Transmission System, BBPP is to be kept in service for all 220 KV Sss to maintain system stability during Grid disturbances and to provide faster clearance of faults on 220 KV buses. We observed that out of eight 220 KV SSs (three single bus bar SSs and five double bus bar SSs) where BBPP was required to be installed, the Board provided the panel only at four SSs.

---

<sup>7</sup> Aluminum Conductor Steel Reinforced.

**Maintenance**

**Performance of Power Transformers (PTRs)**

**3.22** Power Transformers are one of the most important and cost-intensive components of electrical energy supply networks. Thus, it is of special interest to prolong their life duration while reducing their maintenance expenditure. In order to gather detailed information about the operational conditions of PTRs, various kinds of oil analysis like the standard oil Dissolved Gas Analysis (DGA) tests are generally conducted. For PTRs' insulation, a combination of an insulating liquid and a solid insulation impregnated therewith are used. For an evaluation of the actual condition of this insulating system usually a DGA is used, as failures inside the PTRs lead to a degradation of the liquid insulation in such a way that the compound of the gases enables identification of cause of the failure.

The table below indicates status of failure of transformers during the years 2007-08 to 2011-12:

Year	No. of transformers at the beginning of the year	No. of transformers failed	No. of transformers failed within guarantee period	No. of transformers failed within normal working life	Expenditure on repair and maintenance (₹ in crore)
2007-08	111	06	Nil	06	6.26
2008-09	126	01	Nil	01	8.09
2009-10	139	01	Nil	01	10.33
2010-11	159	01	Nil	01	7.75
2011-12	176	07	Nil	07	8.03

*(Source: Information furnished by the Board)*

It would be seen from the table that 16 transformers failed during the period covered in the Performance Audit. Out of 16 transformers two (one 220/132 KV of 150 Mva capacity in March 2008 and another 132/33 KV of 20 Mva August 2010) caught fire and burnt due to failure of the installed protection system, four transformers failed (July-2008, August-2009, August-2011 and October 2011) due to failure of buchholz relay and differential relay, two failed (November-2007 and December 2007) due to failure of winding, one failed (May 2011) due to poor insulation and the remaining seven failed due to internal defects which could have been avoided by conducting periodical test.

**There was no system in place to conduct periodical test of working transformer to ensure their perfectness**

We observed that there was no system in place to conduct periodical test of working transformer to ensure the perfectness of various parameters. During test check of transformers installed at six<sup>8</sup> 220/132 KV SS, DGA test was done only once (July 2008) in SSs at Bodh Gaya. Instead of conducting periodical test, the Board conducts test only after failure of a transformer to assess the damaged parts of the transformers. Reasons for non-conducting of

<sup>8</sup> Biharsharif, Bodh Gaya, Dehri-on-Sone, Fatuha, Khagaul and Gopalganj.

periodical test were non-availability of required infrastructure and adequate shut-downs. Further, as per schedule, maintenance of the transmission equipments was to be taken up twice in a year i.e. summer and winter. However, in none of the SSs schedule maintenance was taken up during Performance Audit period.

The Board stated (October 2012) that Break Down Voltage (BDV) test is carried out to assess the insulation level. In case of low BDV value, filtration of oil is carried out and after that the oil samples are sent periodically in recognised Government laboratory. The reply of the Board was not based on the facts as test was carried out only once in one SS at Bodh Gaya.

### *Working of hot lines division/sub divisions*

**3.23** Regular and periodic maintenance of transmission system is of utmost importance for its un-interrupted operation. Apart from scheduled patrolling of lines, following techniques are prescribed in the Report of the Committee under chairmanship of Dr. S Mukhopadhyay for up-dating the best practices of Transmission in the country for maintenance of lines:

- Hot Line Maintenance.
- Hot Line Washing.
- Hot line Puncture Detection of Insulators.
- Preventive Maintenance by using portable earthing hot line tools.
- Vibration Measurement of the line.
- Thermo-scanning.
- Pollution Measurement of the equipment.

**None of the hot line techniques (except utilisation of Thermo-vision cameras) was available with the Board**

The Hot Line Technique (HLT) envisages attending to maintenance works like hot spots, tightening of nut and bolts, damages to the conductor, replacement of insulators, etc. of SSs and lines without switching off. This includes thermo scanning of all the lines and SSs towards preventive maintenance. HLT was introduced in India in 1958. We observed that none of the above mentioned hot line technique (except utilisation of Thermo-vision cameras) was available with the Board for regular and periodic maintenance during Performance Audit period. Further, separate hot line divisions/sub-divisions in the Board was not found in existence.

The Board accepted (October 2012) the fact and stated that Board would consider setting up of hot line maintenance division and creating the infrastructure.

### *Transmission losses*

**3.24** While energy is carried from the generating station to the consumers through the Transmission & Distribution (T&D) network, some energy is lost which is termed as T&D loss. Transmission loss is the difference between energy received from the generating station/Grid and energy sent

for Distribution. The details of transmission losses from 2007-08 to 2011-12 are given in table below:

Particulars	Unit	Year				
		2007-08	2008-09	2009-10	2010-11	2011-12
Power received for transmission	MUs	7961.30	8584.69	9836.58	10882.86	11965.88
Net power transmitted	MUs	7371.44	8144.14	9217.97	9898.16	10799.30
Actual Transmission loss	MUs	589.86	440.55	618.61	984.70	1166.58
	percentage	7.41	5.13	6.29	9.05	9.75
Transmission loss as per the CEA norm	percentage	4	4	4	4	4
Transmission loss as per BERC norms	percentage	4	4	4	4	4
Transmission loss in excess of BERC norm	MUs	271.48	97.01	225.26	548.50	688.04
	Rate per Unit in ₹	2.96	3.12	3.03	3.87	4.64
	₹ in crore	80.36	30.27	68.25	212.27	319.25

*(Source: Annual Accounts of the Board, Tariff orders of BERC and information furnished by the Board)*

**Failure to keep the transmission losses under CEA and BERC norms resulted in excess loss of 1830.29 MUs valued at ₹ 710.40 crore for the period 2007-08 to 2011-12**

As would be noticed the transmission losses ranged between 5.13 *per cent* and 9.75 *per cent* and exceeded the CEA and BERC norms of four per cent in all the five years up to 2011-12. The value of transmission loss suffered by the Board in excess of the norms for the period 2007-08 to 2011-12 was 1830.29 MUs valued at ₹ 710.40 crore.

Audit observed that the reasons for excessive transmission loss included idle charging of transmission lines to avoid theft of conductors, non-accounting of energy consumed by sub-station transformers used for sub-station lighting/auxiliary consumption due to non-installation of meters and excessive transformation losses by the old power transformers.

The Board stated (October 2012) that the figures of power received for transmission as per tie-flow plus own generation was less than the figures shown by audit and if the same was considered, the loss would be in the range of 3 to 6 *per cent*. We have, however, taken the figure for power received for transmission from Annual Accounts and the same has been considered for calculation of losses.

## **Grid Management**

### *Maintenance of Grid and performance of SLDC*

**3.25** Transmission and Grid Management are essential functions for smooth evacuation of power from generating stations to the State transmission utilities/consumers. Grid Management ensures moment-to-moment power balance in the inter-connected power system to take care of reliability, security, economy and efficiency of the power system. Grid



management in India is carried out in accordance with the standards/directions given in the Grid Code issued by CEA. National Grid consists of five regions viz., Northern, Eastern, Western, North Eastern and Southern Grids, each of these having a Regional Load Dispatch Centre (RLDC), an apex body to ensure integrated operation of the power system in the concerned region. The Bihar State Load Dispatch Centre (SLDC), a constituent of Eastern Regional Load Dispatch Centre (ERLDC), Kolkata, ensures integrated operation of power system in the State. The State Government notified (February 2007) that the SLDC shall be operated by the Board. The SLDC is not assisted by any Area Load Dispatch Centre (ALDCs) for data acquisition and transfer to SLDC and supervisory control of 132 KV and 33 KV equipments.

### *Infrastructure for load monitoring*

**3.26** Remote terminal Units/Sub-station Management Systems (RTUs/SMSs) are essential for monitoring the efficiency of the transmission system and the loads during emergency in Load Dispatch Centres as per the Grid norms for all Sub stations.

**Only eight (9.3 per cent) RTUs were found utilised as on October 2012. As a result real time loads of SSs during emergency could not be monitored and benefit of system could not be achieved**

We observed that there were 86 (eight 220/132 KV SSs and 78 132/33 KV SSs) SSs and one<sup>9</sup> generator in the transmission network of the Board, out of which 27 (31 per cent) SSs and one generator were provided with RTUs for recording of real time data for efficient Energy Management System. Out of 27 RTUs installed, five RTUs were not integrated with the system due to non-availability of link. Further, 14 RTUs were not in working condition till October 2012. Thus, only eight (9.3 per cent) RTUs were found utilised as on October 2012. As a result real time loads of SSs during emergency could not be monitored and benefit of system could not be achieved.

The Board accepted (October 2012) the facts and stated that PGCIL had been requested to do engineering for integration of all running and upcoming SSs with data tele-metering and voice communication.

### *Grid discipline by frequency management*

**3.27** As per Grid Code, the transmission utilities are required to maintain Grid discipline for efficient functioning of the Grid. All the constituent members of the Grid are expected to maintain a system frequency between 49 and 50.5 Hertz (Hz) (49.2 and 50.3 Hz with effect from April 2009). Due to various reasons such as shortages in generating capacities, high demand, non-maintaining load generation balance, inadequate load monitoring and management, Grid frequency goes below or above the permitted frequency levels. To enforce the Grid discipline, the ERLDC issues three types of violation messages viz. A, B and C.

- Message 'A' is issued when the frequency is less than 49.2 Hz and over-drawal is more than 50 MW or 10 per cent of schedule whichever is less.

<sup>9</sup> Barauni Thermal Power Station.



- Message ‘B’ is issued when frequency is less than 49.2 Hz and over-drawal is between 50 and 200 MWs for more than ten minutes or 200 MWs for more than five minutes.
- Message ‘C’ (serious nature) is issued 15 minutes after the issue of message ‘B’ when frequency continues to be less than 49.2 Hz and over drawal is more than 100 MW or ten per cent of the schedule whichever is less.

**The Board violated the Grid norms during 2007-08 to 2010-11, however, the instances of violation of Grid norms reduced considerably during 2011-12**

We observed that the Board received 135 (A type), 71 (B type) and 79 (C type) messages during five years period ending March 2012. Of these, the Board received 131 messages in a year during 2009-10 which included 51 C type (serious nature) messages. The type A messages received by the Board during 2007-08 to 2011-12 ranged between four and 48. Thus, by drawing the power in excess of allocation, the Board violated the Grid norms during 2007-08 to 2010-11, however, the instances of violation of Grid norms reduced considerably during 2011-12.

### *Planning for power procurement*

**3.28** The Board draws long term supply plan taking into account the contracted generation capacity, allocation from central sector and future committed projects and evolve net additional requirement of power in consultation with the distribution wing. It also draws day ahead plan for assessing its day to day power requirement. The details of total requirement of the State, total power supplied and shortage of power for the five years 2007-08 to 2011-12 are given below:

(Figures in MUs)

Sl.No.	Details	2007-08	2008-09	2009-10	2010-11	2011-12
1	Total power requirement	11134	12874	14886	17213	19905
2	Total power supplied <sup>10</sup>	7371	8144	9218	9898	10799
3	Power short supplied	3763	4730	5668	7315	9106
4	Percentage of shortage	33.80	36.74	38.08	42.50	45.75

(Source: Report of 17<sup>th</sup> Electric Power Survey and information furnished by the Board)

It could be seen from the above that the percentage of shortage of power is on the increasing trend i.e., from 33.80 in 2007-08 to 45.75 per cent in 2011-12.

The Board stated (October 2012) that attempts were made to procure power from IPPs, new sugar mills coming in the State as well as construction of new units at BTPS & MTPS to meet shortage of power in the State.

### *Loss due to non-drawal of schedule allocated power*

**3.29** As per 17<sup>th</sup> Electric Power Survey of India, total anticipated power requirement for the year 2011-12 in Bihar was 19905 MUs. Further, during 2011-12, total power available to the Board was 12284.83 MUs which

<sup>10</sup> Including generation, short and long term purchases and drawal from Central Generating Stations.

included own generation, scheduled power allocated under Central Sector, power from individual power producers etc. Out of 12284.83 MUs of power available, the Board purchased 12144.44 MUs of power valuing ₹ 4393.44 crore at an average cost of ₹ 3.62/unit.

Scrutiny of records revealed that out of total 12144.44 MUs of power available through purchase, the Board did not draw 664.15 MUs of power which was considered as sale through Unscheduled Interchange (UI). Thus, 664.15 MUs of power valuing ₹ 209.95 crore was sold under UI at an average value of ₹ 3.16/unit which was purchased at an average cost of ₹ 3.62/unit.

We observed that although there was acute shortage of power in the State and the power supplied by the Board was 54.25 *per cent* of the requirement in 2011-12, the Board did not draw the scheduled allocated power and ultimately it was sold under UI at a loss of ₹ 0.46/unit.

Thus, due to non-drawal of scheduled allocated power, the Board suffered loss of ₹ 30.32 crore as compared to average cost of power purchase during 2011-12.

**Although there was acute shortage of power in the state, the Board did not draw the allocated power and suffered a loss of ₹ 30.32 crore**

The Board stated (October 2012) that power drawal depended on the system conditions and demand. Sometimes due to bad weather i.e. rain, cyclone, wind, breakdown of trunk lines, outage of power transformers, power demand crashes and drawal of power reduced. The reply is not acceptable as the reasons stated by the Board might be accepted for short duration whereas it was noticed that drawal of power by the Board was less than the schedule allocation continuously in nine months from June 2011 to March 2012.

### ***Disaster Management***

**3.30** Disaster Management (DM) aims at mitigating the impact of a major break down on the system and restoring it in the shortest possible time. As per the Best Practices, DM should be set up by all power utilities for immediate restoration of transmission system in the event of a major failure. It is carried out by deploying Emergency Restoration System, DG sets, vehicles, fire-fighting equipments, skilled and specialized manpower.

Disaster Management Centre, National Load Dispatch Centre, New Delhi will act as a Central Control Room in case of disasters. As a part of DM programme, mock drill for starting up generating stations during black start<sup>11</sup> operations was not carried out by the Board during Performance Audit period.

---

<sup>11</sup> The procedure necessary to recover from partial or a total black out.

### ***Inadequate facilities for DM***

**3.31** There is only one generating station (BTPS)<sup>12</sup> in the State. The black start facilities were, however, not available in the Station indicating the inadequacy in the preparedness for DM.

Diesel generating (DG) sets and synchrosopes<sup>13</sup> form part of DM facilities at EHT SSs connecting major generating stations. We observed that DG sets were available in all eight numbers 220 KV SSs (five numbers DG sets in working condition and three numbers not in working condition) while only three synchrosopes were available out of which one was not in use. Further, the Board did not identify vulnerable installations for provision of metal detectors and handing over the security of the sites to the Security Force to meet crisis arising due to terrorist attacks, sabotage and bomb threats.

The Board accepted (October 2012) the fact and stated that attempts were being made to rectify the above mentioned deficiencies.

### **Energy Accounting and Audit**

**3.32** Energy accounting and audit is necessary to assess and reduce the transmission losses. The transmission losses are calculated from the Meter Reading Instrument (MRI) readings obtained from Generation to Transmission (GT) and Transmission to Distribution (TD) Boundary metering points. As on 31 March 2012 there were 361 interface Boundary metering points between TD (327) and GT (34). While in test checked divisions, out of 14 GT points, 12 were provided with 0.2S class<sup>14</sup> meter and remaining with 0.5S class meter. Further, out of 242 TD points in test checked division 206 were provided with 0.2S class meters, 29 were with 0.5S class meters and seven were other meters with class not specified.

**Energy audit on the meter reading report for ascertaining the feeders with high losses and reasons thereof of various SSs was not conducted**

Further, analysis of data for three months period from January 2012 to March 2012 of eight divisions with 38, 132 KV feeders test checked indicated existence of high percentage of losses ranging between 5.9 to 94.69 per cent in 10 feeders, 0.04 to 3.33 per cent in 16 feeders and remaining 12 feeders had defective meters out of which seven were showing negative losses. It was also noticed that the negative losses were due to usage of different class of meters at input and output points, existence of defective meters and replacement of meters without compatibility to Current Transformers and Potential Transformers consequently energy accounting and transmission losses worked out by the Board seems un-realistic.

---

<sup>12</sup> Barauni Thermal Power Station.

<sup>13</sup> In an AC electrical power system it is a device that indicates the degree to which two systems (generators or power networks) are synchronised with each other.

<sup>14</sup> Class of meters shows the limits of the permissible error and expressed in *per cent* i.e. for 0.2S class meters, error should not be more than 0.2 *per cent* at power factor 1.

Further, we observed that the activities of the Board were limited to compilation of the information regarding energy received and transmitted. Energy audit on the meter reading report including analysis of the reports for ascertaining the feeders with high losses and reasons thereof of various SSs was not conducted during the period of Performance Audit.

The Board stated (October 2012) that decision was taken to replace all 0.5 class meters with 0.2 class meters. The Board also stated that 200 meters of 0.2 class had been procured out of which 150 had been installed. The reply was silent about existence of high percentage of losses and non-conducting of energy audit.

### Financial Management

**3.33** One of the major objectives of the National Electricity Policy, 2005 was ensuring financial turn-around and commercial viability of Power Sector. However, the Board was incurring losses during 2007-08 to 2011-12. The accumulated losses of the Board had increased by 303.94 *per cent* from ₹ 2109.41 crore in 2007-08 to ₹ 8520.71 crore in 2011-12. Since the Board has not compiled separate financial data in respect of transmission activity, analysis thereof could not be done in the Performance Audit.

#### *Billing of Extra High Tension consumers*

**3.34** Supply of electricity to Extra High Tension (EHT) consumers (132 KV level) and billing of the energy consumed by them were provided and monitored by the Transmission wing of the Board through seven transmission Circles. Further, Supply of the electricity and billing thereof were guided by the orders of the BERC issued from time to time. During Performance Audit, the system of supply of electricity and billing were scrutinized and following irregularities were noticed:

#### *Non-enhancement of contract demand of Railway Traction Service (RTS) consumers as per Tariff provisions*

**3.35** As per the terms and conditions of the Tariff Order issued in December 2010, the transformer capacity of HT consumer shall not be more than 150 *per cent* of the contract demand except Railways where it was fixed 200 *per cent* of the contract demand. It was further elaborated that if consumer found to be utilising transformer of higher capacity than admissible for his contracted load, it will fall under malpractice.

