

Chapter-II

Performance audit relating to Government Companies

West Bengal State Electricity Transmission Company Limited

2.1 Performance of power transmission utility in West Bengal

Executive Summary

Introduction

National Electricity Policy prepared by Government of India in February 2005 envisaged that transmission system required adequate and timely investment besides efficient and co-ordinated action to develop a robust and integrated power system for the country. Transmission of electricity and grid operations in West Bengal are managed and controlled by West Bengal State Electricity Transmission Company Limited, incorporated on 16 February 2007.

As on 31 March 2012, the Company had transmission network of 11,095.44 circuit kilometres and 103 sub-stations (SSs) (including three switching SS) with installed capacity of 19,236.10 Mega Volt Ampere (MVA). The Company's system availability in 2007-12 was 99.71 per cent.

Planning and Development

The National Electricity Plan (XI Plan) proposed construction of seven 400 KV and four 220 KV lines by the Company. Two out of seven 400KV lines were completed by WBSEB and two lines were completed by WBPDC. None of the remaining projects could be completed by the Company during review period. Out of 32 projects envisaged (June 2006) in the Perspective Plan, only one project could be completed, 14 projects have been dropped; seven projects have been postponed to the XII Plan and one project is yet to be taken up. Land acquisition was pending for two projects, three projects were held up due to right of way and four projects were in progress.

The Company prepared a revised long term Perspective Plan in February 2011 and nine projects out of 11 projects envisaged for completion in this plan by 2011-12 were in progress. Two projects were completed.

In five years the Company had added 5,945 MVA of transformation capacity against planned addition of 9,535.50 MVA. Similarly against planned addition of 5,713.70 circuit KM of lines, the Company could add 1,467.50 circuit KM.

Project Management of Transmission System

Most projects were delayed during execution because of non availability of Right of Way (ROW) from land owners. Projects were also delayed due to lapse of time between survey and execution of the project, changing of route alignment and absence of forest clearances.

Since the Company could not solve problem of non-availability of ROW from the land owners, it was unable to complete the transmission lines associated with the sub-stations. As a result the sub-stations though completed could not be put to use to their full capacity.

Performance of Transmission System

The Company had excess transformation capacity in its system over potential maximum demand in the State after leaving 30 per cent as margin. At the same time these sub-stations were inadequately and unevenly dispersed across the State. Consequently certain sub-stations remained overloaded while others remained underloaded.

There were 1,222 instances of voltage being below Indian Electricity Grid Code norms and 955 instances when voltages were above the norm. 95 EHT lines were found to exceed the thermal loading limit. Violating Indian Electricity Grid Code norms, the Company operated five 220 KV sub-stations with single bus bar. Nine 220 KV SSs were operated without bus bar protection panel of which seven SSs were highly loaded.

91 Current transformers failed during 2011-12 due to bursting, insulation problem, oil leakage and lightning. Company's transmission losses were normatively within CEA's prescribed limit. However in the absence of 100 per cent boundary metering exact losses remained unascertained. The Company had system availability of over 99 per cent.

Grid Management

State Load Despatch Centre (SLDC) is networked with three out of four area load despatch centres. Out of 103 sub-stations and 16 power generating units, only 38 sub-stations and 9 generating units had RTU for efficient energy management system.

Despite improvement in overall grid frequency during 2009-12, instances of Grid Code violations were noticed. Although SLDC communicated 44 grid code violation messages on behalf of Eastern Region Load Despatch Centre, it did not communicate any warning in 1,537 blocks for drawal of energy beyond schedule at low grid frequency. To prevent additional energy generation at times of high frequency, SLDC had lowered the scheduled generation, but failed to effectively reduce higher generation by operators in 15,617 blocks. During 2009-12, the State had injected 2,957.765 MU energy to the national grid as UI while it drew 2,506.337 MU from the national grid as UI.

The Company had not taken adequate steps for disaster management. Diesel Generating sets and synchronoscopes were not available at any critical sub-station.

Energy accounting and audit

The Company had installed boundary meters at 79 Generation Transmission (GT), 1,390 Transmission Distribution (TD) and 23 Interstate interface points for energy accounting. However, it was yet to install meters at 59 TD points. Also, 67 feeders of 11 KV embedded within Company's SSS remained unmetered. Consequently, the Company was unable to accurately calculate the total outflow of energy from its system and thus the transmission loss in its system also could not be determined.

Financial Management

The Company's total profit increased by 132.89 per cent from ₹81.32 crore in 2007-08 to ₹189.39 crore in 2008-09 due to recovery of higher transmission charges and SLDC charges. Subsequently, profit declined to ₹171.67 crore (9.36 per cent) in 2011-12 due to increase in employee cost due to revision of pay and allowances. The debt-equity ratio remained at about two per cent. Employee costs, depreciation and interest and finance charges were the major expenditures while transmission charges were mainstay revenue.

In all the five years, the Company failed to file their tariff petition within the original due dates. Subsequently, West Bengal Electricity Regulatory Commission extended the due dates and condoned delays. In 2007-08, West Bengal Electricity Regulatory Commission disallowed recovery of ₹ 3.50 crore through tariff on account of incentive allowed to its employees.

Material Management

Stock retained by the Company ranged from 105 to 351 times of its monthly consumption during 2007-12. The Company did not identify minimum/maximum stock requirement and purchases were not as per material requirement plans. The Company retained ₹4.27 crore of obsolete stock.

The Company had also not undertaken category wise physical verification of stores until December 2009 when there was an effort to identify and classify inventory. In January 2011, the Company appointed Pricewaterhouse Coopers to prepare a standardised inventory master list and codification of store items. The work was scheduled to be completed by July 2011 but remained incomplete (June 2012).

Monitoring and Control

Although operational and maintenance data was collected and MIS prepared, no action was taken on those data. However, between April 2009 and September 2009, the Company adopted manuals to standardize maintenance schedules, operating procedures and safety. Internal technical audit guidelines were prepared in

September 2010 and technical audits were undertaken through corporate monitoring cell.

In March 2008, the Company adopted an Internal Audit Charter to incorporate the best standards in the Company's internal audit practices. However, audits

conducted did not conform to these norms. An Internal Audit Manual was prepared through Ernst and Young but remained to be adopted by the Company. Audit Committee meetings were regularly held.

Introduction

2.1.1 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 in coordination with Central/ State Transmission Utilities. Transmission of electricity and Grid operations in West Bengal are managed and controlled by West Bengal State Electricity Transmission Company Limited (Company) which is mandated to provide efficient, adequate and properly coordinated grid management and transmission of energy. The Company was incorporated on 16 February 2007 under the Companies Act, 1956 and reported to the Department of Power and Non-conventional Energy Sources, Government of West Bengal (GoWB).

2.1.2 The Management of the Company is vested in a Board of Directors comprising eight members (March 2012), all appointed by the State Government. Day-to-day operations are carried out by the Managing Director who is the Chief Executive of the Company with the assistance of Director (Projects), Director (Finance & Accounts) and Director (Operations). During 2007-08, 19,550.40 MUs of energy was transmitted by the Company which increased to 33,499.09 MUs in 2011-12, *i.e.* an increase of 71.34 *per cent* during 2007-12. As on 31 March 2012, the Company had transmission network of 11,095.44 circuit kilometres (CKm) and 103 sub-stations (SSs) (including three switching SSs and eight 66 KV SSs) with installed capacity of 19,236.10 Mega Volt Ampere (MVA). The turnover of the Company was ₹ 751.87 crore in 2011-12, which was equal to 0.14 *per cent* of State Gross Domestic Product. It employed 2,755 employees as on 31 March 2012. The average system availability in this period was 99.71 *per cent*.

A Performance Audit on "Growth and development of transmission system of the erstwhile West Bengal State Electricity Board (WBSEB¹)" was included in the Report of the Comptroller and Auditor General of India (Commercial), GoWB for the year ended 31 March 2004. The Report has not yet been discussed by COPU (June 2012).

Audit Objectives

2.1.3 The objectives of the Performance Audit were to assess whether:

¹ WBSEB is the predecessor entity of the Company

Planning and Development

- ❖ The Perspective Plan was prepared in accordance with the guidelines of the National Electricity Policy/ Plan and West Bengal Electricity Regulatory Commission (WBERC) and assessment of impact of failure to plan, if any;

Project implementation and monitoring

- ❖ The transmission system was developed and commissioned in an economical, efficient and effective manner;

Operation and Maintenance of Transmission System

- ❖ Operation and maintenance of transmission system was carried out in an economical, efficient and effective manner;
- ❖ Disaster Management System was set up to safeguard its operations against unforeseen disruptions;
- ❖ Effective failure analysis system was set up;

Financial Management

- ❖ Effective and efficient Financial Management system with emphasis on timely raising and collection of bills and filing of Aggregate Revenue Requirement (ARR) for tariff revision in time;

Material Management

- ❖ Transparent and efficient system of procurement of material and inventory control mechanism;

Energy accounting and audit

- ❖ Efficient and effective energy conservation measures were undertaken in line with the NEP and establishment of Energy Audit System; and

Monitoring and control

- ❖ There was a monitoring system in place to review existing/ ongoing projects, take corrective measures to overcome deficiencies identified responded promptly and adequately to Audit/ Internal Audit observations.

Audit Criteria

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

- ❖ Provisions of NEP/ Plan and National Tariff Policy;
- ❖ Perspective Plan and Project Reports of the Company;
- ❖ Standard procedures for award of contracts with reference to principles of economy, efficiency, effectiveness, equity and ethics;

- ❖ ARR filed with West Bengal Electricity Regulatory Commission (WBERC) for tariff fixation, Circulars, Manuals and MIS reports;
- ❖ Manual of Transmission Planning Criteria (MTPC);
- ❖ Code of Technical Interface (CTI)/ Grid Code consisting of planning, operation, connection codes;
- ❖ Directions from State Government/ Ministry of Power (MoP);
- ❖ Norms/ Guidelines issued by WBERC/ Central Electricity Authority (CEA);
- ❖ Report of the Committee constituted by the Ministry of Power recommending the “Best Practices in Transmission”
- ❖ Report of the Task Force (TF) constituted by the MoP to analyse critical elements in transmission project implementation; and
- ❖ Reports of Eastern Regional Power Committee (RPC)/ State Load Despatch Centre (SLDC).
- ❖ Regulations and guidelines issued by WBERC.

Scope and Methodology of Audit

2.1.5 Performance Audit was conducted during April to June 2012 covering performance of the Company during 2007-08 to 2011-12. Audit examination involved scrutiny of records of different wings at the Head Office, State Load Despatch Centre (SLDC) at Howrah and 10² out of 22 area offices (including 36³ sub-stations) headed by the Superintending Engineers.

The Company constructed 20 new SSs (capacity: 3,329 MVA), upgraded voltage rating of four SSs (addition: 660 MVA), erected 26 lines (length: 1,467.5 CKm) as well as augmented existing transformation capacity by 1,956 MVA during the period under review. Out of these, we have examined 11⁴ completed SSs (capacity: 2,795.4 MVA) and five⁵ completed lines (length: 246 CKm) during this audit. Besides, four⁶ (capacity: 1,500 MVA) out of nine SSs and five⁷ (length: 238.5 Ckm) out of 30 lines under construction as of March 2012 were also examined.

² Jeerat, Kasba, Burdwan, Behala, Chandannagar, Purulia, Durgapur, Alipurduar, Arambag and Siliguri.

³ 400 KV: three; 220 KV: eight; 132 KV: 24 and 66 KV: one.

⁴ 132 KV SSs : Barjora, Kalna, Khatra, Lalgola, Mohispota, New Town, Subhasgram; 220 KV SSs : Bishnupur, New Town, Singur; and 400 KV SSs : Durgapur.

⁵ Satgachia-Kalna 132 KV line, LILO of 132 KV lines: Durgapur-Bishnupur at Barjora, Satgachia-Mankar at Mahachanda, Gokarna-Raghunathganj at Lalgola, Durgapur- Sainthia at Bolpur.

⁶ 132 KV SSs: Kurseong, Salt Lake; 220 KV SS : Hura; and 400 KV SS : Kharagpur.

⁷ 132 KV lines: Domjur-Chanditala, Jeerat-Mahispota, Domjur-KWIC; 220 KV lines : Teesta Low Dam Projects- III & IV.

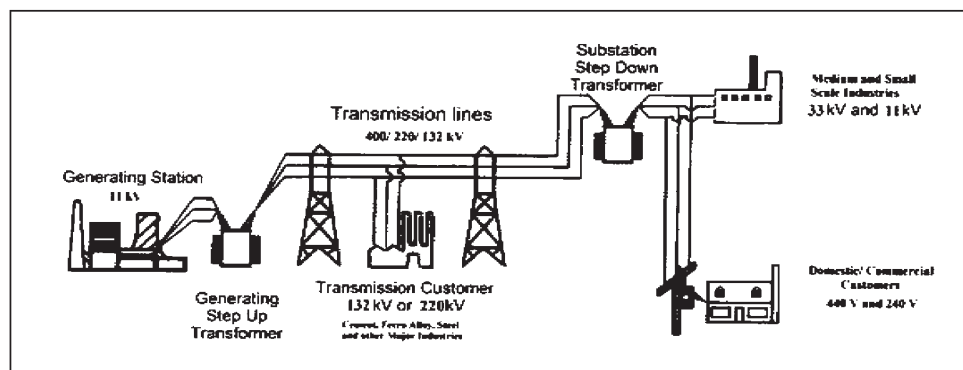
We selected a sample of 10 area offices to assess the Company's operational capabilities, 32 out of 102 purchase orders and 30 out of 98 internal audit reports on the basis of random sampling. The methodology adopted for attaining audit objectives with reference to audit criteria consisted of explaining audit objectives to the top management, scrutiny of records at the Head Office and selected units, interaction with the personnel, analysis of data with reference to audit criteria, raising of audit queries, discussion of audit findings with the Management and issue of draft review to the Management/ Government for comments.

We reviewed the Agenda notes and minutes of Company/ Board Committees/ ERPC, Annual Reports, accounts and scrutinised loan files, physical and financial progress reports and project execution; analysis of data from annual budgets and physical as well as financial progress with completion reports were undertaken and tariff fixed by WBERC was examined. We also discussed our findings with the Management.

Brief description of transmission process

2.1.6 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) have 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. A pictorial representation of the transmission process is given below:



Electrical energy cannot be stored; hence generation must be matched with the demand. Therefore, every transmission system requires a sophisticated system

of control called Grid management to ensure balancing of power generation closely with demand.

Audit Findings

2.1.7 We explained the audit objectives to the Company during an 'Entry Conference' held on 4 May 2012. Subsequently, audit findings were reported to the Company and the State Government in July 2012 and discussed in an 'Exit Conference' held on 5 October 2012. Exit Conference was attended by the Principal Secretary, Power and Non-conventional Energy Sources, GoWB and the Managing Director of the Company. The Company/ State Government replied to audit findings in September 2012. The views expressed by them have been considered while finalising this Performance Audit. The audit findings are discussed in the subsequent paragraphs.

Planning and Development

National Electricity Policy/ Plan

2.1.8 The Central Transmission Utility (CTU) and State Transmission Utilities (STUs) have the key responsibility of network planning and development based on the NEP in coordination with all the agencies concerned. At the end of X Plan (March 2007), the transmission system in the country at 765 HVDC/ 400/ 230/ 220 KV stood at 1.98 lakh CKm of transmission lines which was planned to increase to 2.93 lakh CKm by the end of the XI Plan i.e. March 2012. The NEP assessed the total inter-regional transmission capacity at the end of 2006-07 as 14,100 MW and further planned to add 23,600 MW in the XI plan bringing the total inter-regional capacity to 37,700 MW.

Similarly, the Company's transmission network at the beginning of 2007-08 consisted of 82 Extra High Tension (EHT) SSs (including three switching sub-stations) with a transmission capacity of 13,291.10 MVA⁸ and 9,627.94 CKm of EHT transmission lines. The transmission network as on 31 March 2012 consisted of 103 EHT SSs (including three switching sub-stations) with a transformation capacity of 19,236.10 MVA and 11,095.44 CKm of EHT transmission lines.

The STU is responsible for planning and development of the intra-state transmission system. Assessment of demand is an important pre-requisite for planning capacity addition.

The State Government prepared (June 2006) a Perspective Plan for the period 2006 - 2030 which projected growth and intensification of energy consumption in the State and outlined transmission capacity requirement. Considering the load growth in the State, the Perspective Plan identified need for 32 transmission projects (**Annexure 2.1.1**) within March 2011. We observed that only one project was completed while three projects were held

⁸ There was no transformation capacity at the switching sub-stations.

up due to right of way⁹ (ROW) problems. Fourteen projects were dropped (July 2011) due to establishment of other SSs (six) or absence of demand (eight). Seven projects were postponed to the XII Plan due to non-availability of land (four) and delays in setting up of related generating stations (three). Four projects were in progress as of September 2012. Of the remaining three projects, in one project land was identified but could not be acquired, in another land was acquired but possession could not be taken due to public resistance while the third project for evacuation of power from the proposed Units 3 and 4 of Sagardighi thermal power station was revised but not yet taken up.

Further, the erstwhile WBSEB¹⁰ had communicated (August 2006) to the Ministry of Power, GoI Transmission Plans for 2006-07 and 2007-12 (XI Plan) consisting of 105 sub-stations (capacity: 8,836.4 MVA) and 97 lines (length: 3,634.5 CKm).

During the XI and XII Plans, 3,820 MW of generation capacity was projected to be added in West Bengal. To evacuate power from the generating stations, NEP proposed (April 2007) that one 400 KV SS, seven 400 KV and four¹¹ 220 KV lines were required to be constructed by the Company. Two of the seven 400KV lines were completed by WBSEB in January 2007 and West Bengal Power Development Company Limited (WBPDC) had completed another two lines at their own cost during the review period but was yet to transfer them to the Company. Further, three 220 KV lines were being constructed by National Hydroelectric Project Limited (NHPC) as discussed in **Paragraph 2.1.12**. Of the remaining four lines (220 KV : one, 400 KV : three), two were not taken up due to problems in acquiring land for the associated SS at Jagatballavpur, another not taken up as the related generating station at Katwa was yet to takeoff and the last was to be taken up by The Durgapur Projects Limited.

WBERC directed (February 2007¹²) the Company to prepare a State Perspective Plan (SPP) for 2007-11. However the Company started to prepare a Long Term Load Forecasting and Perspective Plan (LTLFP) for 2011-17 only in February 2011. The LTLFP envisaged 11 projects to be completed by 2011-12 (**Annexure 2.1.2**). However, only two¹³ projects together with their associated lines were completed till June 2012 and remaining nine projects were still in progress.

During Exit Conference, the Government agreed that in the initial years, the Company had not followed any particular plan. From the XII Plan period, the Company has adopted a perspective plan and an annual rolling plan.

⁹ Permission that the Company should obtain from the land owner to pass through his land to erect the transmission towers and lines.

