

# CHAPTER- I

## INTRODUCTION

### 1.1 General Introduction

Nepal is an independent, small developing country of the world. It is recently declared as Federal Democratic Republic, Nepal by the first Constitution Assembly. It is situated on the lap of mighty Himalayas locating in the latitude  $26^{\circ} 22' N$  to  $30^{\circ} 27'$  and  $80^{\circ} 4' E$  to  $88^{\circ} 12' E$  with the elevation ranging from 60 from the sea level to the highest point or the earth, the Mount Everest at 8848 meters. The average length is 885 KM east to west and average breadth 193 km north to south.

Nepal is sandwiched between the world's two most popular countries China in the north and India in the east, west and south. Nepal is a landlocked country but due to the geographical difficulties, it is more an India locked country. Every raw material and goods required for the country enter via the India. This is one of the reasons why the exchange rate of Nepal depends over Indian Currency. Since, the outlet to the outer world is possible only through the Indian way; Nepal generally becomes the third user of the products on goods or technology after the western world and the Indian World. This is how the political consequences of the Indian economy directly affect the economical as well the social aspects of Nepal.

Nepal has an area of 147181 sq. km. It occupies 0.3% of Asia and 0.03% of World. It is decorated by the Terai in the South Region, by mountain in the middle and by evergreen snow-white Himalayas in the northern region. Terai occupies 17% of total land, Mountain 68% and Himalayan region by 15%. There are five-development region & 75 administrative districts.

Nepal is wonder of the nature. Mountains, water forests, soil etc. are the main resources available here. It is recorded as the second richest country in the world with high potentiality of hydropower and bi-diversity. It is one of the tourist's

centre of the world. Its panoramic view, magnificent mountains, lakes with flora and fauna, old heritages and green forests are the main attractions for the tourists. Near about 30% people are living under poverty line by the end of Tenth Five Year Plan. It's per capital income is about \$320 and annual GDP is 4.8% now. This reality depicts that Nepal is the most developing country in the world.

Nepal has adopted mixed economy system where contribution of private and public sectors are co-existed in harmonious role in market oriented and competitive economic activities so that increase in production through efficiency enhancement & resources use and utilization. However, Nepal government has been involving in some specific sectors like infrastructure, essential commodities producing, social welfare, Public utilities, national defense and industries that need to show interest particularly. Basically, public enterprises are established for the purpose of socio-economic development of the country.

### **1.1.1 Meaning and Evolution of Public Enterprises**

The Public enterprise is the state owned organization. It refers to an activity of a business character managed and owned by the government investing more than 51%. In Other words, they are such from of business organizations partially or fully owned, managed and controlled by the government with a primary view of rendering service. They conduct their business to protect the people from exploitation and to restrain monopolistic tendencies. The main role of the government is not only to rule over the state but also to develop the country by developing the economic, financial and industrial sectors of the country. Most of the private organizations are profit oriented; they try to maximize profit by exploiting the people and by providing less quality goods and services. Neglect the nation and may not give contribution. As a result there is monopolistic market and people are forced to consume the goods and services wherever and wherever available in the market.

Therefore the government being a responsible wing of the country should establish such enterprises which help to provide qualitative goods and service at a normal price and provides employment opportunities to the as well.

Public enterprises are autonomous or semi autonomous corporation and companies owned and controlled by the state and engaged in industrial and commercial activities.

Encyclopedia Britannica has defined public enterprises as an undertaking that is owned by a national state or local government supplies at lower price operated on a more or less self supporting basis which enterprise may be international instead or inter municipal i.e. owned and operated jointly by two or more national states or local government.

Public enterprise plays an important role in developing countries. Its role differs from country basically due to political philosophy of the existing government. They came to an existing for deliberating policy of the government to bring certain activities under strict government controlled by creating new institution or by nationalizing them from private sector. The history of PEs, that most of them was created by the government themselves to manage certain key sector of the economy.

The evolution of PEs in the world has along history. During the 18<sup>th</sup> century concept was developed to solve the problems of poverty and unemployment by government intervention in the economy. During that period most of the developed countries had adopted the laissez fair policy in the economy. At the end of 19<sup>th</sup> century the application of the laissez fair policy evolved the capitalism that increased the poverty, corruption, labor exploitation and unbalanced distribution of wealth. So as to avoid these considerable problems government itself started intervention in the economy, the concept of PEs was introduced for the first time

in the world in U.S.A. with the Tennessee Valley Authority. Now there is a number of PEs in almost all countries in the world. (Khanal & Basnet, 1986: 9.18)

### **1.1.2 Objective of Public Enterprises**

Public Enterprises are established to fulfill different requirements. Their basis goal is to serve people as well as to help the nation to develop. It becomes very important to declare the motive of the enterprise right from the establishment. After the declaration of the objectives, it becomes easier to formulate the strategy and working policies of the enterprises. The objective of the public enterprises, therefore, is the most important factor to be taken into consideration. The objectives of the public enterprises are classified into the following groups.

#### **Economic Objectives**

- ) Accelerating the rate of Economic growth
- ) Attaining the goals of Planned Economic Development
- ) Regional and Balanced Development
- ) Mobilization of Funds for future plans.
- ) Making available essential goods and services cheaply and adequately
- ) Acting as Model Entrepreneur
- ) Saving Foreign Exchange
- ) Maintaining Economic stability

#### **Social Objectives**

- ) Preventive monopolistic practices
- ) Generate Employment Opportunities
- ) Reduction in disparity of income
- ) Attaining social justice and social welfare
- ) Avoiding concentration of wealth and means of production in fewer hands
- ) Making healthy and efficient enterprises

#### **Political Objectives**

- ) National defense Policy
- ) Political Ideology
- ) National Interest and Welfare
- ) Political Interest and Purpose

### **1.1.3 Importance of Public Enterprises**

The importance of the establishment of Public Enterprises lies in the services offered to the public sector. The following points can justify the importance of increasing establishment of the enterprises.

- ) To accelerate the rate of economic growth
- ) To develop the fundamental infrastructures
- ) To provide the public utilities
- ) To balance the regional development
- ) To supply the essential commodities
- ) To generate the employment opportunities
- ) To create a model entrepreneur
- ) To reduce economic inequalities
- ) To check the inflationary fund
- ) To contribute to National fund
- ) To increase foreign exchange reserve
- ) To strength the sick industries
- ) To initiate research and development activities
- ) To prevent concentration of economic power
- ) To establish welfare oriented society

### **1.1.4 Public Enterprises under Various Economic Systems**

The economy in the world today is classified into three broad headings as:

#### **Capitalist Economy**

In this type of economy, the owner has sole ownership over the means of production. The main intention of the owner is to make maximum profit. Market mechanism is the device which measures the quality, quantity, type and amount of production. Presently, this type of economy is better known as Free Enterprise Economy. America, Britain, Japan, Canada, Germany are the nations having this economy. Below listed are the features of the capitalist Economy.

- ) Private Property
- ) Economic freedom
- ) Freedom of Choice
- ) Profit Motive
- ) Unplanned Economy
- ) Pricing Process
- ) Class Conflict

### **Social Economy**

Socialism is an organization of society in which the material means of production is owned by the whole community according to a general economic plan. Russia, China, Yugoslavia, France, Italy are the socialist countries. Following are the features of it.

- ) Central Planning
- ) Collective Ownership
- ) Social Welfare motive
- ) Equality of Income
- ) Economic Freedom
- ) Existence of pricing process

### **Mixed Economy**

It is the maximum of both the capitalism and socialism. The co-existence of the both economies makes it a Dual Economy. Developing countries such as Nepal,

India, and Pakistan etc. are adopting this type of economy. Some of the notable features of this economy are as follows:

- ) Existence of private and public sectors
- ) Planned economy
- ) Government control and regulation
- ) Blending of Capitalism and Socialism
- ) Freedom of choice

### **1.1.5 Types of Public Enterprises**

According to the functions and services given by the Enterprises, they are classified into following types:

#### **Manufacturing Public Enterprises**

These Enterprises manufacture goods for public usage. Janakpur Cigarette Factory, Hetauda Cement Udyog, Milk Development Corporation etc. are some of the enterprises of this type.

#### **Commercial Public enterprises**

These are concerned with the commercial aspect of goods and trading of the goods. Nepal Oil Corporation, Nepal Agriculture Product Corporation, Nepal Goods Corporation fall in this category.

#### **Financial Public Enterprises**

These Public enterprises are given financial aid fall under this category. Nepal Agriculture Development Bank, National Commercial Bank, Nepal Industrial Development Corporation, Nepal Bank Development, National Insurance Corporation etc. fall in category.

#### **Public Utilities Public Enterprises**

Some enterprises are solely concerned with the service for the public. They have autonomous power to make their policy, yet public service remains their main

objective. Nepal Telecommunication Corporation, Nepal Electricity Corporation and Nepal Water Supply Corporation are public utilities enterprises.

### **Social Service Public Enterprises**

Some of the enterprises are established to provide social service to the people. Gorkhapatra Corporation, Guthi Sansthan, Nepal Television, Cultural Corporation fall under this category.

### **Development or Service Public Enterprises**

Some enterprises are established only for developmental purposes. Such public enterprises help to uplift the developmental works. Nepal Engineering Consultancy, Economic Service Centre, Agricultural Service Centre etc come under this category.

## **1.1.6 A Brief Overview of Nepal Electricity Authority**

### **1.1.6.1 Introduction**

Nepal Electricity Authority (NEA) is one of the leading public enterprises functioning among public utility sector. It was named as "Bujuli Goshwara" (Bijuli Adda) to operate and maintenance powerhouse, transmission lines and distributes electricity to the public at that time. After the various diesel plants and hydro plants were constructed. As government department Electricity Department was established, Bijuli Adda was organized under Electricity Department in 2018 B.S. as autonomous body Nepal Electricity Corporation (NEC). NEA was responsible for operating and maintaining the powerhouse, transmission lines and distributing electricity to the public. Electricity Department was responsible for surveying, constructing new power plant and transmission lines. They were also constructed some development committees to develop hydro power plants, transmission lines and small hydropower plants.

Nepal Electricity Authority Act 2042 was brought forward and put in effect from 1<sup>st</sup> of Bhadra 2042. According to new NEA act 2041, all former divisions and committees concerning electricity production and supply were amalgamated into Nepal Electricity Authority to unite and regulate the development efforts and supply of electricity. For the development of hydropower sector, NEA is responsible for planning, design, construction, operation and maintenance and transmission distribution facilities through out the kingdom of Nepal. NEA is playing vital role as the key player in the nation's power sectors.

More specially, the objectives of establishing Nepal electricity Authority are highlighted below:-

- ) To establish single organization that would work in all sectors of electricity planning, survey, production, operation, maintenance and distribution of electricity.
- ) To provide equal and extensive still development opportunities for all employees working in the being practiced formerly by extensive of several electricity agencies.

In this way NEA was established as a unified organization in 2042 B.S NEA was funded as an independent corporation owned by the government and according to commercial principles.

#### **1.1.6.2 Functions and Duties**

As per Nepal Electricity Act, the functions and duties of NEA will be as follows:-

- ) To recommend Government of Nepal to determine the long term and short term policy related to supply of electricity by generating, transmitting and distributing electricity pursuant to the prevailing law.
- ) To prepare a plan for the production, transmission and distribution system of electricity and other related works and to construct, conduct, preserve

and promote the production lines and other related facilities which are essential for the implementation of the plan.

- ) To coverage the production, transmission and distribution of electricity of adequate standard in the regions which are economically appropriate for the industrial and agricultural development and the facility of the people.
- ) To conduct the necessary work relating to the production, transmission and distribution of electricity.
- ) To make and cause to make arrangement for higher training and study with a view to prepare export manpower relating to provide technical advice and consultancy relating to production, transmission of distribution of electricity.
- ) To do and cause to do other works that are necessary for the achievement of the objectives of the authority.

### **1.1.6.3 Rights**

The rights of the authority will be as follows:-

- ) To raise loan from foreign government or foreign institution and international institution
- ) To raise loan from national institutions, banks or individuals
- ) To collect charge of electricity & service charges from the customers
- ) To sell & buy electricity to and from foreign countries
- ) To invest the amount, lying in the fund of the authority
- ) To check the authority consumption of electricity applied by the authority
- ) To buy the electricity produced by the private sectors
- ) To conduct all work which seem to be inevitable and necessary for the fulfillment of the works and duties

## **1.2 Statement of the Problem**

NEA is one of the biggest public enterprises in Nepal, which is a single and large-scale power section organization. It has been started under twin commercial and service motive. Government as well as foreign donor agencies have invested huge amount of capital in NEA in order to render quality services receiving substantial return in terms of tax & dividend. There is no any market competitor as other private enterprises. It has higher scope of production and distribution as well. Considering these facts, it should earn good net profit. However the financial performance of NEA is not satisfactory level. Its production and administrative cost is very high. It is not being able to collect the dues in time due to lack of proper revenue management policy. Similarly its fixed assets are not properly utilized for the betterment of the authority. Hence it is running bearing huge losses every year. Now it is being the financial burden to the government.

## **1.3 Objectives of the Study**

The general objective of this study is to examine & evaluate the financial position of NEA. The specific objectives of this study are as follows:

- ) To evaluate the performance of NEA through Income Statement, Balance Sheet.
- ) To analyze the financial performance of the NEA with regard to their liquidity, Leverage, Activity and profitability position.
- ) To identify financial weakness and strengthen of NEA.
- ) To provide a package of recommendation & suggestions to be taken instantly & further to be enclosed with identified financial problems on the basis of findings.

## **1.4 Significance of the Study**

Public enterprises play vital role for the economic, social development of any countries. A number of public enterprises have been incorporated in Nepal as well with a view of providing necessary goods and services at a reasonable price for the welfare of economically low class people.

Establishing public enterprises are not only the concern of the government. The most important part is its well management. The financial and human resources employed there must be efficiently managed in order to achieve the goals stated. However, most of the public enterprises of Nepal are financially poorest in present condition. This is due to lack of proper planning, management and control of the government. Among various types of public enterprises operating in Nepal, Nepal Electricity Authority, one of the largest government undertakings with huge investment and large no. of employees is taken into consideration for the study. This study tries to evaluate the overall aspects of financial performance and its current real position of NEA.

The following are the specific purposes of financial performance analysis:

- ) To evaluate NEA's operating efficiency, financial performance and position.
- ) To examine liquidity, profitability and solvency position.
- ) To provide necessary information to the concerned parties and fulfill their interests.
- ) To facilitate to management for making necessary steps for the sound performance.

This study will be useful & beneficial to following groups and individuals.

- ) For NEA researchers for further research in future.
- ) For NEA to improve financial performance.
- ) For university students who are going to conduct studies in same subject.
- ) For major parties who are interested on analyzing the position of NEA.
- ) For concerned people for valuable suggestion & recommendations.

### **1.5 Limitations of the Study**

This study is focused on the financial performance analysis aspect. The followings are the limitation of this study:

- ) This study only covers five years i.e. from 2060/61 to 064/65 trend & data.

- ) The analysis will be based on the secondary data provided by the management of NEA.
- ) Time & resources constraint may limit the area covered by the study.
- ) Since the study deals with NEA, the conclusion drawn from the study may or may not be applicable to other public enterprises.
- ) The accuracy of this study will be based on the data available from management of NEA, the various published & unpublished documents related to NEA.

## **1.6 Chapter Scheme**

The whole research will be carried on the following ways:

### **Chapter- I INTRODUCTION**

This chapter includes focus of the study, statement of the problem, objectives of the study, significance of the study, limitation of the study.

### **Chapter – II REVIEW OF LITERATURE**

This chapter concerns about the concept of financial position & conceptual setting and review of related thesis to highlight the related terms and to present the available information about previous related studies.

### **Chapter – III RESEARCH METHODOLOGY**

This chapter includes introduction, research design, sources and nature of data, data collection instruments, statistical tools that are used for the study.

### **Chapter – IV DATA PRESENTATION AND ANALYSIS**

In this chapter, the data collected are presented, tabulated as required by the research objectives. Data are here interpreted and analyzed with the help of various analytical tools and techniques.

### **Chapter – V SUMMARY, CONCLUSION AND RECOMMENDATIONS**

This chapter is the last chapter for this research. In this chapter, summary and conclusion are drawn from the study. It also includes valuable recommendation and suggestions to the enterprise on the basis of the study.

Besides these, Bibliography and Appendix are included at the end of the study.

## **CHAPTER- II**

### **REVIEW OF LITERATURE**

#### **2.1 Conceptual Review**

##### **2.1.1 Finance**

Finance is the focal part of any firm. It is concerned with collecting and managing the funds of the firm. This is the lifeblood of any organization whether it is big or small, private or government profit motive or service motive. Unless the collected funds are well managed the organization will not be able to achieve the goals stated in Memorandum of Association. Through well management of fund it can earn good profit as per the investment made and the firm will be financially strong.