During scrutiny of the records of the Electric Transmission Circles, Patna, Gaya and Biharsharif, it was observed that the four RTS consumers at Danapur-Khagaul Point, Fatuha-Khusrupur Point, Jehanabad point and Mokama Point were having Transformers of 1×21.6 Mva each in violation of provisions of the tariff orders although the contract demand of the above consumer was only seven and half, seven, two and five Mva respectively. Hence as per the provisions of the tariff orders, the contract demand of the above consumers should have been 10.80 Mva to match the provisions of tariff of 200 *per cent* transformers capacity.

**Failure of Board to increase the contract demand of the consumer as per provisions of the tariff order resulted in loss of revenue of ₹ 11.67 crore**

We observed that the Board failed to increase the contract demand of the consumer as per provisions of the tariff order which resulted in short billing and loss of revenue of ₹ 11.67 crore<sup>15</sup>.

The Board stated (October 2012) that Railways were requested to enhance their contract demand as per new tariff but in spite of several requests Railways did not enhance their originally contract demand and stated that the above tariff was not acceptable to Railways. The reply of the Board was not convincing as tariff order issued by BERC was binding on all consumers including railways. Further, in case of new RTS connection at Chhapra in March 2011, the Railways has accepted the provisions of the tariff order and accepted the contract demand of 10.8 Mva.

#### ***Short Billing of demand charge***

**3.36** As per the provisions of the tariff, the Demand charge shall be billed on the basis of maximum demand recorded during the month or 85 per cent of the contract demand whichever is higher.

**Frequent resetting of recorded by meter resulted in short billing of ₹ 0.54 crore**

During scrutiny of the records related with the billing of Railways Traction Service (RTS) consumer (Contract Demand – 7500 KVA) from Karamnasa grid, it was observed that the meter recording the maximum demand was frequently reset and maximum demand recorded till the time of resetting was not utilised for the purpose of billing despite being the maximum during the months in violation of provisions of the tariff. This resulted in short billing of Demand Charges by ₹ 0.54 crore.

The Board stated (October 2012) that due to non-availability of supporting document in this respect billing could not be done. The Board also stated that efforts were being made to get the same from Railway Mugalsarai and as soon as the supporting document was made available, action would be taken accordingly. The reply is not convincing as the billing of contract demand should have been done on the basis of maximum demand recorded by the meter during the month.

#### ***Loss of revenue due to delay in agreement for a new connection to Railway Wheel Plant, Chhapra***

**3.37** As per para 4.78 of the Electric Supply Code (Code), issued by BERC in 2007, the Board shall take up the work of extension required to give supply after the payment of charges and execution of the agreement.

Further, as per clause 1 (b) of the standard form of agreement, the consumer shall commence to take the supply within three months of intimation from the Board to the effect that supply is available, failing which a monthly

---

<sup>15</sup> Loss on account of Energy Charge = ₹ 39894894 + ₹ 423540 + ₹ 27428508 + ₹ 11109434 = ₹ 78856376.  
Loss on account of Demand Charge = ₹ 6460080 + ₹ 8883600 + ₹ 14167000 + ₹ 8298541 = ₹ 37809221.  
Total loss on account of Energy Charge and demand Charge = ₹ 78856376 + ₹ 37809221 = ₹ 116665597 i.e. ₹ 11.67 crore.

charge of 50 *per cent* of the minimum guaranteed by the consumer will be levied after expiry of above period until the service is availed of.

Scrutiny of records revealed that the Board, for providing a new HTS-III connection with contract demand of 26.67 Mva for the Railway Wheel Plant at Chhapra, issued (August 2008) work order for construction of transmission line from Chhapra Sub-station to point of supply.

Further, the work of extension required to give supply was completed by the Board in October 2010. Thus, the Board was ready to provide new connection to the consumer with effect from November 2010 but agreement with the consumer was entered in June 2011 and billing was started from July 2011.

**Taking up extension work required to give supply without entering into agreement with the consumer deprived the Board to earn a revenue of ₹ 8.08 crore**

We observed that the Board started the work without entering into an agreement with the consumer in violation of the Code and also delayed the process of entering into agreement with the consumer by seven months from the date of completion of the work which deprived the Board to earn revenue of ₹ 8.08 crore during the period from March 2011 to June 2011.

The Board stated (October 2012) that information regarding sanction of contract demand and completion of construction of transmission line for signing of agreement was sent to Railway in May 2010 and November 2010. As the construction work of Rail Wheel factory was not completed, Railway authorities delayed the execution of agreement. The agreement between Board and Railway should have been signed before starting of construction of transmission line as per the provision of para 4.78 of the Electric Supply Code (Code).

### **Material Management**

**3.38** The key functions in material management are laying down inventory control policy, procurement of materials and disposal of obsolete inventory. The Board had not formulated any procurement policy and inventory control mechanism for economical procurement and efficient control over inventory. Procurement of the materials was done by the Board on the basis of the requirement sent by the field offices. Scrutiny of the records of the Board revealed the following:

**3.39** The details of consumption (per annum), consumption (per month) and closing stocks of the equipments (transformers, cables, breakers, tower members etc.) of transmission system for the period from 2007-08 to 2011-12 are detailed below:



(₹ in crore)

Year	Consumption (per annum)	Consumption (per month)	Net Closing stock (as per Balancesheet)	Closing stock in terms of months consumption
(1)	(2)	(3)	(4)	(5) = (4)/(3)
2007-08	12.97	1.08	20.82	19
2008-09	6.77	0.56	21.95	39
2009-10	24.26	2.02	40.90	20
2010-11	25.79	2.15	54.80	25
2011-12	11.72	0.98	58.22	59

*Source: Information furnished by the Board*

**Huge quantity of the closing stock indicated that the procurement policy of the Board was defective**

It is evident from the huge quantity of the closing stock that the procurement policy of the Board was defective. During the period from 2007-08 to 2011-12, the closing stock in terms of months consumption ranged between 19 months and 59 months. Further, the Board had neither made any ABC analysis, nor fixed any standard minimum level or reorder level of their material requirement.

The Board stated (October 2012) that the equipments being vital for system are purchased once for coming three to four years for requirement in case of emergency and since the above equipments were not easily available in the market, the manufacturers had to design and manufacture as per required specification. Hence, it was general practice in the Board to keep stock of such emergency equipments in order to avoid outage. The reply is not convincing as the Board had neither made any ABC analysis, nor fixed any standard minimum level or reorder level of their material requirement and the closing stock in terms of months consumption ranged between 19 to 59 months which indicated defective procurement policy.

***Non-conducting of physical verification of stocks in the stores***

**3.40** As per Para 7.141 of the Financial and Accounts Code of the Board, the verification of the stock would be a continuous process by a special staff of stock verifiers. The Board would draw out a programme of verification annually and fix mandays for each store.

There were Seven Transmission Stores under the control of the Board. The Physical Verification (PV) of the stores was, however, not being conducted annually in compliance with the provisions of the Financial and Accounts Code. During 2007-08 to 2011-12, PV was conducted only in 2007-08 and 2011-12. The PV was last conducted in Patna circle store (including sub stores) in January 2008 and in Muzaffarpur store in April 2011.



Further, the reconciliation of the above stock could not be made as the PV of all the stores was not being done annually. The Board had not taken action to conduct survey reports and dispose of the scrap/obsolete material, which could have earned revenue and resulted in creation of space for stocking of other materials.

### *Excess purchase of materials*

**3.41** For operation and maintenance of the transmission system of the Board, necessary equipments (Current Transformer, Potential Transformer, Circuit Breaker, etc.) were purchased centrally by the Board on the basis of the requirements received from the field offices.

The Board placed (July 2009) a purchase order (PO) for supply of 184 Current Transformers (CTs) of 132 KV capacity which included 72 of CT of 600/300/150/1-1-1-1 Amp specification.

We observed that the requirement received from the field offices was not properly analysed. As against requirement of 21 CTs in three circles<sup>16</sup>, the Board inflated the requirement to 57 CTs without recording any justification for the same.

Test check of records of Circle Store under ETC, Patna, revealed that out of 48 CTs received, 47 purchased for ₹ 0.47 crore were lying idle without use from March 2010 to March 2012 and the guarantee period of the above CTs had also expired.

Thus, purchase of 47 CTs of ₹ 0.47 crore without requirement resulted in blockade of funds for last two years.

The Board stated (October 2012) that the requirement submitted by the Dehri-on-sona was for 15 sets i.e. 45 CTs. Hence, there was no failure in analysing the requirement by the Board. The reply was not based on facts, as the requirement sent by Dehri-on-sona was for five sets only (two sets for Dehri SS, one set each for Sonenagar SS, Karmanasa SS and Dumraon SS). The reply was silent about non-utilisation of CTs in ETC Patna.

### **Monitoring and Control**

**3.42** The performance of the SSs and lines of 400/220/132 KV on various parameters like Maximum and Minimum voltage levels, breakdowns, voltage profiles should be recorded /maintained as per the Grid code standards. We observed that the year-wise cumulative performance of the SSs and lines were neither being maintained nor consolidated for evaluation of annual performance of the SSs and lines.

Further, the field Divisions of Transmission lines and Sub-station (TL&SS) units compile the monthly MIS reports indicating the performance of the units as well as equipments installed. Verification of MIS reports of field

<sup>16</sup> 15 by ETC, Dehri-on-sona, three CTs by ETC, Patna and three by ETC, Gaya.

units revealed that details regarding programmed overhaul of equipments like Circuit Breakers, due dates of next oil change, On Load Tap Changer operations, dates of maintenance works, performance of SS batteries, performance of relays, were not being mentioned in the MIS report.

Schedule maintenance of various transmission lines and Grid Sub-stations was not being done by the Board. As a result the transmission lines tripped 432 times, including 196 trippings due to snapping of conductors, during 2007-08 to 2011-12. There were 76 trippings in 2007-08 which increased to 130 trippings (71 *per cent*) in 2011-12.

The Board stated (October 2012) that patrolling of transmission line was regularly done to locate any probability of faults viz. loose jumper, heated point, hardware failures etc. and any probability of fault detected was attended immediately. Further, with respect to tripping of lines, the Board stated that tripping was mainly due to sudden transient fault, loose jumper, disconnected jumpers, snapping of earth wire, etc. and due to sudden puncture of fitted disc insulator which caused earth fault. The reply of the Board is not convincing as all the reasons for tripping as mentioned by the Board could have been avoided by regular/effective patrolling and timely action on the detection of faults. The reply was silent about the deficiencies as pointed out in the MIS report

#### ***Review of the envisaged benefits of T&D schemes***

**3.43** The Board executed and commissioned 19 EHT SSs and erected a total length of 841 CKM of EHT lines during the last five year ending March 2012. While approving the T&D schemes, the Board envisaged benefits in terms of reduction in line losses, improvement in voltage levels and the load growth to be achieved by the new schemes. It was, however, observed that the Board failed to derive the envisaged benefit of the T&D schemes. We noticed that the transmission losses increased from 7.41 *per cent* in 2007-08 to 9.75 *per cent* in 2011-12. Voltage level of 220/132 and 132/33 KV level ranged between 252-177 KV and 154-98 KV respectively which violated the norms of Indian Electricity Grid Code. Thus, the Board failed to achieve the objectives envisaged in the schemes.

#### ***Theft of material due to poor monitoring***

**3.44** Circuit of 132 KV XLPE Cable (Cable) laid along Rajendra Bridge, Hathidah was being utilised for supplying power from Hathidah SS to BTPS via Simaria (from south Bihar to North Bihar). The Board decided (May 2008) to abandon and dismantle the cable and the same was to be kept in stores for further utilisation. Further, for safety of the cable till dismantling, a private security agency was engaged (November 2007). According to the terms of deployment, the agency was to be held responsible for any theft/loss. The work order for dismantling the cable was allotted in January 2011 to two tenderers at a cost of ₹ 15.36 lakh each.

**The Board failed to finalise the tender in time for dismantling of cable resulting in loss of ₹ 1.50 crore on account of theft/damage and on security of cable**

Audit scrutiny revealed that from the date of decision of the Board to dismantle the cable (May 2008) and award of work (January 2011), 862 meters valuing ₹0.68 crore<sup>17</sup> was stolen and 519.5 meter valuing ₹ 0.41 crore was damaged by miscreants. Further, an amount of ₹ 0.41 crore was also incurred by the Board on payment for security of the cable. Thus, the Board failed to finalise the tender in time and took 32 months in awarding the work for dismantling of cable. As a result, the Board sustained the loss of ₹ 1.50 crore on account of theft/damage of cable ( ₹ 1.09 crore) and security of cable ( ₹ 0.41 crore).

Further, no action was taken by the Board to recover the loss due to theft/damage of cable from the private security agency, although it was provided in the terms of deployment.

The Board stated (October 2012) that several incidents of theft occurred which could not be stopped despite several attempts and the cable was damaged at several spots and was not repairable. The Board also accepted the fact there was delay in finalising the tender for dismantling of cable. The Board, however, did not offer any reply about recovery from the security agency for theft /loss as per terms and conditions of their deployment.

### **Conclusion**

- **The Board had not prepared year-wise plan for addition/augmentation in the Transmission System of Bihar. Instead, the planning was done by the Power Grid Corporation of India Limited on behalf of the Board.**
- **The Board did not comply with the recommendations of the Task Force on transmission projects constituted by Ministry of Power (MoP), Government of India (GoI), as a result, the projects could not be completed within stipulated time and led to cost and time overrun.**
- **Operation of the transmission system was not efficient and effective. As a result, the transmission losses of the Board were in excess of the norms, the voltage level of SSs were not maintained within the limits, 132 KV feeders were found loaded beyond their Thermal Loading Limit.**
- **The Board received several violation messages from the Eastern Region Load Dispatch Centre due to excess drawal of power. Disaster management facilities of the Board were not adequate. There was no system in place to take the periodical test of working transformers.**
- **Energy accounting system of Board was not effective as existence of high percentage of losses and negative losses were found.**

<sup>17</sup> (Calculated at the rate of ₹ 7919.737/meter as replacement cost quoted by supplier in July 2007).

# **CHAPTER IV**

## **4. TRANSACTION AUDIT OBSERVATIONS**

## Chapter-IV

### 4. Transaction Audit Observations

Important audit findings emerging from test check of transactions of the State Government companies/Statutory corporations are included in this Chapter.

#### Government Companies

#### Bihar State Hydroelectric Power Corporation Limited

##### 4.1 Unfruitful expenditure

***Failure on the part of the Company to comply with the directives of BEREC resulted in unfruitful expenditure of ₹ 29.62 lakh towards consultancy charges and loss of revenue of ₹ 4.72 crore due to sale of energy at lower rates***

In exercise of power under Section 62 of the Electricity Act, 2003 (Act), the Bihar Electricity Regulatory Commission (BERC) has to fix tariff in accordance with the procedure laid down in BERC (Terms and conditions for determination of Tariff Notification) Regulation, 2007 (Regulation). In terms of para 6 (8) of the Regulation, the Bihar State Hydroelectric Power Corporation Limited (Company) is to file Aggregate Revenue Requirement (ARR) along with requisite data in the prescribed format for each financial year by 15 November of the preceding year so that the tariff petition is processed and finalised in 120 days as specified in Section 64 (3) of the Act. Further, para 5 stipulates that for determination of tariff, the generating Company is required to submit an application accompanied with Annual Accounts of the previous year prior to the date of application, duly audited and certified by the Statutory Auditors.

The Company sells the electricity generated by its hydro projects to the Bihar State Electricity Board (Board). The Company had filed (March 2009) a tariff petition to BERC for the year 2009-10. As the Annual Accounts were in arrears from 1997-98, the Commission approved (December 2009) a provisional tariff of ₹ 2.49 per KWh only and directed the Company to take immediate steps for getting the Annual Accounts in arrears audited by the Statutory Auditors/CAG within a time bound programme. The Commission also instructed that in future the Company should submit the tariff proposal along with the Annual Accounts and Audit Reports thereon of the Statutory Auditors/ CAG.

Audit observed that:

- The Company, instead of complying with the instructions of the BERC regarding up-dation of Annual Accounts in arrears, assigned the work of the preparation of tariff proposals of electricity for the years 2010-11 (December 2009) and 2011-12 (December 2010) to Price Waterhouse

Coopers (PwC), a consulting firm, and paid a sum of ₹ 23.47 lakh towards consultancy and other charges and ₹ 6.15 lakh for the filing charges of the tariff petitions.

- In disregard to the Directives given earlier by the BEREC, the Company filed the ARR/ Tariff petition for ₹ 3.72 per KWh and ₹ 2.99 per KWh for the year 2010-11 (April 2010) and for 2011-12 (December 2010) respectively without the Audited Accounts. Consequently, the BEREC rejected the tariff petition of the Company for both the years in June 2010 and May 2011 respectively due to non-compliance of the Directives. Thus, rejection of the tariff petition by the BEREC due to non-adherence to its directives resulted in unfruitful expenditure of ₹ 29.62 lakh towards consultancy and filing charges. Besides, the Company also suffered loss of revenue of ₹ 4.72 crore<sup>1</sup> due to sale of electricity at lower tariff during 2010-11 and 2011-12.

The Management, *inter alia*, stated (July 2012) that the expenditure incurred by the Company towards consultancy and filing charges was in anticipation of approval of provisional tariff of ₹ 2.99 per KWh by the BEREC. It further stated that the efforts were being made to get the Accounts audited by the Statutory Auditors/CAG. We are, however, not convinced with the reply as the Company failed to exercise due diligence and make serious efforts to liquidate the arrears of its Accounts by ensuring the Audit of its Accounts by the Statutory Auditors/CAG within a time bound programme.

The Company needs to make serious efforts to liquidate the arrears of its Accounts by getting its Accounts audited by the Statutory Auditors/CAG within a time bound programme.

The matter was reported to the Government (June 2012), reply was awaited (November 2012).

#### ***4.2 Irregular payment to employees***

***The Company irregularly paid incentive to the tune of ₹ 32.56 lakh to its employees in violation of directions issued by the Finance Department***

Finance Department, Government of Bihar issued directions (December, 1984) to all Public Sector Undertakings (PSUs) which, *inter alia*, states that they would make payment of *ex-gratia* or similar payments in any other name to their employees only with the prior approval of the concerned Administrative Department in this regard. The Administrative Department would communicate to the concerned PSU, the Government's decision on the proposal made justifying such payment to the employees after compulsorily taking approval of the Finance Department.

---

<sup>1</sup> 2010-11 - 26504682 KWh x ₹ 1.23 (3.72-2.49) = ₹ 3.26 crore.

2011-12 - 29218329 KWh x ₹ 0.50 (2.90-2.40) = ₹ 1.46 crore. Total: ₹ 4.72 crore.

We observed (March 2012) that Bihar State Hydroelectric Power Corporation Limited (Company) made a payment of ₹ 32.56 lakh<sup>2</sup> during 2008-10 to its employees as incentive without taking the approval of its Administrative Department in violation of the instructions issued by the Finance Department. The incentive payments to the employees were made even without taking approval of the Board of Directors of the Company. Thus, payment of incentives to its employees by the Company in contravention of the directions of the Finance Department resulted in irregular payment of ₹ 32.56 lakh.