¹⁰ WBSEB was the predecessor entity of the Company.

¹¹ Including three inter-regional lines.

¹² Regulation 31 of WBERC dated February 2007.

¹³ Khatra 132/ 33 KV SS and Kalna 132/ 33 KV SS with associated transmission lines.

Transmission network and its growth

2.1.9 Transmission capacity of the Company at EHT level during 2007-08 to 2011-12 is given below:

Table 2.1.1: Sub-stations, Transformation Capacity and Circuit Kilometres added during five years

Sl. No	Description	2007-08	2008-09	2009-10	2010-11	2011-12	Total
A. Number of Sub-stations (Numbers)							
1	At the beginning of the year	82	85	90	97	100	-
2	Additions planned for the year	4	23	9	6	9	51
3	Added during the year	3	5	7	3	2	20
4	Upgraded during the year ¹⁴	1	1	1	-	1	4
5	Asset transferred from WBSEDCL	0	0	0	0	1 ¹⁵	1
6	Total sub stations at the end of the year (1+3+5)	85	90	97	100	103	-
7	Shortfall in additions (2-3)	1	18	2	3	7	31
B. Transformers capacity (MVA)							
1	Capacity at the beginning of the year	13,291.10	14,366.10	15,380.10	16,933.60	18,218.10	-
2	Additions/ augmentation planned for the year	1,570.00	3,066.50	3,083.00	378.00	1,438.00	9,535.50
3	Capacity added during the year	546.00	315.00	1,402.00	903.00	163.00	3,329.00
4	Capacity augmented during the year	529.00	699.00	151.50	381.50	855.00	2,616.00
5	Asset transferred from WBSEDCL	-	-	-	-	20.00	20.00
6	Capacity at the end of the year	14,366.10	15,380.10	16,933.60	18,218.10	19,236.10	-
7	Shortfall in additions/ augmentation	495.00	2,052.50	1,529.50	(-)906.50	420.00	3,590.50

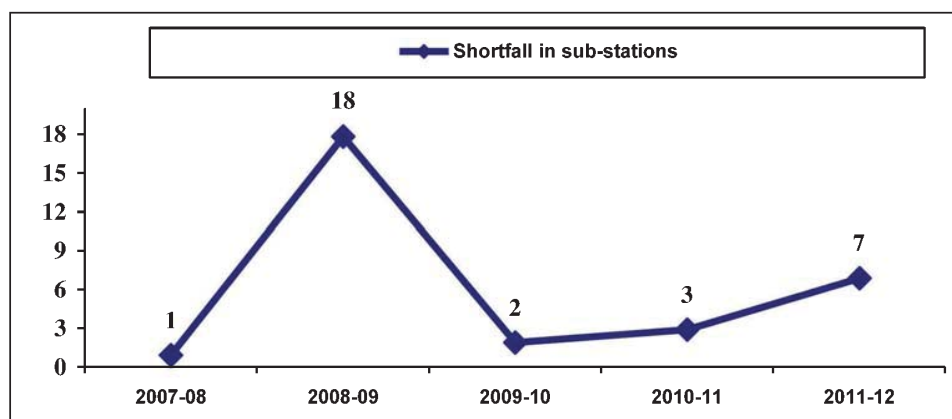
¹⁴ Voltage rating of four sub-stations was increased from either 66 KV to 132 KV or from 132 KV to 220 KV.

¹⁵ Although Bagmundi sub-station had been transferred from WBSEDCL to the Company during 2011-12 and included in the total number of sub-stations, its' transformer capacity (20 MVA) had not been added to the total capacity.

Sl. No	Description	2007-08	2008-09	2009-10	2010-11	2011-12	Total
C. Transmission lines (CKm)							
1	At the beginning of the year	9,627.94	10,137.74	10,540.94	10,899.34	10,903.14	-
2	Additions planned for the year	544.00	1,824.30	2,116.00	508.00	721.40	5,713.70
3	Added during the year	509.80	403.20	358.40	3.80	192.30	1,467.50
4	Total lines at the end of the year	10,137.74	10,540.94	10,899.34	10,903.14	11,095.44	
5	Shortfall in additions (2-3)	34.20	1,421.10	1,757.60	504.20	529.10	4,246.20

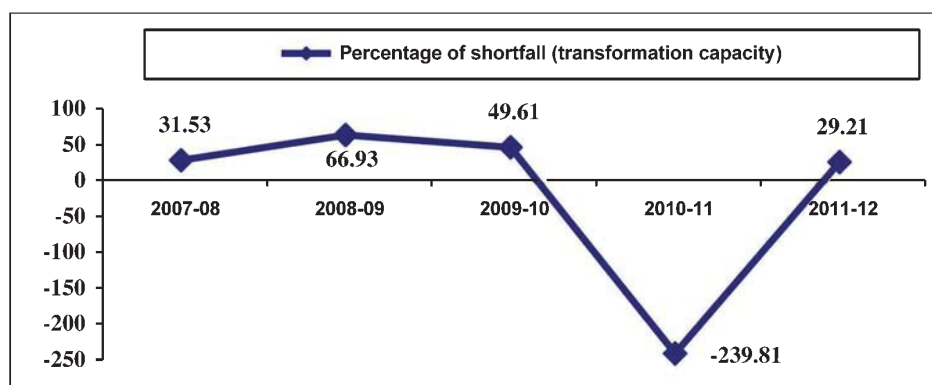
Source: Records of the Company.

Chart 2.1.1: Line Graph showing shortfall in addition of sub-stations vis-a-vis target.



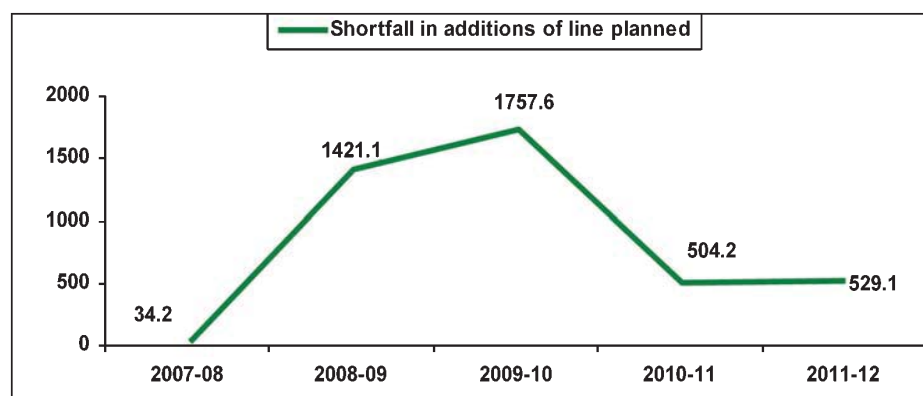
Source: Records of the Company.

Chart 2.1.2: Line Graph showing shortfall in percentage accretion to transformation capacity (MVA) vis-a-vis target.



Source: Records of the Company.

Chart 2.1.3: Line Graph: Trend in shortfall in addition of lines in Circuit Kilometres vis-a-vis target.



Source: Records of the Company.

Against the targeted construction of 51 EHT SSs and laying of 5,713.7 CKm of EHT lines, the Company constructed 20 EHT SSs and 1,467.5 CKm EHT lines during the five year period (achievement of 39.22 per cent and 25.68 per cent respectively). The transmission capacity added was 5,945 MVA (new SSs : 3,329 MVA, voltage upgrade : 660 MVA, augmentation : 1,956 MVA) for the five year period ending 2011-12.

The particulars of voltage-wise capacity additions planned, actual additions, shortfall in capacity, etc., during the review period are given in the **Annexure 2.1.3**.

These shortfalls resulted in overloading of lines (*paragraph 2.1.18*), voltage fluctuation (*paragraph 2.1.17*) and failure to cater to the increasing demand for power in vicinity of proposed projects (*paragraph 2.1.11*).

During Exit Conference (October 2012), Government as well as the Management stated that some planned projects had to be abandoned because of flaws in planning and some other *post facto* uncontrollable circumstances.

Project implementation and monitoring

2.1.10 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, GoI constituted (February 2005) a Task Force on transmission projects with a view to:

- ❖ analyse the critical elements in transmission project implementation,
- ❖ implement the best practices in 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 action to accelerate the completion of transmission systems:

- ❖ Undertake various preparatory activities such as surveys, design and testing, processing for forest and other statutory clearances, tendering activities *etc.* in advance/ parallel to the project appraisal and approval phase and go ahead with construction activities once transmission line project sanction/ approval is received,
- ❖ Break-down the transmission projects into clearly defined packages such that the packages can be procured and implemented requiring the 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.

2.1.11 We found that notwithstanding the elaborate guidelines given by the Task Force Committee for timely completion of the projects, the Company did not adhere to any of the guidelines. It failed to execute several SSs and Lines during 2007-12 within the time frame envisaged in their LOAs as detailed in the table below:

Table 2.1.2: Time overrun in test checked projects during 2007-12

Capacity in KV	Total No ¹⁶		No. test checked by Audit		Delay in construction (Numbers)		Time overrun ¹⁷ (range in months)	
	SSs	Lines	SSs	Lines	SSs	Lines	SSs	Lines
400	2	2	2	-	-	-	-	-
220	9	16	4	2	3	4	4-26	4-41
132	22	38	9	8	3	5	13-17	22-39
Total	33	56	15	10	6	9	-	-

Source: Records of the Company.

We also observed that the Task Force on transmission projects (February 2005) had standardised the tenure for pre-award of works¹⁸ to 13 months for SSs and 11 months for lines. The Company's internal target for pre-award works was 160 days. However, the Company took between six and 114 months in awarding works for eight transmission projects (**Annexure 2.1.4**) to the contractors for execution. Due to delay between survey and actual execution of the projects, new and additional structures had come up across the proposed routes of the lines and thereby resulted in higher resistance in obtaining ROW and consequent route realignments.

Again, the standard time for execution of work for SSs and lines were 20 and 22 months respectively. However, the Company allowed between six to 36 months for execution of the projects. These additional time coupled with

¹⁶ Completed and ongoing projects as of March 2012.

¹⁷ Test checked in audit.

¹⁸ From approval of DPR to award of work to Contractors.

price variation allowed in the contracts and due to changes in BOQs from route realignments resulted in additional cost of ₹ 8.62 crore. Further, delay resulted in increase of interest burden by ₹ 16.15 crore.

Finally, because of delay in completion of the projects, resulting from continued higher transmission and transformation losses that these projects sought to reduce, additional benefits of ₹ 37.66 crore was foregone. Besides, there was envisaged loss of ₹ 11.75 crore in additional revenue due to failure to cater to the EHT consumers (**Annexure 2.1.4**).

The Management concurred (September/ October 2012) that there were severe Right of Way (ROW) problems. The Management/ Government proposed to solve this problem through increasing use of satellite imagery to reduce the time lag between the survey and actual execution. Besides, they were also considering mono-pole towers and multi-circuit towers at critical points which required less land. The Management's corrective actions, though delayed, were in right direction.

The implementation of three inter-state transmission lines is discussed below.

2.1.12 NHPC started construction of two hydro electric generation projects namely Teesta Low Dam Projects-III and IV with aggregate capacity of 292 MW and scheduled completion in 2006-07. Since the power would be used by West Bengal, NEP required the Company to construct three 220 KV transmission lines to evacuate power from these generation projects. Accordingly, the erstwhile WBSEB approved (February 2004) work for construction of these lines as 'deposit' works for evacuation of power, at an estimated cost of ₹ 50.21 crore with scheduled completion by 2006-07. However, WBSEB did not enter into a contract until August 2006. WBSEB signed (September 2006) an agreement with NHPC for construction of these lines as deposit work but no target completion date was envisaged in the agreement. NHPC periodically enhanced (March 2006/ July 2010/ May 2012) the cost of the lines to ₹ 148.99 crore, ₹ 222.54 crore and ₹ 247.50 crore respectively and the Company incurred ₹ 201.79 crore till May 2012. However, the lines were yet to be completed (September 2012).

The Report of the Task Force (February 2005) prescribed that in case of forest cover of more than 40 hectares, in the first step of proposal formulation tree enumeration would be done with Divisional Forest Officer. We observed (February 2011) the list of trees for felling, logging and transporting to depot across the 73.147 hectares of land was not prepared, thereby leading to delay.

The Management stated (September 2012) that the construction of lines was awarded to NHPC as a 'deposit' work to match the evacuation of power from the generation projects and relied upon the expertise of NHPC. The Company was bound by NHPC's terms.

We observed that the Company's agreement with NHPC did not specify any time limit for the construction of the lines. The Task Force recommended that lines in hilly/ mountainous terrain of route length exceeding 50 km may be completed within 31 to 35 months. After allowing 35 months from the

agreement (September 2006) for the completion of the line, the project was delayed by 36 months which resulted in the enhanced cost and the consequential interest burden of ₹ 26.83 crore.

Performance of transmission system

2.1.13 Performance of the Company mainly depends on efficient maintenance of its EHT transmission network for supply of quality power with minimum interruptions. In the course of operation of SS and lines, the supply-demand profile within the constituent sub-systems is identified and system improvement schemes undertaken to reduce line losses and ensure reliability of power by improving voltage profile. These schemes were meant for augmentation of existing transformer capacity, installation of additional transformers, laying of additional lines and installation of capacitor banks. Performance of the Company with regard to operations and maintenance of the system is discussed in the succeeding paragraphs.

Transmission capacity

2.1.14 According to Grid Code of WBERC (April 2007), 30 per cent extra capacity was to be created than the required capacity for secure and stable grid operation. Study of the transmission system of the Company was undertaken in order to assess the installed capacity and its adequacy to handle the load demand of the system for the period 2007-08 to 2011-12 as depicted in the table below:

Table 2.1.3: Company's Transmission capacity and peak demand during 2007-12

Transmission capacity (in MVA)				
Year	Installed	After leaving 30 per cent towards margin	Peak demand including non-coincident demand	Excess/ Shortage (Cols. 3-4)
(1)	(2)	(3)	(4)	(5)
2007-08	14,366.10	10,056.27	8,989.69	1,066.58
2008-09	15,380.10	10,766.07	10,331.67	434.40
2009-10	16,933.60	11,853.52	12,094.23	(-) 240.71
2010-11	18,218.10	12,752.67	12,032.95	719.72
2011-12	19,236.10	13,465.27	12,673.20	792.07

Source: Records of the Company.

From the above table it could be inferred that the overall transmission capacity was in excess of the requirement every year except in 2009-10. The existing transmission capacity excluding redundancy worked out to an excess of 792.07 MVA at the end of March 2012 that worked out to ₹ 17.92 crore (₹ 3.62 crore per 160 MVA PTR) which was a burden passed on to the consumer.

The Management stated (September 2012) that the margin of redundancy should be at a particular voltage on case to case basis with inadequate capacity in certain areas due to non-implementation of the planned schemes.

We observed that there were instances where some of the sub-stations remained under-loaded whereas others were overloaded at the same time. Existence of extra/ idle capacity in the transmission network and prevalence of overloads, high voltages on certain places reflects unscientific planning in creation of transmission network, instances of which are discussed in paragraphs 2.1.15 and 2.1.16.

Sub-stations

Redundant Transmission Capacity in 220 KV sub-stations

2.1.15 We observed that nine out of the 19 SSs of 220 KV were under-loaded during the five years. Asansol SS had operated (2008-12) at 5.04 to 34.21 *per cent* of installed capacity while Kolkata Leather Complex (KLC) SS fell from 29.77 to 27.52 *per cent* over 2009-12 due to overestimated demand. Subhashgram SS operated (2009-12) at 4.04 to 5.25 *per cent* of capacity as it was energised without its associated transmission lines being completed due to non availability of ROW. No action was taken to optimise transformation capacity in line with demand.

Adequacy of sub-stations

2.1.16 Manual on Transmission Planning Criteria (MTPC) issued by CEA stipulates (June 1994) the permissible maximum capacity for different SSs i.e., 1000 MVA for 400 KV, 320 MVA for 220 KV and 150 MVA for 132 KV SSs. Indian Electricity Grid Code 2005 of Central Electricity Regulatory Commission (CERC) also adopted these stipulations. Grid Code issued by WBERC however stipulates that maximum capacities for different SSs were 1000 MVA (400 KV), 500 MVA (220 KV) and 250 MVA (132 KV).

Also, as per MTPC every SS of 132 KV capacity and above should have at least two transformers. We observed that as of March 2012 Bagmundi 132 KV SS did not meet this requirement.

The Management accepted (September 2012) the observation and planned to install the second 132/ 33 KV transformer.

Voltage management

2.1.17 Licensees using intra-state transmission system should make all possible efforts to ensure that grid voltage always remains within limits. As per Indian Electricity Grid code, STUs should maintain voltages ranging between 380-420 KV, 198-245 KV and 119-145 KV in 400 KV, 220 KV and 132 KV line respectively. WBERC's Grid Code restricts the range to 380-420 KV, 209-231 KV, 119-145 KV and 59-73 KV for 400 KV, 220 KV, 132 KV and 66 KV sub-stations respectively. The Company operates through three 400 KV SSs, nineteen 220 KV SSs, seventy 132 KV SSs and eight 66 KV SSs.

The tables below show instances of voltages being beyond the State norms and their distribution pattern over the months during 2007-12.

Table 2.1.4: Instances of Voltage being above or below WBERC norms

Years	400 KV		220 KV		132 KV	
	Voltage below WBERC norms	Voltage above WBERC norms	Voltage below WBERC norms	Voltage above WBERC norms	Voltage below WBERC norms	Voltage above WBERC norms
2007-08	9	19	61	160	218	24
2008-09	4	9	61	129	107	12
2009-10	4	6	92	158	164	31
2010-11	11	2	107	175	165	4
2011-12	3	20	86	185	130	21
Total	31	56	407	807	784	92

Source: Records of the Company.

An analysis of these voltage fluctuations across the years revealed a pattern in terms of months of the year when most voltage fluctuations occur. This is indicated in the table below where voltage dips below permissible limits were segregated into months of their occurrence.

Table 2.1.5: Distribution of Voltage violations across months during 2007-12

Month → Voltage ↓ (range)	Apr	May	June	July	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Total
400 KV (380-420 KV)	6	3	3	4	2	2	3	1	0	0	2	5	31
220 KV (209-231 KV)	42	40	38	42	40	32	41	16	9	22	30	55	407
132 KV (119-145 KV)	84	72	82	67	72	79	79	32	22	37	46	112	784
<i>Per cent</i>	10.80	9.41	10.07	9.25	9.33	9.25	10.07	4.01	2.54	4.83	6.38	14.08	

Source: Records of the Company.

We observed that voltage fluctuations were maximum in March, April, May and June which accounted for 14.08 per cent, 10.80 per cent, 9.41 per cent and 10.07 per cent respectively. These were outcome of peak demand in summer. October witnessed 10.07 per cent of all fluctuations due to demand of festive season.

The Management replied (September 2012) that to ensure quality power to the beneficiaries, the Company proposed to add 9,064 MVA during 2012-17 as well augment 36 SSs with Capacitor Bank (325 MVAR).