##### **2.1.2 Financial Statements**

Simply Financial Statements are the mirror of the firm which depicts the actual positions of the firm. These are the statements prepared at the end of every accounting year in order to show the position of assets, liabilities and capital and profit earned or loss suffered by the firm. These statements include Income Statement (Trading A/C, Profit or Loss A/C and Profit and Loss appropriation A/C), Balance Sheet and Statements of Changes in financial positions. Top level employees are responsible for the preparation of these statements. They are prepared in summarized and systematic way. The firm presents its real status through these statements and keeps close contact with the related parties. The investor, management, employees, government, creditors, bank are its stakeholders who often needs such statements and reports.

The terms financial statements refer to the two statements-Balance Sheet or Statement of Financial Position and Profit and Loss statement which the accountant prepares at the end of the period of time for a Business Enterprises (Pandey; 1986, 29-30).

### **2.1.3 Types of Financial Statements**

#### **Income Statement**

It includes trading account and profit & Loss Account. It reports the profitability of a firm for a stated period of time. In this statement company measures its profitability comparing its revenues with cost incurred for producing these revenues.

#### **Statement of Retained Earnings**

The statement of retained earning some times called has profit & Loss appropriation account explain the changes in retained earning between two balance sheets dates. These changes usually consist of the addition net income and deduction of dividend paid to shareholders.

#### **Balance Sheet**

This is the statement of financial position of the firms, which shows the position of assets, liabilities and capital as of a particular date. Its also called statement of financial affairs.

#### **Statement of Cash Flows**

The statement which shows the net cash inflows and cash outflows of the firm for the specific period generally one year is known as cash flow statement. This statement shows the cash flow from operating, Investing & financing activities of the firms.

### **2.1.4 Importance of Financial Statements**

Financial statement are the summary reports of the firms which provides accounting information to various users like management owners debtors, Creditors, Employees, Governments and others. The following are the importance of the financial statements:

- ) Financial statements are the summary of information related to profitability and resources owned by the firm.
- ) Employees can use the financial statements to demand for incremental in salary and other benefits.
- ) Banks and financial institutions can use them for lending decisions.
- ) Government bases the financial statements of the company for the calculation of tax revenue from the firms.
- ) Financial statement can be used as the basis for management decision-making purpose like planning, promotion, and research and development decisions.
- ) Existing Investor can use them to assess how efficiently the firm is using their funds.
- ) Potential Investor can obtain information, which can be useful to take the investment decisions.
- ) Financial statements reveal the history of the firms.
- ) They can be used to assess the firm's liquidity and solvency position.

### **2.1.5 Financial Statements Analysis**

Financial Performance analysis can be considered as a major tool of the financial decision. The growth and development of any enterprises is directly influenced by the financial policies. And the real picture of financial performance mainly depends upon firm's past, present and anticipated future financial condition. The financial analysis enables us to evaluate and disclose the condition of firm's financial performance is essential to prepare sound financial policies. At present financial management in every sector is involved in record keeping raising necessary funds and maintaining relationship with bank or other financial institution. The mentioning of financial result for corrective action is exercised rarely and the periodic review of budget, development of internal check control, analysis of generation of funds and its investment in cash are also rarely conducted. This often led to the situation where management is not aware of the real financial position of the enterprises and industries.

“Analyzing Financial Statement is a process of evaluation relationship between components of financial statement to obtain a better understanding of a firm’s position and performance.” (Matcalf & Titard; 1976, 157)

Financial Performance as a part of financial management is the main indicator of the success or failure of the industries or enterprises. There are different institutions which are affected by the decision of the stockholders such as owners, managers, creditors, investors, customers; tax authorities etc. are indirectly interested about the financial performance of the industries, though the type of analysis varies according to the specific interest of the party involved. Shareholders of the enterprises are concerned principally with the present and expected future earning and the stability of the earnings of other industries and enterprise. This shows that they concentrate their analysis on the profitability of the industries. Management of the industries is interested in all aspect of financial analysis to adopt good financial management system and for the internal control of the industries. The concerned groups are interested either directly or indirectly about the process of identifying the financial strength and weakness of the firm by properly establishing the relationship between the items of the Balance Sheet and Profit and Loss Account. In sum, it is a process of evaluating the relationship between component parts of financial statement to obtain a better understanding of a firm's position and performance.

#### **2.1.6 Objectives of Financial Statement Analysis**

- ) To Judge the financial Health of the enterprises
- ) To judge the profitability of the business undertaking
- ) To evaluate the capacity to repay the loan and interest thereon
- ) To evaluate the solvency position of the firm and
- ) To examine and evaluate the return on investment and/or capital employed.

### **2.1.7 Importance of Financial Statement Analysis**

- ) It measures the firm's liquidity, Profitability and Solvency Position.
- ) It assesses the firms operating efficiency, financial position and performance.
- ) It fulfills objectives and interest of short-terms creditors, present and potential investor, long terms creditors, management and regulating authorities.
- ) It helps the government for formulating necessary policies providing financial data.
- ) It aids for Coordinating and controlling.

### **2.1.8 Methods and Procedures of Financial Statement Analysis**

The Financial methods of analysis involve sustainable growth modeling. Here, it is determined whether sales growth objectives of the firms are consistent with its operating efficiency and with its financial ratios. This power tool of analysis allows simulating the likely effects of changes in target ratios when it is necessary to move from a steady state environment.

The Following procedures can be used to analyze the financial statements:

- ) Percentage increased or decreased in an item in comparative financial statements.
- ) Percentage relationship in an individual component to an aggregate total in a single financial statement.
- ) Ratios of one amount to another in the financial statement.

These above mentioned methods can be applied by various ways i.e. horizontal analysis, vertical analysis and trend analysis etc.

## **2.2 Evolution of PE in Nepal in Brief**

Nepal is one of the developing countries in the world. It also felt necessarily of establishing public enterprises for providing essential foods and services with the overall development of the country in the fields of commercial, industrial, financial and public sectors. It established Nepal bank, the first public enterprise in Nepal in 1993 B.S.

Public enterprises were rapidly set up after the introduction of Democracy and launching of five years plans. Pre-five years plans was almost nil of public enterprises except Nepal Bank.

Nepal has adopted national plan for the development of industrialization. Government has brought the policy of friendly welcoming private sectors for their investment in Nepal from national or foreign investment. In this process government of Nepal has conducted the procedure of privatizing some public enterprises such as Bhrikuti Parper Mill, Harisiddhi Brick Factory Bansabari Leather and Shoe Factory in the early stage and the processing of privatizing is continuous at present as well.

National Planning Commission was set up in 2013 B.S. for conducting National Planning Process. From this year five years plans concept was introduced in Nepal. The development and growth of public enterprises in each five year plan is highlighted below.

### **The First Five-year Plan (2013-2018 B.S.)**

The following seven public enterprises were established during this period.

- ) Royal Nepal Airlines Corporation (Nepal Airlines Corporation now)
- ) Royal Industrial Development Corporation
- ) Timber Corporation
- ) Ragupati Jute Mill
- ) Asahaya Kalyanra Kendra

- ) Blaju Industrial Estate
- ) Balaju Yantrasala

Out of seven enterprises four enterprises were under the foreign aid program.

**The Interim Period (2018-2019 B.S.)**

In this Period, Three PEs was established which are listed below:

- ) National Trading Ltd.
- ) National Construction company of Nepal
- ) Ratna Recording Corporation

**The Second Three-year Plan (2019-2022 B.S.)**

The second three year plan stressed for the balance regional development. During this plan the following PEs were incorporated.

- ) Fuel Corporation
- ) Transportation Corporation
- ) Nepal Electricity Corporation
- ) Gorkhapatra Corporation
- ) Birgunj Sugar Corporation
- ) Janakpur Cigarette Factory
- ) Provident Fund
- ) Patan Industrial District
- ) Hetauda Industrial District
- ) National Commercial Bank
- ) Nepalese Carpet Pvt. Ltd

**The Third Five-year Plan (2022 to 2027 B.S.)**

In this plan, the priority was given to import substitute goods or manufacturing goods of basis necessity. The export oriented industries had great prospects of earning foreign exchange. These were based on local materials. It was felt that the involvement of both private as well as public sectors in the industrialization process of the country.

During this period the following twelve PEs were incorporated

- ) Himal Cement Company
- ) Agricultural Tools Factory Limited
- ) Agricultural Input Corporation
- ) Agricultural Development Bank
- ) Dairy Development Corporation
- ) National Insurance Corporation
- ) Nepal Tea-Development Board
- ) Nepal Telecommunication Board
- ) Chandeshwari Textile Industry
- ) Cottage Industry and Handicraft Emporium
- ) Brick and Tile Factory
- ) Bansbari Leather and Shoe Factory

#### **The Fourth Five-year Plan (2027 to 2032 B.S.)**

In the beginning of forth plan it was felt that the private sector could not set-up all basis and feasible industries capable of making special contribution to the industrial development of the country. Within the period of this plan the new industrial policy 1974 was also announced by Government of Nepal. During this period the following PEs were established.

- ) Agro Limited Industry
- ) Vegetable Ghee Industry
- ) Royal Drugs Limited
- ) Nepal Oil Corporation
- ) Nepal Food Corporation
- ) Credit Guarantee Corporation
- ) Royal Nepal Film's Corporation
- ) Eastern Electricity Corporation
- ) Jute Development and Trading Corporation

- ) Cultural Corporation
- ) Nepal Transit and Ware Housing Pvt. Ltd.
- ) Drinking Water and Sewerage Boar
- ) Hetauda Textile Industry
- ) Nepal Chauri Ghee Industry
- ) Rastriya Chamal Factory
- ) Tobacco Development Company
- ) Nepal Livestock Company
- ) Electronic Date Processing Centre
- ) Eight Paddy Rice Export Companies.

#### **The Fifth Five-year Plan (2032 to 2037 B.S.)**

In this plan, industrial policy of 2031 B.S. was adopted and provision for industrial district and four industrial ventures in the public sector was also accepted. During this plan period, Nepal Carpet Pvt. Ltd. And Vegetable Ghee Industry was privatized. The following new PEs was established in this plan period.

- ) Bhaktapur Brick and Tile Factory
- ) Hetauda Cement Company
- ) Janak Education Material Centre
- ) Security Marketing Centre Ltd.
- ) Agriculture Project Service Centre Ltd.
- ) Hetauda Leather Company
- ) Nepal Metal Company

#### **The Sixth Five-year Plan (2037 to 2042 B.S.)**

In this plan, new industrial policy was declared in 2037 B.S. The main feature of this policy was that all industries were kept open to private sector except for the defense industry. During this plan following six PEs were established.

- ) Herb Production and Processing Company
- ) Bhrikuti Paper Industry

- ) Lumbini Sugar Factory
- ) Nepalgunj Paper Factory
- ) Butwal Spinning Factory
- ) Nepal Orient Magnetite

### **The Seventh Five-year Plan (2042 to 2047 B.S.)**

In this plan period, too the government decided to run defense industry and public utilities industries which produced goods and services for public welfare and the enterprises which were not showed interest by private sectors. Remaining industries except defense and public utilities were wished to handover to private sector in order to increase the efficiency of existing public enterprises rather than established new more enterprises. During this plan period, the following Three PEs were established.

- ) Udaypur Cement Company
- ) Nepal Television
- ) Nepal Coal Limited

### **The Eight Five-year Plan (2047 to 2054 B.S.)**

In this plan period, PEs were not established. The government decided to private some of the existing Public Enterprises. Feeling the burden of PEs Three PEs were privatized in 2049 B.S. and other fourteen were intended to privatize during this period. The Following public enterprises PEs which were privatized during this plan period.

- ) Bansbari Leather and Shoes Factory
- ) Harisidhhi Bricks and Tile Factory
- ) Bhrikuti Paper Industry

### **The Ninth Five-year Plan (2054 to 2059 B.S.)**

The ninth plan had taken the privatization as a main objective on the field of PEs. By giving more emphasis on the privatization, the ninth plan had said, “Privatization program is being implemented as an alternative means of improving effectiveness in the utilization of resource invested in public corporation and oriented and them towards economic consolidation. The long-term vision therefore aims taking the economy more dynamic and efficient transferring all government owned corporations to the private sector. Instead of production, distribution and services, the order of the government should be considered in removing the weakness of the market system by keeping the economy of proper order. Hence, the program of privatization has been oriented to attain multiple objectives permission was to be granted the private sector foreign investment in various sector.” Different PEs was privatized during the period.

### **The Tenth Five-year Plan (2059 to 2064 B.S.)**

The main objectives of this five year plan was to make the existing the public enterprises more efficient, able, dynamic and competitive through the creation of competitive environment. It also focused on privatizing the some of the corporations which became financial burden the government of Nepal. Government tried to privatize Nepal Telecom, Nepal Airlines etc.

### **2.3 Privatization of Public Enterprises in Nepal**

A number of public enterprises were established in Nepal as well with a view of providing basic services and infrastructural development of the country. For the socio-economical development of the country more than 60 such enterprises were established in various areas during above mentioned five year plan. However the efficiency of such public enterprises after 2046B.S. was found unsatisfactory. The PEs were adversely affected by the political situations therefore they could not increase their efficiency and remained financial weak. At present most of the public enterprises of Nepal are being the burden to the government. They are supposed to be financed by the government itself for covering their operating

expenses as they are not financial self dependent. So government of Nepal also adopted the policy of encouraging the private sector and started handing over state owned enterprises in the hand of private sector for business operations.

In this process a number of public enterprises are being processed for privatization under different forms. The different methods are management contract, sale of shares, sale of properties etc. the government however is not being able to continue privatization process as per the pre-plan to achieve the result as per its target due to lack of transparency problems in management of assets and liabilities, staffs, lack of capital for the clearance of debt and security problems. So the government needs to well identify the situations, formulate the necessary policies and go forward for the privatization.

### **2.3.1 Objectives of Privatization**

- ) To encourage the private sectors in purely commercial activities and to reduce the involvement of government in the business which the government to concentrate for maintaining the laws and orders and development of infrastructure of the nation.
- ) To lessen the financial burden of public enterprises to the government making them self dependent.
- ) To make efficient and competent for remaining public enterprises in terms of financial and management aspects.

The government adopted the policy of privatizing the public enterprises involved except in public utilities, security major projects which need huge investment. The following PEs was privatized under different modalities.

**Table 2.1****List of Privatized PEs in Nepal**

<b>S. No.</b>	<b>Public Enterprises</b>	<b>Applied Modalities</b>
1	Bansbari Shoes & Leather Factory	Assets & Business Sale
2	Bhrikiti Paper Mill	Assets & Business Sale
3	Harisidhhi Bricks & Tile Factory	Assets & Business Sale
4	Nepal Film Development Company	Assets & Business Sale
5	Balaju Textile Industry	Shares Sale
6	Raw Hide Collection & Trading Company	Shares Sale
7	Nepal Jute Development & Trading Company	Liquidation
8	Nepal Lube Oil Limited	Shares Sale
9	Nepal Bitumen & Barrel Industries Limited	Shares Sale
10	Tobacco Development Company	Liquidation
11	Nepal Foundry Industry Limited	Shares Sale
12	Raghupati Jute Mills	Shares Sale
13	Biratnagar Jute Mills	Shares Sale & Lease
14	Nepal Bank Limited	Shares Sale
15	Coal Limited	Liquidation
16	Butwal Power Company Limited	Shares Sale
17	Nepal Tea Development Corporation	Shares Sale & Lease
18	Cottage & Handicrafts Emporium	Liquidation
19	Nepal Transport Corporation	Liquidation
20	Hetauda textile Industry	Liquidation
21	Birgunj Sugar Factory Limited	Dissolution
22	Agriculture Tools Factory Limited	Dissolution

*(Source: Ministry of Finance: privatization Unit)*

**2.4 Existing Hydropower in Nepal**

Nepal is endowed with great potential of hydropower. Among the theoretical potentiality 83000MW, 42000MW is economically viable for production. However Nepal is not being unable to produce sufficient power due to its low economic condition. Considering high demand of the electricity NEA is working with the private sector to produce the necessary power. The following is the

present status of hydropower condition of Nepal from NEA and private sector.  
(Hydropower Nepal, 2008, Issue 2)

## CONSTRUCTION UNDER NEA

**Table 2.2**

### Existing Major Hydropower Stations

S. No.	Name of Power Station	Capacity(MW)
1	Trishuli	24
2	Sunkoshi	10.05
3	Gandak	15
4	Kulekhani I	60
5	Devighat	14.1
6	Kulekhani II	32
7	Marshyangdi	69
8	Puwa Khola	6.2
9	Modi Khola	14.8
10	Kali Gandaki A	144
	<b>Total</b>	<b>389.15</b>

*Source: Annual Report NEA, 2007/08*

**Table 2.3**

### Existing Small Hydropower Stations

S. No.	Name of Power Station	Capacity(kW)
1	Pharping	500
2	Panauti	2,400
3	Sundarijal	640
4	Phewa (Pokhara)	1,088
5	Seti (Pokhara)	1500
6	Tinau (Butwal)	1,024
7	Baglung	200
8	Tatopani/Magdi (i+ii)	2,000
9	Jomsom	240
10	Chatara	3,200
	<b>Total</b>	<b>12,792</b>