The Management stated (May 2012) that incentive payments had been made to encourage employees' contribution and further productivity. Further, the issue pertaining to payment of incentive could not be put up to the Board for approval since very few Board meetings were held during the aforementioned period.

The reply, however, did not explain as to why the prior approval of the Administrative Department was not obtained before making such payments. Moreover, such payments were made on the basis of profits arrived at on provisional figures as audit of the accounts of the Company were in arrears.

The Company should make endeavour to liquidate the arrears of Accounts and adhere to the directives/guidelines of the Finance Department in making payment of *Ex-gratia* or similar payments to its employees.

The matter was reported to the Government (June 2012), reply was awaited (November 2012).

**Bihar State Road Development Corporation Limited and Bihar Rajya Pul Nirman Nigam Limited**

**4.3 Avoidable payment of interest**

***Absence of system for ensuring proper assessment of tax liability led to short payment of advance income tax resulting in avoidable payment of interest of ₹ 1.39 crore***

As per Section 207 of the Income Tax Act, 1961 (Act), every assessee is required to pay advance tax on estimated current income for the financial year in accordance with the provisions of Section 208 to 219 of the Act in four advance instalments<sup>3</sup> at the prescribed rates, in case the amount of Income tax payable is ₹ 10,000 or more. Failure to deposit minimum 90 *per cent* of the tax in advance as well as shortfall in depositing tax as per the prescribed slab attracts interest at the rate of one *per cent* per month separately as prescribed

<sup>2</sup> ₹ 13.77 lakh (2008-09) + ₹ 18.79 lakh (2009-10).

<sup>3</sup> On or before 15 June (not less than 15 *per cent* of such advance tax), 15 September (not less than 45 *per cent* of such advance tax as reduced by the amount paid in earlier instalment), 15 December (not less than 75 *per cent* of such advance tax as reduced by the amount paid in earlier instalments) and 15 March of the financial year (the whole amount of such advance tax as reduced by the amounts paid in the earlier instalments).



under Section 234B and 234C of the Act. This calls for proper estimation of taxable income to ensure deposit of advance tax as required to avoid the incidence of interest payment.

Bihar State Road Development Corporation Limited (BSRDC) and Bihar Rajya Pul Nirman Nigam Limited (BRPNN) are established mainly for construction of roads and bridges respectively in the State of Bihar and are liable to pay advance tax on their assessed income under the provisions of the Act *ibid*.

Scrutiny of records revealed as under:

- BSRDC deposited ₹ 10 crore as advance income tax for the financial year 2010-11. Of this, ₹ two crore was paid (15 June 2010) in the first quarter, ₹ four crore (14 September 2010) in the second quarter, nil in the third quarter and ₹ four crore (14 March 2011) in the fourth quarter. In addition, ₹ 2.75 crore was the amount of tax deducted at source on the income of the Company. The total tax liability of BSRDC for the financial year 2010-11 was ₹ 18.86 crore. Since the total tax paid (advance tax of ₹ 10 crore and TDS of ₹ 2.75 crore) fell short of 90 *per cent* of tax payable, BSRDC had to pay interest of ₹ 0.72 crore. The balance amount of income tax of ₹ 6.11 crore (₹ 18.86 crore minus ₹ 12.75 crore ) and interest of ₹ 0.72 crore was paid by the Company in September 2011.
- Likewise, BRPNN deposited ₹ 14.50 crore as advance income tax for the financial year 2009-10. Of this, ₹ 2.70 crore was paid (12 June 2009) in the first quarter, ₹ 2.38 crore (15 September 2009) in the second quarter, ₹ 4.27 crore (19 December 2009) in the third quarter and ₹ 5.15 crore (12 March 2010) in the fourth quarter. In addition, ₹ 2.05 crore was the amount of tax deducted at source on the income of the Company. The total tax liability of BRPNN for the financial year 2009-10 was ₹ 22.02 crore. Since the total tax paid (advance tax of ₹ 14.52 crore and TDS of ₹ 2.05 crore) fell short of 90 *per cent* of tax payable, BRPNN had to pay interest of ₹ 0.67 crore. The balance amount of income tax of ₹ 5.45 crore (₹ 22.02 crore minus ₹ 16.57 crore ) and interest of ₹ 0.67 crore was paid by the Company in September 2010.

For estimation of taxable income for payment of advance tax, there should be a system to ensure timely availability of relevant information such as estimated Turnover/revenue, etc. However, even in the month of March 2011 when fourth and last instalment of advance tax was paid, the BSRDC was not aware of its Turnover for the year 2010-11, which was more than double the Turnover of 2009-10 (contract revenue was ₹ 881 crore in 2010-11 as against ₹ 415 crore in 2009-10). Similarly, BRPNN Management was also not aware of its Turnover for the year 2009-10 even at the time of payment of the fourth and final instalment of advance tax. It was observed that due to absence of a system, both the companies could not make estimation of taxable income properly and paid less advance tax resulting in avoidable payment of interest of ₹ 1.39 crore (BSRDC - ₹ 0.72 crore, BRPNN - ₹ 0.67 crore ).

BSRDC Management stated (March 2012) that advance tax paid for the year 2010-11 was on the basis of tax of ₹ 13.10 crore paid for the financial year 2009-10. The increase in tax liability during 2010-11 was attributed to increase in Turnover by more than two times with respect to financial year 2009-10, which could not be assessed due to non availability of statistical data.

The Administrative Department (Road Construction Department) of the BSRDC in their reply (August 2012) stated that the amount of ₹ 0.72 crore paid as interest was not the actual expenditure of the Company as the Company had also earned interest on the amount of delayed advance tax lying invested in the bank deposit of the Company. As such, the Department claimed that the net expense on account of interest conceded by the Company was much less. The reply of the Government is not acceptable as the Company had kept huge funds (₹ 74.16 crore as on 31 March 2010) in its Current Account on which it did not earn any interest and the same could have been utilised to avoid payment of interest.

BRPNN Management attributed (June 2012) short payment of advance tax to the accelerated year-end work which prevented fair assessment of Turnover for the year. Reply of the BRPNN Management is not acceptable as for estimation of taxable income for payment of advance tax, there should be a system to ensure timely availability of relevant information such as estimated Turnover/revenue, etc.

Thus, failure of the Companies in assessing the Turnover for the year 2010-11 in March 2011 (BSRDC) and 2009-10 in March 2010 (BRPNN) indicated that there was lack of system to ensure proper estimation of taxable income and tax liability. This resulted in payment of avoidable interest of ₹ 1.39 crore.

The Companies should strengthen their internal control system so as to ensure timely availability of information pertaining to Turnover, revenues and other parameters necessary for estimation of taxable income and formation of other projections, etc.

The matter was reported to the Government (June 2012), reply in respect of BRPNN was awaited (December 2012).

## Statutory Corporation

### Bihar State Electricity Board

#### 4.4 Loss to the Board on account of non-claiming of TDS

***The Board's failure in obtaining TDS certificates from the payee Banks and non-claiming of refund of TDS resulted in a loss of ₹ 12.87 crore to the Board***

As per Section 194A of the Income Tax Act, 1961 (Act), interest earned on fixed deposits is subject to deduction of Income tax at source (TDS) by the payee Bank. The TDS is deposited by the Bank to Income Tax Department and a certificate in this regard is furnished to the assessee organisation under

Section 203 of the Act. The assessee organisation should claim refund of TDS by filing Income Tax Return by due date if its taxable income is nil/there is no/lesser tax liability.

Bihar State Electricity Board (Board) had fixed deposits of ₹ 807.50 crore (2008-09), ₹ 629.34 crore (2009-10), ₹ 1,127.79 crore (2010-11) and ₹ 1,771.30 crore (2011-12) with nine Banks<sup>4</sup>. On the interest earned by the Board, Banks deducted TDS. The Board, however, did not take any action to get the TDS certificates from Banks. As such the Board had no information regarding the amount of TDS deducted by banks. This indicated absence of an effective internal control system to ensure timely flow of information in respect of TDS made by Banks. After continuous persuasion regarding TDS certificates by Audit, the matter was finally taken up by the Board with the Banks in February 2012. The Banks intimated that a total of ₹ 36.14 crore was deducted on account of TDS for the period 2008-09 to 2011-12. Since the Board was incurring losses, it was imperative on the part of the Board to claim the refund of TDS by filing Income Tax Return within the prescribed time limit.

We observed that due to non-maintenance of proper records, lack of close coordination with the Banks and non-filing of Income Tax Return, the afore mentioned TDS amounting to ₹ 36.14 crore could not be claimed for refund. This indicated poor fund management as well as non-observance of financial interests on the part of the Board.

The Board replied (July 2012) that the statement of TDS of ₹ 36.14 crore during 2008-09 to 2011-12 had been obtained from Banks. Further, necessary action to claim refund of TDS by way of filing Income Tax Return was in progress. The fact remains that until pointed out by the Audit, the Board had no system for ensuring information regarding TDS on its interest income. Besides, the Board had filed its Income Tax Returns up to the financial year 2000-01 as of March 2011. It is also pertinent to mention that, out of a total sum of ₹ 36.14 crore deducted on account of TDS up to 2010-11, a sum of ₹ 12.87 crore<sup>5</sup> had become time barred since no claim of refund can be made on expiry of period of two years from the end of the financial year in which tax was deducted at source.

Thus, deficient internal control system and poor fund management resulted in failure of the Board in filing claims on time for refund of TDS amounting to ₹ 36.14 crore including a sum of ₹ 12.87 crore which had already become time barred.

The Board needs to strengthen its internal control system to ensure information regarding TDS, timely filing of Income Tax Returns and efficient

---

<sup>4</sup> State Bank of India, Canara Bank, Punjab National Bank, Union Bank, Bank of India, Central Bank of India, Bank of Baroda, Bihar State Co-operative Bank, SBI, Maurya Lok Branch.

<sup>5</sup> ₹ 6.38 crore for 2008-09 and ₹ 6.49 crore for 2009-10.

and effective management of its fund. Besides, the Board should also fix responsibility for the loss caused to the Board.

The matter was reported to the Government (June 2012); reply was awaited (November 2012).

#### 4.5 Theft of electricity in the Government residential buildings

***Due to failure to install working meters at the consumers' premises as well as to inspect consumer's premises to detect unauthorised use of electricity, the Board lost the opportunity of earning revenue of ₹17.40 crore***

Section 135 (1) of the Electricity Act, 2003 (Act), provides, *inter alia*, that whoever, dishonestly, taps, makes or causes to be made any connection with service facilities of a licensee, or supplier, to use electricity shall be punishable with an imprisonment for a term which may extend to three years or with fine or with both. As per Clause 11.1 (c) (iii) and (iv) of the Bihar Electricity Supply Code, 2007 (Code), the assessment of charges for theft of electricity shall be made for the entire period during which such unauthorised use of electricity has taken place and if, however, the period during which such unauthorised use of electricity has taken place cannot be ascertained, such period shall be limited to a period immediately preceding twelve months and the assessment shall be made at a rate equal to twice the tariff applicable for the relevant category of service.

We examined the records viz. Consumers' Master data, Consumers' ledger, bills, etc. relating to 1940 Government quarters (420<sup>6</sup> for officers and 1520<sup>7</sup> for other staff) taking power connection from the Board and noticed the following deficiencies:-

- In case of 320 quarters including 281 police quarters, electricity was being unauthorisedly used without any proper connection from the Board, during the period April 2007 to March 2012;
- In case of 147 officers/staff quarters, bills were being issued on average basis since there were either no meters or there existed defective meters.
- Out of the above mentioned 420 officers' quarters, 261 quarters were with proper electric connections and meters while 79 quarters either did not have meters or had defective meters. 80 officers' quarters could not be checked for want of necessary details;
- Payments in respect of 56 quarters out of the aforesaid 261 officers' quarters for the period April 2011 to January 2012 were not received and the arrears had accumulated to ₹ 35.82 lakh as on 31 January 2012 but the Board had not disconnected any connection till date (January 2012).

<sup>6</sup> 420 officers' quarters include 84 officers' flats, Punaichak, 90 nos. of officers' flats at Bailey Road, 150 ABC officers' hostel, Punaichak and 96 officers' flat, Bailey Road

<sup>7</sup> 1520 staff quarters include 316 police quarters in different police stations in Patna.

Further scrutiny revealed:

- Out of 316 Upper Subordinate (US)/Lower Subordinate (LS) quarters in 17 Police Stations in Patna, the occupants of 160 US and 121 LS quarters were using electricity unauthorisedly without taking connection from the Board which tantamount to theft of energy. Further the Board also failed to inspect the premises at division level as well as STF level. No action was taken by the Board in this regard as required under Section 135(1) of Electricity Act, 2003.
- In view of non-availability of information regarding actual load, Audit had considered a load of 1 KW for LS quarters and 2 KW for US quarters for five years. Based on this, the amount of fine and other charges recoverable from the occupants for unauthorised use/theft of electricity for the assessed period as per the codal provisions worked out to ₹ 17.40<sup>8</sup> crore for five years from 2007-08 to 2011-12.
- For non-payment of dues, no action had been taken by the Board as required under the Act/Code. The reasons for non-payment as analysed in audit revealed that in case of 39 quarters, bills were prepared and served in the name of officers who had already left the quarters during the period April 2011 to January 2012. Further, the new allottees/occupants were using electricity without taking connection from the Board which was again a case of theft of electricity. As such, they were to be charged as per Clause 11.1 (c) (iii) and (iv) of the Bihar Electricity Supply Code, 2007.
- The officers/staff who vacated the quarters did not intimate the Board so that further bill may be discontinued after preparation of final bills. The agency for serving the bill failed to ascertain the actual occupants of the quarters. As payment was not being made, the theft could have been detected at sub-division/division level by reviewing the payment position, but it was also not done.

Thus, the Board failed to install correct/working meters at the consumers' premises as per Section 55 of Electricity Act, 2003 and inspect the premises to detect unauthorised use of electricity as per the provision of Section 126 of Act, and lost the opportunity of earning revenue of ₹17.40 crore.

The Board should periodically inspect the premises of the consumers and install correct and working meters so as to avoid unauthorised use of electricity. Besides, the Board also needs to disconnect the electricity supply of the consumers for non-payment of dues as required under the Electricity Act/Electricity Supply Code.

---

<sup>8</sup> Formula=Units assessed=L x F x D x H., ₹ 3.48 crore per year. Total for 5 years at the rate of ₹ 3.48 crore per year.

Where L= Connected load in KW found at the time of inspection/raid at site.  
F= Load factor.  
D= Number of days during which unauthorised use of electricity has taken place.  
H= Number of average hours of supply made available per day.

The matter was reported (August 2012) to the Government/Board, their replies were awaited (November 2012).

#### 4.6 Short collection of revenue

***Board's failure to ensure adherence to Codal provisions in billing and collection of revenues from its consumers resulted in short collection of revenues amounting to ₹ 4.73 crore***

Section 9.20 of Bihar State Electricity Supply Code, 2007 (Code), *inter alia*, provides that bills issued to the consumers against consumption of energy shall contain specified details. As per Section 10.17 of the Code, if the consumer fails in payment of any bill in full, by the due date, service connection of the consumer will be liable to be disconnected temporarily. Section 10.20 states that the supply can be restored only after the payment of the outstanding charges/dues/amount of instalment fixed along with reconnection charges as applicable. Further, Section 10.16 of the Code stipulates that the authorised official of the Licensee has to ensure that all the cases pertaining to default in payment are monitored regularly and timely action is initiated as per prescribed procedure for temporary or permanent disconnection.

We examined the records relating to Patna Electricity Supply Undertaking (PESU) of Bihar State Electricity Board (Board) and noticed that in case of consumers occupying 233 staff quarters of Bihar Military Police (BMP-5, BMP-10 and BMP-14), bills were issued on an average basis at the rate of 40 to 288 units per month during the period April 2006 to March 2012 as none of the meters was working in the quarters. No action was taken by the Board either to get the defective meters rectified or to install new meters.

Further, against the bills issued, payments were being accepted by the Board at the rate of 40 units per quarter per month, through cheque from BMP office and not on the basis of bills raised on an average basis. Though as per Codal provision, disconnection of electricity and restoration thereof only after payment of outstanding dues together with restoration charges was the basic requirement for timely collection of its dues, no such action was taken by the Board. We observed that in most of the cases, the occupants of the quarters had changed but bills were being issued in the name of old consumers without any pursuance. Due to acceptance of short receipts by the Board, the arrears had accumulated to ₹ 4.73 crore as on 31 March 2012, the realisability of which had become doubtful for want of requisite action by the Board (March 2012).

Thus, failure of the Board to adhere to codal provisions for billing and collection of revenue has led to recurring loss to the Board. The loss which has already mounted to ₹ 4.73 crore as at the end of March, 2012 is likely to continue unless the defective meters are rectified or new meters are installed.

The Board needs to strengthen its internal control system so as to ensure adherence to the codal provisions relating to providing electricity connections,



billing and collection of revenue from its consumers. Besides, the Board should also fix responsibility on its officials for short realisation of revenues.

The matter was reported (August 2012) to the Government/Board, their replies were awaited (November 2012).

#### **4.7 Loss of revenue due to delay in enhancement of load**

<b><i>Inordinate delay on the part of Board in enhancement of the load resulted in a revenue loss of ₹2.21 crore</i></b>
--

As per Clauses 15 (B) and 17 of the Bihar Electricity Regulatory Commission (Standards of Performance of Distribution Licensee) Regulations, 2006, the Bihar State Electricity Board (Board) shall enhance the load, in case of High Tension (HT) and High Tension Specified Services (HTSS) category consumers, within 145 days where erection of 33 KV line is involved and within 27 days where no extension and alteration of distribution network is involved.

We noticed that in three cases relating to enhancement of load (as per details in *Annexure-8*), the time limit prescribed by the Commission was not adhered to and there were abnormal delays ranging from 92 to 343 days in enhancement of load by the Board. Reasons for inordinate delays as analysed in audit are detailed below:

- Application for enhancement of load from 60 HP to 6300 KVA on 33 KV systems was received from M/s Triveni Smelters Private Limited on 15 January 2011. Load enhancement proposal along with feasibility report was sent by the Electricity Supply Circle (ESC), Patna to the Central Electricity Supply Area Board (Area Board), Patna on 24 January 2011. However, due to lack of co-ordination between the Area Board and the ESC, Patna, the load was sanctioned on 27 June 2011 and supply commenced from 10 September 2011, i.e., after a delay of 92 days.
- Application for enhancement of load from 90 HP to 2151 KVA was received from M/s Balaji Mini Steels & Re-rolling Private Limited, Bihta on 28 July 2010. Though the feasibility report as per the Standards was to be issued within 10 days, the same was issued on 02 May 2011. Resultantly, the supply commenced from 04 October 2011, i.e., after an abnormal delay of 287 days.
- Application for enhancement of load from 7400 KVA to 8000 KVA was received from M/s Neelkamal Steels Private Limited, Patna on 06 January 2011 and after preparation of feasibility report, load enhancement proposal was sent to the GM cum CE for sanction by the Circle on 11 January 2011. However, load was sanctioned by the Board Headquarters on 14 December 2011 and the supply at the enhanced load commenced from 11 January 2012. Thus, there was a delay of 343 days in making correspondences with Area Board and circle located at the same station (Patna).