Lines

EHT lines

2.1.18 Manual for Transmission Planning Criteria (MTPC) stipulates that permissible line loading cannot normally be more than the Thermal Loading

Limit (TLL). The TLL limits the temperature attained by the energised conductors, restricts sag, loss of tensile strength and maximum power flow of the lines. Aluminum Conductors Steel Reinforced (ACSR) 210 sq mm conductors comprised 86 to 91 *per cent* of the aggregate 132 KV line length of the Company. As per MTPC the TLL of Panther conductor (at 45 degrees) was 366 amps. Our study of TLL of ACSR Panther conductor for the year 2007-12 revealed the following:

Table 2.1.6: Lines loaded above Thermal Loading Limit during 2007-12

Year	2007-08	2008-09	2009-10	2010-11	2011-12
No of Panther lines	94	128	133	141	141
Lines loaded above 366 AMPS	14	16	19	20	26
Lines overloaded above TLL on four or more occasions annually					
No. of lines	4	2	4	6	8
Aggregate number of instances	23	13	27	38	53
Maximum percentage over TLL	1,318	55	66	1,450	153
Minimum percentage over TLL	10	11	4	8	13
Maximum number of instances per line	10	7	12	12	12
Duration range (in hours)	2 to 58	40 to 688	1 to 732	1 to 704	1 to 137

Source: Records of the Company.

Despite increase in number of lines from 94 in 2007-08 to 141 in 2011-12, the number of overloaded lines increased from 14 (2007-08) to 26 (2011-12). In 2011-12 out of 26 violations of TLL norms, the maximum loading above TLL was 278 *per cent*. These 26 lines were overloaded for a total of 11,317 hours. Eight of 26 lines were overloaded four or more times of which 153 *per cent* is the maximum which was shown in the table above.

Loading of the lines beyond capacity resulted in voltage fluctuations, higher transmission losses and frequent interruptions/ breakdowns.

The Management stated (September 2012) that permissible line loading limit depended on factors like voltage regulation, stability and current carrying capacity (thermal capacity) while Surge Impedance Loading (SIL) gave a general idea of the loading capability of a line. Moreover, the aggregate line losses for panther conductors were within the overall transmission losses.

The MTPC stipulated that for lines whose permissible line loading as determined considering the SIL was higher than the TLL, the permissible loading limit would be restricted to TLL. Further, lower line losses would result in reduction in total transmission loss.

Bus Bar Protection Panel (BBPP)

2.1.19 Bus bar is used as an application for interconnection 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 result in selective tripping of only those breakers necessary to clear the bus bar fault.

Grid norms and Best Practices in Transmission lays that for 400 KV switchyard One & Half breaker scheme¹⁹ or Double Main and Transfer bus bar scheme²⁰, for 220 KV switchyard Double Main & Transfer scheme or Double Main with breaker by pass scheme and for 132 KV switchyard Main & Transfer scheme may be adopted. 400 KV bus bars are provided with two bus bar protections and 220 KV bus bars are provided with one bus bar protection. BBPP is to be kept in service for all 220 KV and 400 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 19 numbers of 220 KV SSs five were single bus SSs and 14 were double bus SSs. Out of the five single bus sub-stations, we observed that four were commissioned between 2005 and 2009. The Company had not adhered to the recommendations of CEA and IEGC while planning the sub-stations thus putting the system to risk.

We observed that of the 70 number of 132 KV SSs (including 16 numbers constructed during 2007-12), none was fitted with BBPP. 10 out of 19, 220 KV SSs were equipped with BBPP while remaining nine SSs did not have BBPP. We also observed that seven (except KLC and Dalkhola) out of the nine 220 KV SSs not having BBPP were loaded between 77.29 and 98.19 *per cent*. The Company had not safeguarded the system and the equipments at the SSs.

The Management stated (September 2012) that the single bus SSs were constructed 25 years ago and erection of second main bus and protection panel would be time and cost intensive.

The reply did not, however, address the fact that four out of five SSs with single bus were constructed between 2005 and 2009.

Maintenance

Performance of Current transformers (CT)

2.1.20 Current 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 span while reducing their maintenance expenditure. In order to gather detailed information about the operation conditions of CTs, various kinds of oil analysis like the standard oil Dissolved Gas Analysis (DGA) tests are generally conducted. For CT 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

¹⁹ Switchyard layout with protective mechanism built in the laid out structure with two circuits connected between three breakers i.e. devices which automatically disconnect a circuit in case of a fault thereby stopping flow of electrical currents preventing cascading effect in the system.

²⁰ In double main bus bar scheme each circuit is connected to both the buses.

used, as failures inside the CT leads to a degradation of the liquid insulation in such a way that the compound of the gases enables in identification of the cause of failure. The table below indicates status of failure of transformers during the year 2011-12:

Table 2.1.7: Failures of Transformers during 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
2011-12 ²¹	2,154 ²²	91	NIL	81	NA

Source: Records of the Company.

Records revealed that 35 CTs failed due to bursting, insulation problems, oil leakage and lightning. Ten CTs failed due to aging and the reasons for failure in respect of 46 transformers were not on record. The Maintenance Schedule²³ of the Company stipulated that DGA of CT was to be done once in every four years. During field audit of 36 sub-stations under 10 area offices, we observed that none of the sub-stations had conducted DGA of CT and therefore there was no assessment of health of these CTs.

The Management, in its reply, stated that in 2011-12, only 21 out of more than 3,700 CTs had failed. It further added that since the CTs were hermetically sealed and therefore DGA could not be done. The Company, however, did not follow its own maintenance schedule.

Working of hot lines division/ sub-divisions

2.1.21 Regular and periodic maintenance of transmission system is of utmost importance for its uninterrupted operation. Apart from the scheduled patrolling of lines, for maintenance of lines the following techniques are prescribed in the Report of the Committee for updating the Best practices of Transmission in the country:

- ❖ 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.

²¹ Data for 2007-11 was not available.

²² Based on information of 36 sub-stations visited during field audit.

²³ Prepared by Pricewaterhouse Coopers in May/ June 2009 (Table 5, Serial No. 10).

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. Despite this, the Company did not have any hot line division or sub division till March 2012. In absence of hot line maintenance, Company had to resort to Shut Down for maintenance.

We found that the Company did not have any trained manpower for hot line maintenance. The Committee for updating the best practices in the transmission system in the country recommended that power utilities may utilize the facilities of Hot Line Training Centre of CEA at Bangalore. We observed that Company did not utilise the facilities to update and armour itself with hot line monitoring and maintenance. However Line patrolling was shown as done regularly as per maintenance calendar. We observed that though thermo vision camera was available with the sub-stations, thermo scanning of lines was not done in any sub-station in any year. However, thermo scanning of equipments like isolator, breaker, and hot spots in CT was done with the help of thermo vision camera.

Transmission losses

2.1.22 While energy is carried from the generating station to the consumers through 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 to DISCOM²⁴s. Details of transmission losses from 2007-08 to 2011-12 are given below:

Table 2.1.8: Power transmitted, Transmission losses and System availability during 2007-12

Particulars	Unit	Year				
		2007-08	2008-09	2009-10	2010-11	2011-12
Power received for transmission	MUs	20,365.000	23,446.264	29,166.131	31,695.901	34,750.097
Net power transmitted	MUs	19,550.400	22,531.860	28,057.818	30,523.153	33,499.094
Actual Transmission loss	MUs	814.600	914.404	1,108.313	1,172.748	1,251.003
	Per cent	4.00	3.90	3.80	3.70	3.60
Target Transmission loss as per the WBERC norm	Per cent	NA	3.90	3.80	3.70	3.60
Average System Availability	Per cent	99.87	99.00	99.81	99.92	99.93

Source: Records of the Company.

It may be seen from the above that percentage of losses had decreased from 2007-08 to 2011-12. However, the loss so computed is normative loss. The Company had not completed 100 per cent metering of its system boundary to determine exact outflow of energy to the DISCOM as discussed in *paragraph*

²⁴Power Distribution Companies

2.1.31. As a result it was not possible to determine the exact transmission loss between energy entering the Company's system and energy actually transmitted out of the Company's system.

While accepting the facts, the Management stated (September 2012) that 100 per cent metering had been taken up.

Grid Management

Maintenance of Grid and performance of SLDC²⁵

2.1.23 Transmission and Grid Management are essential functions for smooth evacuation of power from the generating stations to the DISCOMs/ consumers. Grid Management ensures moment-to-moment power balance in the interconnected 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 Codes issued by the CEA and WBERC. National Grid consists of five regions viz. Northern, Eastern, Western, North Eastern and Southern Grids, each having a Regional Load Despatch Centre (RLDC), an apex body to ensure integrated operation of the power system in the concerned region. The West Bengal State Load Despatch Centre (SLDC), a constituent of Eastern Regional Load Despatch Centre (ERLDC), ensures integrated operation of power system in the State. The State Government notified (April 2007) that the SLDC would be operated by the Company. The SLDC was assisted by four²⁶ Area Load Despatch Centres (ALDCs) for data acquisition and transfer to SLDC and supervisory control of 132 KV and 33 KV equipments. ALDC-DPSC was not connected to SLDC and data acquisition was done through telephone.

The SLDC levies and collects fees and charges from the generating companies and licensees engaged in intra-state transmission of electricity as specified by the WBERC. Besides, WBERC permits SLDC to transfer requisite fund from the SLDC-Unscheduled Interchange Fund. The Management confirmed (September 2012) the facts.

Infrastructure for load monitoring

2.1.24 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 despatch centres as per the Grid norms for all SSs. We observed that out of 103²⁷ SSs and 16 generators, RTUs were provided for recording real time data for efficient Energy Management System at two (67 per cent) 400 KV SSs, 12 (63 per cent) 220 KV SSs, 24 (34 per cent) 132 KV SSs, none (zero per cent) 66 KV SS and nine (64 per cent) generators. Though communication was done via ERLDC, SLDCs were not integrated among themselves and did not have any data storage or back up

²⁵ SLDC could provide data for three years only as it had migrated to a new database system three years back.

²⁶ ALDC-WBSEDCL, ALDC-CESC, ALDC-DPL, ALDC-DPSC.

²⁷ 3 nos 400 KV, 19 nos 220 KV, 70 nos 132 KV, 8 nos 66 KV substations and three switching substations.

facilities thus reducing them to mere observation centers. Moreover data prior to 2009-10 was not available and accordingly audit analysis was restricted to three years ending 2011-12.

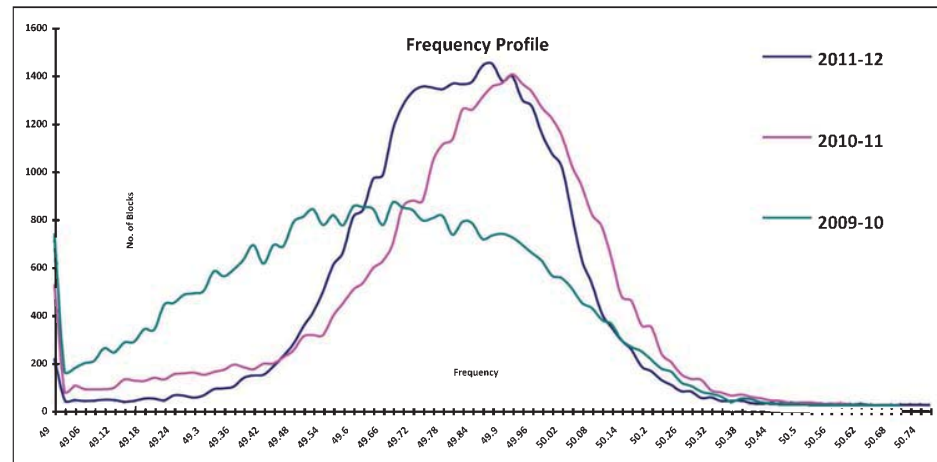
Management replied (September 2012) that they were in final stages of implementing through Power Grid Corporation of India Limited (PGCIL), install RTUs at 72 SSs. However, we found that during the period 2007-12 the system remained compromised.

Grid discipline by frequency management

2.1.25 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 collectively expected to maintain a system frequency between 49 and 50.5 Hertz (Hz) (49.2 and 50.3 Hz with effect from April 2008). For various reasons such as shortages in generating capacities, high demand, grid indiscipline in maintaining load generation balance, inadequate load monitoring and management, grid frequency goes below or above the permitted frequency levels.

The graph below shows the prevailing frequency and the number of blocks, each of 15 minutes' duration that had on average the given frequency during 2009-10 to 2011-12.

Chart 2.1.4: Prevailing frequency during 2009-12



Source: Data from SLDC

In 2009-10, grid frequency for 68.48 per cent of time had remained between 49.50 Hz and 50.50 Hz. In subsequent years this improved to 89.67 per cent (2010-11) and 94.71 per cent (2011-12) of time indicating better grid management with active co-operation from all its constituents. Nevertheless, there were instances of grid code violations from time to time as stated in the paragraphs 2.1.26 and 2.1.27.

Overdrawal from Grid

2.1.26 To enforce grid discipline, SLDC is required to issue three types of violation messages (A, B, C). Message A is issued when the frequency is less than 49.2 Hz and over-drawl is more than 50 MW or 10 *per cent* of schedule, whichever is less. Message B is issued when frequency is less than 49.2 Hz and over-drawl is between 50 and 200 MWs for more than ten minutes or 200 MW 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 overdrawal is more than 100 MW or 10 *per cent* of the schedule, whichever is less. We observed that SLDC did not issue such violation messages on its own.

Our analysis of data²⁸ on functioning of the grid shows that there were instances of state grid violations for which SLDC should have issued messages of grid violations. However, neither there was an explicit provision in the State Grid Code to that effect, nor did SLDC issue any such message to correct imbalances of the grid. The table shows number of instances when constituents of the grid drew in excess of 10 *per cent* of their scheduled drawals despite the grid frequency falling below 49.2 Hz in a given block.

Table 2.1.9: Instances of grid violation* during 2009-12

Grid Constituents	2009-10	2010-11	2011-12
Sagardighi Thermal Power Plant	8	-	-
Philips Carbon Black Ltd.	13	-	-
Crescent Power Limited	161	-	-
WBSEDCL	30	4	7
CESC	385	240	69
DPL	555	6	59
Total	1,152	250	135

Source: Data from SLDC

* Where drawal in a given block was more than 10 *per cent* of scheduled drawal and the grid frequency remained below 49.2 Hz.

Again, in absence of specific provisions in the State Grid Code, SLDC did not impose any financial penalty against such violation of Grid discipline. However, it relayed messages received from ERLDC to its constituents in the State Grid. Twenty one Type 'A' messages were relayed from January 2010 to December 2010. It increased to 23 numbers during the period from January 2011 to December 2011.

Management while confirming the facts (September 2012) pointed out that these instances were not violation of the State Grid.

We observed that Provisions of the State Grid Code were divergent from the National Grid Code because unlike National Grid Code it did not empower SLDC to direct remedial action or impose penalty for overdrawal of energy by its constituents. This compromises the robustness and integrity of the State Grid.

²⁸ Using IDEA and Excel

Backing Down Instructions (BDI)

2.1.27 When the frequency exceeds the ideal limits i.e. situation where generation is more and drawal is less (at a frequency above 50 Hz) SLDC should take action by issuing Backing Down Instructions (BDI)²⁹ to the generators to reduce the generation for ensuring the integrated grid operations and for achieving maximum economy and efficiency in the operation of the power system in the State. Failure of the generators to follow the SLDC instructions would constitute violation of the Grid code and would entail penalties which include termination of connectivity agreement and de-linking from the State Grid. SLDC did not communicate any instruction for backing to the generators down when grid frequency remained above 50 Hz. However, the Management explained that depending on the demand-generation mismatch³⁰ schedule of the generation utilities³¹ are revised and therefore no separate instruction was required to be issued. SLDC had reduced generation of generating utilities by 1,532 MUs during 2008-09 to 2011-12.

We, however, observed that despite reduction of scheduled generation by SLDC, grid constituents continued to generate energy in excess of five *per cent* of their schedule even when the grid frequency remained above 50 Hz.

Table 2.1.10: Instances of grid violation* during 2009-12

Grid Constituents	2009-10	2010-11	2011-12
Bandel Thermal Power Station	836	1,373	838
Santaldhi Thermal Power Station	591	1,131	791
Kolaghat Thermal Power Station	78	95	142
Bakreswar Thermal Power Station	224	233	113
Sagardighi Thermal Power Station	347	440	512
Philips Carbon Black Ltd.	1,093	1,632	477
Tata Power (Haldia)	120	93	12
Crescent Power Limited	466	1,202	570
CESC	271	185	68
DPL	1,144	19	521
Total	5,170	6,403	4,044

Source: Data from SLDC

* Where injection of energy in a given block was more than five *per cent* of scheduled release and the grid frequency remained above 50 Hz.

Thus, revision of schedules alone was not sufficient to deter the generators from injecting energy into the grid when frequency remained above 50 Hz. Again, in the absence of specific provisions in the State Grid Code, SLDC did not impose any penalty on the generators.

²⁹ Instruction to Generating Units to reduce their generation.

³⁰ Where the generation is more than drawal leading to increase in grid frequency above norms.

³¹ This schedule indicates the volume of generation that a power plant may undertake in a given block.

The Management reiterated (September 2009) that there was no benchmark in the State Grid Code to term these actions as violations. Besides, commercially deterrent frequency based processes would discourage deviations.

The Enquiry Committee on Grid Disturbance in the Northern region on 30 July 2012 and in the Northern, Eastern and North eastern regions on 31 July 2012 observed (August 2012) that among the causes of grid collapse across large parts of India on 30 and 31 July 2012 was frequency control through commercial signals and non-compliance of instructions of RLDCs.

The following deficiencies were identified by the Enquiry Committee set up by the Government of India pursuant to the Grid Failures of 30th and 31st July 2012. Our Audit has also highlighted similar deficiencies within the STU.

- **Inadequate transmission lines and transmission capacity to meet power demand. (paragraph 2.1.9)**
- **Overloading of transmission lines, voltage in excess of norms. (paragraphs 2.1.17 and 2.1.18)**
- **Faulty protection system, non- functional power system stabilizers. (paragraph 2.1.19)**
- **Non-availability of RTUs, absence of transient stability studies. (paragraph 2.1.24)**
- **Lack of audit of power system's adequacy (paragraph 2.1.42)**
- **Non adherence to directives of Load Despatch Centers, failure to shed load or reduce generation (paragraphs 2.1.26 and 2.1.27)**

Planning for power procurement

2.1.28 The Company draws long term supply plan taking into account the contracted generation capacity, allocation from the central sector and “future committed projects” and evolves net additional requirement of power in consultation with the DISCOMs. 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:

Table 2.1.11: Status of Power Demand and Supply during 2007-12

(Figures in MUs)

Sl.No.	Details ³²	2007-08	2008-09	2009-10	2010-11	2011-12
1	Total power requirement	28,087.19	30,538.46	33,298.655	36,242.552	37,900.477
2	Total power supplied ³³	27,464.967	29,991.68	32,441.291	35,501.164	37,389.839
3	Power short supplied	622.223	546.78	857.364	741.388	510.638
4	Percentage of shortage	2.22	1.79	2.57	2.05	1.35

Source: Data from SLDC

³² In respect of WBSEDCL, DPL and CESC. DVC and DPSC have their own transmission infrastructure.