*Source: Annual Report NEA, 2007/08*

**Table 2.4**  
**Projects under Construction**

<b>S. No.</b>	<b>Name of Power Station</b>	<b>Capacity(MW)</b>
1	Middle Marshyangdi	70
2	Chamelia	30
3	Kulekhani III	14
	<b>Total</b>	<b>144</b>

*Source: Annual Report NEA, 2007/08*

## CONSTRUCTION UNDER PRIVATE SECTORS

**Table 2.5**  
**Existing Private Sector Plants**

<b>S. No.</b>	<b>Independent power Producer</b>	<b>Name of Power Station</b>	<b>Capacity (MW)</b>
1	Himal Power Limited	Khimti HPS	60
2	Bhotekoshi Power Limited	Upper Bhotekoshi HPS	36
3	Chilime Hydro Power Company	Chilime HPS	20
4	Butwal Power Company	Jhimruk HPS	12
5	National Hydro Power Company	Indrawati HPS	7.5
6	Butwal Power Company	Andhikhola HPS	5.1
7	Arun Valley Hydro Power Company	Piluwa Khola HPS	3.0
8	Sanima Hydro Power Pvt. Ltd.	Sunkoshi Small HPS	2.5
9	Alliance Power Nepal Pvt. Ltd.	Chaku Khola Small HPS	1.5
10	Rairang Hydropower Pvt. Ltd.	Rairang Small HPS	0.5
11	Sange Bidyut Co. Limited	Sange HPS	0.18
12	Khudi Hydro Power Limited	Khudi HPS	3.45
13	Unique Hydel Limited	Baramchi HPS	0.98
	<b>Total</b>		<b>152.713</b>

*Source: Annual Report NEA, 2007/08*

**Table 2.6**

**Private Sector Plants under Construction**

<b>S.No.</b>	<b>Name of Project</b>	<b>Capacity(kW)</b>
1	Sisne Khola	750
2	Phema Khola	995
3	Sali Nadi	232
4	Thopal Khola	1650
5	Mardi Khola	3100
6	Pati Khola	996
7	Ridi Khola	2400
	<b>Total</b>	<b>10923</b>

*Source: Annual Report NEA, 2007/08*

**2.5 Distribution centers and profit centre concept**

Selling and distribution of produced goods and services plays the most important role to achieve the goals of any organization as it meets the demand of market and generate the required fund for the organization. The distribution system should be effective, as considering this well real fact, NEA has established separate unit named as distribution and consumer services business group for planning, design, contraction, operation and maintenance of the distribution system up to 33 KV Voltage level. It is also responsible for consumer services providing new connections, meter reading and billing and revenue collection. DCS is providing its services to the consumers through two departments, five regional offices, thirty-four Distribution, five regional offices, thirty- four Distribution centre's and thirty branches offices spread throughout the integrated system o NEA grid.

**Table 2.7****Name of Distribution centers**

1	Kathmandu Mid Distribution Center	18	Itahari Distribution Center
2	Kathmandu Distribution Center	19	Rajbiraj Distribution Center
3	Kathmandu North Distribution Center	20	Ratna Nagar Distribution Center
4	Kathmandu north Distribution Center	21	Bhadrapur Distribution Center
5	Bhaktapur Distribution Center	22	Dharan Distribution Center
6	Thimi Distribution Center	23	Damak Distribution Center
7	Lalitpur Distribution Center	24	Kalaiya Distribution Center
8	Pulchowk Distribution Center	25	Kavre Distribution Center
9	Nepalgunj Distribution Center	26	Kirtipur Distribution Center
10	Pokhara Distribution Center	27	Tanahun Distribution Center
11	Bhairahawa Distribution Center	28	Gangaula Distribution Center
12	Butwal Distribution Center	29	Palap Distribution Center
13	Bhatapur Distribution Center	30	Kawasoti Distribution Center
14	Hetauda Distribution Center	31	Dhangadhi Distribution Center
15	Birganj Distribution Center	32	Ghorahi Distribution Center
16	Janakpur Distribution Center	33	Mahendranagar Distribution Center
17	Biratnagar Distribution Center	34	Gularia Distribution Center

NEA Board set up the Distribution branches in 2059 as per the new Distribution Center by-law 2059. The Distribution branches assigned responsibility to run as profit centre module as Distribution Center. the Distribution Centers are established through a performance service for tenure of 2 Distribution Centers need to have balance sheet and profit and loss account of their own on based on their own income and expenditure. The concepts have to buy power from the grid or sub grid of NEA at the calculated rate of transfer price as price as specified in the by- law. The performance indicators designed for centre's evaluation are:

**Table 2.8**  
**Performance indicators**

<b>S. N.</b>	<b>Performance Indicators</b>	<b>Weight</b>
1	Power loss control	0.50
2	Average collection period	0.10
3	Stock turnover ratio	0.07
4	Capital work progress	0.10
5	Connection period (new consumer)	0.20
6	MIS Reporting	0.03
	<b>Total</b>	1.00

*(Source: Vidyut, Half yearly magazine, 2065, Bhadra)*

The above table 4.19 depicts the fact that power loss control gets 50% weight and holds the most important issue on total work performance. The second priority goes to connection period (New Consumer) which is 20%. Similarly the average collection period and capital work progress gets 10% weight each. The least but the important focus goes to stock turnover and MIS reporting which are 7% and 3% weight respectively.

It is obviously true that leakage should be controlled as far as possible in order to increase the profitability of the Authority, which is reported later in power loss section. The targeted figures given so the each Distribution Center are as follows:

**Table 2.9**  
**Targeted leakage control**

<b>S.N.</b>	<b>Leakage %</b>	<b>Control %</b>
1	Above-35%	6%
2	26-35%	4%
3	20-25%	3%
4	15-19%	1%
5	10-14%	0.5%
6	Below 10%	0.05%

*(Source: Vidyut, Half Yearly Magazine ,2061, Bhandra)*

The Distribution Center is rewarded as per their performance indicators. It is evaluated in each six months on the basis of following criteria's.

**Table 2.10**  
**Basis of Evaluation**

<b>S.N.</b>	<b>Basis</b>	<b>Performance</b>
1	Power Loss Control	005%-6%
2	Average collection Period	50 days
3	Stock Turnover Ratio	3 times
4	New Connection	7 to 35 days
5	Capital Works Progress	As per performance index
6	MIS Reporting	Timely

*(Source: Vidyut, Half Yearly magazine, 2061, Bhadra)*

Those Distribution Center which meets the above composite performance indicators get the cast and other incentives. The other incentives include, Declaration of the best manager of distribution centre, keeping the photo of the best manager and providing the opportunity of foreign visit. In the other hand, those Distribution Center which composite performance indicator is below 60% of the targeted performance are punished as per the provision of the Authority.

Distribution centres have been made competitive, effective and efficient for the control of leakage and account receivable (dues). They are to be made more sell autonomous and encouraged for better performance again.

The efficiency and effectiveness of the Distribution Center after the implementation of Distribution Center concept is evaluated by the following analysis.

## **2.6 Review of Previous Studies or Research**

**Chiranjibi Acharya (1998)** on the topic of “Profit Planning in Nepalese Public Enterprises: A Case Study of Nepal Electricity Authority”. The main Objective of

the present study is to examine Comprehensive Profit Planning System applied in NEA and its effectiveness and the specific objectives are:

- ) Examine the Profit Planning system applied in NEA.
- ) To analyze the various functional budgets those are prepared by NEA.
- ) To analyze the variance between budgets and actual achievement of the Authority.
- ) To assess the financial performance analysis on NEA by applying financial tools i.e. Ratio Analysis.
- ) To make relevant suggestion and recommendations to the management of NEA on the basis of finding from the above analysis.

His study conducted the following findings after his detail analyzing the current practice of profit planning system of NEA which is highlighted some remarkable points as under: -

- ) NEA prepares both short-term and long-term profit planning but long term profit plan is confined only to the top-level executives.
- ) There is perfect positive correlation between the planned sales and actual sales, between sales and product showed by the different statistical tools.
- ) The Authority is unable to manage its account receivables properly amount of accounts receivable is increasing each year.
- ) All the expenses, such as manufacturing administrative and selling and distribution are not separated systematically. Authority has combined all these expenses together and named it “Operation and Maintenance Expenditure Budget”.
- ) Leakage, Outage and theft are on the major consideration in NEA. Due to this leakage there is a vast gap between sales and production and this leakage therefore is reducing the NEA’s profit annually.

- ) NEA prepares cash flow plan for up-coming year but it does not describe sources and use of cash in detail. Also it does not apply the mention determining interim, financing.
- ) There is a large amount of cash and bank balance in balance sheet of NEA. It shows the inability of management of NEA because it is lying idle.
- ) Cost-Volume Profit relationship is not considered while developing the sales plan and pricing strategy.
- ) According to the break even analysis the authority is in satisfactory stage because the BE sales in Rs. Lower than actual sales in Rs.
- ) Due to the poor assets turnover ratio, it can be said that there is the absence of effective utilization of assets.
- ) Strength and Weakness are not analyzed in depth by NEA because of the monopoly situation or the absence of competitors and it is not alert toward its possible threats and opportunity.
- ) NEA prepares program budget, however due to the lack of adequate knowledge of PPC, it is facing some problems in profit planning system.
- ) There is lack of proper co-ordination between various directorates in regard of the goals, objectives and strategies.

**G. Bhatta (1998)** has conducted a research about “Profit Planning in Nepal Electricity Authority”. In this research he has tried to point out some features and problems of profit planning in NEA. The chief objectives of Mr. Bhatta’s thesis are as below:

- ) To examine the present profit planning premises adopted by NEA.
- ) To observe the NEA’s profit planning on the basis of overall managerial budgeting.
- ) To analyze the variance between budgets and actual achievement of the Authority.
- ) To recommend measure to be taken instantly and further to encounter with the identified budgeting and profit planning problems.

For accomplishing the above stated objectives, Mr. Bhatta has made in research covering the time period of 5 years i.e. from fiscal year 2049/50 to 2053/54. He has used primary as well as secondary data in his dissertation. He has depicted the various findings and recommendations and chiefs of them are as under:

### **Findings**

- ) The NEA has high amount fixed costs and the interest payable on long-term loans every year comprises the considerable portion of fixed cost.
- ) Electricity leakage, theft and wastage are on of the remarkable problem of NEA and it is reducing the profit earning capacity of the authority. Likewise this leakage has become the main reason behind the high gap between actual production and actual sales.
- ) The balance sheet of NEA shows the huge amount of cash and bank balance lying idle and it indicates some deficiency of the authority to utilize its liquid assets.
- ) The accumulated amounts receivable which is increasing year by year denotes the inefficiency of the authority to collect its revenue in time.
- ) Overhead budget is not prepared in scientific and systematic way. All expenses are shown under only one overhead budget named as “Operation and maintenance Expenditure Budget”.
- ) There is the absence of effective utilization of assets. In comparison with the amount tied up in total assets, assets turnover ratio is poor.
- ) NEA prepares both long term and short-term profit plans, but long-term profit plan is confined only to the top level executives.
- ) The authority fails to analyze its strength and weakness in depth. Because of absence of the competitors, Authority has become monopolistic concern and hence, it is not alert towards its possible treats and opportunities.
- ) Cost Volume Profit relationships are not considered while developing the sales plan and pricing strategy.

- ) There are no clear-cut boundaries to separate cost into fixed and variable. The cost classification is not scientific and systematic.
- ) The Authority has been facing some problems in profit planning system. Management is in the lack of adequate knowledge about the following facts: nature and content of profit planning, corporate planning, and Participate management, evaluation of board and long range objectives and co-ordination system in the organization.

**Suman Acharya (2000)** has carried on the topic of profit planning in public utility undertakings of Nepal. The main objective of the present study is to evaluate the profit planning system in public utility undertaking of Nepal.

In accordance to this main objective the study tried to meet the following sub-objectives.

- ) To interpret the trend of profit of NEA and NTC.
- ) To see how far the public utility undertakings is participating on contributing the national development.
- ) To examine the board and specific objectives of NEA and NTC.
- ) To evaluate the variances between target and achievement in different responsibility centers.
- ) To find out the major problems in developing and implementation profit planning in NEA and NTC.
- ) To suggest some remedies for improving profit planning system.

## **Findings**

Major findings of his research work can be presented below:

- ) Both in NEA and NTC, goals and objectives are not communicated to lower level staff. There is the absence of MBO principle of participate management.
- ) In both enterprises the top-level executives are only involved in planning and decision-making.

- ) In both enterprises there is not any concept of profit planning system.
- ) Budgeting procedure of NEA is realistic than NTC to some extent because in NEA there is less deviation between budgeted and actual data.
- ) Both NEA and NTC are suffering from high fixed cost.
- ) In NEA and NTC, overheads are not classified systematically and it creates problems to control cost.
- ) NEA is suffering from power loss, which is 24% of production, and also in NTC there is an increasing trend of idle capacity, which is very remarkable in profit planning system.
- ) The main problem of public utility undertakings is whatever it aims to minimize profits or to maximize social service is not clearly distinguished.
- ) There is problem of autonomy, government directly interfere to the public enterprises. Any decisions like about pricing, services and personnel should be approved prior by the Government.
- ) NEA has established 56 DC's as profit center but these centers can not operated as objectives.
- ) NTC has started home delivery services of bill in one exchange as trial to collect the telephone charges in minimum time. But this purpose is not fulfilled because the date of collecting cash is the same as other customers.
- ) In NTC there is a system of Management Information System Report but in NEA there is not any system of MIS report.
- ) Both NEA and NTC have not practice to follow the budget principles strictly because in both enterprises the actual overhead on out of budgeted limit.

**Puran Prasad Shrestha (1999)** has made a study on the Comparative Financial Analysis of Water Supply and Sewerage Cooperation and Nepal Electricity Authority.

The Specific objectives of the study are as follows:

- ) To analyze, examine and interpret the financial position of both PEs;
- ) Identify the financial strength and weakness of both PEs;
- ) To describe and analyze the changes in financial position and mobilization of both PEs; and
- ) To compare the financial position of both PEs.

### **Major Findings**

- ) The debt-equity ratio reveals that WSSC and NEA both have not so high debt equity ratio. Even though, WSSC has been slightly more rely on loan than that of NEA, but the increasing trend of debt is higher in NEA. So it has been becoming highly levered than that of WSSC.
- ) The interest coverage ratio indicates the worsening position of WSSC. It seems that WSSC has not utilized its funds in proper manner and there is no fund to pay interest charges. Where as in case of NEA; this ratio indicted the more desirable financial position. NEA has utilized the funds properly in some extent and it has few funds to pay the interest charges.
- ) The return on assets reveals that WSSC has been suffered by unsound financial position so that the financial resources invested in its assets are not utilized properly and thus the financial position of WSSC has been worsening over the years. Where as the return on assets of NEA has not been worsening and financial resources invested in assets are utilized more properly than that of WSSC. Similarly, the return on capital employed of WSSC has been worst due to its heavy losses. So, the operating position of WSSC is not good and it has not been able to utilize its creditors' fund and GOVERNMENT OF NEPAL equity and contributors properly. Where as in case of NEA, the return on capital employed is not worst but insufficient in order to maintain its operating efficiency. NEA has been able to utilize its creditors' fund and owners' equity somehow efficiency than that of WSSC.
- ) In view of current ratio, it reveals that even the current ratios of WSSC and NEA have been decreasing; the liquidity position of WSSC has been in far

better position than that of NEA. However WSSC has maintained its assets idle and more funds has been tightened up in advances, debtors and inventories. Even the current ratio of WSSC is higher, it fails to maintain the consistency in the short term solvency and there is erratic changes are current ratio where as in case of NEA the current ratio is lower than that of WSSC and it seems that the liquidity position is unsound. Moreover, NEA is unable to meet its current obligations during the final two years of this study. However, NEA has maintained the consistency in short-term solvency to some extent. The quick ratio of WSSC and NEA show the unsound financial position of WSSC is somehow better than that of NEA in view of quick ratios, the slow paying debtors, non-liquid inventory and most of the cash needed to pay its operating expenses have made the unsound liquidity position of WSSC.

**Narendra Kandel (1998)** has submitted his research work entitled “Profit Planning in Nepalese Utilities Concern: A case study of Nepal Electricity Authority” in which he has tried to analyze and evaluate the profit planning performance under various functional budgets of NEA. The major findings are cited as under:

- ) Nepal Electricity Authority is only enterprise in power sector that is facing the threats from independent power producer and loosing its absolute monopoly.
- ) NEA prepares profit plan for both long and short term. Short-term profit plan is communicated to concerned departments and persons but long term profit is strictly confidential to top level only.
- ) NEA prepares both functional and financial budget and financial budgets as components of comprehensive profit planning and control. The major functional budgets are sales budget, generation and purchase budget and purchase budget, operation and maintenance budget and personnel budget. Similarly the financial budgets prepared by NEA are capital expenditure budget, cash flow budget and budgeted profit and loss account.