- The Board did not have adequate internal control system to monitor timely preparation of feasibility report, processing of application and other formalities to ensure enhancement of load in the stipulated time period.

Thus, avoidable delays of 92 to 343 days in enhancement of load in the above cited three cases, resulted in a revenue loss of ₹ 2.21 crore<sup>9</sup> to the Board due to realisation of revenue at the lower tariff than as per the enhanced loads.

The Board attributed (November 2012) delays in enhancement of load to M/s Triveni Smelters Private Limited and M/s Neelkamal Steels Private Limited to consumption of time in redressal of deficiencies in the application made by the consumers and non-clearance of energy bills (M/s Neelkamal Steels Private Limited) against them. For the delays in the case of M/s Balaji Mini Steels & Re-rolling Private Limited, the Board stated that it was due to settlement of protest made by another consumer to provide the enhanced load through tapping of energy from the latter's 33 KV line.

Reply of the Board is not convincing as it was noticed in audit that the inordinate delays in enhancement of load were mainly due to procedural delays and lack of co-ordination between different offices of the Board.

The Board needs to ensure compliance with the provisions as well as strengthen its internal control system so as to mitigate the procedural delays in providing electricity connections to the consumers.

The matter was reported to the Government (June 2012); reply was awaited (November 2012).

#### **4.8 Loss of revenue due to incorrect categorisation of consumers**

***Incorrect categorisation of consumer and non-adherence to the tariff provisions resulted in a revenue loss of ₹1.47 crore to the Board***

As per Tariff Order issued by Bihar Electricity Regulatory Commission from time to time,<sup>10</sup> the Domestic Service (DS)-III is applicable to residential colonies and multistoried residential complexes taking load in bulk at a single point, with a minimum load of 2 KW per flat/house and subject to the maximum total load up to 60 KW. The load having 75 KVA and above comes under High Tension Service (HTS) -I category.

We noticed that Divisional Accounts Office, Eastern Central Railway, Bibiganj, was sanctioned (April 2001) a load of 60 KW under DS - III tariff category to electrify its 107 residential quarters and was billed as per DS-III tariff till August 2010 and thereafter under DS-II<sup>11</sup>. The total amount charged against the consumer for the period November 2006 to March 2012 worked out to ₹ 12.21 lakh.

<sup>9</sup> M/s. Triveni Smelters Private Limited (₹ 1.32 crore), M/s Balaji Mini Steels & Re-rolling Private Limited (₹ 0.41 crore) and M/s Neelkamal Steels Private Limited (₹ 0.48 crore).

<sup>10</sup> November 2006, September 2008, December 2010 and May 2011.

<sup>11</sup> Applicable for domestic premises in urban areas.

The minimum aggregate load for 107 residential quarters works out to be 214 (107  $\times$  2) KW (238 KVA) justifying its categorisation as HTS -I as the aggregate load exceeded 75 KVA. As such, the load sanctioned to the said consumer under DS-III/DS-II category instead of HTS-I category was incorrect and was not as per the tariff provisions. Taking into account the Tariff provision, amount to be charged as per tariff for HTS - I category was ₹ 159.57 lakh.

Thus, due to incorrect categorisation of the consumer under DS-III/DS-II instead of HTS-I, the Board had charged the consumer ₹ 12.21 lakh only instead of ₹ 159.57 lakh<sup>12</sup> for the period November 2006 to March 2012, and thereby suffered a revenue loss of ₹ 147.36 lakh (₹ 159.57 lakh - ₹ 12.21 lakh).

The Board should categorise its consumers in accordance with the provisions of the Tariff Order and bill them accordingly. Besides, the Board should also fix responsibility for the loss caused to the Board due to incorrect categorisation of consumers.

The matter was reported to the Board and Government (May 2012); replies were awaited (November 2012).

#### ***4.9 Revenue loss due to non-conversion of the Consumer's category***

***The Board suffered a revenue loss of ₹ 1.50 crore due to non-conversion of the Consumer's category***

Para 2.2 of Tariff Order issued in 2006 by Bihar Electricity Regulatory Commission (Commission) provides that Non-Domestic (NDS-I, II & III) categories are applicable for supply of electricity to the Low Tension (LT) consumers with a maximum contracted load of 66 KVA only. Further, as per Para 7.1 of the Tariff Order, supply under High Tension Service (HTS) category is applicable for electricity with a minimum contract demand of 75 KVA. The tariff for HTS category is higher in comparison to the tariff applicable for DS and NDS categories.

Our Audit scrutiny revealed that a consumer, L.N. Mishra Institute, Patna, was supplied electricity at an enhanced load of 290 KW (322 KVA) with effect from September 2006 but billings were being done under NDS-II category.

As NDS-II is applicable up to 60 KW (66 KVA) only, the supply of electricity to the Consumer at a load of 290 KW under NDS-II was irregular and required categorisation of the said consumer into HTS category. The Board issued (October 2009) a notice to the consumer for enhancement of its load and for conversion of its category. Neither the consumer responded to the notice nor this matter was pursued by the Board further. Since the Board, despite being aware of the load of the said consumer being in excess of 66 KVA, did not take effective measures for conversion of the consumer's category, this tantamounted to extension of undue benefit to the consumer. Non-conversion

---

<sup>12</sup> Energy charges (₹ 131.82 lakh) + Demand charges (₹ 27.75 lakh) for 107 quarters.

of the consumer's category from NDS-II to HTS resulted in a loss of revenue of ₹ 1.50 crore (during September 2006 to June 2012) to the Board.

The Management's reply was still awaited. However, the Circle office of the Board stated (July 2012) that the consumer had been converted into HT category with effect from 14 July 2012 and billing would be done accordingly. Though, the Board at the instance of audit observation had categorised the said consumer into HTS category, no action had been taken for the recovery of loss of ₹ 1.50 crore<sup>13</sup> already caused to the Board.

Thus, non-conversion of consumer's category from NDS II to HTS during the period September 2006 to June 2012 resulted in an extension of undue benefit to the consumer and a loss of ₹ 1.50 crore to the Board.

The Board should take effective measures promptly with the consumer requiring conversion of consumer category so as to avoid loss of revenue. Besides, the Board also needs to fix responsibility for the lapse.

The matter was reported to the Board and the Government (May 2012); replies were awaited (November 2012).

#### ***4.10 Avoidable expenditure in procurement of Distribution Transformers***

***The Board failed to invoke the clauses of the Purchase Order which led to avoidable expenditure of ₹ 47.09 lakh in procurement of Distribution Transformers***

Bihar State Electricity Board (Board) placed a Purchase Order on a private firm M/s East India Udyog Limited (Supplier) in August 2010 for supply of 2000 Distribution Transformers of 100 KVA capacity at a landed cost of ₹ 67,662.73 per transformer. Clause 6 of Purchase Order provided for supply of the entire quantity of transformers within four months, i.e., up to 19 December 2010<sup>14</sup>. Clause 7 of the said Purchase Order provided for levy of penalty at the rate of 0.25 *per cent* of ex-works value of the materials delayed in delivery for a week or part thereof subject to a maximum ceiling of five *per cent* from the bills of the suppliers. Further, as per Clause 8 of the Purchase Order, the Board was empowered to reject either in part or full of the awarded contract/order without assigning any reason in case of delay in supply of materials or supply of substandard materials.

The audit scrutiny revealed that:-

- Against the schedule of supplying 800 transformers by 19 October 2010, the supplier delivered only 486 transformers. Instead of supplying the entire 2000 transformers by 19 December 2010, the supplier made a delivery of a total quantity of 1868 transformers during September 2010 to October 2011. The Board had deducted a sum of ₹ 14.80 lakh from the bills of suppliers on account of penalty for delay in supply of Distribution

<sup>13</sup> HTS Billing (due): ₹ 2.38crore – NDS-II Billing (charged): ₹ 0.88 crore = ₹ 1.50 crore.

<sup>14</sup> 1<sup>st</sup> month-200, 2<sup>nd</sup> month-600, 3<sup>rd</sup> month- 600, 4<sup>th</sup> month-600.

Transformers. It was also observed that even after a lapse of ten months from the scheduled completion period, the supply of entire quantity of transformers was not made. Inordinate delay on the part of supplier, thus, attracted provisions of Clause 8 of the Purchase Order which was, however, not invoked.

- In September 2010, the Board invited tender for procurement of another 1000 Distribution Transformers of 100 KVA for which the price bid was opened on 15 November 2010. The rate per transformer quoted by the lowest tenderer was found to be ₹ 63800, which was lower by ₹ 3862.73 than the rate of ₹ 67662.73 at which 2000 transformers were under procurement. By 15 November 2010, when the price bids were opened, the supplier had made a delivery of only 649 transformers, against the previous order.
- Since the price quoted against the tender of September 2010 was lower than that of Purchase Order of August 2010 and the supplier had defaulted in timely supply of transformers, it was in the financial interest of the Board to cancel the Purchase Order by invoking clause 8 thereof for the remaining quantity (1351)<sup>15</sup> of transformers yet to be supplied. Alternatively, the balance quantity should have been purchased at a lower rate of ₹ 63800 per transformer. Instead of this, the Board, continued to accept the transformers supplied belatedly at a higher rate (total quantity of 1868 transformers were delivered by the supplier). This resulted in an avoidable expenditure of ₹ 47.09 lakh (₹ 3862.73 x 1219 transformers, i.e., 1868 minus 649 received till 15 November 2010).
- Further, invitation of tender for procurement of 1000 distribution transformers merely within a month from the date of placement of Purchase Orders for 2000 Distribution Transformers of same capacity reflected ill planning on the part of the Board and also deprived the Board of volume discount it could have got from the supplier.

The Board needs to ensure compliance with the terms and conditions of the Purchase Order so as to avoid extra expenditure.

The matter was reported to the Board and Government (June 2012); replies were awaited (November 2012).

---

<sup>15</sup> 2000-649=1351.

#### 4.11 Loss to the Board

***Non-compliance with the terms and conditions of Fuel Supply Agreement resulted in a loss of ₹3.32 crore to the Board***

Clause 4.6.1 of Fuel Supply Agreement (FSA) entered into between Bihar State Electricity Board (Board) and Eastern Coalfields Limited (ECL) for supply of coal to Barauni Thermal Power Station (BTPS), effective from April 2009 provided, *inter alia*, that the purchaser shall inform the seller, the presence of stones in the consignment of coal received immediately on its detection at delivery/unloading point. The quantity of stones was to be segregated for joint assessment by the seller and the purchaser and the quantity of oversized stones (more than 250 mm in size) was to be adjusted from the coal bills pursuant to clause 9.1 of FSA. Further, clause 4.6.3 (a) and (b) of FSA provided for segregation and stacking of oversized stones at a mutually agreed place. The stones were to be disposed off only after determination of its quantity during joint assessment.

Our audit scrutiny revealed that :-

- A quantity of 24590.44 tonne of stones was found with the coal supplied by ECL during April 2009 to September 2011. As per FSA, the stones were to be stacked and measured by the joint team of ECL and Board. Though the team of ECL visited BTPS several times (during February 2010 to November 2010) but stone could not be measured due to its non-stacking and non-availability of survey instruments until April 2011.
- In May 2011, the joint team measured 1798.41 tonne of stones (for the period December 2009 to April 2011) and found oversized stones of 1528.64 tonne. The joint team again measured (October 2011) a quantity of 252.20 tonne of stones (for the period May 2011 to September 2011) and found 226.98 tonne of oversized stones. On an average, 85 *per cent* of the total quantity of stones was found to be oversized.
- From time to time, the Board resorted to picking, segregating and disposal of stones without carrying out the joint assessment thereof.

It was further observed that against a quantity of 24590.44 tonnes of stones received, the Board could produce a quantity of 2050.61 tonnes of stones only for joint measurement and the remaining 22539.83 tonne of stones could not be produced. As a result, the Board lost the opportunity of claiming ₹ 3.32 crore on 19158.86 tonne (85 *per cent* of 22539.83 tonne at the rate of ₹ 1730.27 per tonne) towards the presence of oversized stones in the balance quantity of 22539.83 tonnes. Reasons for non-production of the remaining quantity of stones for joint measurement as examined in audit were space constraints and non-finalisation of a mutually agreed place for stacking of stones. In the absence of the said mutually agreed place, picked stones could not be stacked and therefore could not be made available for joint

measurement. Thus, Board's failure to comply with the terms and conditions of the Fuel Supply Agreement resulted in a loss of ₹3.32 crore<sup>16</sup> to the Board.

The Board stated (August 2012) that total of 24590 tonne of stones were collected/segregated/stacked/disposed off during the period from December 2009 to September 2011. The stone of size 250 mm above and below 250 mm picked, segregated and stacked at one place, was shown to ECL representatives for their measurement but they refused to go for it in absence of survey instrument as mentioned in FSA.

The Reply is not based on facts as the joint team of Board and ECL had measured 2050.61 tonne of stones only out of total quantity of stones segregated and stacked during December 2009 to May 2011. As such refusal by the ECL to measure segregated and stacked quantity of stones does not hold good. The fact remains that BTPS failed to segregate and stack the oversized stones for verification by ECL and further adjustment against coal bills. Moreover, disposal of stones was done regardless of their size and without carrying out joint assessment, which was otherwise to be disposed off only after the determination of oversized quantity.

The Board in compliance with the terms and conditions of the FSA should segregate and stack the stones and make the same available for joint measurement before the representatives of ECL for further segregation of stones of 250 mm size and above.

The matter was reported to the Government (June 2012); reply was awaited (November 2012).

## **GENERAL**

### ***4.12 Response to inspection reports, draft paragraphs and Performance Audits***

Audit observations made during audit and not settled on the spot were communicated to the heads of PSUs and concerned departments of the State Government through Inspection Reports (IRs). The heads of the PSUs were required to furnish replies to the IRs through respective heads of departments within a period of six weeks. IRs issued up to March 2012 pertaining to 18 PSUs disclosed that 1320 paragraphs related to 608 Inspection Reports were outstanding at the end of September 2012. These outstanding Inspection Report paragraphs had not been replied to for one to eight years. Department-wise break-up of IRs and audit observations outstanding as on 30 September 2012 is given in *Annexure- 9*

---

<sup>16</sup> 19,158.86 tonnes x ₹ 1,730.27 per tome = ₹ 3.32 crore.

Similarly, draft paragraphs and Performance Audits on the working of PSUs were forwarded to the Principal Secretary/Secretary of the administrative department concerned demi-officially, seeking confirmation of facts and figures and their comments thereon within a period of six weeks. It was, however, observed, that replies to 11 draft paragraphs and two Performance Audits forwarded to the various departments during May to August 2012 as detailed in *Annexure -10* were awaited (December 2012).

It is recommended that the Government should ensure that (a) procedure exists for action against officials who fail to send replies to inspection reports/draft paragraphs/Performance Audits as per the prescribed time schedule; (b) action is taken to recover loss/outstanding advances/overpayments in a time bound schedule; and (c) the system of responding to audit observations is strengthened.

Patna  
The



**(I. D. S. DHARIWAL)**  
Accountant General (Audit), Bihar

**Countersigned**

New Delhi  
The



**(VINOD RAI)**  
Comptroller and Auditor General of India



# **ANNEXURES**

## Annexure – 1

(Referred to in paragraph 1.7)

## Statement showing particulars of up-to-date Paid-up Capital, Loans outstanding and Manpower as on 31 March 2012 in respect of Government companies and Statutory corporations

(Figures in column 5 (a) to 6 (c) are ₹ in crore)

Sl. No.	Sector & Name of the Company	Name of the Department	Month and year of incorporation	Paid-up Capital <sup>5</sup>			Loans <sup>**</sup> outstanding at the close of 2011-12			Debt Equity ratio for 2011-12 (Previous year)	Manpower (No. of employees) (as on 31.3.2012)		
				State Government	Central Government	Others	Total	State Government	Central Government			Others	Total
(1)	(2)	(3)	(4)	5 (a)	5 (b)	5 (c)	5 (d)	5 (e)	6 (a)	6 (b)	6 (c)	(7)	(8)
<b>A. Working Government companies</b>													
AGRICULTURE & ALLIED													
1.	Bihar Rajya Beej Nigam Limited	Agriculture	18.7.1977	2.27 (0.65)	1.22 (0.02)	0.22 (0.03)	3.71 (0.70)	27.93	-	-	27.93	7.53:1 (7.53:1)	93
2.	Bihar Rajya Matasya Vikas Nigam Limited	Animal & Fish Resources	23.3.1980	3.00 (1.25)	-	-	3.00 (1.25)	2.60	0.03	-	2.63	0.88:1 (0.88:1)	35
3.	SCADA Agro Business Co. Limited	Water Resources		-	-	0.05	0.05	-	-	-	-	-- (--)	NA
<b>Sector wise total</b>				<b>5.27 (1.90)</b>	<b>1.22 (0.02)</b>	<b>0.27 (0.03)</b>	<b>6.76 (1.95)</b>	<b>30.53</b>	<b>0.03</b>	<b>-</b>	<b>30.56</b>		<b>128</b>
FINANCE													
4.	Bihar State Credit & Investment Corporation Limited	Industries	30.1.1975	15.12 (0.12)	-	-	15.12 (0.12)	20.47	-	33.01	53.48	3.54:1 (3.54:1)	51
5.	Bihar State Backward Classes Finance & Development Corporation	Social Welfare	17.6.1993	19.36 (6.00)	-	-	19.36 (6.00)	-	16.58	-	16.58	0.86:1 (0.91:1)	17
6.	Bihar State Minorities Finance Corporation Limited	Minority Welfare	22.3.1984	32.79 (1.00)	-	-	32.79 (1.00)	-	-	47.26	47.26	1.44:1 (1.35:1)	26
7.	Bihar State Film Development & Finance Corporation Limited	Industries	6.3.1983	2.00 (1.00)	-	-	2.00 (1.00)	0.15	-	-	0.15	0.08:1 (0.07:1)	08
<b>Sector wise total</b>				<b>69.27 (8.12)</b>	<b>-</b>	<b>-</b>	<b>69.27 (8.12)</b>	<b>20.62</b>	<b>16.58</b>	<b>80.27</b>	<b>117.47</b>		<b>102</b>
INFRASTRUCTURE													
8.	Bihar Police Building Construction Corporation Limited	Home (police)	26.6.1974	0.10 (0.00)	-	-	0.10 (0.00)	-	0.43	-	0.43	4.30:1 (4.30:1)	397
9.	Bihar Rajya Pul Nirman Nigam Limited	Road Construction	11.6.1975	3.50	-	-	3.50	-	-	-	-	-	396