³³ Including generation, short and long term purchases and drawal from Central Generating Stations.

The gap in demand supply position also leads to variation between actual generation or actual drawal and scheduled generation or scheduled drawal which is accounted through Unscheduled Interchange (UI)³⁴ charges, worked out by SLDC for each 15 minutes time block. UI charges are levied for the supply and consumption of energy in variation from the pre-committed daily schedule. This charge varies inversely with the system frequency prevailing at the time of supply/ consumption. Hence it reflects the marginal value of energy at the time of supply. The levying of UI charges acts as a commercial deterrent to curb overdrawals from CGS³⁵ during low frequency conditions.

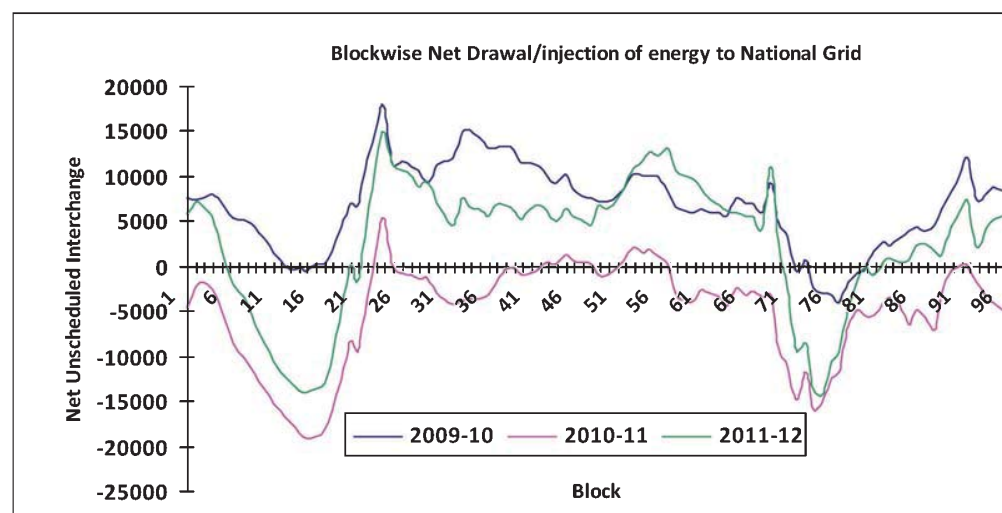
Table 2.1.12: Energy drawal and injection to national grid during 2009-12

Particulars	2009-10	2010-11	2011-12
No. of block when energy was consumed from National Grid	13,804	19,599	16,435
Total Energy Consumed from National Grid (MU)	403.777	1,117.994	984.565
No. of block when energy was released into National Grid	21,236	15,441	18,701
Total Energy released into National Grid (MU)	1,064.654	650.158	1,242.952
Net UI (MU)	660.877	(-)467.836	258.387

Source: Data from SLDC

In 2009-10 to 2011-12, the State Grid had provided 2,957.765 MU energy in 55,378 blocks (53 per cent) to the National Grid; while drawing from the National Grid 2,506.337 MU in 49,838 blocks (47 per cent). The graph below indicates net drawal or injection to the National Grid in each block of an average day during 2009-10 to 2011-12.

Chart 2.1.5: Net drawal or injection to the National Grid in each block of an average day during 2009-12



Source: Data from SLDC

³⁴ Generation or drawal of energy by utilities in the grid, beyond their schedules.

³⁵ Central Generating Stations.

The above graph indicated that the State generally consumed energy from the National Grid during 1-15 to 5-00 Hrs and 19-30 to 22-00 Hrs while at remaining time the State Grid generally injected energy to the National Grid. While consumption during 19-30 to 22-00 Hrs was to meet peak demand in the State, the consumption during 1-15 to 5-00 Hrs was largely to operate Purulia Pumped Storage Project. While some egress and ingress of power across the National Grid in UI mode was unavoidable, all constituents of the State Grid could work closely to avoid volatility of demand and supply leading to lower UI.

Disaster Management

2.1.29 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 procedures 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 System³⁶, DG sets, vehicles, fire-fighting equipment, skilled and specialised manpower.

Disaster Management Centre, National Load Despatch Centre, New Delhi is to act as a Central Control Room in case of disasters. We observed that mock drill for starting up generating stations during black start³⁷ operations as a part of DM programme was not carried out by the Company.

Inadequate facilities for DM

2.1.30 None of the 16 major generating stations in the State had black start facilities indicating inadequacy in the preparedness for DM.

Diesel Generating (DG) sets and synchronoscopes³⁸ form part of DM facilities at EHT SSs connecting major generating stations. We found that of 103 SSs, DG set was available only at Lebong SS and synchronoscopes were not available in any SS. Further, the Company 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 Management replied (September 2012) that decision had been taken for installation of DG sets with suitable ratings for all 400 KV SSs and in important 220 KV SSs to act as backup of auxiliary system under any exigency condition of total or partial failure of the grid. In order to combat any emergency situation arising out of failure of vital active and reactive components of any sub-station along with the associated 400/ 220/ 132 KV transmission line, adequate spares were always kept and maintained at different strategic locations of the network in order to set right and normalise the system with bare minimum time of power interruption. 400 KV SS had provisions for synchronization with the grid.

³⁶ Mechanism to restore power system to working condition.

³⁷ The procedure necessary to recover from partial or a total black out.

³⁸ 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.

Management's reply indicated that DG sets were yet to be operationalised (September 2012)

Energy Accounting and Audit

2.1.31 Energy accounting and audit is necessary to assess and reduce the transmission losses. 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 also between ingress and egress of energy at interstate transmission points. The Company had entrusted data collection, preparation of Reports and service maintenance to Secure Meters Limited at an expenditure of ₹ 1.71 crore (2007-12).

As on 31 March 2012, the Company had 1,492 interface Boundary metering points between TD (1,390) and GT (79), besides 23 meters accounting for interstate transmissions. While all the GT and interstate points were provided with 0.2 class meters, 293 TD points were provided with 0.2 class meters and balance 1,038 points were of 0.5 class meters, 59 points remained unmetred.

The Company also has 884.8 MVA of 33/ 11 KV transformation capacities which were retained as these capacities were embedded within the Company's SSs. However, we found that 67 feeders through which energy was provided to WBSEDCL at 11 KV had remained unmetred due to absence of interface points (July 2012). In absence of meters, the Company could not effectively ascertain total energy transmitted to the DISCOMs and consequently precise accounting for egress of energy was not possible.

Besides, data also showed instances where output exceeded input energy which were due to usage of different classes of meters at input and output points and replacement of meters without compatibility to CTs and PT consequently making energy accounting and transmission losses worked out un-realistic.

Further, 100 *per cent* metering of the Company's system for energy auditing was also not completed. The information and reports for March 2012 submitted by Secure Meters Limited were based on the 8,676.33 CKm and 14,239.45 MVA of installed transmission capacity whereas the actual transmission lines were of 11,095.44 CKm and transformation capacity was 19,236.10 MVA. Thus there was under-coverage of 2,419.11 CKm (27.88 *per cent*) of lines and 4,996.65 MVA (35.09 *per cent*) of transformer capacity which was not taken into account while calculating technical loss for energy audits.

Management stated (September 2012) that an IT wing was created in 2011 to develop infrastructure and technical expertise in-house. Further, 0.5 class meters in the system were installed by the erstwhile WBSEB while the Company had procured 0.2 class meters according to CEA guidelines. It was further stated that 100 *per cent* metering Project was a continuous process and was being implemented in the Company accordingly in phases with the addition of new transmission lines and sub-stations.

Financial Management

2.1.32 One of the major objectives of the NEP 2005 was ensuring financial turnaround and commercial viability of the power sector. The financial position of the Company for the five years ending 2011-12 is as under:

Table 2.1.13: Financial Position of the Company during 2007-12

	(₹ in crore)				
	2007-08	2008-09	2009-10	2010-11	2011-12
A. Liabilities					
Paid up Capital	1,014.00	1,105.52	1,105.52	1,105.52	1,105.52
Reserves & Surplus (including Capital Grants)	5.91	104.09	278.76	458.39	630.06
Deferred Tax					
Borrowings (Loan Funds)	2,072.42	2,185.17	2,252.26	2,275.17	2,367.40
Current Liabilities & Provisions (CL)	359.54	432.23	357.99	474.47	516.55
Total	3,451.86	3,827.01	3,994.53	4,313.55	4,619.53
B. Assets					
Gross Block	3,156.83	3,483.20	4,186.64	4,434.09	4,671.08
Less: Depreciation	945.41	1,033.65	1,145.54	1,271.01	1,396.99
Net Fixed Assets	2,211.42	2,449.55	3,041.10	3,163.08	3,274.09
Capital Works-in-Progress (CWIP)	838.32	971.00	552.75	741.61	855.01
Current Assets, Loans and Advances (CA)	303.93	406.46	400.68	408.86	490.43
Accumulated Losses and Misc. Expenditure	98.19	0.00	0.00	0.00	0.00
Total	3,451.86	3,827.01	3,994.53	4,313.55	4,619.53
Debt equity ratio³⁹	2.02	1.95	2.04	1.99	2.14
Interest (net off IDC)	155.10	174.10	187.78	182.02	180.22
Profit	81.32	189.39	174.68	174.49	171.67
Return⁴⁰ on Capital Employed	236.42	363.49	362.46	356.51	351.89
Capital Employed	3,092.33	3,394.77	3,636.55	3,839.09	4,063.60
Percentage of Return on Capital Employed	7.65	10.78	10.21	9.31	9.72

Source: Annual Accounts of the Company

It may be seen from the above that the Company's profit increased by 132.89 per cent from ₹ 81.32 crore in 2007-08 to ₹ 189.39 crore in 2008-09 due to recovery of higher transmission charges and SLDC charges as determined by WBERC. Thereafter the profit decreased by 9.36 per cent from ₹ 189.39 crore in 2008-09 to ₹ 171.67 crore in 2011-12 due to increased employee costs resulting from revision of pay and allowances as well as decline in advance against depreciation, non revision of tariff and higher provision for income tax. The debt-equity ratio of the Company had increased during the period under audit.

³⁹ Debt to Equity ratio : Debt is principal of long term borrowings while Equity is Paid up Share Capital only.

⁴⁰ Total Return = Profit + Interest.

2.1.33 Details of working results like revenue realisation, net surplus/ loss and earnings and cost per unit of transmission are given below:

Table 2.1.14: Working results of the Company during 2007-12

(₹ in crore)						
Sl.No	Description	2007-08	2008-09	2009-10	2010-11	2011-12
1	Income					
	Revenue (Transmission Charges)	428.04	666.44	721.28	748.53	724.11
	Other income including interest/ subsidy	8.90	7.59	8.28	17.01	27.76
	Total Income	436.94	674.03	729.56	765.54	751.87
2	Transmission					
(a)	Installed capacity (MVA)	14,366.10	15,380.10	16,933.60	18,218.10	19,236.10
(b)	Power received for transmission (MU)	20,365.00	23,446.26	29,166.13	31,695.90	34,750.10
(c)	Loss in transmission (MUs)	814.60	914.40	1,108.31	1,172.75	1,251.00
	Net power transmitted (b)-(c) in MUs	19,550.40	22,531.86	28,057.82	30,523.15	33,499.10
3	Expenditure					
(a)	Fixed cost					
(i)	Employees cost	55.03	108.20	93.06	115.01	119.77
(ii)	Administrative and General expenses	12.69	17.50	19.11	24.00	26.67
(iii)	Depreciation	81.70	89.75	111.89	120.01	125.13
(iv)	Interest and Finance charges (net after capitalisation)	155.14	176.73	196.68	182.87	180.22
(v)	Transmission Charges paid to WBPDC	35.31	42.37	66.13	58.87	56.98
	Total fixed cost	339.87	434.55	486.87	500.76	508.77
(b)	Variable cost	14.59	17.49	16.92	30.80	28.49
(c)	Total cost 3 (a) + 3(b)	354.46	452.04	503.79	531.56	537.26
4	Realisation (₹ per unit)	0.22	0.30	0.26	0.25	0.22
5	Fixed cost (₹ per unit)	0.17	0.19	0.17	0.16	0.15
6	Variable cost (₹ per unit)	0.01	0.01	0.01	0.01	0.01
7	Total cost (₹ per unit) (5+6)	0.18	0.20	0.18	0.17	0.16
8	Contribution (₹ per unit) (4-6)	0.21	0.29	0.25	0.24	0.21
9	Profit (+)/Loss(-) (₹ per unit) (4-7)	0.04	0.10	0.08	0.08	0.06

Source: Annual Accounts of the Company

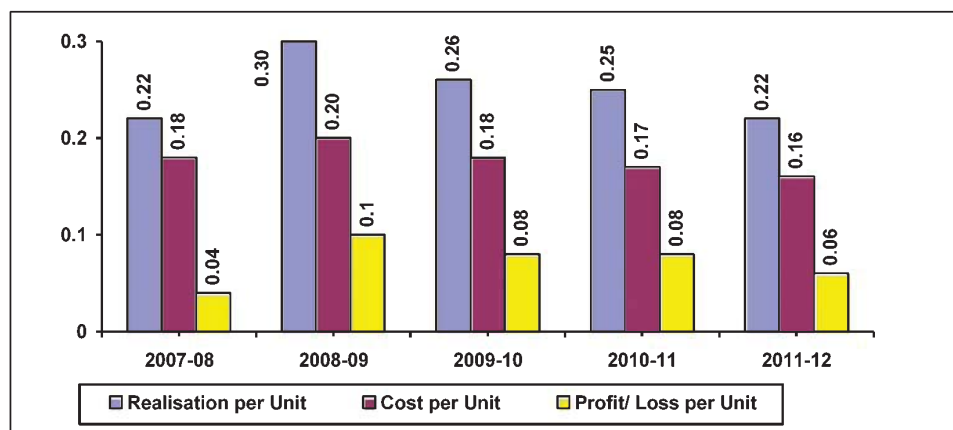
It may be seen from the above that though realisation per unit increased from ₹ 0.22 in 2007-08 to ₹ 0.30 in 2008-09 (36.36 per cent), it decreased thereafter to ₹ 0.22 (2011-12) (26.67 per cent). Similarly, cost per unit increased from ₹ 0.18 in 2007-08 to ₹ 0.20 in 2008-09 (11.11 per cent) and declined to ₹ 0.16 (20 per cent) in 2011-12.

It was also evident from the above table that employee cost, depreciation and interest and finance charges constituted the major elements of cost in 2011-12 which represented 23.54 per cent, 24.59 per cent and 35.42 per cent respectively of the total cost in that year. On the other hand, transmission charges which represented 96.31 per cent of the total revenue, constituted the major element of revenue in 2011-12.

Recovery of cost of operations

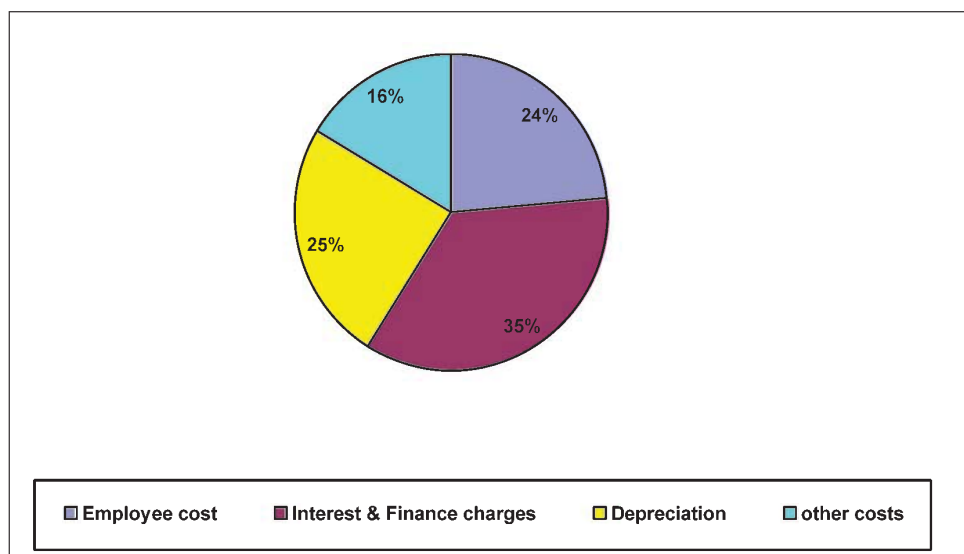
2.1.34 During the last four years ending 2011-12, the profit per unit has improved based on recovery of higher transmission charges approved by WBERC as given in the bar chart and pie diagrams below:

Chart 2.1.6: Bar Chart on Realisation, Cost and Profit per Unit



Source: Annual Accounts of the Company

Chart 2.1.7: Pie diagram on elements of cost

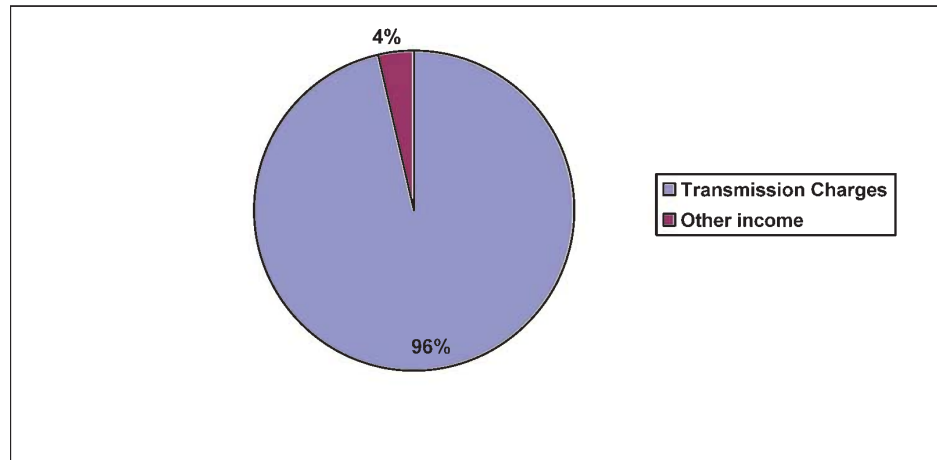


Source: Annual Accounts of the Company

Elements of revenue

2.1.35 Transmission charges constitute the major element of revenue. The percentage break-up of revenue for 2011-12 is given below in the pie chart.