- ) The authority is unable to sell all available energies to customers. It has been serving only about 15% of the total population.
- ) NEA has not applied cost classification techniques till now. It consolidates all expenditures relating to manufacturing, administrative, selling and distribution under the single category as “Operation and Maintenance Expenditure Budget”.
- ) There is wide gap between production and sales of electricity. The gap is due to power loss that has occurred increasingly by theft, leakage, outage and clumsy distribution.
- ) NEA uses traditional techniques for capital budgeting. Capital expenditure budget is prepared for both long-term as well as short-term.
- ) NEA is unable to properly utilize the cash and bank balance.
- ) NEA is unable to collect its debts from customers on time. The average collection period is 75 days, which is quite higher than the normal period of 60 days.
- ) The proportionate increase of profit is less than the proportionate increase on investment.
- ) Because of non-classification of overhead expenses as fixed and variable components, application of flexible budgeting technique and cost volume profit analysis is lacking in NEA.
- ) The break-even analysis indicates that the break even sales are lower than the actual sales, which is the indication of good operational situation.
- ) There is a lack of proper co-ordination between various directorates and department.
- ) The authority fails to analyze its strengths, weakness, opportunities and threats in real depth. Though it is facing competition from independent power producers and supplier, it has not yet made assessment of its present prospects and future potentiality seriously.

**Yagya Prasad Timilsina (2000)** entitled “Profit Planning in Nepalese Manufacturing Concern: A case study of Nepal Electricity Authority” submitted to

the central department of management by Mr. Timilsina states the following major findings.

- ) NEA prepares both long-term and short-term profit plan but they are confined only up to the top-level executives.
- ) The authority is unable to sell all services available to its grid.
- ) The basis chosen for cost classification are not systematic and appropriate.
- ) The significant gap between sales and production is mainly due to leakage, outage and theft.
- ) NEA uses traditional methods of evaluation for capital budgeting.
- ) Authority is unable to collect its debt from customers.
- ) Return on net worth is positive and increasing, however, it is not satisfactory.
- ) Power purchase should be discouraged which will reduce operational expenses.

**Dr. Bhekh Bahadur Thapa & Bharat Bahadur Pradhan** entitled “Water Resources Development: Nepalese Perspectives” published by HDS study Directors Thapa and Pradhan is one of important treats in respect of the hydropower of Nepal. Some of the relevant findings are as follows:

- ) Forest in Nepal provides more than 95% of the rural energy needs, about 20-25% of the fodder for livestock and all the domestic timber needs.
- ) Deforestation is one of the most challenging and rapidly worsening environment problems in Nepal.
- ) Nepal’s energy scenario reflects imbalances between energy consumption and energy resources endowment.
- ) The theoretical power potential of the water resources in Nepal is estimated to be about 83000 MW out of which 42122 MW is estimated to be the output of technically and economically viable schemes. The installed capacity of hydro power stations developed till now works out to be less than one percent of the potential power generation identified up to date. Thus,

Nepal's enormous potential of water resource to generate hydropower is in the early stage of exploitation.

- ) Future Development of agriculture based industries and processing facilities would also need reliable supply of power, storage type projects can substantially increase opportunities for large scale year round irrigation as well as hydropower generation for export and use in power intensive industries.
- ) Development of water resources is essential in order to meet human needs like increasing agriculture and industrial production, meeting energy needs and earning foreign exchange from power export.
- ) The strategy from power development in Nepal should aim at maximizing the economic benefits from hydropower development through an optimum development of country's river basins. Optimum utilization of this resources calls for meeting full cooperation among the riparian countries

**Dilli Raj Sharma (2000)** has submitted his research work on the topic of "Revenue collection of NEA" had the following findings & research:

#### **Findings**

- ) The revenue of NEA is increasing yearly.
- ) There has been fluctuating trend of revenue in NEA.
- ) The revenue form industrial sector is more fluctuating.
- ) There is no improvement in the revenue collection of NEA despite the government efforts in this field.

**Anil Prasad Bista (2003)** has made a study entitled, Role of sales budgeting in the Profitability of Public Enterprises in Nepal: A case study of Dairy Development Corporation (DDC)". The major objectives of his study are:

- ) To examine the sales budgeting process adopted by DDC.
- ) To analyze the relationship between sales and profitability of DDC.
- ) To compare the performance status of sales budgeting system of DDC.

- ) To find out the cause of deviation on sales budget of DDC.
- ) To provide suitable suggestions and recommend on the basis of the study.

## **Findings**

Major findings of the study are enumerated hereunder,

- ) DDC does not have comprehensive profit plan based on the realistic expectation.
- ) DDC does not have long term strategic sales plan.
- ) Lack of coordination between performance department and measurement department.
- ) Participation of only top levels in planning and decision-making.
- ) Lack of communication between high level and low-level staffs.
- ) Sales forecasting based on the personal judgments of top-level staffs.
- ) Actual sales are lower than budgeted sales.
- ) Lack of adequate supply of milk and collection centers for the milk from farmers.
- ) Rate of increase in cost is higher than the rate of change in sales.
- ) Non-evaluation of internal and external variables.
- ) Lack of segregation of cost into fixed and variables.
- ) Lack of planning, lack of capacity and political disturbances are some of the causes for the non-achievement of plans.

**Man Bahadur Tamang (2004)** on the topic of “Sales Budgeting & Planning of NOC” has the following objectives:

- ) To examine the sales planning system by NOC.
- ) To examine annual sales budget of NOC and to examine interrelationship between sales planning & profit planning.
- ) To study sales trend & problems of NOC.
- ) NOC has got enough storage facilities located at different parts of the country for Petrol, Diesel, Kerosene and Aviation Fuel. The total storage

facilities could sustain nearly a month's national demand of these petroleum products.

- ) NOC has got enough distributions depots to cover the every economic region of Nepalese Market.
- ) The sales plan achievements are satisfactory for expansion but there is no particular person to prepare sales plan.
- ) NOC has sales forecasting on realistic ground because there is highly significant and positive correlation between budgeted and actual sales which indicate that if targets are high achievement will also be high.
- ) Regression line about sales and purchases of NOC indicate a positive trend.
- ) Least Square straight line of sales trend of NOC shows that sales will be high in future if present efforts are frequently being improved.
- ) Budgeted sales has prepared by NOC in Quantity but not in rupees.
- ) The corporation has no clear pricing method.
- ) There is no good performance evaluation method of corporation.
- ) NOC does not carry out any kind of sales research to know the consumers' reaction and the external forces that could affect NOC's business in the long run.
- ) Every price hike decision turns out to be a big political propaganda or issue in the country.
- ) It is controlled by a government ministry, which has got other major areas of concern like industries and commerce. Mostly the policy matter and necessary pricing decisions are pending in the ministry. NOC is not independent on its policy and cannot decide the retail prices of the petroleum products on its own.

**Shashti Kumar Shrestha (2005)** on the topic of "Sales Planning of Nepal Electricity Authority" has the following objectives:

- ) To analyze the variance of annual sales budget and actual sales.
- ) To analyze the relationship between sales and production.

- ) To analyze the interrelationship between sales and profit.
- ) To study the trend of sales and problems of Nepal Electricity Authority.
- ) To interpret the sales related ratios.
- ) To analyze the relationship between sales revenue and total costs.

## **Findings**

- ) The trend value of sales is increasing.
- ) The time series analysis indicates that it will go on increasing in the following years.
- ) An actual sale is less than actual production. It indicates remarkable power loss of NEA.
- ) Power loss is significantly high in NEA. This is due to theft, Leakage, outage and unsystematic distribution channel.
- ) NEA is paying a huge amount of interest every year and suffering from high fixed costs.
- ) NEA has very poor management of costs. Sale has increased each year but due to high cost the authority has being suffered from huge loss.
- ) NEA has very poor utilization of assets.
- ) Operating ratio is very high which is nearly cent percent so there is less operating profit to cover the non operating expenses.
- ) The capital employed ratio is low so NEA is not able to utilize its capital efficiently.
- ) Number of customers is increasing each year but NEA is not being able to make efforts to meet the demand of the customers.

## **2.7 Research Gap**

The public enterprise one of the form of business undertaking plays vital role for the overall development of the country. Truly speaking it occupies the most value in developing countries like, Nepal. Considering its value a number of researchers had conducted their research works on various topics of different Nepalese public

enterprises. It was also found that Nepal Electricity Authority, one of the leading public enterprises of Nepal was widely taken into consideration for the vary purpose.

Most of the researchers conducted the research wok and found that NEA is suffering from huge loss annually and is becoming the financial burden for the government. They however are unable to ascertain the reasons behind for its poor financial performance. This study would be of different value as it tries to find out the concrete reasons for the poor financial problem of NEA.

## **CHAPTER - III**

### **RESEARCH METHODOLOGY**

#### **3.1 General Meaning**

Research methodology refers to the various sequential steps to be adopted by a researcher for the study of the related problem with specified objectives in a view. It is the systematic & well-organized way for solving the research problem.(C.R. Kothari, 1190, 390) This research tries to evaluate the financial performance of NEA. As it is necessary to follow the appropriate research methodology, the following main contents are considered.

#### **3.2 Research Design**

Research design is the definite procedure and technique which guideline to study and propounds ways for research variability. It is a planned structure and strategy of investigation to obtain answers to research questions.

This study is the examination of financial performance of NEA of five years period. It tries to sort out the financial performance of NEA. It is closely related with the amount of resources i.e. assets and liabilities and results of their utilization for generating profitability.

#### **3.3 Nature & Sources of Data**

Data are the main arms and weapons for successful analysis. Data may be information, statistics, facts, figures, charts etc. for the successful analysis. It plays an important role to draw meaningful conclusion. So collection of data is the most important part of any research. Data are of two types i.e., Primary Data and Secondary Data. As primary data are to be collected from the source through direct interview, questionnaire, dialogue, discussion etc. they are raw and need to be processed which is time consuming & tedious as well. Considering this fact, secondary data are used here for this research which can be collected through the

management, budgeting section and different publications. The data have been collected from the following sources:-

- ) Published and unpublished articles
- ) Annual reports of NEA
- ) Profiles of Enterprises
- ) Half yearly magazine, "Vidyut".
- ) Budget & plan of NEA.
- ) Previous studies made in this field.

### **3.4 Period Covered**

This research study covers the time period of five years i.e. from F/Y 2059/60 to 2063/64 for short term and long-term financial analysis. Data are collected from NEA and it is assumed that they are true & correct.

### **3.5 Research Variables**

The research variables of this study are related with financial statement of NEA, actual sales and total costs, profit & loss, Balance sheet etc. which cover 5 years period.

### **3.6 Tools of Analysis**

As the data used for this research study is secondary data, they are managed in proper table, format chart for meaningful interpretation. Various statistical, financial as well as mathematical tools are used as per need in order to come in conclusion. The tools that are used to in this study are:

- ) Arithmetical Mean
- ) Standard Deviation
- ) Co-efficient Variation
- ) Percentage
- ) Ratio Analysis
- ) Graphs and diagrams

- ) Regression Analysis
- ) Trend Analysis

### **3.7 Research Procedure**

The following steps are followed for the very research procedure.

- ) Collection of necessary books, journals, magazines, newspaper and other relevant documents
- ) Assimilation of useful secondary data.
- ) Description and analysis of collected data.
- ) Presentation of data in tables, graphs, figures and charts as per requirements.
- ) Analysis of data with the help of statistical and financial tools.
- ) Extraction of valuable conclusion and recommendations.

## CHAPTER - IV

### DATA PRESENTATION AND ANALYSIS

#### 4.1 General Meaning

This chapter includes the analysis and results of the gathered data with a view to assess financial analysis of the Authority for the period of five years. Consequently, this research paper helps to the management to take benefit of strategic management techniques by providing information regarding strength and weakness of the industry. To evaluate the financial performance of NEA, different tools and techniques have employed in this chapter.

#### 4.2 Liquidity Ratios

Liquidity ratio measures the short term solvency position of the firm. It is used by the firm to judge its ability to pay its current obligations or short term debts within a year. Essentially these ratios are the comparison of short term obligation with the resources available and measured by the current ratio and quick ratio.

##### 4.2.1 Current ratio

Current ratio is a measure of the firm's short term solvency. It indicates the availability of current assets in rupees for every one rupee of current liability. As a conventional rule, a current ratio of 2:1 or more is considered satisfactory. The current ratio is calculated by dividing the current assets by current liabilities.

$$\text{Current ratio} = \frac{\text{Current Assets}}{\text{Current Liabilities}}$$

**Where,**

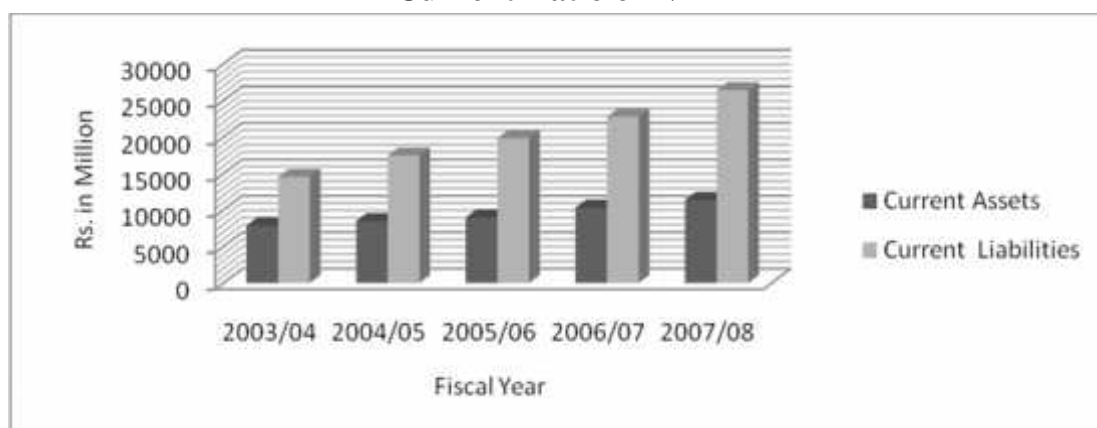
Current Assets	:	Inventories + Sundry Debtors and other receivables + Cash and Bank Balance + Prepaid, Advance, Loan and Deposits
Current Liabilities	:	Sundry Creditors and Payable + provisions

**Table 4.1**  
**Current Ratio**  
**Nepal Electricity Authority**

			Rs. in million
Fiscal Year	Current Assets (CA)	Current Liabilities (CL)	Current Ratio (CR) = CA/CL
2003/04	7883.41	14538.09	0.54:1
2004/05	8491.60	17466.39	0.49:1
2005/06	8995.30	19854.19	0.45:1
2006/07	10322.97	22812.13	0.45:1
2007/08	11391.46	26430.84	0.43:1
<b>Mean</b>			<b>0.47:1</b>
<b>S.D.</b>			<b>0.04:1</b>
<b>C.V. %</b>			<b>8.30</b>

*Source: Annual Report NEA, 2007/08*

**Figure 4.1**  
**Current Ratio of NEA**



*Source: Annual Report NEA, 2007/08*

The table & figure 4.1 shows the decreasing trend of current ratio. The current ratio ranged from 0.54:1 in the fiscal year 2003/04 to 0.43:1 in the fiscal year 2007/08. None of the current ratios of NEA had met the standard ratio of 2:1. As a result the average current ratio (0.47:1) of NEA within the five year period taken for research is less than the benchmark 2:1. However, the coefficient of variation, 8.30%, on current ratio indicates the consistency in such ratio. Thus, it can be concluded that NEA was not in the position to meet its current obligations and was

in great difficulties while paying bills. The lower current ratio may turn NEA into bankruptcy in meeting its payment.