**Audit Report on Public Sector Undertakings for the year ended 31 March 2012**

(Figures in column 5 (a) to 6 (c) are ₹ in crore)

Sl. No.	Sector & Name of the Company	Name of the Department	Month and year of incorporation	Paid-up Capital <sup>§</sup>			Loans** outstanding at the close of 2011-12			Debt Equity ratio for 2011-12 (Previous year)	Manpower (No. of employees) (as on 31.3.2012)		
				State Government	Central Government	Others	Total	State Government	Central Government			Others	Total
(1)	(2)	(3)	(4)	5 (a)	5 (b)	5 (c)	5 (d)	5 (e)	6 (a)	6 (b)	6 (c)	(7)	(8)
10.	Bihar State Building Construction Corporation Limited*	Building Construction	20.3.2008	0.06	-	-	0.06	-	-	-	-	-	19
11.	Bihar State Road Development Corporation Limited	Road Construction	20.04.2009	20.00	-	-	20.00	-	-	-	-	-	103
12.	Bihar Urban Infrastructure Development Corporation Limited	Urban Development & Housing Education	16.06.2009	5.00	-	-	5.00	-	-	-	-	-	47
13.	Bihar State Educational Infrastructure Development Corporation Limited	Education	16.07.2010	20.00 (19.95)	-	-	20.00 (19.95)	-	-	-	-	-	49
	<b>Sector wise total</b>			<b>48.66 (19.95)</b>	-	-	<b>48.66 (19.95)</b>	-	<b>0.43</b>	-	<b>0.43</b>	-	<b>1011</b>
<b>MANUFACTURING</b>													
14.	Bihar State Electronics Development Corporation Limited	Information Technology	21.2.1978	5.66 (5.51)	-	-	5.66 (5.51)	6.00	-	-	6.00	1.06:1 (1.06:1)	71
15.	Bihar State Mineral Development Corporation Limited	Mines & Geology	12.6.1972	9.97	-	-	9.97	-	-	-	-	-	NA
16.	Bihar State Beverages Corporation Limited	Registration, Excise & Prohibition	25.5.2006	5.00	-	-	5.00	-	-	-	-	-	228
	<b>Sector wise total</b>			<b>20.63 (5.51)</b>	-	-	<b>20.63 (5.51)</b>	<b>6.00</b>	-	-	<b>6.00</b>	-	<b>299</b>
<b>POWER</b>													
17.	Bihar State Hydroelectric Power Corporation Limited	Energy	31.3.1982	99.04	-	-	99.04	182.72	-	132.52	316.24	3.19:1 (2.83:1)	129
	<b>Sector wise total</b>			<b>99.04</b>	-	-	<b>99.04</b>	<b>182.72</b>	-	<b>132.52</b>	<b>316.24</b>	-	<b>129</b>
<b>SERVICES</b>													
18.	Bihar State Tourism Development Corporation Limited	Tourism	28.11.1980	5.00	-	-	5.00	-	-	-	-	-	226
19.	Bihar State Food & Civil Supplies Corporation Limited	Food & Consumer Protection	22.4.1973	5.27	-	-	5.27	518.64	1.94	-	520.58	98.78:1 (22.88:1)	649
20.	Bihar Medical Services & Infrastructure Corporation Limited	Health & Family Welfare	26.07.2010	6.67 (6.67)	-	0.07 (0.07)	6.74 (6.74)	-	-	-	-	-	9
	<b>Sector wise total</b>			<b>16.94 (6.67)</b>	-	<b>0.07 (0.07)</b>	<b>17.01 (6.74)</b>	<b>518.64</b>	<b>1.94</b>	-	<b>520.58</b>	-	<b>884</b>

\* Previously it was Bihar Health Project Development Corporation Limited.

(Figures in column 5 (a) to 6 (c) are ₹ in crore)

Sl. No.	Sector & Name of the Company	Name of the Department	Month and year of incorporation	Paid-up Capital <sup>5</sup>		Loans <sup>6*</sup> outstanding at the close of 2011-12		Total	Debt Equity ratio for 2011-12 (Previous year)	Manpower (No. of employees) (as on 31.3.2012)			
				State Government	Central Government	State Government	Central Government				Others	Others	
(1)	(2)	(3)	(4)	5 (a)	5 (b)	5 (c)	5 (d)	5 (e)	6 (a)	6 (b)	6 (c)	(7)	(8)
<b>MISCELLANEOUS</b>													
21.	Bihar State Forest Development Corporation Limited	Environment & Forest	10.2.1975	1.75	0.54	-	2.29	-	-	-	-	-	NA
22.	Bihar State Text Book Publishing Corporation Limited	Education	2.4.1965	0.36	-	0.12	0.48	-	-	-	-	-	163
<b>Sector wise total</b>				<b>2.11</b>	<b>0.54</b>	<b>0.12</b>	<b>2.77</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>163</b>
<b>Total A (All sector wise working Government companies)</b>				<b>261.92 (42.15)</b>	<b>1.76 (0.02)</b>	<b>0.46 (0.10)</b>	<b>264.14 (42.27)</b>	<b>758.51</b>	<b>18.98</b>	<b>213.79</b>	<b>991.28</b>	<b>-</b>	<b>2716</b>
<b>B. Working Statutory corporations</b>													
<b>FINANCE</b>													
1.	Bihar State Financial Corporation	Industries	2.11.1954	39.95	37.70	0.19	77.84	228.47	-	-	228.47	2.94:1 (2.98:1)	307
<b>Sector wise total</b>				<b>39.95</b>	<b>37.70</b>	<b>0.19</b>	<b>77.84</b>	<b>228.47</b>	<b>-</b>	<b>-</b>	<b>228.47</b>	<b>-</b>	<b>307</b>
<b>POWER</b>													
2.	Bihar State Electricity Board	Energy	1.4.1958	-	-	-	-	8912.68	279.99	232.92	9425.59	-	10278
<b>Sector wise total</b>				<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>8912.68</b>	<b>279.99</b>	<b>232.92</b>	<b>9425.59</b>	<b>-</b>	<b>10278</b>
<b>SERVICES</b>													
3.	Bihar State Road Transport Corporation	Transport	1.5.1959	74.75	26.52	-	101.27	547.79	-	-	547.79	5.41:1 (2.95:1)	1516
4.	Bihar State Warehousing Corporation	Co-operative	29.3.1957	3.21	-	3.21	6.42	-	-	-	-	-- (0.18:1)	215
<b>Sector wise total</b>				<b>77.96</b>	<b>26.52</b>	<b>3.21</b>	<b>107.69</b>	<b>547.79</b>	<b>-</b>	<b>-</b>	<b>547.79</b>	<b>-</b>	<b>1731</b>
<b>Total B (All sector wise working Statutory corporations)</b>				<b>117.91</b>	<b>64.22</b>	<b>3.40</b>	<b>185.53</b>	<b>9688.94</b>	<b>279.99</b>	<b>232.92</b>	<b>10201.85</b>	<b>-</b>	<b>12316</b>
<b>Grand Total (A + B)</b>				<b>379.83 (42.15)</b>	<b>65.98 (0.02)</b>	<b>3.86 (0.10)</b>	<b>449.67 (42.17)</b>	<b>10447.45</b>	<b>298.97</b>	<b>446.71</b>	<b>11193.13</b>	<b>-</b>	<b>15032</b>
<b>C. Non working Government companies</b>													
<b>AGRICULTURE &amp; ALLIED</b>													
1.	Bihar State Water Development Corporation Limited	Water Resources	12.4.1973	10.00	-	-	10.00	49.68	-	-	49.68	4.97:1 (4.97:1)	NA
2.	Bihar State Dairy Corporation Limited	Animal & Fish Resources	13.3.1972	6.72	-	-	6.72	1.75	-	-	1.75	0.26:1 (0.26:1)	-
3.	Bihar Hill Area Lift Irrigation Corporation Limited	Minor Irrigation	3.6.1975	10.82	-	-	10.82	8.55	-	-	8.55	0.79:1 (0.86:1)	NA
4.	Bihar State Agro Industries Development Corporation Limited	Agriculture	28.4.1966	7.64 (0.07)	-	-	7.64 (0.07)	12.60	-	-	12.60	1.65:1 (1.65:1)	283
5.	Bihar State Fruit & Vegetables Development Corporation Limited	Agriculture	8.10.1980	1.61	0.49	-	2.10	0.42	0.70	-	1.12	0.53:1 (0.53:1)	09

**Audit Report on Public Sector Undertakings for the year ended 31 March 2012**

(Figures in column 5 (a) to 6 (c) are ₹ in crore)

Sl. No.	Sector & Name of the Company	Name of the Department	Month and year of incorporation	Paid-up Capital*			Loans** outstanding at the close of 2011-12			Debt Equity ratio for 2011-12 (Previous year)	Manpower (No. of employees) (as on 31.3.2012)		
				State Government	Central Government	Others	Total	State Government	Central Government			Others	Total
(1)	(2)	(3)	(4)	5 (a)	5 (b)	5 (c)	5 (d)	5 (e)	6 (a)	6 (b)	6 (c)	(7)	(8)
6.	Bihar Insecticide Limited	Industries	27.2.1983	-	-	2.96 (2.39)	2.96 (2.39)	-	-	1.54	1.54	0.52:1 (0.52:1)	69
7.	SCADA Agro Business Khagaul Ltd	Agriculture	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
8.	SCADA Agro Business Ltd., Dehri	Agriculture	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
9.	SCADA Agro Business Ltd. Arrah	Agriculture	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
10.	SCADA Agro Business Ltd. Aurangabad	Agriculture	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
11.	SCADA Agro Business Ltd. Mohania	Agriculture	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
12.	SCADA Agro Forestry Company limited Khagaul	Agriculture	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
<b>Sector wise total</b>				<b>36.79 (0.07)</b>	<b>0.49</b>	<b>2.96 (2.39)</b>	<b>40.24 (2.46)</b>	<b>73.00</b>	<b>0.70</b>	<b>1.54</b>	<b>75.24</b>	-	<b>361</b>
<b>FINANCE</b>													
13.	Bihar Panchayati Raj Finance Corporation Limited	Panchayati Raj	20.4.1974	1.44 (0.38)	--	--	1.44 (0.38)	-	-	-	-	-	NA
14.	Bihar State Handloom and Handicrafts Corporation Limited	Industries	21.5.1974	10.00	--	--	10.00	1.16	-	-	1.16	0.12:1 (0.12:1)	NA
15.	Bihar State Small Industries Corporation Limited	Industries	29.10.1961	7.18	-	-	7.18	10.40	-	1.83	12.23	1.70:1 (1.70:1)	49
16.	Bihar State Industrial Development Corporation Limited	Industries	5.11.1960	14.04	-	-	14.04	66.54	-	0.02	66.56	4.74:1 (4.44:1)	823
<b>Sector wise total</b>				<b>32.66 (0.38)</b>	-	-	<b>32.66 (0.38)</b>	<b>78.10</b>	-	<b>1.85</b>	<b>79.95</b>	-	<b>872</b>
<b>INFRASTRUCTURE</b>													
17.	Bihar State Construction Corporation Limited	Water Resources	22.8.1974	11.00	-	-	11.00	-	-	-	-	-	1086
<b>Sector wise total</b>				<b>11.00</b>	-	-	<b>11.00</b>	-	-	-	-	-	<b>1086</b>
<b>MANUFACTURING</b>													
18.	Bihar Solvent & Chemicals Limited	Environment & Forest Industries	Aug-79	0.20	-	0.88	1.08	-	-	0.89	0.89	0.82:1 (0.82:1)	NA
19.	Magadh Mineral Limited	Industries	22.11.1984	-	-	0.36 (0.36)	0.36 (0.36)	-	-	0.47	0.47	1.31:1 (1.31:1)	05
20.	Kumardhubi Metal Casting & Engineering Limited	Industries	25.10.1983	-	-	2.17	2.17	-	-	6.63	6.63	3.06:1 (3.06:1)	NA
21.	Beltron Video System Limited	Industries	19.9.1984	-	-	5.05	5.05	-	-	4.51	4.51	0.89:1 (0.89:1)	NA

(Figures in column 5 (a) to 6 (c) are ₹ in crore)

Sl. No.	Sector & Name of the Company	Name of the Department	Month and year of incorporation	Paid-up Capital <sup>₹</sup>			Loans <sup>**</sup> outstanding at the close of 2011-12			Debt Equity ratio for 2011-12 (Previous year)	Manpower (No. of employees) (as on 31.3.2012)		
				State Government	Central Government	Others	Total	State Government	Central Government			Others	Total
(1)	(2)	(3)	(4)	5 (a)	5 (b)	5 (c)	5 (d)	5 (e)	6 (a)	6 (b)	6 (c)	(7)	(8)
22.	Beltron Mining System Limited	Industries	30.1.1986	-	-	2.48	2.48	-	-	-	-	-	NA
23.	Beltron Informatics Limited	Industries	1.3.1988	-	-	0.00 <sup>3</sup>	0.00	-	-	-	-	-	NA
24.	Bihar State Sugar Corporation Limited	Sugar Cane	26.12.1974	20.00	-	-	20.00	322.95	-	-	322.95	16.15:1 (16.15:1)	NA
25.	Bihar State Cement Corporation Limited	Industries	17.10.1981	-	-	0.00 <sup>3</sup>	0.00	0.03	-	-	0.03	42.86:1 (45.29:1)	NA
26.	Bihar State Pharmaceuticals & Chemicals Development Corporation Limited	Industries	22.2.1978	16.54 (0.78)	-	-	16.54 (0.78)	4.28	-	-	4.28	0.26:1 (4.60:1)	52
27.	Bihar Maize Product Limited	Industries	2.9.1982	-	-	0.74 (0.74)	0.74 (0.74)	-	-	0.02	0.02	0.03:1 (0.03:1)	NA
28.	Bihar Drugs and Chemicals Limited	Industries	12.8.1983	-	-	4.00	4.00	1.28	-	-	1.28	0.32:1 (0.32:1)	NA
29.	Bihar State Textiles Corporation Limited	Industries	21.2.1978	10.78	-	-	10.78	2.27	-	-	2.27	0.21:1 (0.42:1)	51
<b>Sector wise total</b>				<b>47.52 (0.78)</b>	-	<b>15.68 (1.10)</b>	<b>63.20 (1.88)</b>	<b>330.81</b>	-	<b>12.52</b>	<b>343.53</b>	-	<b>108</b>
SERVICES													
30.	Bihar State Export Corporation Limited	Industries	29.12.1974	2.00	-	-	2.00	1.22	-	-	1.22	0.61:1 (0.61:1)	23
<b>Sector wise total</b>				<b>2.00</b>	-	-	<b>2.00</b>	<b>1.22</b>	-	-	<b>1.22</b>	-	<b>23</b>
MISCELLANEOUS													
31.	Bihar Paper Mills Limited	Industries	8.7.1977	-	-	7.77	7.77	-	-	10.72	10.72	1.38:1 (1.38:1)	NA
32.	Bihar State Glazed Tiles & Ceramics Limited	Industries	2.4.1984	-	-	1.40 (0.25)	1.40 (0.25)	-	-	3.66	3.66	2.61:1 (2.61:1)	32
33.	Vishwamitra Paper Industries Limited	Industries	18.6.1983	-	-	1.74 (0.60)	1.74 (0.60)	-	-	0.81	0.81	0.47:1 (0.47:1)	NA
34.	Jhunjhampur Paper Industries Limited	Industries	27.2.1982	-	-	1.49 (0.42)	1.49 (0.42)	-	-	0.46	0.46	0.31:1 (0.31:1)	13
35.	Bihar State Tannin Extract Limited	Environment & Forest	27.1.1984	-	-	1.57	1.57	-	-	2.14	2.14	1.36:1 (1.36:1)	NA
36.	Bihar State Finished Leathers Corporation Limited	Industries	20.4.1982	-	-	1.47	1.47	9.18	-	-	9.18	6.24:1 (6.24:1)	NA
37.	Synthetic Resins (Eastern) Limited	Industries	14.12.1982	-	-	0.31	0.31	-	-	1.05	1.05	3.39:1 (3.39:1)	-

2 ₹ 0.28 lakh  
3 ₹ 0.07 lakh

**Audit Report on Public Sector Undertakings for the year ended 31 March 2012**

(Figures in column 5 (a) to 6 (c) are ₹ in crore)

Sl. No.	Sector & Name of the Company	Name of the Department	Month and year of incorporation	Paid-up Capital <sup>§</sup>			Loans** outstanding at the close of 2011-12			Debt Equity ratio for 2011-12 (Previous year)	Manpower (No. of employees) (as on 31.3.2012)	
				State Government	Central Government	Others	State Government	Central Government	Others			Total
(1)	(2)	(3)	(4)	5 (a)	5 (b)	5 (c)	5 (e)	6 (a)	6 (b)	6 (c)	(7)	(8)
38.	Bhavani Active Carbon Limited	Industries	26.3.1985	-	-	0.09	-	-	-	-	-	NA
39.	Bihar State Leather Industries Development Corporation Limited	Industries	23.3.1974	17.40	-	-	17.40	12.43	1.70	14.13	0.81:1 (1.41:1)	NA
40.	Bihar Scooters Limited	Industries	19.1.1978	-	-	1.63	1.63	6.09	-	6.09	3.74:1 (3.74:1)	NA
<b>Sector wise total</b>				17.40	-	17.47 (1.27)	34.87 (1.27)	27.70	20.54	48.24	-	45
<b>Total C (All sector wise non-working Government companies)</b>				147.37 (1.23)	0.49	36.11 (4.76)	183.97 (5.99)	510.83	36.45	547.98	-	2495
<b>Grand Total (A + B + C)</b>				527.20 (43.38)	66.47 (0.02)	39.97 (4.86)	10958.28 (48.26)	299.67	483.16	11741.11	-	17527

Above includes Section 619-B Companies at Sl. No. 3 of working Companies and Sl. No. 7 to 12 of non-working Companies.

§ Paid-up capital includes share application money which is appearing in brackets in column 5 (a) to 5 (d)

\*\* Loans outstanding at the close of 20 11-12 represent long-term loans only.

NA indicates that the information has not been provided by the respective companies.

Figures of the companies at Sl. No. A -7, A -15, A -21, C-1 to 40 (except C-5) have been taken from the previous Audit Report (Commercial), Govt. of Bihar as the required information was not furnished by the respective companies.