Chart 2.1.8: Pie diagram on elements of revenue



Source: Annual Accounts of the Company

Collection of SLDC charges

2.1.36 SLDC charges were introduced from 2007-08 onwards and the Company levied charges amounting to ₹ 80.57 crore on generators/ Open Access (OA) users for 2007-08 to 2011-12.

Collection of surcharge from DISCOMs

2.1.37 The Company raises monthly transmission bills on West Bengal State Electricity Distribution Company Ltd (WBSEDCL) on the allocated capacities at rates specified in the Tariff Orders. The bills are to be paid within 30 days from the date of issue. The transmission agreement between the Company and WBSEDCL provided for opening of irrevocable revolving Letter of Credit (LoC) in favour of the Company. In the event of failure to make payment within 30 days from the due date the Company should invoke the LoC. We observed that WBSEDCL opened LoC from April 2008 and the Company was receiving payments in time.

Tariff Fixation

2.1.38 Financial viability of the Company depends upon generation of surplus (including fair returns) from the operations to finance their operating needs and future capital expansion programmes by adopting prudent financial practices. Revenue collection was the main source of generation of funds for the Company and the issues relating to tariff are discussed here under.

The tariff structure of the Company was subject to revision approved by WBERC after the objections, if any, received against Aggregate Revenue Requirement (ARR) petition filed by them within the stipulated date. WBERC introduced multi-year tariffs in February 2007. The first control period⁴¹ was 2007-08 with subsequent control period of three years each from 2008-09.

⁴¹ Period fixed by WBERC from time to time under the multi-year tariff framework for determination of tariff.

The Company was required to file the ARR for each control period 120 days before the commencement of the respective control period (seven days in case of first control period i.e 2007-08). WBERC accepted the application filed by the Company with such modifications/ conditions as may be deemed just and appropriate and after considering all suggestions and objections from public and other stakeholders. The table below shows the due date of filing ARR, actual date of filing, date of approval of tariff petition and the effective date of the revised tariff.

Table 2.1.15: Due Date vis-à-vis Actual Date of filing of tariff application and their approval

Year	Due date of filing	Extended due date of filing as approved by WBERC	Actual date of filing	Delay in days	Date of approval	Effective date
2007-08	25.03.2007	16.04.2007	16.04.2007	Nil	26.07.2007	April, 2007
2008-09	01.03.2008	31.05.2008	26.05.2008	Nil	23.09.2008	April, 2008
2009-10	01.03.2008	31.05.2008	26.05.2008	Nil	28.07.2009	April, 2009
2010-11	01.03.2008	31.05.2008	26.05.2008	Nil	29.07.2010	April, 2010
2011-12	29.05.2011	15.07.2011	15.07.2011	Nil	01.12.2012	April, 2011

Source: Tariff orders and Tariff Applications.

From the above it may be seen that the Company could not file their tariff petition within the original due dates on any occasion. However, WBERC had allowed extension of time each year to enable the Company to file their tariff petitions within such revised time frame. These delays were attributed to the Company's inexperience in preparation of a tariff petition as well as finalisation of the scheme of bifurcation of erstwhile WBSEB into DISCOM and TRANSCO (2007-08), preparation of first multi-year tariff (2008-11) and directive from the State Government to delay tariff petition (2011-12).

2.1.39 As per terms and conditions for determination of tariff for transmission activity⁴², the Company files for ARR with the WBERC for the revenue required to meet the cost pertaining to the transmission business for each financial year which would be permitted by the Commission to be recovered through tariffs and charges. Thus, the main source of revenue of the Company was transmission and SLDC charges.

The ARR proposals made by the Company and approved by the Commission are given below:

⁴² 31/WBERC dated 9 July 2007

Table 2.1.16: Tariff sought vis-à-vis tariff allowed by WBERC during 2007-12

Year	Transmission Tariff					
	TRANSCO			WBERC		
	Total Capacity for transmission (MW)	Revenue Requirement (₹ in crore)	Tariff, ₹/MW/ Month	Total capacity for transmission (MW)	Revenue Requirement (₹ in crore) excluding APR & other adjustments	Tariff, ₹/MW/ Month
2007-08	3,159.58	409.61	1,08,034	3,159.58	423.43	1,11,678
2008-09	3,475.83	611.62	1,46,639	3,475.83	646.75	1,55,058
2009-10	3,823.17	624.49	1,36,210	3,823.17	642.47	1,40,039
2010-11	4,205.42	658.25	1,30,437	4,205.42	655.15	1,29,823
2011-12	4,421.00	983.06	1,85,302	4,421.00	725.92	1,36,831

Source: Tariff Orders and Tariff Applications.

Further, as per the Regulation, the Company shall file before the Commission an Annual Performance Review (APR) for the year within November of the subsequent year. Whenever there is a gain or loss (excess/ short) in the controllable items (O&M, return on capital employed, depreciation and non tariff income) the Commission would review the same and make appropriate adjustments wherever required. Accordingly, the Company had filed APR claim for all the years as detailed below:

Table 2.1.17: APR petitions and their approvals by WBERC

APR for the year	2007-08	2008-09	2009-10	2010-11	2011-12
Date of filing APR	26.02.2009	27.11.2009	29.11.2010	29.11.2011	30.11.2012
Date of approval	28.05.2009	26.07.2010	30.08.2012	19.10.2012	NA ⁴³
Additional Amount claimed (₹ in crores)	65.55	98.77	96.78	94.72	158.58 ⁴⁴
Additional amount allowed for recovery (₹ in crores)	37.80	40.49	72.72	27.85	NA
Year of Adjustment as allowed by WBERC	2009-10	2013-14			NA

Source: Tariff orders and Tariff Applications.

The Commission however disallowed (May 2009) ₹ 3.50 crore paid during 2007-08 to the employees as performance incentive.

Material Management

2.1.40 The key functions in material management are laying down inventory control policy, procurement of materials and disposal of obsolete inventory. The Company had formulated a procurement policy for economical procurement (September 2009) after passage of two and half year of incorporation of the Company. The Company laid down (December 2009) inventory control mechanism indicating normal term moving inventory, medium term moving inventory, long term moving inventory and obsolete

inventory for efficient control over inventory and timely disposal of scrap.

⁴³ APR yet to be finalised by WBERC.

⁴⁴ The APR claim was filed before the tariff order for 2011-12 was finalised. The Tariff Order was finalized in December 2012.

The Management stated (September 2012) that the procurement policy was effected from May 2010.

The table below shows the stock position, and corresponding annual consumption during 2007-12.

Table 2.1.18: Stock position and annual consumption during 2007-12

(₹ in crore)

Year	Consumption (per annum)	Consumption (per month)	Net Closing stock ⁴⁵ (as per Balance sheet)	Closing stock in terms of months to consumption
2007-08	4.77	0.40	139.53	351.02
2008-09	5.59	0.47	127.39	273.47
2009-10	6.20	0.52	118.51	229.37
2010-11	5.96	0.50	104.00	209.40
2011-12	10.01	0.83	87.73	105.17

Source: Annual Accounts and records of the Company

It may be observed from the table above that the closing stock of inventory had remained high in all five years, but declining over the years. However, it was also observed that bulk of these inventories were carried forward from erstwhile WBSEB and made available to the Company under scheme of reorganisation of the WBSEB between the Distribution and Transmission Utilities. The Company did not make procurements according to Material Requirement Plans. Instead, purchases were made on the basis of requisitions from the user departments. It had not identified its minimum and maximum store levels. Besides, the requisitions did not indicate planned usage of the items.

The Management stated (September 2012) that since the Company was in the process of implementation of ERP Solutions, issues relating to stock accounting and management would be addressed.

Physical verification of stores

2.1.41 There were 66 stores under the control of the Company. Physical verification of these stores along with segregation and identification of the stores was undertaken from December 2009. The process was completed by May 2011 and the position of stores as of March 2011 was as follows:

Table 2.1.19: Value of store as on 31 March 2011

Sl. No.	Nature of store	Value (₹ in crore)
1.	Long Term Moving	19.08
2.	Medium Term Moving	17.91
3.	Normal Term Moving	37.87
4.	Obsolete	
i)	Maintenance Spares	0.85
ii)	Proposed Scrap	3.42
	Total	79.13

Source: Records of the Company.

⁴⁵ Only for O&M stock and excluding obsolete stock.

As per annual accounts of the Company for year ended 31 March 2011 the book value of stores was ₹ 104.11 crore. Thus, there was a difference of ₹ 24.98 crore with book stock as of March 2011. However, no reconciliation was undertaken (June 2012).

Management also engaged (January 2011) Pricewaterhouse Coopers (PwC) to prepare a standardised inventory master list and codification of the store items. The work was scheduled to be completed by July 2011 but remained incomplete (June 2012). Management also directed (May 2011) disposal of scrap through MSTC Ltd. However, the same was yet to be completed (September 2012).

In its reply, Management stated (September 2012) that the process of identification and codification of stores was yet to be completed. Moreover, an amount of ₹ 18.42 crore was realised from the sale of scrap during 2007-12.

Monitoring and Control

2.1.42 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. However, there was no standard requirement as to their preparation or submission until September 2009. Further, verification of MIS reports of TL&SS, revealed that details regarding programmed overhauls of equipments like CBs⁴⁶, due dates of the next oil change, OLTC⁴⁷ operations, dates of maintenance works, performance of SS batteries, performance of relays, cause-wise analysis of feeder breakdowns were not reported or subsequently analysed and followed up with corrective action.

The Management replied (September 2012) that all maintenance required was regularly carried out. However, in absence of appropriate MIS reports at regular interval Management could not verify that requisite maintenance was carried out.

Between April 2009 and September 2009, the Company adopted three manuals to standardise maintenance schedules, operating procedures and safety, all prepared by PwC as part of State Government's capacity building exercise for the Company. Compliance to these manuals was assessed through technical audits carried out by the Corporate Monitoring Cell headed by an Additional Chief Engineer. For efficient technical audits, PwC also prepared an Internal Technical Audit (ITA) Guideline which was adopted by the Company in September 2010. Between December 2011 and March 2012 ITAs were conducted by the Company at 45 SSs. The following shortcomings were recurrently highlighted in these reports.

- Absence of adequate safety equipment,
- Deficiencies in maintenance of equipments.

⁴⁶ Circuit Breaker.

⁴⁷ On Load Tap Changer.

- Partial compliance to standard operating procedures.

These indicate that despite lapse of over two years since adoption of various standard procedures on maintenance, operations and safety, most units were yet to adhere to them as there was deficient control procedures and enforcement.

The Management indicated (September 2012) that it was in process of building adequate safety equipment through their newly set up safety wing and that PwC's manuals were adhered in all sub-stations. Also periodical maintenance, pre-Puja maintenance and winter maintenance are being regularly done.

However, standardisation of maintenance schedules, operating procedures and safety were the core requirement of Company's business. Delayed implementation indicated lack of monitoring and control.

Internal Control and Internal Audit

2.1.43 Internal control is a process designed for providing reasonable assurance for efficiency of operations, reliability of financial reporting and compliance with applicable laws and statutes which is designed to ensure proper functioning as well as effectiveness of the internal control system and detection of errors and frauds.

The Company had adopted (March 2008) an Internal Audit Charter that sought to bring about a systematic approach to evaluation and suggest improvements to the effectiveness of the Company's processes. The internal audit processes were to be COSO/ COBIT⁴⁸ compliant and this required a risk based approach to Audit.

To meet these objectives, the Company appointed (May 2008) M/s Ernst & Young as consultant at cost of ₹ 10 lakh to prepare an Internal Audit model that would incorporate Business Process Risk Assessment, a three to five year internal audit plan, an internal audit manual, monitoring of internal audit execution and management reporting. Ernst & Young submitted their report in December 2010. However, the Company was yet (March 2012) to adopt the internal audit manual.

The Internal Audit Department of the Company was entrusted with the responsibility of conducting internal audit. However, due to lack of manpower, it merely acted as an intermediary between the Company and the Audit firm appointed to conduct the internal audit. The Company, however, appointed (May 2008) a firm of Chartered Accountants as Internal Auditors of the Company.

The table below indicates the units audited during each year and the fees.

⁴⁸ COSO/COBIT are internationally recognized audit frame work for financial and IS audit.

Table 2.1.20: Number of units audited and audit fees during 2007-12

	2007-08	2008-09	2009-10	2010-11	2011-12
Total auditable units	98	98	98	92	91
No. of Units Audited	Nil	36	33	82	72
Per cent of coverage	0.00	36.73	44.32	89.13	79.12
Fees paid (₹ in lakh)	Nil	3.19	5.53	7.18	13.54

Source: Tariff Orders and Tariff Applications.

Internal audit processes did not identify and report risks in Company's operations. Consequently internal audit was limited to verification of financial records and vouching of transactions.

Management replied (September 2012) that the scope of technical audit would be considerably increased from 2012-13.

Audit Committee

2.1.44 The Company constituted an Audit Committee (AC) as required under Section 292A of the Companies Act, 1956. As per the terms of reference of the AC, the AC should meet four times in a year. Thus, in a span of five years, the AC should have met for a minimum number of 20 times.

The Company's AC met on 25 occasions during 2007-12, out of which Internal Audit department participated in 24 meetings. However, the firm of Chartered Accountants undertaking Company's internal audit did not attend the AC meetings to offer their suggestions regarding remedial measures.

Management stated (September 2012) that attendance of Chartered Accountants undertaking Company's internal audit was not mandatory as per Companies Act but offered to place the proposal before the Audit Committee.

Conclusions and Recommendations

2.1.45 Conclusion

Though the Company was incorporated in February 2007, it had not formulated Annual Work Plans in harmonisation with Long Term Load Forecast and National Electricity Plan. The Company achieved 39.22 per cent and 25.68 per cent of target of sub-stations and lines respectively during the five years period. There were abnormal delays in execution of projects due to deficient planning and project management which resulted in time overrun of six to 114 months. The Company did not comply with the recommendations of the Task Force which resulted in delayed execution of work due to ineffective and improper contract management.

The Company constructed sub-stations and lines without proper load flow studies resulting in their under-utilisation. Quality of power was compromised due to voltage fluctuations while the Company did not

install adequate capacitor banks in the sub-stations to provide necessary reactive power. There were cases of abnormal overloading of transformers and 132 KV transmission lines than prescribed by State Grid Code. Bus bar protection systems in 220 KV to maintain system stability were not adequate. Standards of operation in the State Grid Code were more relaxed than Indian Electricity Grid code.

There were instances of over drawal of energy or over injection of energy but State Load Despatch Center lacked authority under State Grid code to effectively impose grid discipline. Disaster Management system was inadequate.

The Company had not completed 100 *per cent* boundary metering till March 2012. The Energy Audit and Accounting was reported on transmission capacity and length of transmission lines that were lesser than the actual capacity and length.

The Company had earned profits in all five years. However, the Company's profitability could have further improved if additional amounts recoverable through Annual Performance Review were released by West Bengal Electricity Regulatory Commission within time. The Company has been holding high volume of stock in all the five years. Stores management and control was inadequate. There were un-reconciled stores between book and physical balance. Management Information System was not adequate for decision making and corrective action. Internal audit process did not adhere to COSO/ COBIT framework.

2.1.46 Recommendations:

The Government/ Management should

- *Chalk out annual as well as rolling plans for addition and augmentation in line with National Electricity Plan and Long Term Load Forecast.*
- *Ensure that the recommendations of Task Force on Transmission Projects are followed scrupulously so as to avoid time overrun of the projects.*
- *Ensure installation of adequate number of capacitor banks and bus bar protection systems to protect the lines and SSs.*
- *Adhere to the standards/ norms fixed in MTPC/ Indian Electricity Grid Code and State regulations.*
- *Explore harmonisation of State and National Grid codes.*
- *Complete 100 per cent boundary metering at the earliest along with feeder metering to compute precise transmission losses.*

West Bengal Tourism Development Corporation Limited

2.2 Performance and workings for the period 2007-08 to 2011-12

Executive Summary

West Bengal Tourism Development Corporation Limited (Company) was incorporated on 29 April 1974 as a wholly owned Government Company to develop, promote and publicise tourism in the State.

The Company's resources comprise 36 tourist lodges (25 under own management and 11 leased out), two tourists' information bureaux, three vessels, six AC buses along with 429 employees as of March 2012 to provide facilities and services to the tourists. The Company implements various tourist infrastructure developmental projects with grants from the Government of India (GoI) and Government of West Bengal (GoWB).

Performance audit covered the period from 2007-08 to 2011-12 to assess the performance and workings of the Company.

Tourist inflow in the State ranged between 204.48 lakh and 302.29 lakh during 2007-12. Despite being in operation for more than 38 years in the tourism sector, the overall share of the Company in the State's tourism sector was negligible (0.44 per cent). The paid up share capital of the Company is ₹9.99 crore. However, 33 per cent of the paid up capital of the Company was eroded by March 2012.

Planning

The State Government did not clearly spell out the role of the Company in implementation of State Tourism Policy in terms of specific activities/ programmes. Besides, the Company had also not prepared strategic plan for development of tourism in the State. The Company had neither identified critical/ nodal areas for planning to augment tourism nor evolved clear milestones/ deliverables for overall development of tourism in the State.

Project Management

Central and State Government together released ₹112.29 crore (GoI - ₹96.15 crore, GoWB - ₹16.14 crore) to seven agencies for development of 67 projects (including 57 to the Company) against total sanctioned cost of ₹159.56 crore. Fifteen projects were completed in 2007-12 (expenditure: ₹10.10 crore), while 27 were ongoing for 13 to 54 months (expenditure: ₹43.42 crore) and the remaining 25 projects were not taken up as on March 2012. Out of 57 projects allocated to the Company for implementation, 13 projects were completed with delays of three to 46 months while 23 projects were in progress with delays of two to 30 months due to poor planning, lack of monitoring, lack of co-ordination and non-availability of land. Remaining 21 projects were not taken up.

Operational Performance

During 2007-12, the Company incurred operational losses of ₹9.52 crore from its 11 to 19 lodges. It had neither fixed standard occupancy ratio nor worked out break-even turnover to operate the lodges profitably.

Despite having spent ₹16.72 crore towards renovation of 19 lodges during 2007-08 to 2011-12, the Company failed to attract adequate number of tourists to its 10 newly renovated lodges. Moreover, the Company had not applied for Star category rating. The food-cost ratio at 10 out of 13 lodges exceeded the norm.

The Company leased out 11 lodges to private operators but failed to realise substantial revenue through execution of standard lease agreement.

Marketing Management

The Company did not form an independent marketing cell to formulate policy/ plan for marketing and promotion of tourism business. Although Tourist Reception Centres (TRCs) supplemented

the marketing efforts, no targets for business of TRCs were fixed by the Company. Further, the Company did not chalk-out a well-defined marketing strategy to tap prospective tourists to its lodges.

*Monitoring and internal control
The Company did not prepare any purchase policy/ manual and maintain*

records of land in its possession and the title deeds of immovable properties. It has not reconstituted the Audit Committee since June 2009. The Company neither took remedial action on the irregularities pointed out by the internal auditors nor was the matter reported to the Board of Directors for corrective action.