#### 4.2.2 Quick Ratio

This ratio establishes a relationship between quick or liquid assets and current liabilities. An asset is liquid if it can be converted into cash immediately or reasonably soon without a loss of value. Inventories are considered to be less liquid. So, quick asset doesn't include it. The quick ratio is found out by dividing quick assets by current liabilities. Generally, the quick ratio of 1:1 is considered as adequate standard. The quick ratio of NEA is as follows:

$$\text{Quick Ratio} = \frac{\text{Quick Assets}}{\text{Current Liabilities}}$$

**Where,**

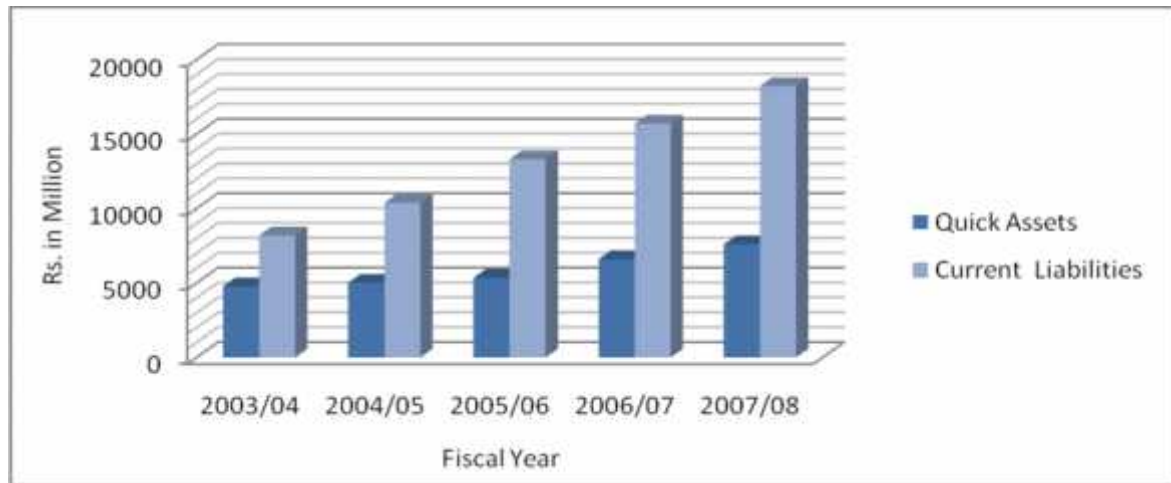
Quick Assets : Sundry Debtors and other receivables + Cash and Bank Balance  
 Current Liabilities : Sundry Creditors and Payable + provisions

**Table 4.2**  
**Quick Ratio**  
**Nepal Electricity Authority**

			Rs. in million
Fiscal Year	Quick Assets (QA)	Current Liabilities (CL)	Current Ratio (CR) = QA/CL
2003/04	4772.13	14538.09	0.32:1
2004/05	5020.30	17466.39	0.29:1
2005/06	5346.60	19854.19	0.27:1
2006/07	6598.99	22812.13	0.29:1
2007/08	7597.54	26430.84	0.29:1
<b>Mean</b>			<b>0.29:1</b>
<b>S.D.</b>			<b>0.02</b>
<b>C.V. %</b>			<b>5.48</b>

*Source: Annual Report NEA, 2007/08*

**Figure 4.2**  
**Quick Ratio of NEA**



*Source: Annual Report NEA, 2007/08*

The table & figure 4.2 shows that the quick ratio of NEA is in fluctuating trend. The ratio ranged from 0.32:1 in the fiscal year 2003/04 to 0.29:1 in the fiscal year 2005/06. In none of the fiscal year, the quick ratio of NEA has met the standard ratio of 1:1. The average ratio in the five year periods is only 0.29:1, which is less than one third of the standard ratio. This clearly indicates that NEA faces problems in clearing its current liabilities, which can obviously decrease the trust of creditors on NEA and eventually can create problem to NEA in case of need of cash.

### **4.3 Activity Ratio**

Turnover ratios are also called assets management or activity or efficiency ratios. Those ratios look at the amount of various types of assets and attempt to determine if they are too high or low at current operating levels. They provide the measure for how efficiently the firm has been managing its available assets. If too many funds are tied up in certain types of assets that could otherwise be employed more productively elsewhere, the firm is not as profitable as it should be. The following ratios are calculated of NEA to know how efficiently it is utilizing assets for the study.

### 4.3.1 Inventory turnover ratio

Each firm has to maintain a certain level of inventory (stock) as per the requirement of the business. It indicates whether the investment in inventory is efficiently used or not. It checks the efficiency of inventory management. This ratio is calculated as;

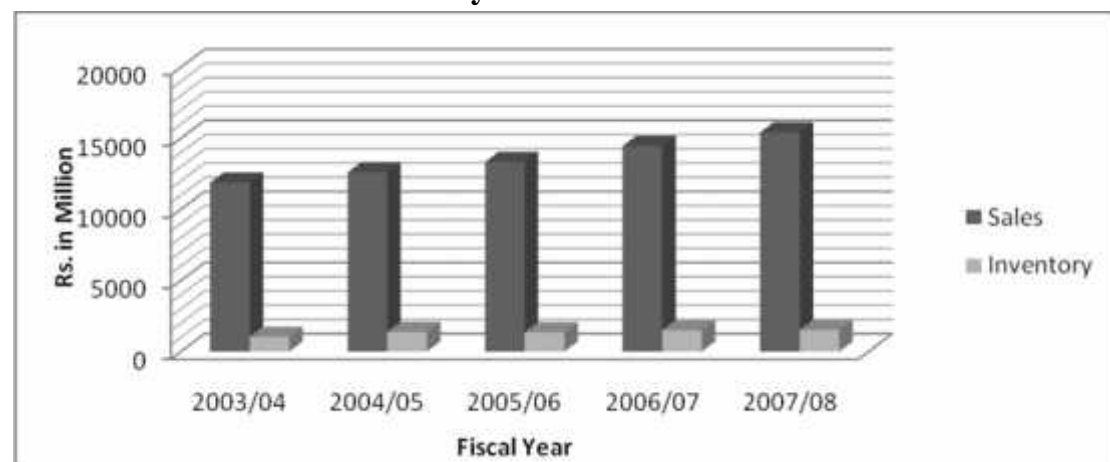
$$\text{Inventory Ratio} = \frac{\text{Sales}}{\text{Inventory}}$$

**Table 4.3**  
**Inventory Turnover Ratio**  
**Nepal Electricity Authority**

<b>Rs. in million</b>			
<b>Fiscal Year</b>	<b>Sales</b>	<b>Inventory</b>	<b>Inventory Turnover Ratio</b>
2003/04	11874.70	1048.01	11.33
2004/05	12605.20	1372.70	9.18
2005/06	13331.90	1354.80	9.84
2006/07	14449.73	1498.45	9.64
2007/08	15405.03	1518.45	10.15
<b>Mean</b>			<b>10.03</b>
<b>S.D.</b>			<b>0.72</b>
<b>C.V. %</b>			<b>7.21</b>

*Source: Annual Report NEA, 2007/08*

**Figure 4.3**  
**Inventory Turnover ratio of NEA**



*Source: Annual Report NEA, 2007/08*

The table and figure depicts that the inventory turnover ratio followed a fluctuating trend. The inventory turnover ratio in the fiscal year 2003/04, 2004/05, 2005/06, 2006/07 and 2007/08 are 11.33 times, 9.18 times, 9.84 times, 9.64 times and 10.15 times respectively. However, the mean ratio is 10.03 times, which indicates that company has the policy of keeping almost 10% of the sales as stock. The standard deviation of 0.72 times and coefficient variation of 7.21% indicate that there is uniformity in the inventory policy of the company.

#### 4.3.2 Debtor Turnover Ratio

This ratio indicates relationship between Net Credit Sales and Trade Debtors where trade debtors include Sundry Debtors, Account Receivables and Bills Receivable. It tests the efficiency of the firm for collecting the receivables amount. It also shows the rate at which cash is generated by the turnover of Trade Debtors. It is calculated by dividing Net Credit Sales by Trade Debtors.

$$\text{Debtors Turnover Ratio} = \frac{\text{Net Sales}}{\text{Trade Debtors}}$$

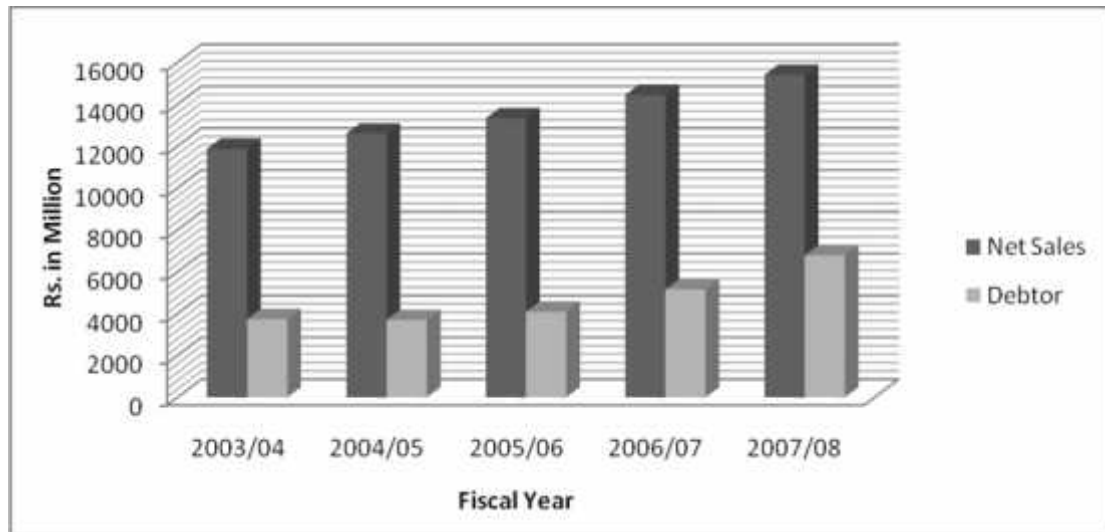
Higher debtor turnover is accepted because higher turn over generates the receivables in shorter time. However the industrial standard is not fixed. The inventory ratio of NEA from 2003/04 to 2006/07 is presented below.

**Table 4.4**  
**Debtor Turnover Ratio**  
**Nepal Electricity Authority**

<b>Rs. in million</b>			
<b>Fiscal Year</b>	<b>Net Sales</b>	<b>Debtor</b>	<b>Debtor Turnover Ratio</b>
2003/04	11874.70	3735.71	3.18
2004/05	12605.20	3697.70	3.41
2005/06	13331.90	4088.00	3.26
2006/07	14449.73	5151.44	2.80
2007/08	15405.03	6776.70	2.27
<b>Mean</b>			<b>2.98</b>
<b>S.D.</b>			<b>0.41</b>
<b>C.V. %</b>			<b>13.73</b>

*Source: Annual Report NEA, 2007/08*

**Figure 4.4**  
**Debtor Turnover ratio of NEA**



*Source: Annual Report NEA, 2007/08*

The table & figure 4.4 showed the debtors turnover ratio of NEA in the five fiscal years taken for research. The debtor turnover ratio ranged from 2.27 times in the fiscal year 2006/07 to 3.41 times in the fiscal year 2004/05. The mean ratio of 2.98 times indicates that NEA has almost one-third of its credit sales amount to be receivable. The NEA has high amount of the receivable in the fiscal year 2007/08, since the debtor turnover ratio is lowest, 2.27 times, in that year. The C.V. of 13.73% indicates that there is satisfactory level of consistency in the debtor turnover ratio on the five year period.

### **4.2.3 Average Collection Period**

Average Collection Period is the average number of the days for which the firm has to wait to collect trade debtors and converted into cash. It is calculated as,

$$\text{Average Collection Period} = \frac{\text{Days in a year}}{\text{Debtors Turnover Ratio}}$$

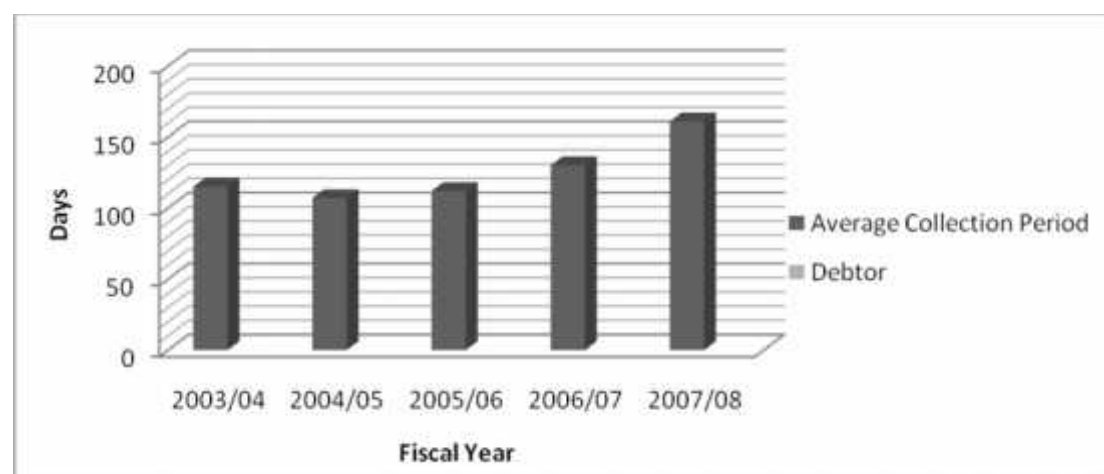
The shorter collection period symbolizes the higher efficiency of the authority to collect its receivables. The average collection period of NEA from 2003/04 to 2007/08 is presented below in table and diagram.

**Table 4.5**  
**Average Collection Period**  
**Nepal Electricity Authority**

<b>Fiscal Year</b>	<b>Days in a Year</b>	<b>Debtor Turnover Ratio</b>	<b>Rs. in million</b>
			<b>Average Collection Period</b>
2003/04	365	3.18	115
2004/05	365	3.41	107
2005/06	365	3.26	112
2006/07	365	2.80	130
2007/08	365	2.27	161
<b>Mean</b>			<b>125</b>
<b>S.D.</b>			<b>19.57</b>
<b>C.V. %</b>			<b>15.65</b>

*Source: Annual Report NEA, 2007/08*

**Figure 4.5**  
**Average Collection Period of NEA**



*Source: Annual Report NEA, 2007/08*

The table & figure 4.5 shows the average collection period of NEA. The NEA took lowest period, 107 days, to collect its credit sales in the fiscal year 2004/05 and took the longest time, 161 days, in the fiscal year 2007/08. The average collection period of NEA followed increasing trend in the last four years period. This indicates that the collection policy of NEA is poor in recent years. However, in average NEA took 125 days to collect its credit sales and the C.V. of 15.65% implies satisfactory result in the collection policy.

#### 4.3.4 Fixed Assets Turnover Ratio

It shows the investment in fixed assets of the firm to contribute the sales. It measures how efficiently the firm is utilizing its investment in fixed assets such as plant and machinery, land and building etc. This ratio also indicates the adequacy of sales in relation to the investment in fixed assets. It is determined by dividing the sales amount by net fixed assets i.e. depreciated value of fixed assets but it doesn't consider investment. Mathematically, it is calculated as:

$$\text{Fixed Assets Turnover Ratio} = \frac{\text{Sales}}{\text{Net Fixed Assets}}$$

Where,

Net Fixed Assets: Cost of Property, Plant & equipments-Depreciation

Higher the fixed assets turnover shows the better performance of the firm. The following is the fixed assets turnover of NEA for five years.

**Table 4.6**  
**Fixed Assets Turnover Ratio**  
**Nepal Electricity Authority**

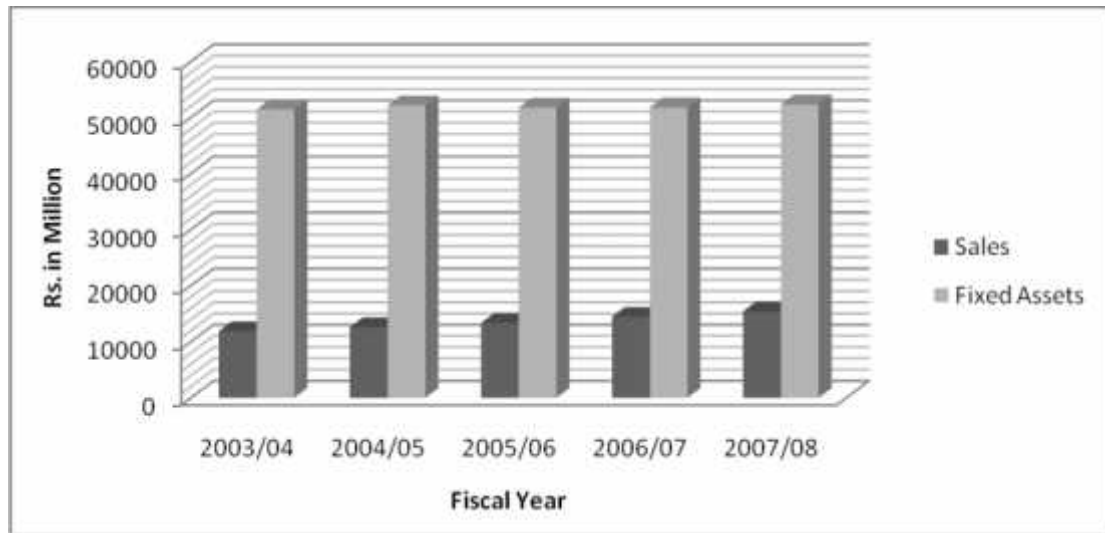
<b>Rs. in million</b>			
<b>Fiscal Year</b>	<b>Sales</b>	<b>Fixed Assets</b>	<b>Fixed Assets Turnover Ratio</b>
2003/04	11874.70	51415.14	0.23
2004/05	12605.20	52166.56	0.24
2005/06	13331.90	51743.38	0.26
2006/07	14449.73	51781.76	0.28
2007/08	15405.03	52294.10	0.29

<b>Mean</b>			<b>0.26</b>
<b>S.D.</b>			<b>0.02</b>
<b>C.V. %</b>			<b>8.77</b>

*Source: Annual Report NEA, 2007/08*

**Figure 4.6**

**Fixed Assets Turnover Ratio**



*Source: Annual Report NEA, 2007/08*

The table & figure 4.6 depicts the fixed assets turnover of NEA. The table indicates that the ratio ranged from 0.23 times in the fiscal year 2003/04 to 0.29 times in the fiscal year 2007/08. In each fiscal year the ratio is gradually increasing. The mean ratio of 0.26 times indicates that NEA generated Re. 0.26 sales from per rupee investment in fixed assets. The S.D. and C.V. of fixed assets turnover ratio are 0.02 times and 8.77 % respectively. Although, the ratio is very poor, it can be expected from the increasing trend that NEA will obviously effectively utilize its fixed assets to generate sales in the future.