## Annexure – 2

(Referred to in paragraph 1.14 and 1.34)

## Summarised financial results of Government companies and Statutory corporations for the latest year for which accounts were finalised

(Figures in column 5 (a) to (6) and (7) to (10) are ₹ in crore)

Sl. No.	Sector & Name of the Company	Period of Accounts	Year in which finalised	Net Profit (+)/ Loss (-)		Turn-over	Impact of Accounts Comments #	Paid up Capital	Accumulated Profit (+)/ Loss (-)	Capital Employed @	Return on Capital Employed <sup>5</sup>	Percentage return on Capital Employed
				Net Profit/ Loss before Interest & Depreciation	5 (a)							
(1)	(2)	(3)	(4)	5 (a)	5 (b)	5 (c)	(7)	(8)	(9)	(10)	(11)	(12)
<b>A. Working Government companies</b>												
AGRICULTURE & ALLIED												
1.	Bihar Rajya Beej Nigam Limited	1998-99	2010-11	(-2.73)	2.77	0.07	(-1.53)	3.71	(-53.45)	2.90	(-2.80)	-
2.	Bihar Rajya Matasya Vikas Nigam Limited	1992-93	1996-97	(-0.01)	0.17	0.04	-	1.75	(-1.92)	1.74	(-0.05)	-
3.	SCADA Agro Business Company Limited	2010-11	2011-12	0.01	-	0.01	-	0.05	(-1.81)	1.11	-	0.36
	<b>Sector wise total</b>			<b>(-2.73)</b>	<b>2.94</b>	<b>0.12</b>	<b>(-1.53)</b>	<b>5.51</b>	<b>(-57.18)</b>	<b>5.75</b>	<b>(-2.85)</b>	<b>-</b>
FINANCE												
4.	Bihar State Credit & Investment Corporation Limited	2004-05	2011-12	(-0.26)	3.69	0.04	(-0.99)	15.00	(-149.67)	15.66	(-0.30)	-
5.	Bihar State Backward Classes Finance & Development Corporation	1997-98	2006-07	0.41	0.68	0.02	-	3.62	0.53	3.86	0.39	10.10
6.	Bihar State Minorities Finance Corporation Limited	2007-08	2011-12	0.61	0.96	0.01	-	11.00	(-5.04)	11.00	0.60	5.45
7.	Bihar State Film Development & Finance Corporation Limited	1991-92	2000-01	0.02	-	0.00 <sup>4</sup>	-	0.95	(-0.12)	0.88	0.02	2.27
	<b>Sector wise total</b>			<b>0.78</b>	<b>5.33</b>	<b>0.07</b>	<b>(-0.99)</b>	<b>30.57</b>	<b>(-154.30)</b>	<b>31.40</b>	<b>0.71</b>	<b>-</b>
INFRASTRUCTURE												
8.	Bihar Police Building Construction Corporation Limited	2002-03	2012-13	0.95	-	0.03	-	0.10	(-5.56)	(-5.04)	0.92	-
9.	Bihar Rajya Pul Nirman Nigam Limited	2010-11	2012-13	45.31	-	7.42	-	3.50	110.44	180.18	37.89	21.03

<sup>4</sup> ₹ 0.42 lakh<sup>5</sup> ₹ 0.29 lakh

**Audit Report on Public Sector Undertakings for the year ended 31 March 2012**

(Figures in column 5 (a) to (6) and (7) to (10) are ₹ in crore)

Sl. No.	Sector & Name of the Company	Period of Accounts	Year in which finalised	Net Profit/ Loss before Interest & Depreciation	Net Profit (+)/ Loss (-)		Turn-over	Impact of Accounts Comments #	Paid up Capital	Accumulated Profit (+)/ Loss (-)	Capital Employed @	Return on Capital Employed \$	Percentage return on Capital Employed	
					5 (a)	5 (b)								5 (c)
10.	Bihar State Building Construction Corporation Limited	1 <sup>st</sup> Accounts not finalised	(4)	-	-	-	-	-	(8)	(9)	(10)	(11)	(12)	
11.	Bihar State Road Development Corporation Limited	2010-11	2011-12	75.72	-	0.27	880.63	(-)39.48	20.00	94.56	113.20	75.45	66.65	
12.	Bihar Urban Infrastructure Development Corporation Limited	2010-11	2011-12	0.42	-	0.11	1.57	-	5.00	0.27	5.09	0.31	6.09	
13.	Bihar State Educational Infrastructure Development Corporation Limited	2010-11	2012-13	10.42	-	-	-	(-)10.84	20.00	10.42	(-)277.65	10.42	-	
<b>Sector wise total</b>				<b>132.82</b>	<b>-</b>	<b>7.83</b>	<b>972.07</b>	<b>(-)50.32</b>	<b>48.60</b>	<b>210.13</b>	<b>15.78</b>	<b>124.99</b>	<b>-</b>	
<b>MANUFACTURING</b>														
14.	Bihar State Electronics Development Corporation Limited	2009-10	2011-12	8.31	0.92	0.08	32.86	(-)1.32	5.66	1.76	26.18	8.23	31.44	
15.	Bihar State Mineral Development Corporation Limited	2000-01	2004-05	9.42	-	0.13	31.55	-	9.97	7.04	20.68	9.29	44.92	
16.	Bihar State Beverages Corporation Limited	2009-10	2011-12	5.65	-	0.19	1210.00	-	5.00	5.55	11.12	5.46	49.10	
<b>Sector wise total</b>				<b>23.38</b>	<b>0.92</b>	<b>0.40</b>	<b>1274.41</b>	<b>(-)1.32</b>	<b>20.63</b>	<b>14.35</b>	<b>57.98</b>	<b>22.98</b>	<b>-</b>	
<b>POWER</b>														
17.	Bihar State Hydroelectric Power Corporation Limited	1999-2000	2012-13	6.60	6.54	5.65	8.53	(-)0.94	99.04	(-)44.79	143.01	0.95	0.66	
<b>Sector wise total</b>				<b>6.60</b>	<b>6.54</b>	<b>5.65</b>	<b>8.53</b>	<b>(-)0.94</b>	<b>99.04</b>	<b>(-)44.79</b>	<b>143.01</b>	<b>0.95</b>	<b>0.95</b>	<b>-</b>
<b>SERVICES</b>														
18.	Bihar State Tourism Development Corporation Limited	2003-04	2012-13	0.23	-	0.13	3.90	-	5.00	3.38	8.00	0.10	1.25	
19.	Bihar State Food & Civil Supplies Corporation Limited	1989-90	2011-12	(-)3.99	1.04	0.63	159.41	-	4.46	(-)34.86	34.59	(-)4.62	-	

(Figures in column 5 (a) to (6) and (7) to (10) are ₹ in crore)

Sl. No.	Sector & Name of the Company	Period of Accounts	Year in which finalised	Net Profit (+)/ Loss (-)			Turn-over	Impact of Accounts Comments #	Paid up Capital	Accumulated Profit (+)/ Loss (-)	Capital Employed @	Return on Capital Employed \$	Percentage return on Capital Employed	
				Net Profit/ Loss before Interest & Depreciation	Interest	Depre- ciation								Net Profit/ Loss
(1)	(2)	(3)	(4)	5 (a)	5 (b)	5 (c)	5 (d)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
20.	Bihar Medical Services & Infrastructure Corporation Limited	2010-11	2012-13	-	-	-	-	-	0.08	-	-	-	-	
<b>Sector wise total</b>				<b>(-33.76)</b>	<b>1.04</b>	<b>0.76</b>	<b>(-5.56)</b>	<b>163.31</b>	<b>9.54</b>	<b>(-31.48)</b>	<b>42.59</b>	<b>(-4.52)</b>		
<b>MISCELLANEOUS</b>														
21.	Bihar State Forest Development Corporation Limited	2000-01	2005-06	0.34	-	0.06	0.28	22.81	(-0.40)	2.29	0.32	1.17	0.28	23.93
22.	Bihar State Text Book Publishing Corporation Limited	1997-98	2009-10	(-4.30)	-	0.06	(-4.36)	7.28	-	0.48	(-5.97)	(-6.51)	(-4.36)	-
<b>Sector wise total</b>				<b>(-3.96)</b>	<b>-</b>	<b>0.12</b>	<b>(-4.08)</b>	<b>30.09</b>	<b>(-0.40)</b>	<b>2.77</b>	<b>(-5.65)</b>	<b>(-5.34)</b>	<b>(-4.08)</b>	
<b>Total A (All sector wise working Government companies)</b>				<b>153.13</b>	<b>16.77</b>	<b>14.95</b>	<b>121.41</b>	<b>2458.84</b>	<b>(-55.50)</b>	<b>216.66</b>	<b>(-68.92)</b>	<b>291.17</b>	<b>138.18</b>	<b>-</b>
<b>B. Working Statutory corporations</b>														
<b>FINANCE</b>														
1.	Bihar State Financial Corporation	2010-11	2012-13	33.32	31.53	0.06	1.73	11.71	(-0.33)	77.84	(-382.20)	403.38	33.26	8.25
<b>Sector wise total</b>				<b>33.32</b>	<b>31.53</b>	<b>0.06</b>	<b>1.73</b>	<b>11.71</b>	<b>(-0.33)</b>	<b>77.84</b>	<b>(-382.20)</b>	<b>403.38</b>	<b>33.26</b>	
<b>POWER</b>														
2.	Bihar State Electricity Board	2011-12	2012-13	(-1038.26)	1480.64	143.48	(-2662.38)	5268.79	**	-	(-8520.71)	6216.34	(-1181.74)	-
<b>Sector wise total</b>				<b>(-1038.26)</b>	<b>1480.64</b>	<b>143.48</b>	<b>(-2662.38)</b>	<b>5268.79</b>	<b>-</b>	<b>-</b>	<b>(-8520.71)</b>	<b>6216.34</b>	<b>(-1181.74)</b>	
<b>SERVICES</b>														
3.	Bihar State Road Transport Corporation	2002-03	2009-10	(-25.57)	28.77	1.40	(-55.74)	18.19	(-9.28)	101.28	(-680.17)	(-428.03)	(-26.97)	-
4.	Bihar State Warehousing Corporation	2008-09	2010-11	1.73	0.40	0.81	0.52	53.75	(-2.42)	5.31	3.43	21.16	0.92	4.35
<b>Sector wise total</b>				<b>(-23.84)</b>	<b>29.17</b>	<b>2.21</b>	<b>(-55.22)</b>	<b>71.94</b>	<b>(-11.70)</b>	<b>106.59</b>	<b>(-676.74)</b>	<b>(-406.87)</b>	<b>(-26.05)</b>	
<b>Total B (All sector wise working Statutory corporations)</b>				<b>(-1028.78)</b>	<b>1541.34</b>	<b>145.75</b>	<b>(-2715.87)</b>	<b>5352.44</b>	<b>(-12.03)</b>	<b>184.43</b>	<b>(-9579.65)</b>	<b>6212.85</b>	<b>(-1174.53)</b>	
<b>Grand Total (A + B)</b>				<b>(-875.65)</b>	<b>1558.11</b>	<b>160.70</b>	<b>(-2594.46)</b>	<b>7811.28</b>	<b>(-67.53)</b>	<b>401.09</b>	<b>(-9648.57)</b>	<b>6504.02</b>	<b>(-1036.35)</b>	

**Audit Report on Public Sector Undertakings for the year ended 31 March 2012**

(Figures in column 5 (a) to (6) and (7) to (10) are ₹ in crore)

Sl. No.	Sector & Name of the Company	Period of Accounts	Year in which finalised	Net Profit (+)/ Loss (-)			Turn-over	Impact of Accounts Comments #	Paid up Capital	Accumulated Profit (+)/ Loss (-)	Capital Employed @	Return on Capital Employed \$	Percentage return on Capital Employed
				5 (a)	5 (b)	5 (c)							
<b>C. Non-working Government companies</b>													
<b>AGRICULTURE &amp; ALLIED</b>													
1.	Bihar State Water Development Corporation Limited	1978-79	1997-98	3.03	0.25	0.61	2.17	-	5.00	11.20	26.70	2.42	9.06
2.	Bihar State Dairy Corporation Limited	1995-96	2011-12	0.00 <sup>6</sup>	-	0.00 <sup>7</sup>	0.00 <sup>8</sup>	-	6.72	(-)10.58	4.88	0.00 <sup>9</sup>	0.03
3.	Bihar Hill Area Lift Irrigation Corporation Limited	1982-83	1993-94	0.18	0.13	0.31	(-)0.26	0.01	5.60	(-)0.86	9.53	(-)0.13	-
4.	Bihar State Agro Industries Development Corporation Limited	1989-90	2009-10	(-)5.02	0.65	0.03	(-)5.70	2.79	7.57	(-)28.96	(-)1.41	(-)5.05	-
5.	Bihar State Fruit & Vegetables Development Corporation Limited	1994-95	2010-11	(-)0.12	0.73	0.07	(-)0.92	0.00	2.10	(-)7.82	(-)0.07	(-)0.19	-
6.	Bihar Insecticide Limited	1986-87	1991-92	(-)0.52	0.16	0.35	(-)1.03	-	0.57	(-)1.03	2.35	(-)0.87	-
7.	SCADA Agro Business Limited, Khagaul	-	-	-	-	-	-	-	-	-	-	-	-
8.	SCADA Agro Business Limited, Dehri	-	-	-	-	-	-	-	-	-	-	-	-
9.	SCADA Agro Business Limited, Arrah	-	-	-	-	-	-	-	-	-	-	-	-
10.	SCADA Agro Business Limited, Aurangabad	-	-	-	-	-	-	-	-	-	-	-	-
11.	SCADA Agro Business Limited, Mohania	-	-	-	-	-	-	-	-	-	-	-	-
12.	SCADA Agro Forestry Company Limited, Khagaul	-	-	-	-	-	-	-	-	-	-	-	-
<b>Sector wise total</b>				<b>(-)2.45</b>	<b>1.92</b>	<b>1.37</b>	<b>(-)5.74</b>	<b>2.80</b>	<b>27.56</b>	<b>(-)38.05</b>	<b>41.98</b>	<b>(-)3.82</b>	

<sup>6</sup> ₹ 0.17 Lakh

<sup>7</sup> ₹ 684.00

<sup>8</sup> ₹ 0.16 Lakh

<sup>9</sup> ₹ 0.16 Lakh

(Figures in column 5 (a) to (6) and (7) to (10) are ₹ in crore)

Sl. No.	Sector & Name of the Company	Period of Accounts	Year in which finalised	Net Profit (+)/ Loss (-)			Turn-over	Impact of Accounts Comments #	Paid up Capital	Accumulated Profit (+)/ Loss (-)	Capital Employed @	Return on Capital Employed \$	Percentage return on Capital Employed	
				Net Profit/ Loss before Interest & Depreciation	Net Profit/ Interest	Depre- ciation								
(1)	(2)	(3)	(4)	5 (a)	5 (b)	5 (c)	5 (d)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
FINANCE														
13.	Bihar Panchayati Raj Finance Corporation Limited	1984-85	1991-92	0.23	0.24	0.00 <sup>10</sup>	(-0.01)	-	1.44	(-0.03)	5.86	0.23	3.92	
14.	Bihar State Handloom and Handicrafts Corporation Limited	1983-84	1996-97	0.02	0.11	0.01	(-0.10)	(-0.01)	6.28	(-0.44)	7.08	0.01	0.14	
15.	Bihar State Small Industries Corporation Limited	1990-91	2005-06	(-0.21)	1.15	0.06	(-1.42)	(-0.53)	7.18	(-116.56)	1.86	(-0.27)	-	
16.	Bihar State Industrial Development Corporation Limited	1987-88	2009-10	2.22	5.35	0.38	(-3.51)	(-9.28)	14.04	(-26.42)	29.54	1.84	6.23	
<b>Sector wise total</b>				<b>2.26</b>	<b>6.85</b>	<b>0.45</b>	<b>(-5.04)</b>	<b>(-9.82)</b>	<b>28.94</b>	<b>(-43.45)</b>	<b>44.34</b>	<b>1.81</b>		
INFRASTRUCTURE														
17.	Bihar State Construction Corporation Limited	1989-90	2012-13	0.99	-	0.15	0.84	-	7.00	(-0.04)	2.38	0.84	35.29	
<b>Sector wise total</b>				<b>0.99</b>	<b>-</b>	<b>0.15</b>	<b>0.84</b>	<b>-</b>	<b>7.00</b>	<b>(-0.04)</b>	<b>2.38</b>	<b>0.84</b>		
MANUFACTURING														
18.	Bihar Solvent & Chemicals Limited	1986-87	1995-96	(-0.05)	0.11	0.16	(-0.32)	(-0.24)	0.66	(-0.32)	1.67	(-0.21)	-	
19.	Magadh Mineral Limited	-	-	-	-	-	-	-	-	-	-	-	-	
20.	Kumardhubi Metal Casting & Engineering Limited	1994-95	1995-96	(-1.13)	0.38	0.88	(-2.39)	10.89	2.17	(-8.16)	0.91	(-2.01)	-	
21.	Beltron Video System Limited	1987-88	1998-99	(-0.09)	0.05	0.01	(-0.15)	0.75	1.21	(-0.22)	1.02	(-0.10)	-	
22.	Beltron Mining System Limited	1989-90	2002-03	(-0.07)	-	0.03	(-0.10)	0.41	1.26	(-0.49)	0.52	(-0.10)	-	
23.	Beltron Informatics Limited	-	-	-	-	-	-	-	-	-	-	-	-	
24.	Bihar State Sugar Corporation Limited	1984-85	1996-97	(-2.84)	6.00	0.36	(-9.20)	(-4.67)	9.97	(-72.31)	(-10.24)	(-3.20)	-	
25.	Bihar State Cement Corporation Limited	-	-	-	-	-	-	-	-	-	-	-	-	

**Audit Report on Public Sector Undertakings for the year ended 31 March 2012**

(Figures in column 5 (a) to (6) and (7) to (10) are ₹ in crore)