2.2.1 Introduction

West Bengal Tourism Development Corporation Limited was incorporated on 29 April 1974 as a wholly owned Government Company to develop, promote and publicise tourism in West Bengal, as well as to manage places of tourist interest, facilities for stay of the tourists, transport and travel services and develop tourism infrastructure.

As on 31 March 2012, the Company had 36 tourist lodges (25¹ under own management and 11 leased out) to provide accommodation and catering facilities to the tourists. Further, it operated three vessels and six AC - buses for the tourists and ran two tourists' information bureaux for dissemination of information relating to tourists' resorts, tour packages and associated services etc. The Company had 429 employees as on 31 March 2012.

We conducted a Performance Audit on the "Occupancy performance and catering services" of the Company, which was incorporated in the Report of the Comptroller and Auditor General of India for the year ended 31 March 1999 (Commercial), Government of West Bengal (GoWB). The Report was not selected for discussion by the Committee on Public Undertakings (COPU).

2.2.2 Organisation structure

The Company, under the aegis of the Tourism department of the State Government is managed by a Board of Directors (BOD) comprising of the Chairman, Managing Director (MD) and two Directors (Principal Chief Conservator of Forest and Managing Director, Floatel), all nominated by the State Government. The MD² is the Chief Executive of the Company who is assisted by four General Managers (*viz.* GM- Operation, GM- Technical, GM- Personnel, and GM- Finance and Accounts cum Secretary) and three Deputy General Managers in day-to-day operations. The Project Management Cell (PMC) of the Company is headed by the General Manager (Technical). The projects are executed through Project Management Consultants.

2.2.3 Audit objectives

We conducted the Performance Audit to ascertain whether:

- the Company had a proper plan for development of tourism in the State in consonance with State Tourism Policy;

¹Digha(Tented) Accommodation was completed in January 2012 but revenue inflow started from April 2012.

²Also ex-officio Joint Secretary of the Tourism department, Government of West Bengal.

- the Company had clearly laid down its objectives and implemented projects efficiently, economically and effectively;
- the Company operated tourist lodges and other services at an optimal level;
- there were adequate infrastructural facilities and amenities as well as quality services to the customers;
- there was well defined marketing policy to tap the prospective tourist; and
- the internal control mechanism was effective.

2.2.4 Scope and methodology of audit

We conducted a Performance Audit during January to August 2012, covering Head Office, Tourism Centres³ of the Company and the Tourism department, GoWB as well as 13⁴ out of 25 tourist lodges and 11 (out of 57) projects. Lodges and projects were selected on the basis of random sampling method.

Audit methodology involved scrutiny of records maintained at the Head Office, the Tourism Centres of the Company and the Tourism department. Site inspections alongwith the Company's officers and taking photographs *etc.* was also done.

An Entry Conference was held on 10 May 2012 when the objectives, scope and methodology of the Performance Audit were explained to the Principal Secretary, Managing Director who is also the *ex-officio* Joint Secretary of the Tourism department, GoWB and senior management of the Company.

Audit findings were reported to the Company and the Government in September 2012. An Exit Conference held on 24 September 2012, was attended by the Principal Secretary, Department of Tourism, GoWB and the Managing Director of the Company. Management's reply was received on 17 October 2012. Their views had duly been considered while finalising this Performance Audit Report.

2.2.5 Audit criteria

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

- Tourism Policies of the Government of India (GoI) and State Government, plans and performance benchmarks for the hotel industry;
- West Bengal Financial Rules, Works Manual (CPWD) and Detailed Project Reports;
- GoI criteria for classification of lodges with respect to their facilities; and
- Guidelines of Centrally Sponsored schemes.

³Located at Kolkata and Siliguri.

⁴Own control: Hill Top, Kalimpong, Darjeeling, Jaldapara, Mainak, Teesta, Behrampore, Santiniketan, Bakkhali, Digha, Diamond Harbour, Sajnekhali and Malancha.

2.2.6 Physical and financial performance

Physical performance

2.2.6.1 During 2007-11, growth of domestic and foreign tourists in India was 40.57 per cent and 34.67 per cent respectively. However, the share of the State in attracting domestic tourists declined from 3.67 per cent in 2007-08 to 2.95 per cent in 2010-11 and similarly, the share of foreign tourists dipped from 8.55 to 6.74 per cent during the same period.

A comparative analysis of growth of tourist traffic in the State and the Company alongwith the Company's share during last five years upto March 2012 is shown in the table below:

Table 2.2.1: Growth of tourist traffic

Year	Aggregate tourist traffic in India			Tourists who visited West Bengal			Tourists who stayed at Company's lodges			Percentage of tourists availing Company's facilities		
	Dom.	For.	Total	Dom.	For.	Total	Dom.	For.	Total	Dom.	For.	Total
	(Numbers in lakh)									(Percentage)		
2007 – 08	5,265.64	132.57	5,398.21	193.14	11.34	204.48	0.94	0.02	0.96	0.49	0.18	0.47
2008 – 09	5,630.34	143.81	5,774.15	205.29	11.80	217.09	0.90	0.02	0.92	0.44	0.17	0.42
2009 – 10	6,688.00	143.72	6,831.72	210.79	11.92	222.71	0.86	0.02	0.88	0.41	0.17	0.40
2010 – 11	7,402.14	178.53	7,580.67	218.49	12.03	230.52	1.19	0.02	1.21	0.54	0.17	0.52
2011 – 12	NA	NA	NA	286.61	15.68	302.29	1.23	0.02	1.25	0.43	0.13	0.41
Total				1,114.32	62.77	1,177.09	5.12	0.10	5.22	0.46	0.16	0.44

(Dom. - Domestic, For. - Foreign, NA - Not Available)

(Source: Annual reports of the Department of Tourism, GoWB and occupancy registers of respective lodges and Management information system reports of the Company)

It may be seen from the above table that tourist inflow in the State increased from 204.48 lakh to 302.29 lakh (47.83 per cent) during the period from 2007-08 to 2011-12. Further, the inflow of domestic tourists in the State had increased from 193.14 lakh to 286.61 lakh (48.39 per cent) and similarly, inflow of foreign tourists had increased from 11.34 lakh to 15.68 lakh (38.27 per cent). However, the Company could attract 0.46 per cent and 0.16 per cent of total inflow of domestic and foreign tourists in the State during the same period, which is quite negligible.

We observed that despite being in operation for more than 38 years, the overall share of the Company remained 0.44 per cent of total inflow of tourists in the State.

At the Exit Conference, the Government stated (September 2012) that although the Company was the torch bearer for tourism, it was not designed to cater to adequate share of the tourist traffic. However, the Government admitted the need to enhance the Company's tourist capacity.

Financial performance

2.2.6.2 The analysis of financial position and working results of the Company for last five years upto March 2012 brought out the following:

Table 2.2.2: Summarised working results of the company

(₹ in crore)

Particulars	2007 - 08	2008 - 09	2009 - 10	2010 - 11	2011-12 (Provisional)
A. Total Income	21.44	29.27	39.30	45.96	50.97
B. Variable cost	7.65	7.99	9.50	13.77	15.19
C. Contribution (A – B)	13.79	21.28	29.80	32.19	35.78
D. Total Fixed cost	11.45	19.19	26.89	30.97	33.11
E. EBIDTA ⁵ (C-D)	2.34	2.09	2.91	1.22	2.67
Interest, Depreciation costs, Tax and prior period adjustment	0.42	1.10	0.70	0.95	1.74
F. EAT/ PAT ⁶	1.92	0.99	2.21	0.27	0.93
G. Paid up capital	9.99	9.99	9.99	9.99	9.99
H. Accumulated loss	7.70	6.71	4.50	4.23	3.31

(Source: Annual/ Provisional Accounts of the Company)

- Revenue increased from ₹ 21.44 crore in 2007-08 to ₹ 50.97 crore in 2011-12 showing a CAGR⁷ of 24.17 per cent. The reason for improvement in revenue realisation was upward revision of tariffs in the tourist lodges during 2007-12.
- Although the accumulated losses of the Company showed a decreasing trend during last five years, 33 per cent of the paid up capital of the Company was eroded by March 2012.
- The main reasons for rise in fixed costs were (i) higher employee cost attributable to pay hike as the effect of Fifth Pay Commission, especially from 2009-10, and (ii) expenditure on renovation/ repair works initiated during 2008-12.

2.2.7 Audit Findings

The Performance Audit revealed various deficiencies which are discussed in the succeeding paragraphs.

2.2.8 Planning

State Tourism Policy

2.2.8.1 National Tourism Policy of the Government of India (GoI) was adopted in May 2002 which declared tourism development as an activity of national priority.

In order to have a planned effort for development of tourism, the State Government adopted West Bengal Tourism Policy (WBTP) in April 2008. The basic objectives of WBTP were:

- to improve market share of the State in the inbound international tourism segment and also to have a dominant share in the domestic market.
- to promote responsible and sustainable tourism through integrated development of the infrastructure.
- to fully tap the direct and indirect benefits of tourism.

⁵ EBIDTA: Earning before interest, depreciation and tax adjustment.

⁶ EAT: Earning after tax, PAT: Profit after tax.

⁷ Compounded annual growth rate.

- to increase the revenue earnings of the State and the foreign exchange reserves in the country through tourism.

While examining the WBTP, we observed that the State Government did not clearly spell out role of the Company in implementation of WBTP. Moreover, physical and financial targets for implementation of WBTP in terms of specific activities/ programmes were not laid down.

The Company being the State's Public undertaking in tourism sector, incorporated specially to promote and develop tourism in the State, should have made great strides in developing tourist facilities in the State. However, we noticed that the Company had neither identified critical/ nodal areas for planning to augment tourism nor evolved clear milestones/ deliverables for overall development of tourism in the State.

The management stated (October 2012) that the Company played a small role under WBTP. Further, the 26⁸ lodges of the Company could not decide the future of the tourism in the State. The micro level planning for evolving destination specific milestones was the task of the Department. The activities of the Company were a part of this overall plan.

The reply is not acceptable since (i) the Company was incorporated as the nodal agency for promotion and development of tourism in the State on behalf of the State Government. (ii) During 2007-12, the State Government entrusted 85 per cent of the total number of tourism projects to the Company. As such the activities of the Company certainly affect the development of tourism in the State. (iii) Further, while the Government would look after the macro-level planning, the micro-level plans for implementation of the WBTP would have to be prepared by the Company with a view to fulfill the deliverables under the policy.

2.2.8.2 GoI had given thrust towards development of tourism projects from X Five Year Plan onwards. The WBTP (2008) envisioned that the State would become a preferred tourism and tourism related investment destination. In order to attract adequate number of tourists, tourism infrastructure/ facilities⁹ were required to be developed with the matching tourism services of reliable nature and quality. These included development of new destinations as well as renovation and development of the existing infrastructure.

The State Government appointed (2006-07) M/s Ernst & Young as Consultant to identify various sites and places for development of tourism infrastructure within the State. The Consultant identified 249 project ideas and recommended their development as integrated projects for product as well as product cum accommodation facilities by 2018-19. Aggregate expenditure on these "project ideas" had not been worked out by the Consultant.

We observed that the State Government selectively took-up 14 project ideas randomly out of 249 as suggested by the Consultant for implementation. This approach of the Government coupled with unplanned and delayed

⁸ Including Digha (Tented) Accommodation for which revenue inflow was from April 2012.

⁹ Tourism infrastructure / facilities mean not only special infrastructure for tourism such as tourism units used for servicing and hosting tourist during their stay in the State, but also related basic infrastructure such as roads, lighting etc. and repairs, renovation of tourist lodges.

implementation of tourism projects by the Company (as discussed in paragraph 2.2.9) led to a position where the State Government/ Company failed to tap the full potential of the State tourism prospects.

Strategic plan

2.2.8.3 A medium to long term strategic plan provides an organisation with a framework to develop goals and programmes strategies and work plans for implementing targeted programmes and deploying resources and setting performance indicators for quality assurance and measuring of progress towards goals. The COPU in its 93rd report (July 2008) had observed that tourism potential in the State was neglected for want of foresight and proper planning.

Our review of the Board Minutes and Agenda from 2007-08 to 2011-12 showed that in absence of strategic plan/ policy, no development of project ideas as well as development of tourism projects was taken by the Company's BOD. Further, the Company prepared only revenue budget without capital budget. Plans for development of tourism projects were prepared by the Government and allotted to the Company for implementation.

Restructuring exercise

2.2.8.4 As a part of restructuring exercise of loss-incurring State owned public sector enterprises, the State Government appointed (September 2007) Mott Mac Donald as consultant. The consultant identified (March 2009) various reasons for the Company's poor financial performance on a sustained basis as well as poor service quality at the Company's lodges and restaurants, uneconomic size of lodges, low occupancy levels and lack of market driven policies/ in-house talent. Accordingly, the consultant suggested following 12 broad recommendations for business, administrative and financial restructuring of the Company to be implemented by March 2012.

- i. Introducing tour packages in line with market demand.
- ii. Introducing self-operated road fleet.
- iii. Increasing tariffs based on benchmarking.
- iv. Promoting use of credit cards.
- v. Renovating and upgrading facilities like lodges, vessels *etc.* to compete with the private sector.
- vi. Implementing Decision Support System (DSS).
- vii. Operating lodges, conducted tours and bookings and water fleets as profit centres with delegation of authority and accountability to the managers.
- viii. Inducting independent Directors on the Board in line with the principles of good governance and creating Board level committee.
- ix. Appointing an external consultant for finalising the roles, responsibilities and key performance indicators of individual positions and updating the human resources related policies.
- x. Recruiting staff for core and support functions for existing sanctioned post.

- xi. Restructuring the organisational set up.
- xii. Converting accumulated loan and interest thereon to equity as well as adjusting the accumulated losses through capital reduction.

We observed that the BOD discussed (June 2009) these recommendations in detail but did not chalk out requisite implementation plans. Further, the Company did not implement six (sl. no. vii to xii) recommendations as of March 2012. The status of implementation of the restructuring process by the Company upto March 2012 is given in **Annexure 2.2.1**. No reasons/ grounds were adduced or were on record for such status.

2.2.9 Implementation of tourism projects

Project funding

2.2.9.1 The State Government conceives and monitors different projects for development of tourism in the State. Implementation/ execution of such projects are, however, assigned to different agencies/ authorities, not all of which were under the administrative control of the Tourism department or even the State Government. The projects involved development of specific destinations and tourist circuits *etc.* Summary of projects undertaken and funds may be seen from the following table.

Table 2.2.3 Summary of projects sanctioned and taken up during 2007-12
(Amount ₹ in crore)

Sl no.	Particulars	Sanctioned projects			Projects taken up during 2007-12			Projects covered in audit		
		No.	Sanctioned amount	Fund received	No.	Estimated cost	Exp. till March 2012	No.	Estimated cost	Exp. till March 2012
A.	State funded- completed- 11 (SFA)									
1	The Company	34	16.14	16.14	19	8.35	5.83	2	1.05	0.21
2	Other agencies	Nil	N.A.	N.A.	Nil	N. A.	N. A.	N.A.	N. A.	N.A.
	Sub-Total	34	16.14	16.14	19	8.35	5.83	2	1.05	0.21
B.	Centrally funded – completed- 4 (CFA)									
1	The Company	23	127.97	83.75	17	92.44	39.13	9	56.87	30.04
2	Other agencies	10	15.45	12.40	6	14.06	8.56	Nil	Nil	N.A.
	Sub-Total	33	143.42	96.15	23	106.50	47.69	9	56.87	30.04
C.	Aggregate- completed- 15									
1	The Company	57	144.11	99.89	36	100.79	44.96	11	57.92	30.25
2	Other agencies	10	15.45	12.40	6	14.06	8.56	Nil	Nil	Nil
	Total	67	159.56	112.29	42	114.85	53.52	11	57.92	30.25

(Note: Six spillover CFA projects from the X Five Years Plan, taken up in the XI Five Years Plan period are not included.)

It is evident from the above table that:

- The Government released ₹ 112.29 crore (GoI - ₹ 96.15 crore, GoWB - ₹ 16.14 crore) to seven¹⁰ agencies for 67 projects against total sanctioned cost of ₹ 159.56 crore (i.e.70.37 per cent).

¹⁰ Company (CFA : 23, SFA : 34); Darjeeling Gorkha Hill Council (CFA : 3); RIDDHI(CFA : 1); District Magistrate, Hooghly (CFA : 2);Ramkrishna Mission (CFA : 2), Howrah Zilla Parishad(CFA : 1) and Nadia Zilla Parishad(CFA : 1).

- Expenditure of ₹ 53.52 crore¹¹ incurred till March 2012 represented fund utilisation of 47.66 per cent. However, utilisation of fund (₹ 47.69 crore) against GoI funded projects was 49.60 per cent and that of projects funded by the State Government (₹ 5.83 crore) was 36.12 per cent.
- Fifteen projects were completed in 2007-12 (expenditure: ₹ 10.10 crore), while 27 were ongoing for 13 to 54 months (expenditure: ₹ 43.42 crore) as at March 2012. The remaining 25 projects were not taken up (as of July 2012). While fund (₹ 23.59 crore) in respect of 21 projects to be implemented by the Company were parked in term deposits with banks, the status of balance four¹² (₹ 1.16 crore) was not known as their progress reports had not been obtained from the implementing agencies by the Government.

Project management

2.2.9.2 Implementation of the projects¹³ envisages meticulous planning, effective execution and professional management to complete the projects in time within the cost and ensure performance. The State Government allocated implementation of 57 (CFA¹⁴-23 and SFA-34) out of 67 tourism projects (85.07 per cent) to the Company. Till March 2012, the Company completed 13 projects with delays of three to 46 months while 23 projects were in progress with delays of two to 30 months and remaining 21 projects were not taken up.

We analysed 11 CFA projects (**Annexure 2.2.2**) and observed that the slow pace of implementation of projects by the Company was attributable to poor planning, lack of monitoring/ co-ordination, land acquisition/ diversion problems. Out of 11 projects seen by audit, in five cases the Company had to drop project components from the approved project due to non-availability of land. Some of the cases are discussed hereafter.

Eco-tourism complex at Sajnekhali, Sunderban

2.2.9.3 In 1987, Sunderban was declared a world heritage site by the UNESCO. Consequently, with a view to minimise the adverse effect of mass tourism on the wildlife, Forest department, directed that no private hospitality



Vacant land available on the west of existing accommodation

firm could be allowed to construct any new lodge/ resort/ other tourist facilities within Sunderban. Sajnekhali eco-tourism complex of Sunderban is situated in the eco-sensitive zone of both the Sunderban Biosphere Reserve and Sunderban Tiger Reserve. Subsequently, the State Government proposed (October 2008) to develop the eco tourism complex at Sajnekhali. Accordingly, GoI sanctioned (February 2009) ₹ 4.58 crore

¹¹ 42 projects were taken up, while 25 were yet to be taken up.