**4.2.5 Total Assets Turnover Ratio**

Total assets include current assets, long term or fixed assets and intangible assets. This ratio establishes the relationship between total assets and sales of the firm. It analyzes to what extent assets of the firm are managed and utilized. It also checks the role of assets for increasing sales. It indicates the sales generated per rupee of

investment in the total assets. It is simply calculated by dividing net sales by total assets. Mathematically, it is calculated as:

$$\text{Total Assets Turnover Ratio} = \frac{\text{Sales}}{\text{Total Assets}}$$

Where,

Total Assets : Property, Plant & Equipments + Total Current Assets

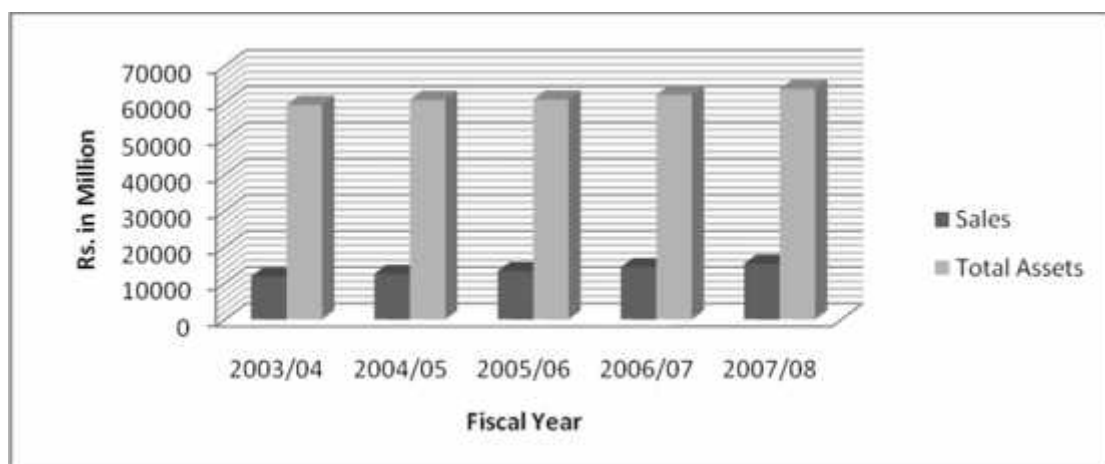
Higher the total assets turnover shows the better performance of the firm. The following is the total assets turnover of NEA from year 2003/04 to 2007/08.

**Table 4.7**  
**Total Assets Turnover Ratio**  
**Nepal Electricity Authority**

Fiscal Year	Sales	Total Assets	Rs. in million
			Total Assets Turnover Ratio
2003/04	11874.70	59298.55	0.20
2004/05	12605.20	60658.16	0.21
2005/06	13331.90	60738.68	0.22
2006/07	14449.73	62104.73	0.23
2007/08	15405.03	63685.56	0.24
<b>Mean</b>			<b>0.22</b>
<b>S.D.</b>			<b>0.01</b>
<b>C.V. %</b>			<b>6.43</b>

Source: Annual Report NEA, 2007/08

**Figure 4.7**  
**Total Assets Turnover Ratio**



Source: Annual Report NEA, 2007/08

The table & figure depicts the relation between the net sales and total assets of NEA. It has very poor management of total assets. It is true that NEA has high investment on different fixed and other current assets but shows poor concentration for the management for the high utilization of available assets. A low ratio is an indicator of poor mobilization of fixed assets. Through the study of above table it is clear that there is very poor utilization of assets of NEA. The overall turn over is less than even 1 time for the five year study. Its average ratio is only 0.22 time. This indicates that NEA remained able to generate only Re. 0.22 sales from per rupee investment in total assets.

#### 4.3.6 Capital Employed Turnover Ratio

Capital Employed may be defined as shareholder's equity plus long term debt. Higher ratio of capital employed turnover indicates better utilization of owners and long-term creditor's funds. It is calculated by dividing sales by capital employed.

$$\text{Capital Employed Turnover Ratio} = \frac{\text{Net Sales}}{\text{Total Capital}}$$

Where,

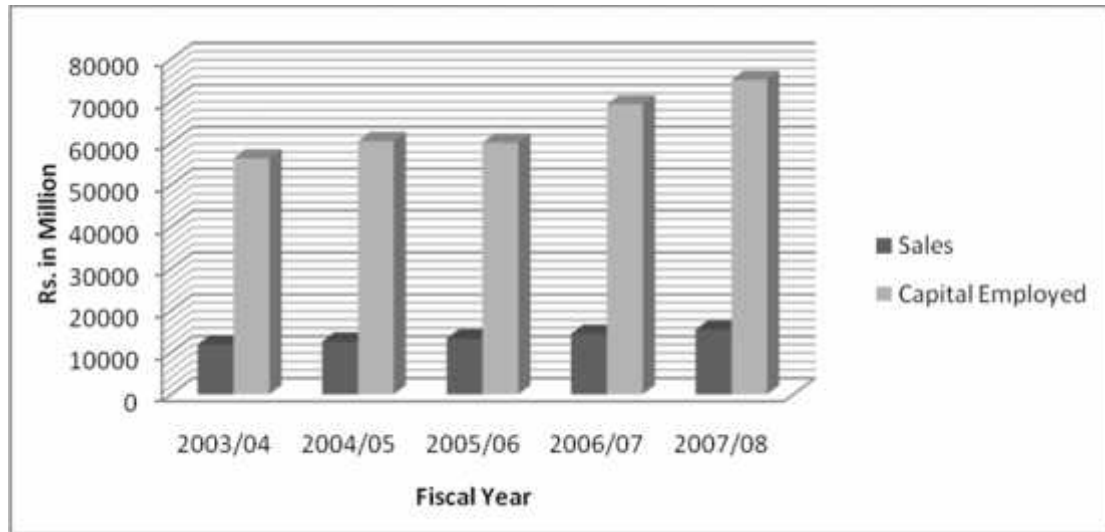
Total Capital : Share Capital + Reserve & Accumulated Profit +  
Secured Long-term Loan

**Table 4.8**  
**Capital Employed Turnover Ratio**  
**Nepal Electricity Authority**

<b>Rs. in million</b>			
<b>Fiscal Year</b>	<b>Sales</b>	<b>Capital Employed</b>	<b>Capital Employed Turnover Ratio</b>
2003/04	11874.70	56321.30	0.21
2004/05	12605.20	60405.17	0.21
2005/06	13331.90	60055.69	0.22
2006/07	14449.73	69195.61	0.21
2007/08	15405.03	75062.29	0.21
<b>Mean</b>			<b>0.21</b>
<b>S.D.</b>			<b>0.004</b>
<b>C.V. %</b>			<b>1.89</b>

Source: Annual Report NEA, 2007/08

**Figure 4.8**  
**Capital Employed Turnover ratio**



*Source: Annual Report NEA, 2007/08*

The above table delineates that the capital employed turnover ratio is 0.21 times in the four years and 0.22 times in one fiscal year 2005/06. In average, the ratio is 0.21 times. The S.D. and C.V. on the ratio are 0.004 times and 1.89% respectively. The capital employed turnover ratio is also very poor; NEA generated only Re. 0.21 sales on per rupee investment on capital. The lower ratio may endanger the organization in retaining its shareholders. It is worthwhile if NEA enhance its management in utilizing its capital.

#### **4.4 Capital Structure Ratio**

Capital Structure ratio measures the composition of debt capital and equity capital. The three ratios are been measured which are as follows:

##### **4.4.1 Debt-Equity Ratio**

Debt-equity sometimes called debt to net worth ratio is a test of long term solvency of the firm. It measures the relative claims of creditors and owners against the assets of the firm. This ratio indicates the relationship between debt and equity i.e.

outsiders funds which are sometimes called as external and internal equity. It depicts the degree of protection enjoyed by the long term creditors. It is calculated in order to calculated then extend of debt financing used in the firm. Mathematically, it is calculated as:

$$\text{Debt – equity Ratio} = \frac{\text{Long Terms Debt}}{\text{Permanent Equity}}$$

**Where,**

Long Term Debt : Secured Long term Loan

Permanent Equity : Share Capital + Reserve & Accumulated Profit

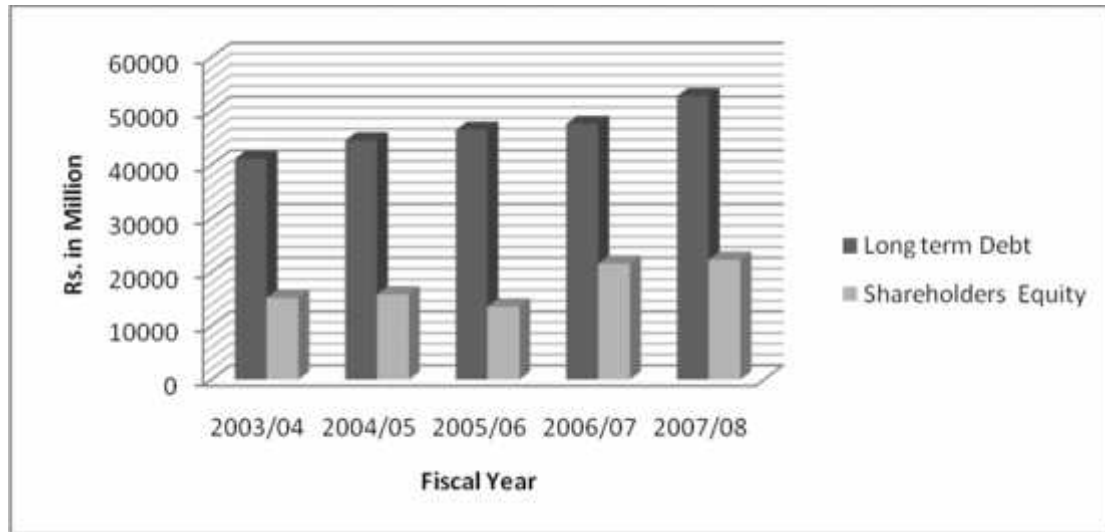
The general standard Debt-equity ratio is 2:3 for the satisfaction of the shareholders and long term financing parties. The debt-equity ratio of NEA for five years is as follows;

**Table 4.9**  
**Debt Equity Ratio**  
**Nepal Electricity Authority**

			<b>Rs. in million</b>
<b>Fiscal Year</b>	<b>Long term Debt</b>	<b>Shareholders Equity</b>	<b>Debt-Equity Ratio</b>
2003/04	41103.14	15218.16	2.70
2004/05	44537.51	15867.66	2.81
2005/06	46487.91	13567.78	3.43
2006/07	47616.15	21579.46	2.21
2007/08	52762.18	22300.11	2.37
<b>Mean</b>			<b>2.70</b>
<b>S.D.</b>			<b>0.42</b>
<b>C.V. %</b>			<b>15.64</b>

*Source: Annual Report NEA, 2007/08*

**Figure 4.9**  
**Debt Equity Ratio**



*Source: Annual Report NEA, 2007/08*

The above table showed that the NEA has given less important to internal financing. In each fiscal year, the shareholders equity is less than the long term debt. The debt equity ratio ranged from 2.21 times to 3.43 times in the fiscal year 2006/07 and 2005/06 respectively. The average debt-equity ratio of NEA in the five years period is 2.70 times and the coefficient of variation is 15.64%. The maximum use of debt than shareholder's equity has obliged NEA in the burden of high interest and thus eventually decreased the profit. It will be worthwhile if NEA restructures its debt-equity combination by lowering debt financing and thus get rid of burden of interest.

#### **4.4.2 Debt - Total Equity Ratio**

This ratio establishes the relationship between long term debt and total permanent capital of the firm. Here the permanent capital called total capital as well as sum of long term debt and shareholders' equity. It is calculated by dividing the total debt by total capital of the firm. Mathematically is calculated as:

$$\text{Debt Total Equity Ratio} = \frac{\text{Long Term Debt}}{\text{Permanent Capital}}$$

Where,

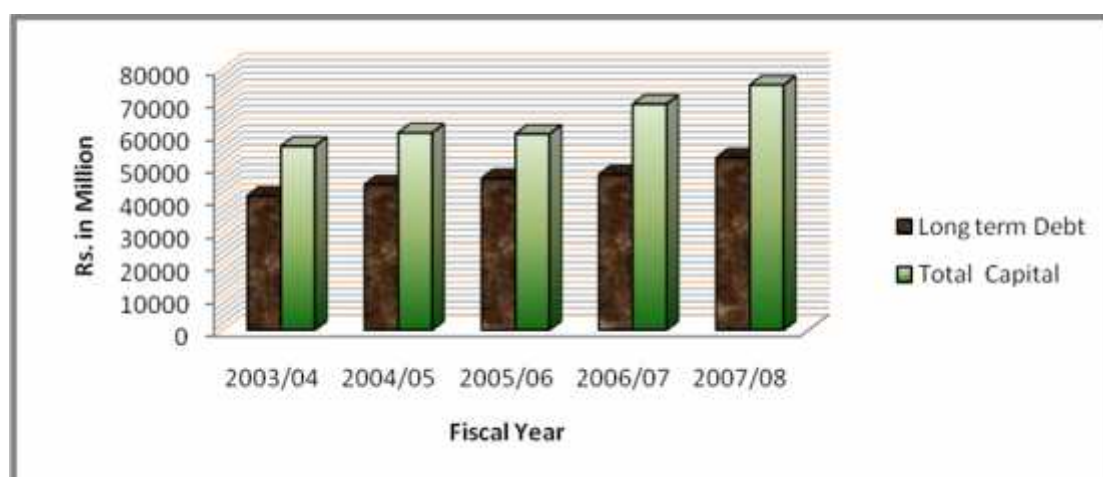
Permanent Capital = Share Holders' Equity + Long -term Debt+ Reserve  
& accumulated profit

**Table 4.10**  
**Debt to Total Equity Ratio**  
**Nepal Electricity Authority**

<b>Rs. in million</b>			
<b>Fiscal Year</b>	<b>Long term Debt</b>	<b>Total Capital</b>	<b>Debt to Total Equity Ratio</b>
2003/04	41103.14	56321.30	0.73
2004/05	44537.51	60405.17	0.74
2005/06	46487.91	60055.69	0.77
2006/07	47616.15	69195.61	0.69
2007/08	52762.18	75062.29	0.70
<b>Mean</b>			<b>0.73</b>
<b>S.D.</b>			<b>0.03</b>
<b>C.V. %</b>			<b>3.95</b>

Source: Annual Report NEA, 2007/08

**Figure 4.10**  
**Debt – Total Equity Ratio**



Source: Annual Report NEA, 2007/08

From the table & figure, it is considered that NEA uses maximum amount of debt to finance its total assets. Almost 73% of the total capital employed has been covered by debt financing, which has pushed NEA to bear the burden of higher interest amount and finally decreased the surplus generation. To increase the profit NEA, it is essential to reduce the debt amount.