Sl. No.	Sector & Name of the Company	Period of Accounts	Year in which finalised	Net Profit (+)/ Loss (-)			Turn-over	Impact of Accounts Comments #	Paid up Capital	Accumulated Profit (+)/ Loss (-)	Capital Employed @	Return on Capital Employed \$	Percentage return on Capital Employed	
				Net Profit/ Loss before Interest & Depreciation	Interest	Depreciation								
(1)	(2)	(3)	(4)	5 (a)	5 (b)	5 (c)	5 (d)	(7)	(8)	(9)	(10)	(11)	(12)	
26.	Bihar State Pharmaceuticals & Chemicals Development Corporation Limited	1985-86	1992-93	(-0.16)	0.00 <sup>11</sup>	0.01	(-0.17)	-	3.62	(-0.74)	6.87	(-0.17)	-	
27.	Bihar Maize Product Limited	1983-84	1987-88	(-0.03)	-	0.00 <sup>12</sup>	(-0.03)	-	0.67	(-0.06)	0.80	(-0.03)	-	
28.	Bihar Drugs and Chemicals Limited	1985-86	1991-92	(-0.03)	-	0.00 <sup>13</sup>	(-0.03)	-	0.94	(-0.16)	1.16	(-0.03)	-	
29.	Bihar State Textiles Corporation Limited	1987-88	1995-96	(-0.08)	-	0.01	(-0.09)	(-0.02)	4.98	(-0.32)	3.72	(-0.09)	-	
<b>Sector wise total</b>				<b>(-4.48)</b>	<b>6.54</b>	<b>1.46</b>	<b>(-12.48)</b>	<b>(-4.93)</b>	<b>25.48</b>	<b>(-82.78)</b>	<b>6.43</b>	<b>(-5.94)</b>		
<b>SERVICES</b>														
30.	Bihar State Export Corporation Limited	1991-92	1999-00	0.11	0.20	0.01	(-0.10)	(-0.03)	2.00	(-0.01)	3.75	0.10	2.67	
<b>Sector wise total</b>				<b>0.11</b>	<b>0.20</b>	<b>0.01</b>	<b>(-0.10)</b>	<b>(-0.03)</b>	<b>2.00</b>	<b>(-0.01)</b>	<b>3.75</b>	<b>0.10</b>		
<b>MISCELLANEOUS</b>														
31.	Bihar Paper Mills Limited	1985-86	1997-98	(-0.05)	-	0.01	(-0.06)	0.00 <sup>14</sup>	1.56	(-0.31)	1.44	(-0.06)	-	
32.	Bihar State Glazed Tiles & Ceramics Limited	1985-86	1997-98	(-0.06)	0.02	0.00 <sup>15</sup>	(-0.08)	-	0.16	(-0.51)	3.50	0.06	-	
33.	Vishwamitra Paper Industries Limited	1984-85	1988-89	(-0.01)	-	0.00 <sup>16</sup>	(-0.01)	-	0.40	(-0.01)	0.69	(-0.01)	-	
34.	Jhanjharpur Paper Industries Limited	1985-86	1991-92	(-0.01)	0.00 <sup>17</sup>	0.00 <sup>18</sup>	(-0.01)	(-0.03)	0.42	(-0.02)	0.59	(-0.01)	-	
35.	Bihar State Tannin Extract Limited	1988-89	1993-94	(-0.16)	0.16	0.00 <sup>19</sup>	(-0.32)	-	1.03	(-0.67)	2.49	(-0.16)	-	
36.	Bihar State Finished Leathers Corporation Limited	1983-84	1986-87	(-1.49)	-	-	(-1.49)	-	1.47	(-2.13)	6.15	(-1.49)	-	
37.	Synthetic Resins (Eastem) Limited	1983-84	1987-88	(-0.02)	0.00 <sup>20</sup>	-	(-0.02)	-	0.09	(-0.01)	0.17	(-0.02)	-	

<sup>11</sup> ₹ 1,680.50

<sup>12</sup> ₹ 9,052.80

<sup>13</sup> ₹ 328.52

<sup>14</sup> ₹ 36,000

<sup>15</sup> ₹ 47,550.94

<sup>16</sup> ₹ 7,623.00

<sup>17</sup> ₹ 2,533.30

<sup>18</sup> ₹ 421.36

<sup>19</sup> ₹ 22,074.77

<sup>20</sup> ₹ 5,814.45

(Figures in column 5 (a) to (6) and (7) to (10) are ₹ in crore)

Sl. No.	Sector & Name of the Company	Period of Accounts	Year in which finalised	Net Profit (+)/ Loss (-)			Turn-over	Impact of Accounts Comments #	Paid up Capital	Accumulated Profit (+)/ Loss (-)	Capital Employed @	Return on Capital Employed \$	Percentage return on Capital Employed
				Net Profit/ Loss before Interest & Depreciation	5 (a)	5 (b)							
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)		
38.	Bhavani Active Carbon Limited	1985-86	1989-90	(-)0.01	-	-	0.02	(-)0.01	0.01	(-)0.01	-		
39.	Bihar State Leather Industries Development Corporation Limited	1982-83	2004-05	(-)0.25	0.08	0.04	5.14	(-)2.92	2.56	(-)0.29	-		
40.	Bihar Scooters Limited	-	-	-	-	-	-	-	-	-	-		
Sector wise total				(-)2.06	0.26	0.05	10.29	(-)6.59	17.60	(-)2.11			
Total C (All sector wise non working Government companies)				(-)5.63	15.77	3.49	101.27	(-)170.92	116.48	(-)9.12			
Grand Total (A + B + C)				(-)881.28	1573.88	164.19	502.36	(-)9819.49	6620.50	(-)1045.47			

# Above includes Section 619-B Companies at Sl. No. 3 of working companies and Sl. No. 7 to 12 of non-working companies.

# Impact of accounts comments include the net impact of comments of Statutory Auditors and CAG of India and is denoted by (+) increase in profit/ decrease in losses (-) decrease in profit/ increase in losses.

@ Capital employed represents net fixed assets (including capital works -in-progress) plus working capital except in case of finance companies/ corporations where the capital employed is worked out as a mean of aggregate of the opening and closing balances of paid up capital, free reserves, bonds, deposits and borrowings (including refinance).

\$ Return on capital employed has been worked out by adding profit and interest charged to profit and loss account.

\*\* Audit of Accounts by CAG of India who is the sole auditor for these corporations is under progress .



Annexure – 3

(Referred to in paragraph 1.10)

Statement showing equity/loans received out of budget, grants and subsidy received/receivable, guarantees received, waiver of dues, loans written off and loans converted into equity during the year and guarantee commitment at the end of March 2012

(Figures in column 3 (a) to 6 (d) are ₹ in crore)

Sl. No.	Sector & Name of the Company	Equity/ Loans received out of budget during the year		Grants and Subsidy received during the year				Guarantees received during the year and Commitment at the end of the year <sup>(a)</sup>				Waiver of dues during the year			
		Equity	Loans	Central Government	State Government	Others	Total	Received	Commitment	Loans repayment written off	Loans converted into Equity	Interest/ Penal Interest waived	Total		
(1)	(2)	3 (a)	3 (b)	4 (a)	4 (b)	4 (c)	4 (d)	5 (a)	5 (b)	6 (a)	6 (b)	6 (c)	6 (d)		
<b>A. Working Government companies</b>															
FINANCE															
1.	Bihar State Backward Classes Finance & Development Corporation	1.00	-	-	-	-	-	-	25.00 <sup>(a/s)</sup>	-	-	-	-		
2.	Bihar State Minorities Finance Corporation Limited	1.00	-	-	-	-	-	-	30.00 <sup>(a/s)</sup>	-	-	-	-		
	<b>Sector wise total</b>	<b>2.00</b>	-	-	-	-	-	-	<b>55.00<sup>(a/s)</sup></b>	-	-	-	-		
<b>POWER</b>															
3.	Bihar State Hydroelectric Power Corporation Limited	-	35.59	-	-	-	-	-	-	-	-	-	-		
	<b>Sector wise total</b>	-	<b>35.59</b>	-	-	-	-	-	-	-	-	-	-		
<b>SERVICES</b>															
4.	Bihar State Food & Civil Supplies Corporation Limited	-	400.00	-	-	-	-	-	-	-	-	-	-		
	<b>Sector wise total</b>	-	<b>400.00</b>	-	-	-	-	-	-	-	-	-	-		
	<b>Total A (All sector wise working Government companies)</b>	<b>2.00</b>	<b>435.59</b>	-	-	-	-	-	<b>55.00<sup>(a/s)</sup></b>	-	-	-	-		
<b>B. Working Statutory corporations</b>															
FINANCE															
1.	Bihar State Financial Corporation	-	-	-	-	-	-	-	3.47 <sup>(a)</sup>	-	-	-	-		
	<b>Sector wise total</b>	-	-	-	-	-	-	-	<b>3.47<sup>(a)</sup></b>	-	-	-	-		

(Figures in column 3 (a) to 6 (d) are ₹ in crore)

Sl. No.	Sector & Name of the Company	Equity/ Loans received out of budget during the year		Grants and Subsidy received during the year			Guarantees received during the year and Commitment at the end of the year <sup>@</sup>		Waiver of dues during the year				
		Equity	Loans	Central Government	State Government	Others	Total	Received	Commitment	Loans repayment written off	Loans converted into Equity	Interest/ Penal Interest waived	Total
(1)	(2)	3 (a)	3 (b)	4 (a)	4 (b)	4 (c)	4 (d)	5 (a)	5 (b)	6 (a)	6 (b)	6 (c)	6 (d)
<b>POWER</b>													
2.	Bihar State Electricity Board	-	899.94	-	2120.24	-	2120.24	-	194.58 <sup>(o/s)</sup>	-	-	-	-
	<b>Sector wise total</b>	-	<b>899.94</b>	-	<b>2120.24</b>	-	<b>2120.24</b>	-	<b>194.58<sup>(o/s)</sup></b>	-	-	-	-
<b>SERVICES</b>													
3.	Bihar State Road Transport Corporation	-	129.34	-	-	-	-	-	-	-	-	-	-
	<b>Sector wise Total</b>	-	<b>129.34</b>	-	-	-	-	-	-	-	-	-	-
	<b>Total B (All sector wise working Statutory corporations)</b>	-	<b>1029.28</b>	-	<b>2120.24</b>	-	<b>2120.24</b>	-	<b>3.47<sup>(a)</sup></b> <b>194.58<sup>(o/s)</sup></b>	-	-	-	-
	<b>Grand Total (A + B)</b>	<b>2.00</b>	<b>1464.87</b>	-	<b>2120.24</b>	-	<b>2120.24</b>	-	<b>3.47<sup>(a)</sup></b> <b>249.58<sup>(o/s)</sup></b>	-	-	-	-

<sup>@</sup> Figures indicate total commitment made at the end of the year.

(o/s) Guarantee outstanding at the end of March, 2012.

**Annexure – 4**  
**(Referred to in paragraph 1.23)**

**Statement showing investments made by the State Government in PSUs whose accounts are in arrears**

(Amount: ₹ in crore)

Name of PSU	Year up to which Accounts finalised	Paid up capital as per latest finalised Accounts	Investment made by the State Government during the years for which Accounts are in arrears				
			Equity	Loans	Grants	Others to be specified (Subsidy)	Total
<b>A. Working Companies</b>							
Bihar Rajya Beej Nigam Limited	1998-99	3.71	-	2.28	59.69	-	61.97
Bihar State Text Book Publishing Corporation Limited	1997-98	0.48	-	-	-	205.00	205.00
Bihar State Backward Classes Finance & Development Corporation	1997-98	3.62	15.74	7.49	-	-	23.23
Bihar State Tourism Development Corporation Limited	2003-04	5.00	-	-	-	-	-
Bihar State Food & Civil Supplies Corporation Limited	1989-90	4.46	0.81	602.25	-	-	603.06
Bihar Rajya Pul Nirman Nigam Limited	2010-11	3.50	-	-	-	-	-
Bihar Police Building Construction Corporation Limited	2003-04	0.10	-	-	-	-	-
Bihar State Hydroelectric Power Corporation Limited	1999-2000	99.04	-	89.78	-	-	89.78
Bihar Rajya Matasya Vikas Nigam Limited	1992-93	1.75	1.25	5.63	-	-	6.88
Bihar State Forest Development Corporation Limited	2000-01	2.29	-	-	-	-	-
Bihar State Credit & Investment Corporation Limited	2004-05	15.12	-	57.49	-	-	57.49
Bihar State Film Development & Finance Corporation Limited	1991-92	0.95	1.05	0.01	-	-	1.06
Bihar State Electronic Development Corporation Limited	2009-10	5.66	-	-	-	-	-
Bihar State Mineral Development Corporation Limited	2000-01	9.97	-	-	11.00	-	11.00
Bihar State Minorities Finance Corporation Limited	2007-08	11.00	21.79	-	-	-	21.79
Bihar State Beverages Corporation Limited	2009-10	5.00	-	-	-	-	-
Bihar State Building Construction Corporation Limited	No Accounts finalised since inception	0.06*	0.06	-	-	-	0.06

Name of PSU	Year up to which Accounts finalised	Paid up capital as per latest finalised Accounts	Investment made by the State Government during the years for which Accounts are in arrears				
			Equity	Loans	Grants	Others to be specified (Subsidy)	Total
Bihar State Road Development Corporation Limited	2010-11	20.00		-	-	-	-
Bihar Urban Infrastructure Development Corporation Limited	2010-11	5.00		-	-	-	-
Bihar State Educational Infrastructure Development Corporation Limited	2010-11	20.00	-	-	-	-	-
Bihar Medical Services & Infrastructure Corporation Limited	2010-11	7.58	-	-	-	-	-
<b>Total (A)</b>			<b>40.70</b>	<b>764.93</b>	<b>70.69</b>	<b>205.00</b>	<b>1081.32</b>
<b>B. Working Statutory corporations</b>							
Bihar State Electricity Board	2011-12	-	-	-	-	-	-
Bihar State Road Transport Corporation	2002-03	101.27	-	456.77	-	-	456.77
Bihar State Financial Corporation	2010-11	77.84	-	-	-	-	-
Bihar State Warehousing Corporation	2008-09	5.31	-	-	-	-	-
<b>Total (B)</b>			<b>-</b>	<b>456.77</b>	<b>-</b>	<b>-</b>	<b>456.77</b>
<b>Total (A+B)</b>			<b>40.70</b>	<b>1221.70</b>	<b>70.69</b>	<b>205.00</b>	<b>1538.09</b>
<b>C. Non-working Companies</b>							
Bihar State Small Industries Corporation Limited	1990-91	7.18	-	1.66	-	2.46	4.12
Bihar State Pharmaceuticals & Chemical Development Corporation Limited	1985-86	3.62	12.92	6.30	-	-	19.22
Bihar State Industrial Development Corporation Limited	1987-88	14.04	-	38.47	-	-	38.47
Bihar State Leather Industries Development Corporation Limited	1982-83	5.14	12.26	43.18	-	-	55.44
Bihar State Textile Corporation Limited	1987-88	4.98	5.80	2.74	-	-	8.54
Bihar State Dairy Corporation Limited	1995-96	6.72	-	-	-	-	-
Bihar State Construction Corporation Limited	1989-90	7.00	2.00	1.05	-	-	3.05
Bihar Hill Area Lift Irrigation Corporation Limited	1982-83	5.60	5.22	18.78	-	55.41	79.41
Bihar State Sugar Corporation Limited	1984-85	9.97	10.03	365.32	-	-	375.35

Name of PSU	Year up to which Accounts finalised	Paid up capital as per latest finalised Accounts	Investment made by the State Government during the years for which Accounts are in arrears				
			Equity	Loans	Grants	Others to be specified (Subsidy)	Total
Bihar Panchayati Raj Finance Corporation Limited	1984-85	1.44	-	-	-	-	-
Bihar State Water Development Corporation Limited	1978-79	5.00	5.00	154.33	-	-	159.33
Bihar State Agro Industries Development Corporation Limited	1989-90	7.57	0.07	24.66	-	-	24.73
Bihar Fruits & Vegetables Development Corporation Limited	1994-95	2.10	-	4.65	21.07	-	25.72
Bihar State Export Corporation Limited	1991-92	2.00	-	2.21	-	0.07	2.28
Bihar State Handloom & Handicrafts Corporation Limited	1983-84	6.28	3.72	0.25	-	0.48	4.45
Bihar Solvent & Chemicals Limited	1986-87	0.66	-	-	-	-	-
Bihar State Cement Corporation Limited	A/c has not been finalised since inception	-	-	-	-	-	-
Bihar Drugs and Chemicals Limited	1985-86	0.94	NA	NA	NA	NA	NA
Bihar State Tannin Extract Limited	1988-89	1.03	NA	NA	NA	NA	NA
Bihar State Finished Leathers Corporation Limited	1983-84	1.47	-	9.18	-	-	9.18
Bihar Scooters Limited	-	-	-	6.09	-	-	6.09
<b>Total (C)</b>			<b>57.02</b>	<b>678.87</b>	<b>21.07</b>	<b>58.42</b>	<b>815.38</b>
<b>Grand Total (A+B+C)</b>			<b>97.72</b>	<b>1900.57</b>	<b>91.76</b>	<b>263.42</b>	<b>2353.47</b>

\* Figures are based on the information furnished by the Companies.

NA indicates that the information has not been provided by the respective Company.

## Annexure - 5

(Referred to in paragraph 1.14)

## Statement of financial position of Statutory corporations

(Amount: ₹ in crore)

<b>1. Bihar State Electricity Board</b>			
<b>Particulars</b>	<b>2009-10</b>	<b>2010-11</b>	<b>2011-12</b>
<b>A Liabilities</b>			
Equity Capital	-	-	-
Loans from Government	6496.66	8493.87	11464.96
Reserves and Surplus(excluding depreciation reserve)	-	-	-
Current Liabilities and provisions	3738.72	3873.45	5977.22
Capital liabilities	6763.88	8225.92	9867.94
<b>Total – A</b>	<b>16996.26</b>	<b>20593.24</b>	<b>27310.12</b>
<b>B Assets</b>			
Gross fixed assets	2864.80	3856.07	5049.28
Less : depreciation	1800.57	1895.18	2101.11
Net fixed assets	1064.23	1960.89	2948.17
Capital work-in- progress	881.20	1282.04	3865.49
Current assets	5316.13	5644.86	5379.89
Investments	829.57	1471.48	2280.21
Subsidy receivable from Government	4315.65	4315.65	4315.65
Assets not in use	3.61	-	-
Regulatory assets	60.00	60.00	-
Miscellaneous expenditure	-	-	-
Deficits	4525.88	5858.32	8520.71
<b>Total – B</b>	<b>16996.26</b>	<b>20593.24</b>	<b>27310.12</b>
<b>C Capital Employed*</b>	<b>3522.84</b>	<b>5014.34</b>	<b>6216.34</b>
<b>2. Bihar State Road Transport Corporation ♦</b>			
<b>Particulars</b>	<b>2009-10</b> (provisional)	<b>2010-11</b> (provisional)	<b>2011-12</b> (provisional)
<b>A Liabilities</b>			
Capital (including capital loan & equity capital)	404.01	525.35	646.69
Borrowings (Government)	--	--	--
(Others)	--	--	--
Funds**	0.30	0.30	0.30
Trade dues and other current liabilities (including provisions)	1215.52	925.52	722.77
<b>Total – A</b>	<b>1619.53</b>	<b>1451.17</b>	<b>1369.76</b>
<b>B Assets</b>			
Gross Block	-	-	-
Less : depreciation	-	-	-
Net fixed assets	37.00	32.00	27.00

\*Capital employed represents net fixed assets (including Capital Work-in-Progress) plus working capital. While working out working Capital the element of deferred cost and investments are excluded from the current assets.