¹² Darjeeling Gorkha Hill Council (CFA : 1); RIDDHI(CFA : 1); District Magistrate, Hooghly (CFA : 2)

¹³ Project includes tourism products/ destination as well as infrastructure facilities.

¹⁴ Central Financial Assistance

to the State for creation of additional facilities like improvement of the surroundings through landscaping, tourist jetty with revetment, water supply/ sewage/ storm water disposal systems, tourist reception/ information/ refreshment centres and budget accommodation (16 rooms) at the Company's existing facility at Sajnekhali. The GoI disbursed (March 2009) ₹ 3.66 crore for the project to be completed by February 2011. The Company engaged (August 2009) Bengal Srei Infrastructure Limited as Project Management Consultant (PMC). The entire work was awarded (October 2009) to P.B. Nirman Udyog Pvt. Ltd. for ₹ 1.64 crore, to be completed within nine months. The Company commenced the work without obtaining environmental clearance from the Forest department. Consequently, the Forest department stopped (July 2010) the work since the southern side was abutting the pasture frequented by wild life and human habitation at close proximity would be detrimental to them. However, by that time the Company incurred an expenditure of ₹ 1.29 crore towards landscaping and construction of jetty (₹ 87.06 lakh) and budget accommodations (₹ 41.76 lakh).

The Company prepared the DPR without obtaining requisite clearances from the Forest department. Consequently, the project remained incomplete and expenditure of ₹ 41.76 lakh on construction of budget accommodation became infructuous.

The management stated (October 2012) that the efforts were being made to execute the remaining work through the Forest department.

Ganga Heritage River Cruise

2.2.9.4 The State Government decided (July 2008) to set up jetty and other facilities at 12¹⁵ ferry *ghats* on the river Hooghly between Kolkata and Azimganj, Murshidabad district for the Ganga Heritage River Cruise. GoI sanctioned and released (September 2008) ₹ 10.21 crore for execution of 11 locations at an estimated project cost of ₹ 20.42¹⁶ crore. Works were to be executed through the Company by September 2010.

One ferry *ghat* (Behrampore) was completed (June 2011) while eight were in progress (as of March 2012) with aggregate expenditure of ₹ 5.37 crore towards erection of canopy structure, renovation of *ghats* and jetties *etc.* At Behrampore and Murshidabad-Lalbagh, the Company incurred a consolidated expenditure of ₹ 1.61 crore against sanctioned cost of ₹ 1.07 crore leading to excess expenditure of ₹ 54.16 lakh. This was attributable to the increase in component of works not approved by GoI. Although the State Government constructed a new jetty at Behrampore Ferry Ghat (prior to July 2008), the Company installed (December 2010) another gangway cum pontoon and fixed jetty platform (actual cost: ₹ 75.90 lakh) not included in the project for which no reasons were found on record.

¹⁵Belur Math, Behrampore, Lalbagh (Murshidabad), Serampore, Chinsura, Barrackpore, Chandannagar, Nabadwip, Mayapur, Plassey, Azimganj – Baranagar and Dakshineswar.

¹⁶Belur- ₹ 2.08 crore, Barrackpore- ₹ 1.64 crore, Serampore- ₹ 1.92 crore, Chandannagar- ₹ 2.14 crore, Hooghly – Chinsurah- ₹ 2.15 crore, Nabadwip- ₹ 71.78 lakh, Mayapur- ₹ 1.13 crore, Plassey- ₹ 3.20 crore, Behrampore- ₹ 75.35 lakh, Murshidabad – Lalbagh- ₹ 31.55 lakh, Azimganj – Baranagar- ₹ 4.37 crore.

We observed that the existing jetty was constructed by the Transport department, GoWB and additional jetty was not required in Berhampore as envisaged in the DPR. The Company constructed another jetty ignoring the above fact. Besides, the Company diverted (December 2011) ₹ five crore towards Kolkata Riverfront Beautification Project (a Kolkata Municipal Corporation project) for which no approval was taken from the GoI. However, on the other hand the Company could neither take up the scheduled work at two locations (Belur and Nabadwip) nor completed the work at eight other locations due to shortage of fund.

Circuit Tourism at Bakkhali, Fraserganj and Sagar Island

2.2.9.5 With a view to develop infrastructural activities for Circuit Tourism at Bakkhali, Fraserganj and Sagar Island, the Company had taken up (September 2007) a project at a sanctioned cost of ₹ 4.71 crore. The project components *inter alia* included landscaping, development of parks, illumination of the tourist area, construction of budgeted accommodation, tourist reception /interpretation centres and other activities directly related to tourism. The GoI released (September 2007) ₹ 3.77 crore to the Company for the project to be completed by September 2009.

Land acquisition at Sagar Island was initiated (October 2008) after a delay of 13 months but had not yet materialised as land transfer was not made. Landscaping work at Bakkhali was started in July 2010 after a delay of 33 months due to lack of co-ordination between the architect, PMC and management. The Company incurred an expenditure of ₹ 97.54 lakh on sanctioned components of work but had not created infrastructure such as improvement of solid waste and sewage management, wayside and other amenities *etc.* at Fraserganj and Sagar Island. Meanwhile, the Company diverted (January 2008) ₹ 2.94 crore towards construction of a new building (cost: ₹ 2.19 crore) at Bakkhali tourist lodge complex and ₹ 75.14 lakh for erection of shed at Sagar Island for which no approval was taken from the GoI.

The management stated (October 2012) that no diversion has been made for Bakkhali works. All the works have been taken up for creating a high class tourist complex at the specified location.

The reply is not acceptable as GoI sanctioned funds specifically to develop infrastructural activities for tourist circuit connecting Bakkhali, Fraserganj and Sagar Island taken up by the State. Instead of completing the works at these three destinations, the Company diverted funds for creation of high class tourist complex at Bakkhali. Development of other two locations (*viz.* Fraserganj and Sagar Island) of the circuit as included in the scheme was not taken up.

Eastern Dooars Tourism Circuit in Jalpaiguri,

2.2.9.6 In connection with Eastern Dooars Tourism Circuit in Jalpaiguri, GoI sanctioned (February 2007) ₹ 6.84 crore and released ₹ 4.47 crore for tourism related works. Components of the scheme, *inter alia*, included landscaping work, illumination of tourist destinations and other tourism related works at

four places (*viz.* Jaldapara Wild Life Sanctuary, Rajabhatkhawa, Jayanti-Buxaduar and Hatipota) to be completed by February 2009.

After taking 25 months for identifying land at Rajabhatkhawa, the Company approached (April 2009) the Forest department for approval of that project component but was not accorded (May 2009) permission under the revised guidelines of Wild Life Protection Act. Jayanti-Buxaduar and Hatipota components were dropped due to non-availability of land.

As of March 2012, expenditure of ₹ 1.70 crore was incurred for landscaping and other project works at Jaldapara. Components of the Project at Rajabhatkhawa, Jayanti and Hatipota could, thus, not be executed (January 2012) as they fell within the core area of Buxa Dooars Tiger Reserve. Ultimately, they were dropped (March 2012) by the GoI. Thus, lack of liaison with the Forest department while identifying land for the Project led to non-implementation of the project.

Other lacunae in Project Management

2.2.9.7 We noticed the following lacunae in formulation of estimates, award of tenders, monitoring progress *etc.*

- As per the Works Manual of Central Public Works Department (CPWD) the consultants' fees shall be included in the estimates as a distinct item of the project cost. Although the Company paid (2007-12) consultancy fees of ₹ 1.70 crore for implementation of 21¹⁷ projects funded by GoI, it could not raise claims from the GoI since such fees was not included in the estimates/ DPRs as a distinct item of cost.
- West Bengal Financial Rules (WBFR) specifies that all works exceeding ₹ one lakh are to be awarded through open tender. In all instances, the appointments of the consultants were not done either by inviting open tenders or obtaining quotations. In two cases, the terms of payments were modified by ₹ 3.40 lakh to the advantage of consultants (*viz.* SMG Design, Hyderabad and Chadha Design Pvt. Ltd.) after awarding of the contracts.
- Though the State Government was to set up (September 2006) State Level Monitoring and Convergence Committees under the chairmanship of the Secretary (Tourism) for monitoring of tourism projects, they were formed only in March 2010 after a delay of 42 months. Besides, a Committee headed by the Chief Secretary, to be constituted so that the issues relating to convergence of financial resources under different sectors and harmonious co-operation of various agencies could be taken up at the highest level by March 2012 had not yet been set-up.
- Besides, workings of PMCs were not regularly monitored by the Project Management Cell of the Company. The Company did not maintain Measurement Books of project works. Payments to the contractors were in all instances made on the basis of recommendations of the PMCs and the actual quantum of components of work were not cross checked on site by the Project Management Cell of the Company. Thus, the responsibility towards award and execution of contracts had been abdicated by the Company.

¹⁷Including four spillover projects.

In reply to the audit observations, the management stated (October 2012) that henceforth, fees of Project Management Consultant/ architects would be included in the DPR as direct costs. Regarding engagement of Project Management Consultants, they intimated that the Engineering cell of the Company was not able to supervise the work sites spread all over the State; therefore, Project Management Consultants were engaged to monitor the works.

The reply is silent about the lapses in engagement of the Project Management Consultants.

2.2.10 Operational performance

Operation of lodges under own control

2.2.10.1 The WBTP 2008 envisages renovation, expansion and upgradation to appropriate star categories of the Company's lodges. Besides, it recommends that private entrepreneurs be associated with the management and operation of lodges, especially, those incurring losses.

The Company operated 25 lodges (including one new lodge operational since May 2011) during 2007-12. Summarised operational performance of these lodges is given below, with annual profitability of 24¹⁸ lodges given at Annexure 2.2.3.

Table No. 2.2.4: Summarised operational performance of lodges during 2007-12

(Amount: ₹ in crore)

Year	Lodges/ hotels earning profit		Lodges/ hotels incurring losses		Operational profit/ loss (-)
	No.	Amount	No.	Amount	
2007-08	11	1.18	13	0.64	0.54
2008-09	8	1.31	16	1.30	0.01
2009-10	5	1.18	19	2.73	(-) 1.55
2010-11	8	1.86	16	2.82	(-) 0.96
2011-12	14	1.74	11	2.03	(-) 0.29
Total		7.27		9.52	(-) 2.25

(Source: Accounting statements of lodges of the Company)

We observed that the Company incurred operational losses of ₹ 9.52 crore from its 11 to 19 lodges (2007-12). Also, 28 percent of its lodges (seven¹⁹) incurred losses continuously aggregating to ₹ 5.45 crore during 2007-12. Our analysis showed that the main reasons for uneconomic operation of these lodges of the Company were (i) absence of long-term planning in improving occupancy/ business, (ii) delayed renovation of tourist lodges, (iii) lower occupancy due to inability to market its products at par with the private competitors, and (iv) fall in quality of services reflected in the rising trend of customers' complaints which are discussed in the succeeding paragraphs.

In reply, the management stated (October 2012) that fresh initiatives had been taken to remove these discrepancies.

¹⁸25 since the year 2011 – 12

¹⁹Rupnarayan (₹ 0.31 crore), Behrampore (₹ 0.28 crore), Teesta Paryatak Abas (₹ 0.65 crore), Mainak (₹ 1.82 crore), Raiganj (₹ 0.75 crore), Kalimpong (Morgan House) (₹ 0.98 crore) and Hill Top (₹ 0.66 crore).

Occupancy

2.2.10.2 The Company had neither fixed standard occupancy ratio²⁰ nor worked out break-even turnover to operate the lodges' profitably. All India Average (AIA)²¹ annual occupancy ratio during 2007-08 and 2008-09 was 59.60 and 55.30 *per cent* respectively. The Company had tied up (July 2009) with Karnataka Tourism Development Corporation Limited (KTDCL) for mutual business development. KTDCL had fixed norms of room occupancy at 57 *per cent*. **With 57 *per cent* occupancy** as benchmark, it was noted that 14 to 17 of the Company's lodges had not met the targets as given below:

Table No. 2.2.5: Average occupancy and achievement of occupancy norm during 2008-12

Year	Targeted income (at 57 <i>per cent</i> occupancy)	Actual income (percentage of targeted income)	Shortfall	No. of lodges achieving the target		No. of lodges not achieving the target		Average annual occupancy ratio
				No.	Percentage	No.	Percentage	
		(Amount ₹in lakh)						
2008 - 09	776.22	531.78 (68.51)	244.44	0 7	29	17	71	42.66
2009 - 10	1,003.31	672.11 (66.99)	331.20	0 7	29	17	71	41.83
2010 - 11	1,199.95	874.43 (72.87)	325.52	0 9	38	15	62	40.58
2011 - 12	1,309.88	971.85 (74.19)	338.03	1 1	44	14	56	44.15
Total	4,289.36	3,050.17	1,239.19					

(Source: Annual Budgets of the Company)

Note: - Targets for 2007-08 is not available. Figures in brackets indicate percentage of achievements to targets.

During 2007-08, the average occupancy ratio of lodges was 42.01 *per cent*. We observed that though overall occupancy percentage had declined over 2007-11, it improved in 2011-12 due to increase in inflow of tourists in Company's lodges for hill and adventure tourism in the State. There was nothing on record to indicate that the management had either analysed the reasons for low occupancy or taken corrective actions to increase revenue from the lodges. The Company fixed annual revenue targets for lodges after discussion with the respective Managers. In all five years, pre-budget discussions were held in June of the financial year and the revenue budgets were issued in July. Thus, four months elapse when the budget is allotted. Consequently, the Managers were apprised of the annual targets when only eight months in the year were left. This contributed to shortfall in targets in three out of four²² years as given in **Annexure 2.2.4**. The budget was never tabled in the BOD. Besides, the Company had not applied to the Hotels and Restaurants Approval and Classification Committee (HRACC) under the Department of Tourism, GoI for Star category rating to get benefit from the

²⁰ Occupancy ratio is a measure of the actual utilisation of lodging facilities and is expressed as a percentage of actual number of bed – days occupied to the total number of bed – days available in a year i.e. total number of beds multiplied by 365.

²¹ Ministry of Tourism, Government of India

²² Target in respect of 2007-08 is not available

inherent business advantage of star classification as recommended by the consultant (Mott Mac Donald).

While accepting the audit observations, management stated (October 2012) that possibilities were being explored to meet the target in future and mentioned that necessary steps would be taken to prepare the budget for 2012-13 within 31 March 2013. Further, necessary action would be taken to obtain star rating.

Renovation of tourist lodges

2.2.10.3 The WBTP 2008 proposed upgradation of tourism infrastructures/ facilities and rectify deficiencies in accommodation and lodging. We observed that the Company had no mechanism for identification of assets in urgent need of repairs or maintenance. Moreover, there were no guidelines or policy fixing any target action plan for renovation and upgradation of assets.

During 2007-12, the Company had undertaken renovation of its' 19 lodges to make them 'commercially viable'. Of these 19 lodges, two²³ were still under renovation (July 2012). Details of all 19 lodges are given at **Annexure 2.2.5**. The following table summarises the impact of renovation of 17 tourist lodges:

Table No. 2.2.6 Impact on occupancy of 17 lodges after renovation

Occupancy Ratio (percentage)	Change in occupancy after renovation			
	Improvement		Fall	
	No. of lodges	Expenditure ²⁴ (₹ in crore)	No. of lodges	Expenditure ²⁴ (₹ in crore)
Up to five percentage points	Nil	N.A.	1	1.36
More than five up to ten percentage points	Nil	N.A.	3	3.13
More than ten up to twenty percentage points	3	2.41	2	0.48
More than twenty percentage points	4	2.68	4	4.48
Total	7	5.09	10	9.45

(Source: Occupancy register and expenditure statements of the lodges of the Company)

Audit scrutiny revealed that the management had not analysed reasons for this post-renovation decline in occupancy ratios in tourist lodges. Also, in four instances (as shown in the **Annexure 2.2.6**), diversion of fund (₹ 3.80 crore) from the central assistance, abnormal delays in taking up execution of renovation works and consequential loss of potential revenue (₹ 1.95 crore) by the Company were noted.

Operational Performance of Restaurants

2.2.10.4 During 2007-12, the Company operated 22 restaurants at 25 tourist lodges under its own control. The summarised position of operational performance of these restaurants showed that the restaurants had earned an aggregate profit of ₹ 8.70 crore (**Annexure 2.2.7**). The major component of cost was food.

2.2.10.5 The Company had fixed (July 2007) food cost norms at 40 per cent of catering turnover from 2007-08 and it was reduced (July 2011) to 35 per cent from 2011-12. Test check of catering records of 13 restaurants out of 22 showed that:

²³ Malancha and Rupnarayan.

²⁴ Expenditure relates to renovation of lodges.

- Except three lodges (*viz.* Sajnekhali, Berhampore and Jaldapara) the actual food cost percentage was in excess of norms and it ranged between 36 *per cent* and 88 *per cent*.
- Till April 2009, the Company calculated²⁵ food cost after considering raw materials and cooking fuel. Thereafter, the Company omitted cooking fuel and opening and closing stock of groceries/ fresh supplies while calculating percentage of food cost. This resulted in favourable depiction of food cost percentage.
- The Company had not framed any norm/ rule for raw materials procurement. The raw materials (*viz.* groceries) were procured locally without entering into rate contracts finalised through tenders, indicating ineffective control over the input cost by the Company.
- At four lodges, Teesta, Berhampore, Bakkhali and Malancha the value of free duty food per employee was enhanced in 2010-11 over 2009-10 by 114 *per cent*, 11.38 *per cent*, 36 *per cent* and 30 *per cent* respectively. By charging higher amounts towards free duty food, these lodges succeeded in presenting a lower percentage of food cost.

In reply to our observation, the management stated (October 2012) that the formula for ascertaining the food cost ratio was adopted from the guidelines of Indian Institute of Hotel Management (IIHM). Percentage of food cost was high due to less number of customers in the restaurants and rate contract could not be viable without specific minimum requirement of materials.

Reply of the management is not tenable as food cost per serving unit is fixed, irrespective of the number of customers in the restaurants. Despite revision of formula regarding percentage of food cost, the Company failed to bring down the food cost percentage within the norm by improving its operations. Moreover, periodical trend analysis of consumption of raw materials of restaurants helps to identify economic order quantity (EOQ) for procuring materials on rate contract basis which was not adopted by the Company even after 38 years of its operation.

Shortage of operational manpower

2.2.10.6 In a service industry such as tourism, availability of skilled and adequate manpower is critical. The staffing pattern at the Company's lodges showed that the bed-employee ratio was 2.95:1 as against industry norm of 1:2 representing short deployment of employee against each bed. All the test checked 13 lodges except Siliguri Tourism Centre were short staffed. There was shortage of manpower at all functional/ operational levels of the Company. These shortages were partly met by utilising the services of daily rated labour. Further, nine out of 25 lodges were managed by the personnel below the rank of Manager. Moreover, the Company had no dedicated Public Relations Officer to sort out customer-grievances.