#### **4.4.3 Interest Coverage Ratio**

This ratio measures how much net income before interest and taxes could be declined and still provided coverage of total interest expenses. It is also called debt service ratio. It reflects the relationship between the net profit interest and tax and the amount of interest payments for the period. It is developed for prospective debt holders often required convenience in the loan arrangement spelling out the number of time the firm is expected to cover its debt service obligations. It calculated as:

$$\text{Interest Coverage Ratio} = \frac{\text{EBIT}}{\text{Interest Amount}}$$

Where,

EBIT : Operating Surplus + Other (Exp.) income

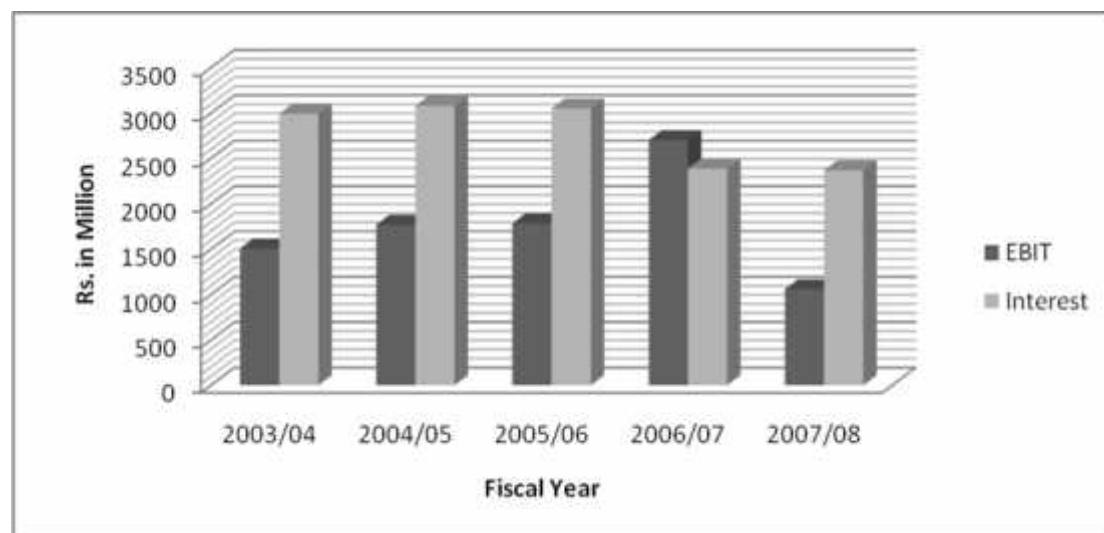
As interest coverage ratio indicates the ability of the firm to pay interest out of profit earned, the ratio is considered as favorable for the firm. Generally it should cover six or seven times. The following is the interest coverage ratio of NEA from 2003/04 to 2007/08.

**Table 4.11**  
**Interest Coverage Ratio**  
**Nepal Electricity Authority**

			<b>Rs. in million</b>
<b>Fiscal Year</b>	<b>EBIT</b>	<b>Interest</b>	<b>Interest Coverage Ratio</b>
2003/04	1505.40	2991.50	0.50
2004/05	1767.00	3079.80	0.57
2005/06	1783.10	3050.90	0.58
2006/07	2699.60	2385.41	1.13
2007/08	1056.25	2368.41	0.45
<b>Mean</b>			<b>0.65</b>
<b>S.D.</b>			<b>0.25</b>
<b>C.V. %</b>			<b>38.18</b>

*Source: Annual Report NEA, 2007/08*

**Figure 4.11**  
**Interest Coverage Ratio**



*Source: Annual Report NEA, 2007/08*

The table & figure showed that the interest coverage ratio of NEA increased in the first four years, from 0.50 times in the fiscal year 2003/04 to 1.13 times in the fiscal year 2006/07, and then decreased to 0.45 times in the fiscal year 2007/08. Similarly, the mean ratio and coefficient of variation are 0.65 times and 38.18%

respectively. In none of the year, the interest coverage ratio of NEA has met the standard ratio of 6 to 7 times, which clearly indicates the poor loan management of NEA. NEA could not effectively utilize its loan in generating higher profit.

#### **4.5 Profitability ratio**

This ratio is related to profit of the firm. Profit is essential for the survival of the firm. So it is regarded as the engine that drives the business and indicates the economical progress. It is calculated to measure the overall efficiency of the business. Generally profitability is calculated either in relation to sales or in relations to investment.

The profit position of NEA is measured by applying the profitability ratio. It is true that higher profitability ratio betters the financial position and vice versa. The following ratios are calculated under profitability ratios to measures the financials performance of NEA.

##### **4.5.1 Gross Profit Ratio**

This ratio shows the relationship between gross profit and net sales & is generally expressed in percentage. It determines the efficiency with which production or purchase operation is carried on. Gross profit margin should be adequate to cover operating expenses and to provide fixed charges, to pay dividend and build up reserves, it is calculated by dividing gross profit by net sales as follows:-

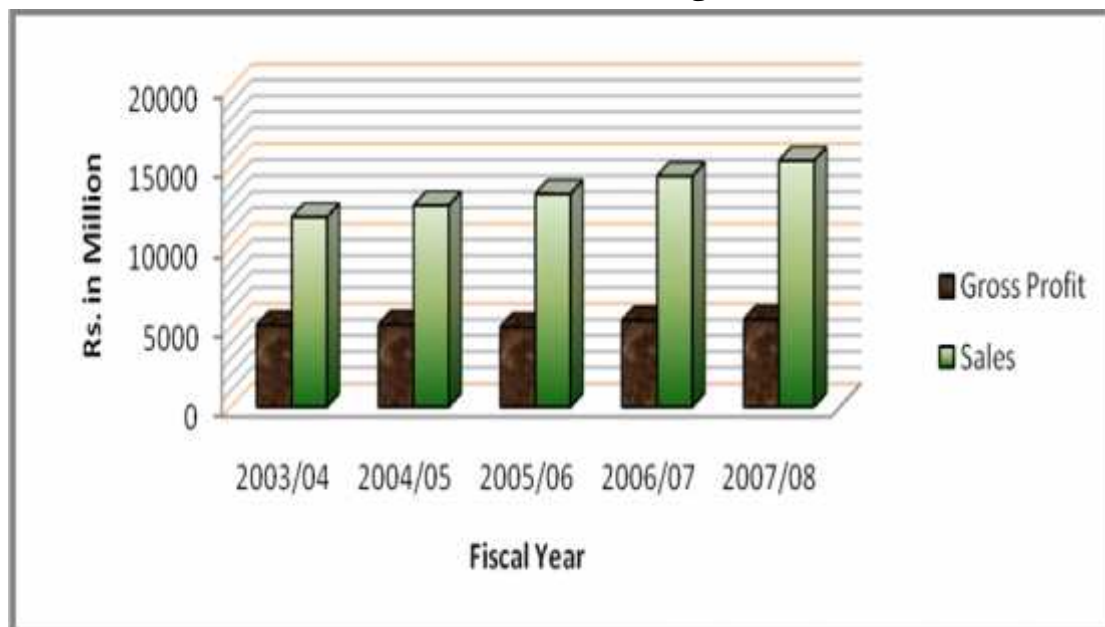
$$\text{Gross Profit Ratio} = \frac{\text{Gross Profit}}{\text{Net Sales}}$$

**Table 4.12**  
**Gross Profit Margin**  
**Nepal Electricity Authority**

			Rs. in million
Fiscal Year	Gross Profit	Sales	Gross Profit Margin
2003/04	5109.30	11874.70	43.03
2004/05	5142.80	12605.20	40.80
2005/06	4999.20	13331.90	37.50
2006/07	5415.17	14449.73	37.48
2007/08	5475.18	15405.03	35.54
<b>Mean</b>			<b>38.87</b>
<b>S.D.</b>			<b>2.68</b>
<b>C.V. %</b>			<b>6.90</b>

*Source: Annual Report NEA, 2007/08*

**Figure 4.12**  
**Gross Profit Margin**



*Source: Annual Report NEA, 2007/08*

The table & figure 4.11 shows that the gross profit margin of NEA followed decreasing trend. The gross profit margin in the fiscal year 2003/04, 2004/05,

2005/06, 2006/07 and 2007/08 are 43.03%, 40.80%, 37.50%, 37.48% and 35.54% respectively. The average gross profit margin is 38.87% and the coefficient of variation is 6.90%, indicating less volatile. Although, the gross profit has increased, the inability to increase the gross profit in same proportion with the increase of sales has resulted decreased gross profit margin. It is essential that NEA implement new policy to barricade the decreasing gross profit margin and remain successful to meet the expenses and generate profit.

#### 4.5.2 Net Profit Ratio

This ratio is also known as Net Margin or Net Income Percentage. It measures the rate of net profit earned on sales. It helps to determine the operational efficiency of management. Mathematically it is calculated as:

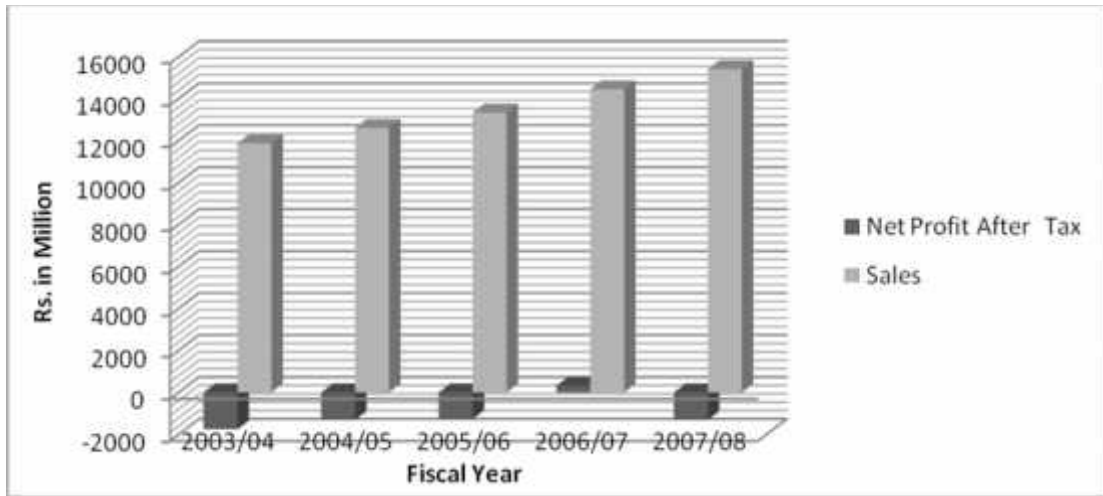
$$\text{Net Profit Ratio} = \frac{\text{Net Profit After Tax}}{\text{Net Sales}}$$

**Table 4.13**  
**Net Profit Ratio**  
**Nepal Electricity Authority**

			Rs. in million
Fiscal Year	Net Profit After Tax	Sales	Net Profit Ratio
2003/04	-1760.30	11874.70	-14.82
2004/05	-1312.80	12605.20	-10.41
2005/06	-1267.80	13331.90	-9.51
2006/07	314.19	14449.73	2.17
2007/08	-1312.16	15405.03	-8.52
<b>Mean</b>			<b>-8.22</b>
<b>S.D.</b>			<b>5.62</b>
<b>C.V. %</b>			-68.42

*Source: Annual Report NEA, 2007/08*

**Figure 4.13**  
**Net Profit Ratio**



*Source: Annual Report NEA, 2007/08*

The table & figure shows that the net profit ratio of NEA is in negative in all the years except fiscal year 2006/07. The net loss has resulted negative net profit margin. The company suffered highest loss of 14.85% in the fiscal year 2003/04. Even the net profit margin of 2.17% in the fiscal year 2006/07 is also very low. In average the company suffered a loss of 8.22% in the five years period. This clearly indicates that NEA remained totally unsuccessful in controlling its expenditure.

#### **4.5.3 Net operating ratio**

Net operating ratio established relationship between operating expenses and sales and revenue. The operating ratio is the yardstick of operating efficiency. The calculation of this ratio comprises of all operating expenses.

$$\text{Operating Ratio} = \frac{\text{Operating expenses}}{\text{Net Sales}}$$

**Where,**

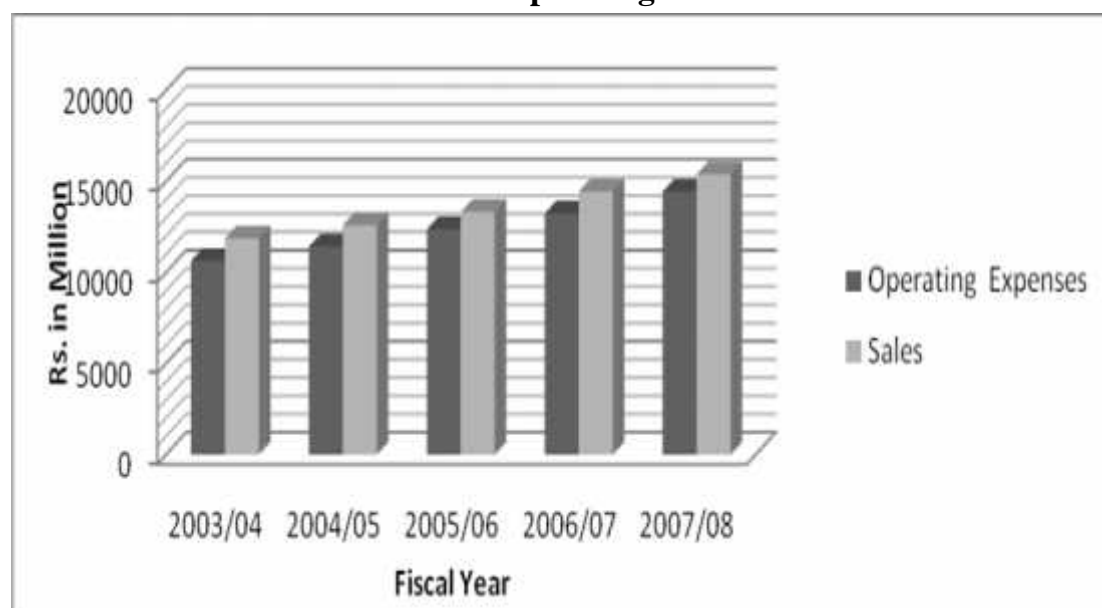
Operating expenses= Generation +transmission+ distribution+ administration+  
depreciation +deferred revenue expenditure

**Table 4.14**  
**Net Operating Ratio**  
**Nepal Electricity Authority**

<b>Fiscal Year</b>	<b>Operating Expenses</b>	<b>Sales</b>	<b>Rs. in million</b>
			<b>Net Operating Ratio</b>
2003/04	10636.70	11874.70	89.57
2004/05	11425.80	12605.20	90.64
2005/06	12378.20	13331.90	92.85
2006/07	13247.57	14449.73	91.68
2007/08	14443.41	15405.03	93.76
<b>Mean</b>			<b>91.70</b>
<b>S.D.</b>			<b>1.50</b>
<b>C.V. %</b>			<b>1.63</b>

*Source: Annual Report NEA, 2007/08*

**Figure 4.14**  
**Net Operating ratio**



*Source: Annual Report NEA, 2007/08*

The table & figure shows that average operating expenses of NEA covers 91.70% of the sales. The ratio ranged from 89.57% in the fiscal year 2003/04 to 93.76% in the fiscal year 2007/08. Except in the fiscal year 2006/07, the ratio followed increasing trend. NEA should control the raising head of operating expenses to minimize its net loss. All operating expenses i.e. generation, transmission, distribution, administration, depreciation and deferred revenue expenditure should be controlled wherever possible. The C.V. of 1.63% indicates that there is less result in the operating ratio of NEA.

#### **4.5.4 Return on Total Assets (ROA):**

Return on total assets records relationship between total assets and net profit. This shows the percentage of net profit on total assets. The profitability of the firm is also measured with the expectation that the investment on such assets with the expectation that return the investment on such assets will yield a reasonable amount of profits. The return on total ratio measures the profitability of all financial resources employee in the firm assets. As the relationship satisfactory level profit is one of the main objectives on that firm, this ration shows the extent to which this objective is being achieves.

$$\text{Return on total Assets} = \frac{\text{Net profit after tax}}{\text{Total Assets}} \times 100$$

Where,

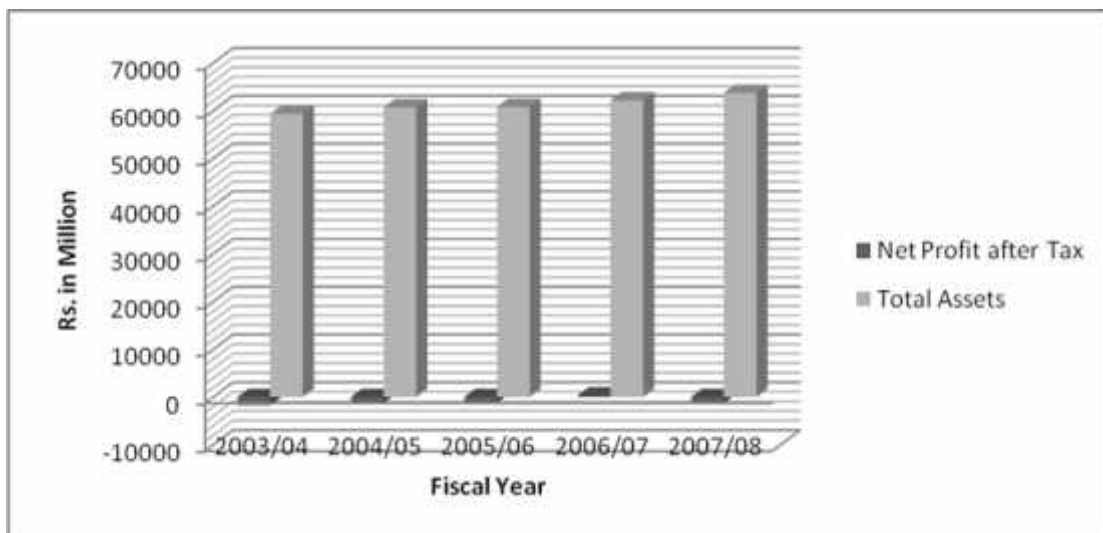
Total Assets : Property, Plant & Equipments + Total Current Assets

**Table 4.15**  
**Return on Total Assets**  
**Nepal Electricity Authority**

			Rs. in million
Fiscal Year	Net Profit after Tax	Total Assets	ROA
2003/04	-1760.30	59298.55	-2.97
2004/05	-1312.80	60658.16	-2.16
2005/06	-1267.80	60738.68	-2.09
2006/07	-314.19	62104.73	0.51
2007/08	-1312.16	63685.56	-2.06
<b>Mean</b>			<b>-1.75</b>
<b>S.D.</b>			<b>1.18</b>
<b>C.V. %</b>			<b>-67.34</b>

*Source: Annual Report NEA, 2007/08*

**Figure 4.15**  
**Return on Total Assets**



The table & figure 4.15 shows the return on total assets of Nepal Electricity Authority. Except in the fiscal year 2006/07, when ROA is 0.51%, in all the fiscal years the shareholders have to bear net loss. This indicates that the management remained failure to effectively utilize the total assets in generating profit. Rather

the shareholders have to face Re. 1.75 loss in average in per rupee investment in total assets. This pattern will obviously invite the withdrawal of share from NEA. So, it is worthwhile if NEA plans to maximize profit by effectively utilizing its resources.