♦ Figures are as per information provided by the Corporation.

\*\* Excluding depreciation funds.

Capital works in progress (including cost of chassis)	-	-	-
Investments	-	-	-
Current Assets, loans and advances	495.90	325.39	149.75
Accumulated Losses	1086.63	1093.78	1193.01
<b>Total – B</b>	<b>1619.53</b>	<b>1451.17</b>	<b>1369.76</b>
<b>C. Capital Employed<sup>#</sup></b>	<b>(-)682.62</b>	<b>(-)568.13</b>	<b>(-)532.66</b>
<b>3. Bihar State Financial Corporation</b>			
<b>Particulars</b>	<b>2009-10</b>	<b>2010-11</b>	<b>2011-12</b> (provisional)
<b>A Liabilities</b>			
Paid-up capital*	77.84	77.84	77.84
Reserve fund, other reserves	10.05	10.05	10.05
Borrowings	-	-	-
Bonds and Debentures	35.32	3.47	-
Others paid by State Govt.	228.47	228.47	228.47
Current liabilities and provisions	293.19	305.34	281.51
<b>Total – A</b>	<b>644.87</b>	<b>625.17</b>	<b>597.87</b>
<b>B Assets</b>			
Cash and Bank balance	48.76	71.16	61.12
Investments	0.04	0.04	0.04
Loans and advances	204.86	162.60	143.92
Net fixed assets	0.69	0.65	0.64
Current assets	6.59	8.53	10.01
Dividend deficit account	-	-	-
Deficit	383.93	382.20	382.14
<b>Total – B</b>	<b>644.87</b>	<b>625.18</b>	<b>597.87</b>
<b>C. Capital Employed**</b>	<b>375.53</b>	<b>335.75</b>	<b>318.09</b>
<b>4. Bihar State Warehousing Corporation<sup>⊕</sup></b>			
<b>Particulars</b>	<b>2009-10</b> (provisional)	<b>2010-11</b> (provisional)	<b>2011-12</b> (provisional)
<b>A. Liabilities</b>			
Paid-up capital	6.42	6.42	6.42
Reserves and surplus	12.39	14.39	16.39
Trade dues and other liabilities (including provisions)	39.87	37.09	33.41
<b>Total -A</b>	<b>58.68</b>	<b>57.90</b>	<b>56.22</b>
<b>B Assets</b>			
Gross block	22.13	22.24	22.23
Less depreciation	7.32	8.10	8.86
Net fixed assets	14.81	14.14	13.37
Capital work-in-progress	--	2.03	2.03
Current assets, loans and advances	43.87	41.73	40.82
Profit and loss Account	--	--	--
<b>Total – B</b>	<b>58.68</b>	<b>57.90</b>	<b>56.22</b>
<b>C. Capital Employed<sup>#</sup></b>	<b>14.81</b>	<b>14.14</b>	<b>13.36</b>

<sup>#</sup> Capital employed represents net fixed assets (including capital work-in-progress) plus working capital.

\*Paid-up capital includes share application money.

\*\*Capital employed represents the mean of the aggregate of opening and closing balances of paid-up capital, reserves (Other than those which have been funded specifically and backed by investment outside) bond, deposits and borrowings (including refinance).

<sup>⊕</sup> Figures are as per information provided by the Corporation.



## Annexure - 6

(Referred to in paragraph 1.14)

## Statement of working results of Statutory corporations

(Amount: ₹ in crore)

<b>1. Bihar State Electricity Board</b>				
<b>Sl. No</b>	<b>Particulars</b>	<b>2009-10</b>	<b>2010-11</b>	<b>2011-12</b>
1	(a) Revenue Receipts	1955.89	2537.61	3300.91
	(b) Subsidy from the Government	840.00	1080.00	2120.24
	<b>Total</b>	<b>2795.89</b>	<b>3617.61</b>	<b>5421.15</b>
2	Revenue Expenditure (net of expenses capitalised) including write off of intangible assets but excluding depreciation and Interest)	3249.11	3994.93	6215.65
3	Gross Surplus (+)/deficit (-) for the year (1-2)	(-)453.52	(-)377.32	(-)794.50
4	Adjustment relating to previous years	84.29	290.41	(-)284.76
5	Final Gross Surplus (+)/deficit (-) for the year (3+4)	(-)369.23	(-)86.91	(-)1079.26
6	<b>Appropriation</b>			
(a)	Depreciation (less capitalised)	59.72	90.45	143.48
(b)	Interest on capital loans	693.94	830.92	976.20
(c)	Interest on other loans, bonds, advances, etc.	305.00	349.17	504.44
(d)	Total Interest on loans and finance charges (b+c)	998.94	1180.09	1480.64
(e)	Less : Interest capitalised	16.00	25.00	41.00
(f)	Net Interest Charged to revenue (d-e)	982.94	1155.09	1439.64
(g)	Total appropriation (a+f)	1042.66	1245.54	1583.12
7	Surplus (+) /deficit (-) before account of subsidy from State Government (5-6(g) -1(b))	(-)2235.89	(-)2392.45	(-)542.14
8	Net surplus (+)/deficit (-) 5-6(g)	(-)1411.89	(-)1332.45	(-)2662.38
9	Total return on Capital employed*	(-)428.95	(-)177.36	(-)1181.74
10	Percentage of return on Capital employed	-	-	-
<b>2 Bihar State Road Transport Corporation ♦</b>				
	<b>Particulars</b>	<b>2009-10</b> (provisional)	<b>2010-11</b> (provisional)	<b>2011-12</b> (provisional)
	<b>Operating</b>			
(a)	Revenue	19.50	19.56	21.03
(b)	Expenditure	49.54	33.53	36.46
(c)	Surplus (+)/Deficit (-)	(-) 30.04	(-)13.97	(-)15.43
	<b>Non-operating</b>			
(a)	Revenue	2.73	-	10.35
(b)	Expenditure	36.18	7.18	94.15
(c)	Surplus (+)/Deficit (-)	(-) 33.45	(-)7.18	(-)83.80
	Revenue	22.23	19.56	31.38
	Expenditure	85.72	40.71	130.61
	Net Profit (+)/ Loss (-)	(-) 63.49	(-)21.15	(-)99.23
	Interest on capital and loans	18.53	-	89.63

\*Total return on capital employed represents Net surplus/deficit plus total interest charged to profit and loss account (less interest capitalised).

♦ Figures are provided by the Corporation.

	Total return on Capital employed	(-44.96)	(-21.15)	(-9.60)
<b>3.</b>	<b>Bihar State Financial Corporation ▼</b>			
	<b>Particulars</b>	<b>2009-10</b>	<b>2010-11</b>	<b>2011-12</b> (provisional)
<b>1</b>	<b>Income</b>			
i)	Interest on loans	13.33	8.28	5.78
ii)	Other income	6.82	44.32	28.34
	<b>Total - 1</b>	<b>20.15</b>	<b>52.60</b>	<b>34.12</b>
<b>2.</b>	<b>Expenses *</b>			
i)	(a) Interest on long term loans and short term loans	5.96	31.53	19.04
	(b) Provision for non-performing assets	1.73	-	-
	(c) Other Expenses	12.46	19.34	15.03
	<b>Total - 2</b>	<b>20.15</b>	<b>50.87</b>	<b>34.07</b>
3.	Profit (+)/Loss (-) before tax (1-2)	0.00 <sup>21</sup>	1.73	0.05
4.	Provision for tax	0.02	-	-
5.	Other appropriations	--	-	-
6.	Amount available for dividend #	--	-	-
7.	Dividend	--	-	-
8.	Total return on capital employed	5.96	33.26	19.09
9.	Percentage of return on capital employed	1.58	9.90	6.00
<b>4.</b>	<b>Bihar State Warehousing Corporation ▼</b>			
	<b>Particulars</b>	<b>2009-10</b> (provisional)	<b>2010-11</b> (provisional)	<b>2011-12</b> (provisional)
<b>1.</b>	<b>Income</b>			
(a)	Warehousing charges	9.31	9.33	13.25
(b)	Other income	49.60	56.56	59.15
	<b>Total - 1</b>	<b>58.91</b>	<b>65.89</b>	<b>72.40</b>
<b>2.</b>	<b>Expenses</b>			
(a)	Establishment Charges	4.93	4.91	6.35
(b)	Other Expenses	51.58	58.51	58.39
	<b>Total - 2</b>	<b>56.51</b>	<b>63.42</b>	<b>64.75</b>
3	Profit (+)/Loss (-) before tax	2.40	2.47	7.65
4.	Prior period adjustment	0.12	0.04	-
5.	Other appropriation	1.00	2.00	2.00
6.	Amount available for dividend	1.27	0.43	5.65
7.	Dividend for the year	-	-	-
8.	Total return on Capital employed	2.40	2.47	7.65
9.	Percentage of return on Capital employed	16.18	17.48	57.25

▼ Figures are provided by the Corporation.

\* Provision for Non-Performing Assets for the year may be distinctly shown under the head Expenses.

<sup>21</sup> ₹ 0.30 lakh

# Represents profit of current year available for dividend after considering the specific reserve.

## Annexure - 7

(Referred to in paragraph 3.10 )

Statement showing voltage-wise capacity additions planned, actual additions and shortfall during five years up to 2011-12

Sl. No.	Description	2007-08	2008-09	2009-10	2010-11	2011-12	Total
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
<b>400 KV Sub-Stations (Numbers)</b>							
1	At the beginning of the year	NIL	NIL	NIL	NIL	NIL	NIL
2	Additions Planned for the year	NIL	NIL	NIL	NIL	NIL	NIL
3	Actual Additions during the year	NIL	NIL	NIL	NIL	NIL	NIL
4	At the end of the year (1+3)	NIL	NIL	NIL	NIL	NIL	NIL
5	Shortfall in Additions (2-3)	NIL	NIL	NIL	NIL	NIL	NIL
<b>400 KV Transformers Capacity (MVA)</b>							
1	At the beginning of the year	NIL	NIL	NIL	NIL	NIL	NIL
2	Additions/ augmentation Planned for the year	NIL	NIL	NIL	NIL	NIL	NIL
3	Actual Additions during the year	NIL	NIL	NIL	NIL	NIL	NIL
4	Capacity at the end of the year (1+3)	NIL	NIL	NIL	NIL	NIL	NIL
5	Shortfall in Additions/ Augmentation (2-3)	NIL	NIL	NIL	NIL	NIL	NIL
<b>400 KV Lines (CKM)</b>							
1	At the beginning of the year	75.00	75.00	75.00	75.00	75.00	-
2	Additions Planned for the year	-	-	-	-	-	-
3	Actual Additions during the year	NIL	NIL	NIL	NIL	NIL	NIL
4	At the end of the year (1+3)	75.00	75.00	75.00	75.00	75.00	-
5	Shortfall in Additions (2-3)	-	-	-	-	-	-
<b>220 KV Sub-Stations (Numbers)</b>							
1	At the beginning of the year	8	8	8	9	9	-
2	Additions Planned for the year	Year-wise planning for addition not done by the Board					4
3	Actual Additions during the year	NIL	NIL	1	NIL	NIL	1
4	At the end of the year (1+3)	8	8	9	9	9	-
5	Shortfall in Additions (2-3)	-	-	-	-	-	3
<b>220 KV Transformers Capacity (MVA)</b>							
1	At the beginning of the year	1750	1750	2000	2100	2450	
2	Additions/ augmentation Planned for the year	Year-wise planning for addition not done by the Board					1400
3	Actual Additions during the year	Nil	250	100	350	Nil	700

**Audit Report on Public Sector Undertakings for the year ended 31 March 2012**

Sl. No.	Description	2007-08	2008-09	2009-10	2010-11	2011-12	Total
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
4	Capacity at the end of the year (1+3)	1750	2000	2100	2450	2450	-
5	Shortfall in Additions/ Augmentation (2-3)	-	-	-	-	-	700
<b>220 KV Lines (CKM)</b>							
1	At the beginning of the year	1126.89	1126.89	1126.89	1126.89	1126.89	-
2	Additions Planned for the year	Year-wise planning for addition not done by the Board					432.29
3	Actual Additions during the year	NIL	NIL	NIL	NIL	20.40	20.40
4	At the end of the year (1+3)	1126.89	1126.89	1126.89	1126.89	1147.29	-
5	Shortfall in Additions (2-3)	-	-	-	-	-	411.89
<b>132 KV Sub-Stations (Numbers)</b>							
1	At the beginning of the year	59	61	62	65	70	-
2	Additions Planned for the year	Year-wise planning for addition not done by the Board					29
3	Actual Additions during the year	2	1	3	5	7	18
4	At the end of the year (1+3)	61	62	65	70	77	-
5	Shortfall in Additions (2-3)	-	-	-	-	-	11
<b>132 KV Transformers Capacity (MVA)</b>							
1	At the beginning of the year	2728	2808	3468	3798	4228	-
2	Additions/ augmentation Planned for the year	Year-wise planning for addition not done by the Board					2660
3	Actual Additions during the year	80	660	330	430	400	1900
4	Capacity at the end of the year (1+3)	2808	3468	3798	4228	4628	-
5	Shortfall in Additions/ Augmentation (2-3)	-	-	-	-	-	560
<b>132 KV Lines (CKM)</b>							
1	At the beginning of the year	4357.16	4357.16	4422.96	4528.06	4715.63	-
2	Additions Planned for the year	Year-wise planning for addition not done by the Board					1770.02
3	Actual Additions during the year	Nil	65.80	105.10	187.57	462.29	820.76
4	At the end of the year (1+3)	4357.16	4422.96	4528.06	4715.63	5177.92	-
5	Shortfall in Additions (2-3)	-	-	-	-	-	949.26

Source: Information furnished by the Board

**Annexure-8**  
**(Referred to in paragraph 4.7)**

**Statement showing Loss of revenue due to delay in enhancement of Load**

Sl. No.	Name of Consumer	Existing Load	Load applied for (KVA)	Date of application	Date of Supply at enhanced load	No. of days taken in providing supply at enhanced load	No. of days required as per standard	Delay in supply of enhanced load (7-8)	Loss of revenue (fixed charge) (₹ in lakh)	Reason for delay
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
1.	M/s Triveni Smelters Pvt. Ltd. Fatuha	60 HP (LTIS)	6300 KVA (HTSS)	15 January 2011	10 September 2011	237	145	92	132.12	Delay in necessary formalities and removal of deficiencies in proposal.
2.	M/s Balajee Mimi steel & Rerolling Private Ltd. Bihta	90 HP (LTIS)	2151 KVA (HTSS)	28 July 2010	04 October 2011	432	145	287	40.53	Delay in preparation of feasibility report
3.	M/s Neeekamal steels Pvt. Ltd., Patna	7400 (HTSS)	8000 (HTSS)	06 January 2011	11 January 2012	370	27	343	48.02	Delay in sanction of load
<b>Total ₹</b>									<b>220.67 lakh</b>	

**Annexure -9**

**(Referred to in paragraph 4.12)**

**Statement of department-wise outstanding Inspection Reports (IRs)**

Sl. No.	Name of Department	No. of PSUs	No. of outstanding IRs	No. of outstanding paragraphs	Year from which paragraphs outstanding
1	Industry	2	7	29	2007-08
2	Information Technology	1	3	13	2007-08
3	Environment & Forest	1	1	9	2005-06
4	Agriculture	1	2	3	2004-05
5	Energy	2	571	1144	2004-05
6	Food & Civil Supplies	1	4	33	2007-08
7	Tourism	1	1	4	2011-12
8	Education	1	2	7	2010-11
9	Road Construction	1	1	7	2007-08
10	Home (Police)	1	2	9	2007-08
11	Transport	1	2	11	2007-08
12	Co-operative	1	5	24	2004-05
13	Registration, Excise & Prohibition	1	4	15	2008-09
14	Minority welfare	1	1	2	2010-11
15	Backward & Extremely Backward Classes Welfare Department	1	1	5	2010-11
16	Urban Development & Housing	1	1	5	2011-12
<b>Total</b>		<b>18</b>	<b>608</b>	<b>1320</b>	

**Annexure – 10****(Referred to in paragraph 4.12)****Statement of department-wise draft paragraphs/Performance Audits, reply to which are awaited**

<b>Sl. No.</b>	<b>Name of Department</b>	<b>No. of draft paragraphs</b>	<b>No. of Performance Audits</b>	<b>Periods of issue</b>
1.	Energy	10	1	May to August 2012
2.	Education Department	-	1	August 2012
3.	Road Construction Department	1	-	June 2012



**GLOSSARY OF ABBREVIATIONS**

<b>Abbreviation</b>	<b>Expanded form</b>
AC	Alternating current
AGM	Annual General Meeting
ALDC	Area Load Dispatch Centre
Amp	Ampere
ARR	Aggregate Revenue Requirement
BBPP	Bus Bar Protection Panel
BDV	Break Down Voltage
BERC	Bihar Electricity Regulatory Commission
BoD	Board of Directors
BRPNN	Bihar Rajya Pul Nirman Nigam Limited
BSEB	Bihar State Electricity Board
BSPP	Bihar Shiksha Pariyojana Parishad
BSRDC	Bihar State Road Development Corporation Limited
BTPS	Barauni Thermal Power Station
CEA	Central Electricity Authority
Ckm	Circuit Kilometer
CTs	Current Transformers
CTU	Central Transmission Utility
DC	Direct current
DGA	Dissolved Gas Analysis
DM	Disaster Management
DS	Domestic Services
ECL	Eastern Coalfields Limited
EHT	Extra High Tension
ERLDC	Eastern Region Load Dispatch Centre
ERPC	Eastern Region Power Committee
FSA	Fuel Supply Agreement
GDP	Gross Domestic Product
GoB	Government of Bihar
GT	Generation to Transmission
HPCL	Hindustan Paper Corporation Limited
HT	High Tension
Hz	Hertz
IRs	Inspection Reports
MOU	Memorandum of Understanding
MTPC	Manual of Transmission Planning Criteria
MUs	Million Units
Mva	Mega volt ampere
NEP	National Electricity Plan
NIT	Notice Inviting Tender

---

NPC	National Productivity Council
O&M	Operation and Maintenance
OLTC	On Load Tap Changer
PGCIL	Power Grid Corporation of India Limited
PO	Purchase Order
PSU	Public Sector Undertaking
PTRs	Power Transformers
PV	Physical Verification
ROW	Right of Way
RTU	Remote Terminal Unit
RTS	Railways Traction Service
SAR	Separate Audit Report
SEP	State Electricity Plan
SLDC	State Load Despatch Centre
SMS	Sub-station Management System
SSA	Sarva Shiksha Abhiyan
SSs	Sub-Stations
STU	State Transmission Utility
T&D	Transmission and Distribution
TD	Transmission to Distribution
TDS	Tax Deducted at Source
TLL	Thermal Loading Limit
UI	Unscheduled Interchange