²⁵ Formula for food cost (prior to April 2009): Raw materials consumed *including* fuel *divided* by (Sales *including* free duty food to kitchen staff, staff food, complimentary food etc.) *multiplied* by 100.

Formula for food cost (since April 2009 onwards): (Raw materials consumed *excluding* free duty food to kitchen staff, staff food, complimentary food etc.) *divided* by Sales *multiplied* by 100.

Further, the restructuring Consultant (Mott Mac Donald) had recommended (March 2009) total manpower of 722 (Lodges – 580, Head Office – 92 and Tourist Centres – 50) to be implemented by March 2012. However, no action has been taken on the recommendation of the consultant. Besides, the Company had outsourced manpower for sweeping, security and gardening work to the external agencies, without framing any outsourcing policy as recommended by the Consultant (Mott Mac Donald).

Inadequate essential facilities

2.2.10.7 Test check of essential services/ amenities at 13 lodges brought out that the Company did not conduct periodic medical checkup of the cooks and other employees. The quality of food was never tested by the food inspectors of the Public Health department. The Company had not displayed information on availability of medical facilities/ expertise at the reception counters of the lodges/ restaurants. A review of fire protection measures at 13 lodges revealed that in nine lodges the Company had not installed (July 2012) fire extinguishers or fire alarms.

Management accepted (October 2012) the audit observations and stated that necessary steps would be taken for periodic medical checkup of cooks and other employees and food testing by the food inspector of Public Health Department.

Assessment of customers' satisfaction

2.2.10.8 To assess the degree of satisfaction of the customers, with regard to accommodation, their upkeep/ maintenance/ service and quality of food, the lodges maintain suggestion/ complaint registers. Of the 13 lodges visited, Malancha and Mainak did not maintain registers while no complaints were recorded at Sajnekhali and Morgan House. During the period 2007-08 to 2011-12, 168 complaints were lodged by the customers in the remaining nine lodges with restaurants. The nature of complaints included deficiencies in services (including room service), maintenance, provision of basic amenities, poor quality of food and discourteous behavior towards customers by staff.

Scrutiny of action taken against complaints brought out that the managers of Santiniketan, Digha, Bakkhali, Darjeeling and Jaldapara tourist lodges did not take any action on the complaints during 2007-08 to 2011-12. However, the managers of Teesta and Diamond Harbour tourist lodges took action against only four complaints each out of total 10 and 63 complaints respectively. Though the Company's website was designed (November 2008) to register complaints online, it was noticed that the customers' feedback provision on the website had not been activated thereby defeating the purpose for which it was created.

2.2.10.9 The management neither reviewed the customers' complaints nor initiated remedial action to improve quality of services rendered by the employees. Instead the Company freely distributed ₹ 2.36 crore as honorarium to its employees without judging employees' performances against quality of services rendered out of the service charges collected (₹ 3.17 crore) from the customers for last five years upto March 2012.

The management assured (October 2012) to incorporate customers' feedback on the website while accepting the system deficiency.

Fixation of tariff for lodges and restaurants

2.2.10.10 The Company had not evolved a policy for fixation/ revision of tariff. The Company revised lodge tariffs twice (April and October) in a year based on discussion with the managers of the lodges and considering occupancy ratio of the respective lodges. Food tariffs were fixed by the respective lodges without any approval/ monitoring from the Company.

In this connection, it was noted that tariff was fixed without any analysis or comparison with the other operators. No systematic variance analysis of lodge wise tariff was attempted to manage the lodges commercially. Moreover, the rates of food items as offered to the customers were fixed locally by the lodge managers at mark up of cent *per cent* on direct costs.

Operational Performance of bars

2.2.10.11 Audit scrutiny revealed that liquor items were procured and the selling prices of the same were fixed locally by the lodge (having bars) authorities of the Company. There was no uniformity in fixing selling prices of such liquor items. The summarised profitability of the Company's bars was as follows:

Table No. 2.2.7: Summarised profitability of bars of the Company

Year	Number of working bars	Total operating profit (₹ in lakh)	Profit earning bars (₹ in lakh)			Loss incurring bars (₹ in lakh)		
			Number	Percentage	Amount	Number	Percentage	Amount
2007-08	14	28.26	12	85.71	30.19	2	14.29	1.93
2008-09	14	45.58	11	78.57	47.17	3	21.43	1.59
2009-10	14	78.51	12	85.71	78.97	2	14.29	0.46
2010-11	15	(13.29)	12	80.00	115.56	3	20.00	128.85
2011-12	15	38.59	10	66.67	112.17	5	33.33	73.58
Total		177.65			384.06			206.41

(Source: Annual statements of accounts of the bars of Company)

The percentage of loss incurring bars ranged from 14.29 to 33.33 during 2007 -12. At Malbazar and Mecheda, loss of ₹ 2.02 crore in 2010-12 was sustained on an aggregate turnover of ₹ 4.29 crore. Losses were attributable to (i) fixation of selling price of liquor items (*viz.* beer and spirits) without considering the cost of license fees, carrying cost of liquor items and other expenditure with their purchase price; (ii) discrepancies in the valuation of different items of bar stock by the lodge authorities and (iii) non-review of monthly returns of bar stock at HQ level of the Company.

Operation of Vessels and Air-conditioned Buses

2.2.10.12 The Company operates four vessels viz. Chitrarekha, Sarbajaya, Madhukar²⁶ and Sumangal for conducting package tours to Sunderbans and river cruises on Hooghly. Although all the four vessels are owned by the State Government, the entire income generated from operation of these vessels is treated as the Company's income.

We observed that the Company reflected an operating profit of ₹ 1.13 crore in the past three years up to 2011-12. This did not, however, include expenditure of ₹ 1.82 crore incurred on repairs and renovation in the same period. The Company, thus, incurred a loss of ₹ 0.69 crore.

2.2.10.13 The Company purchased (2009-10) six AC buses (cost: ₹ 1.22 crore) with seating capacity of 30 persons each for conducting city tours. These buses were manned through personnel on contract basis. During 2009-12, it utilised 41 to 50 per cent of the available seat capacity to earn revenue of ₹ 1.06 crore and generate profit of ₹ 33.50 lakh. Management has neither analysed the reasons for under utilisation of the buses, nor taken corrective action to maximise profit from operation of such buses.

The management admitted (October 2012) that there was need to improve the operation of vessels and AC buses.

Leasing out of lodges to management contractors

2.2.10.14 With a view to encourage private participation in tourism, the Company from time to time leases out lodges through tender. As of March 2012, the Company had leased (April 1995 to October 2009) out 11 tourist lodges covering 3.07 lakh sq.m of land of the Company on long term contracts of 15 to 33 years to private operators/ management contractors (MCs). The revenue of ₹ 2.63 crore realised from such private operators by the Company during last five years upto March 2012 is given in **Annexure 2.2.8**.

Deficiencies in leasing out two lodges at Shantiniketan (II) and New Digha (paragraph 4.13 of Audit Report Commercial 2003-04 and paragraph 4.17 of Audit Report Commercial 2005-06) were pointed out. The COPU had recommended (July 2008/ December 2008) in its 93rd and 97th reports that the Government/ Company should exercise caution before signing every management contract to avoid incorporation of ambiguous, undesirable and detrimental clauses. Besides, COPU also recommended a thorough enquiry into the affairs of new Digha tourist lodge to explore the dubious dealing of the valuer and the Company's management.

We observed that-

- The Company had still not formulated a policy for leasing out its lodges to MCs. In absence of leasing policy the Company could not fix upset price²⁷ systemically and pre-determine percentage increase in lease rentals while renewing leases.

²⁶ Transferred to the Department of Tourism in 25 July 2011.

²⁷ Upset price is the price below which the MC could not be engaged.

- The BOD of the Company decided (September 2007) to standardise the agreement with the MCs. Although the Company framed (June 2008) a standardised agreement for management contracts at an expenditure of ₹ nine lakh through Bengal Srei Infrastructure Development Limited, it discontinued (June 2009) the process of revision of agreements for reasons not on the records. Thereafter, none of the management contracts were revised (July 2012).
- Under lease agreements, the higher of minimum annual guaranteed revenue (MAGR) or pre-determined percentage of annual turnover was payable by the MCs to the Company over the entire lease period. However, the Company had never obtained certified Financial Statements from the MCs for arriving at the actual lease rentals payable on their turnover by the MCs. Consequently, the adequacy of the value of business (₹ 2.63 crore) collected by the Company could not be justified in audit.
- In the lease agreements with seven MCs, the Company had not incorporated the above clause and collected the MAGR. The original lease agreements (April 1995/ November 1995) with two of these MCs (*viz.* Mark Hotel & Resorts Pvt. Ltd. for Santiniketan 2nd Tourist Lodge and Larica Resorts Pvt. Ltd. for Digha 2nd Tourist Lodge) contained a clause on percentage of annual turnover. This clause had subsequently been deleted (September 2003/ September 2005) by the management from the revised agreements for reasons not on records. Loss of revenue on leasing out of tourist lodges to MCs cannot be ruled out.
- The Company did not maintain registers/ documents having details of annual lease rent recoverable, actual recoveries, shortfall in realisation/ recovery, interest chargeable on delayed payment and outstanding balance realisable. Hence, the unrealised rent was not ascertainable.
- Although the lease agreements with MCs permitted the management to inspect and survey the leased assets, it did not inspect the properties of these tourist lodges regularly.

The management assured (October 2012) to check MAGR or pre-determined percentage of annual turnover and to incorporate the clause of pre-determined percentage of annual turnover in future agreements. It further assured (October 2012) to consider the recommendation of COPU of enquiring into the affairs of New Digha Tourist Lodge regarding its valuation. The Tourism department, however, remained silent on the recommendation of COPU.

2.2.11 Marketing Management

Marketing Strategy

2.2.11.1 In order to define the marketing strategy and the likely way forward for the Tourism department, the State Government appointed (2006-07) Ernst & Young as consultant. The consultant recommended the following eight marketing strategies to be implemented in phased manner by March 2012.

- i. Set up organizational cell.
- ii. Initiate branding and sub-branding.
- iii. Conceptualise and develop website.

- iv. Identify and target priority market.
- v. Expand activities in all the target markets.
- vi. Set up marketing programmes and their local chapters for various countries.
- vii. Initiate the presence of the State in tourism fairs.
- viii. Engage marketing agency on annual basis.

We observed that the State Government had neither implemented these recommendations nor directed the Company to implement the same for development and promotion of tourism of the State.

2.2.11.2 We further observed following deficiencies with respect to marketing and promotion of tourism business:

- The Company did not form an independent marketing cell to formulate policy/ plan for marketing and promotion of tourism business. Although the Tourist Reception Centres (TRCs) supplemented the marketing efforts, no targets of business of TRCs were fixed by the Company.
- The Company did not chalk-out a well-defined marketing strategy of its own to tap prospective tourists to its lodges. The Tourist Guide published by the Company was not updated and was thus not fit for dissemination of information to prospective tourists.
- In spite of tie ups with some major corporate travel agencies (*viz.* Thomas Cook, Ezeego, Make My Trip and Cox & Kings), no major bookings had been received from them. Management of the Company, however, had not taken any initiative to increase the volume of business from such corporate travel agencies.
- Potential avenues of marketing like LTC packages, tour by reputed clubs, Co-operative Societies, Corporate Houses *etc.* had not been explored at the desired level. Consequently, the Company could not tap substantial revenues from such sources.
- The Company conducted/ participated in 126²⁸ fairs/ festivals with the aid of ₹ 17.12 crore²⁹ during the last five years up to March 2012. We found no record of detailed expenditures on fairs and festivals from the Company's documents despite our requisitions. Moreover, no tangible benefits from such fairs and festivals on promotion of tourism in the State were noted.
- The Company decided (June 2007) and appointed 36 sales/ marketing agents to appoint sales agencies for increasing business volumes. However, performance of such agents was not periodically assessed. The volume of business generated by these agents aggregated to ₹ 1.36 crore over 2009-12, with nine agents contributing 62 *per cent.* The total commission paid was ₹ 17 lakh (*i.e.* 12.5 *per cent.*).

²⁸44 National, 15 International and 67 State Fairs/ Festivals.

²⁹CFA : ₹ 1.20 crore, SFA : ₹ 15.92 crore.

In reply, the management stated (October 2012) that they would reassess the performance of the Sales/ Marketing agents.

Package tours

2.2.11.3 During last three years upto March 2012 the Company conducted 30 package tours on 16 circuits to facilitate the tourists in accessing various destinations in the State. The details for 2007-09 were not made available. During 2009-12, the revenue from these tours aggregated to ₹ 50.37 lakh against an expenditure of ₹ 36.99 lakh to earn profit of ₹ 13.38 lakh.

We observed that –

- Four circuits³⁰ were operated profitably in all three years, while two circuits³¹ incurred losses in two out of three years. However, the margin of profit fluctuated between 25.04 per cent and 30.80 per cent.
- One international circuit tour package (Jaldapara - Bhutan) was operated in 2009-10 with profit margin of 31.08 per cent. However, it was discontinued since 2010-11 without any recorded reason.

2.2.12 Internal Control Mechanism

2.2.12.1 Internal control is a process designed to provide reasonable assurance to an organisation regarding achievement of its performance goals. A built-in internal control system minimises the risk of errors, irregularities and ensures optimum utilisation of resources. The following deficiencies in internal control system were noticed by us.

Non formation of purchase committee and tender committee

2.2.12.2 The Company did not prepare any purchase policy/ manual. Besides, delegation of financial powers was not revised since January 2004. Moreover, as per the Government's directives (November 2004/ June 2012), all purchases/ tenders, for works exceeding ₹ one lakh were to be scrutinised by the tender committee and purchase committee. During the period 2007-12, the Company made bulk purchases of ₹ 8.32³² crore for execution of tourism projects without forming any tender and purchase committee.

The management stated (October 2012) that the basic norms of purchase and tender of the GoWB was being followed in the organisation.

The reply bypassed the fact that the Company did not form any tender/ purchase committee and made payments towards bulk purchases merely on the recommendations of the Project Management Consultants, thereby giving a complete go by to the due process envisaged in such areas.

Non maintenance of records of land

2.2.12.3 The Company did not maintain any record of land in its possession and the title deeds of immovable properties. Further, there was no system for identification of impaired assets³³ and adjusting their values in the

³⁰ Green Dooars, Hollong Chilapata, Poush Mela, Kenduli Mela.

³¹ Murshidabad, Tarapith, Sainthia.

³² Electrical – ₹ 5.66 crore, Furniture – ₹ 1.01 crore and Miscellaneous – ₹ 1.65 crore.

³³ e.g. Lalgarh Tourist Lodge, Lalbandh Tourist Lodge, Coochbehar Victor Palace Tourist Lodge.

Company's books. Moreover, mutation of the land appurtenant to two³⁴ lodges in the possession of the Company was not done either by the State Government or by the Company since takeover of these lodges in 1975.

The management stated (October 2012) that action has been initiated to authenticate the records of land.

Under utilisation of Information Technology

2.2.12.4 The Company decided (2002) to computerise its' books and records. Partial computerisation (2010-11) of accounting at the Head office of the Company and manual maintenance of accounts in lodges *vis-à-vis* preparation of accounts and other statutory returns through outsourcing (accounting charges paid for last five years upto March 2012 was ₹ 21.32 lakh) delayed in compilation and finalisation of accounts.

Moreover, the media backup of server data taken at regular intervals was kept in the same server room. Besides, there was no business continuity and disaster recovery plan in the event of a disaster.

The management noted (October 2012) the audit observations for future guidance.

Non preparation of functional/ operational manual

2.2.12.5 A business or company operating manual contains all the policies, procedures and work instructions that make up the way a business carries out all the functions. The Company had not prepared any functional manual for operating lodges, bars, conference halls *etc.*

Internal audit

2.2.12.6 Internal audit of the Company was carried out by firms of Chartered Accountants. The Company had appointed five³⁵ firms on continuous basis for last five years upto 2011-12 and paid ₹ 11.36 lakh as audit fees. In this connection the following points were worth mentioning:

- The scope of works of the internal auditors included (i) certification/ verification of receipts and payments and (ii) preparation of exception report showing irregularities in activities and functioning of the Company which was not commensurate with the size of the Company and nature of its business.
- The Company neither took remedial action on the irregularities pointed out by the internal auditors nor was the matter reported to the Board of Directors for corrective action.
- As a measure of corporate governance, Audit Committee (AC) of the Company was last constituted in November 2005 with three Directors.

³⁴Morgan House-Tashiding, Kalimpong and Hill Top, Kalimpong.

³⁵M/s Nirupam & Associates, M/s A.K. Sinha & Associates, M/s A. Dutta & Associates, M/s Halder & Dutta, Lahotia Roy & Associates and K.L. Banerjee & Co.

These Directors resigned between December 2006 and June 2009. Since then, AC was not reconstituted and it became defunct. Besides, no minutes of the Audit Committee meeting was found on record. Consequently, accountability of internal audit to the AC was not ensured.

The audit findings were reported to the Government in September 2012, their reply was awaited (December 2012).

Conclusion

The State Government did not define the specific role of the Company in implementation of State Tourism Policy. Besides, the Company had not prepared Strategic Plan for development of either project or its ideas. Consequently, its share of tourist traffic continued to remain negligible despite being in operation for more than 38 years. Slow progress of projects was due to poor planning, lack of monitoring/ co-ordination, land acquisition/ diversion problems, non-execution of works etc.

During 2007-12, 11 to 19 lodges incurred operational losses, including seven which incurred continuous losses. Post renovation occupancy of 10 lodges had fallen. Food cost was in excess of industry standards or norms due to poor operational practices. There was no policy for fixation/ revision of tariff. Lodges were leased out without ring-fencing the Company's revenues. Despite a rising trend in customer complaints, no review was undertaken to remedy the grievances.

The Company did not have an independent marketing cell to make policy/ plans for marketing and promotion of tourism business. Despite facing a negligible share of tourist traffic, the Company did not chalk out a well-defined marketing strategy to tap the increased inflow of tourist in the State. No tangible benefits were noted by the Company's participation in fairs/ festivals. Internal control mechanism in the Company was lacking in areas of purchases/ procurement, immovable assets management etc.

Recommendations

In order to improve efficiency and effectiveness of the West Bengal Tourism Development Corporation Limited, the Government/ Company may:-

- define the Company's role in implementation of WBTP and draw up a Strategic Plan with long term and short term deliverables to improve its performance accordingly.***
- constitute a Project Monitoring Committee with members from industry, engineering, finance, legal and administrative skills to concurrently monitor and report on progress to the Company's Board of Directors and the Government.***

- *fix occupancy targets for lodges and monitor occupancy regularly to improve revenue inflow and carry out impact analysis of tariff to ascertain reasons for dip in occupancy/ usage.*
- *implement leasing policy based on profitability, improve operational efficiency to realise value of its assets for which it is essential to complete records of all its immovable properties.*
- *set up a separate marketing cell with the professional expertise to improve its marketing.*
- *improve and strengthen internal control mechanism/ internal audit.*