#### 4.5.5 Return on Capital Employed

This ratio shows the relationship between capital employed and Net Profit after tax of the firm. It indicates how well the management has used the fund supplied by creditors and owners. Higher ratio indicates the efficient use of fund entrusted to the firm by creditors and owners. It can be calculated as,

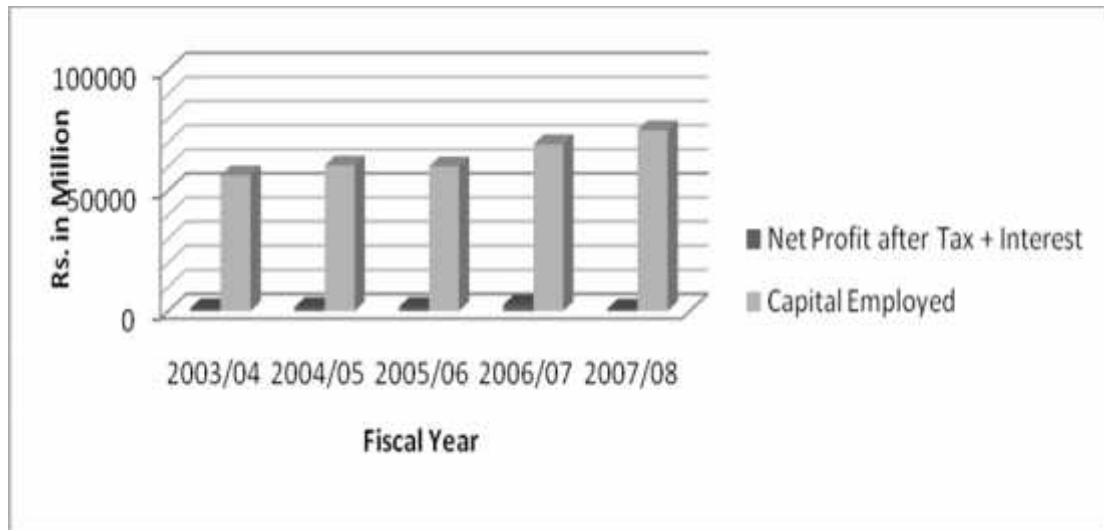
$$\text{Return on Capital Employed} = \frac{\text{Net Profit After Tax} + \text{Interest}}{\text{Total Capital}} \times 100$$

**Table 4.16**  
**Return on Capital Employed**  
**Nepal Electricity Authority**

			Rs. in million
Fiscal Year	Net Profit after Tax + Interest	Capital Employed	ROCE
2003/04	1231.20	56321.30	2.19
2004/05	1767.00	60405.17	2.93
2005/06	1783.10	60055.69	2.97
2006/07	2699.60	69195.61	3.90
2007/08	1056.25	75062.29	1.41
<b>Mean</b>			<b>2.68</b>
<b>S.D.</b>			<b>0.84</b>
<b>C.V. %</b>			<b>31.17</b>

*Source: Annual Report NEA, 2007/08*

**Figure 4.16**  
**Return on Capital Employed**



*Source: Annual Report NEA, 2007/08*

The table & figure 4.16 shows that the return on capital employed increased in the first four fiscal years. It increased from 2.19% in the fiscal year 2003/04 to 3.90% in the fiscal year 2006/07 and then decreased to 1.41% in the fiscal year 2007/08. However, in average the company converted only 2.68% of its capital employed net profit before interest and after tax. The C.V. of 31.17% implies high volatile on ROCE. Also, the return on capital employed in each fiscal year and average is very low.

#### **4.5.6 Return on Shareholder's Equity**

This ratio shows the relationship between net profit after tax and shareholder's equity. It indicates the profitability of owners' investment. It is the most commonly used ratio for measuring the return on owners' investment. It is calculated as,

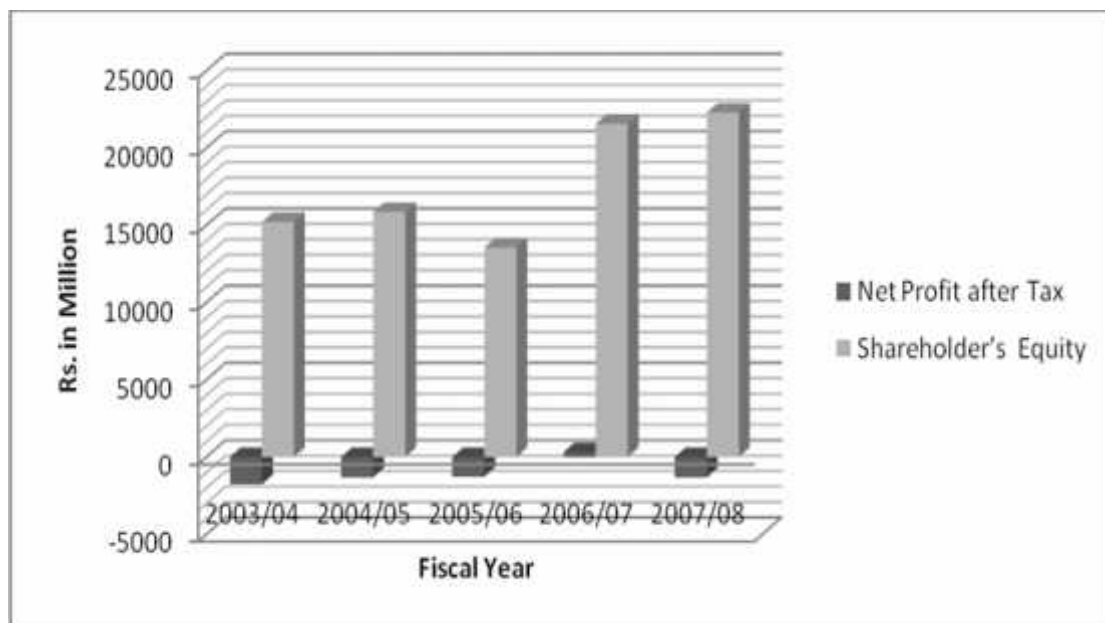
$$\text{Return on Shareholder's Equity} = \frac{\text{Net Profit After Tax}}{\text{Shareholder's Equity}} \times 100$$

**Table 4.17**  
**Return on Shareholder's Equity**  
**Nepal Electricity Authority**

			<b>Rs. in million</b>
<b>Fiscal Year</b>	<b>Net Profit after Tax</b>	<b>Shareholder's Equity</b>	<b>ROSE</b>
2003/04	-1760.30	15218.16	-11.57
2004/05	-1312.80	15867.66	-8.27
2005/06	-1267.80	13567.78	-9.34
2006/07	314.19	21579.46	1.46
2007/08	-1312.16	22300.11	-5.88
<b>Mean</b>			<b>-6.72</b>
<b>S.D.</b>			<b>4.48</b>
<b>C.V. %</b>			<b>-66.69</b>

*Source: Annual Report NEA, 2007/08*

**Figure 4.17**  
**Return on Shareholder's Equity**



*Source: Annual Report NEA, 2007/08*

The table & figure depicts that the shareholders of NEA are facing continuous loss in the researched years except in the fiscal year 2006/07, when the shareholder

enjoyed minimal return of 1.46% on their investment. The loss on ROSE ranged from 5.88% in the fiscal year 2007/08 to 11.57% in the fiscal year 2003/04. In average, the shareholders faced 6.72% loss on per rupee shareholders equity. The continuous loss may cause difficulty to NEA in retaining its shareholders.

## 2.6 Power loss analysis of NEA

Power loss is a serious problem in Nepal Electricity Authority. Since 1963 A.D, the authority has been suffering from this problem and has become uncontrollable problem too. In 1963 A.D, the actual power loss was about 60% and it was an era of diesel generation prominence, to find out the years is presented bellows;

**Table 4.18**  
**Power loss situation of NEA**

<b>Year</b>	<b>% of loss in comparison to sales</b>
2003/04	23.00
2004/05	24.83
2005/06	24.70
2006/07	25.12
2007/08	26.59
<b>Mean</b>	<b>24.85</b>

(Source: *Urja Nepal, 2065 B.S.*)

The table depicts, that power loss of NEA in last five years is very significant. The average loss of the authority is 24.85 GWh of sales. Except in the fiscal year 2005/06, the power loss followed increased trend. The power loss increased from 23% of sales in the fiscal year 2003/04 to 26.59% of sales in the fiscal year 2007/08. In other developing countries where electricity Distribution is much developed, 15 percentages of electricity leakage and outage out of the total supply is assumed to be normal and uncontrollable. But in case of NEA the leakage and outage resulting from load lost and other losses is nearly 32 percentages of total sales. Theft is one of the main and unavoidable cases of power loss. Similarly, undeveloped Distribution is another major cause of power loss.

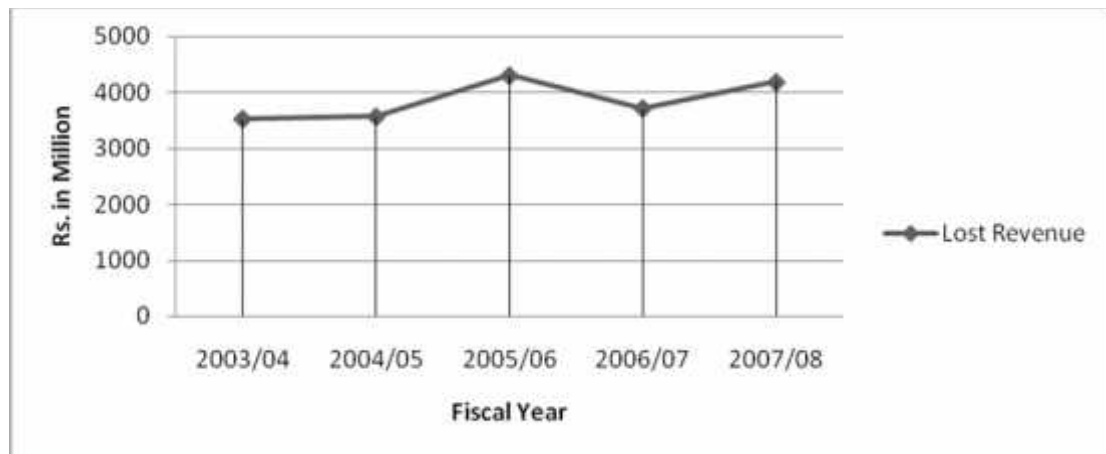
#### 4.6.1 Revenue Loss Analysis of NEA

In order to find out the effect of power loss for the profitability of the authority, now it is necessary to compare the revenue that can be generated from power loss. Therefore, the lost revenue from power loss of NEA is presented below:

**Table 4.19**  
**Lost revenue from power loss**

<b>FY</b>	<b>Power loss in '000' units</b>	<b>Average sales rate</b>	<b>Sales revenue Loss in '000' Rs.</b>
2003/04	538983	6.53	3519558.99
2004/05	545224	6.53	3560312.72
2005/06	656195	6.56	4304639.20
2006/07	553695	6.70	3709756.50
2007/08	624575	6.70	4184652.50
<b>Mean</b>			<b>3855783.98</b>

**Figure 4.18**  
**Lost revenue from power loss**



The table & figure shows that the actual power loss of NEA is very significant. By analyzing the revenue which can be generated from power loss it seems to be in fluctuating trend. The average loss revenue is Rs 3855783.98 thousands. Therefore, it can be stated that if NEA can control the power loss strictly, the authority will not have to bear huge loss every year. If the authority can reduce the power loss in some extent, it can operate in BEP a (the point where there is no

profit, no loss). If it, strictly manages the loss power properly, the authority will enjoy the huge profit in comings years. For this purpose, NEA must work very hard using modern tools and techniques to reduce the power loss.

#### 4.7 Trend Analysis

The trend analysis aids to predict the future value on the basis of the past years. To know the Net Profit (Loss) and Power Loss of the NEA, the trend analysis has been used.

##### 4.7.1 Trend Analysis of Net Profit (Loss)

Let Year (X) 1, 2, 3, 4 and 5 denotes fiscal year 2003/04, 2004/05, 2005/06, 2006/07 and 2007/08 respectively. Then regression line of NPAT (Y) on year is given by;

$$Y = a + b X$$

$$\text{NPAT} = -1824.83 + 252.40 X$$

The trend value of NPAT calculated from this regression equation is presented in the following table.

**Table 4.20**  
**Trend Analysis of NPAT**

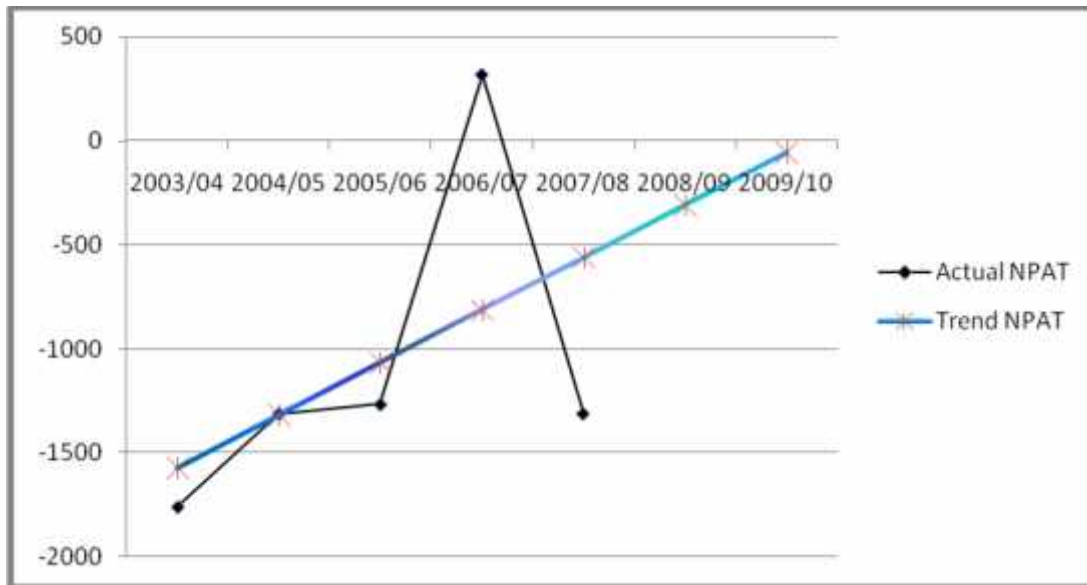
Fiscal Year	NEA	
	Actual NPAT	Trend NPAT
2003/04	-1760.3	-1572.43
2004/05	-1312.8	-1320.03
2005/06	-1267.8	-1067.63
2006/07	314.9	-815.23
2007/08	-1312.16	-562.83
2008/09		-310.43
2009/10		-58.03

The table shows that the trend NPAT follows increasing trend. The table depicts that the NPAT of NEA in the fiscal year 2008/09 and 2009/10 will be Rs. -310.43

and Rs. -58.03 respectively. Likewise, the trend shows that each year the NPAT of NEA increases by Rs. 252.40 million.

On the basis of predicted value, NEA will soon overcome its accumulated loss and will enjoy profit in the future.

**Figure 4.19**  
**Trend Value of NPAT**



#### 4.7.2 Trend Analysis of Power Loss

Let Year (X) 1, 2, 3, 4 and 5 denotes fiscal year 2003/04, 2004/05, 2005/06, 2006/07 and 2007/08 respectively. Then regression line of Power Loss (Y) on year is given by;

$$Y = a + b X$$

$$\text{Power Loss} = 22.61 + 0.75 X$$

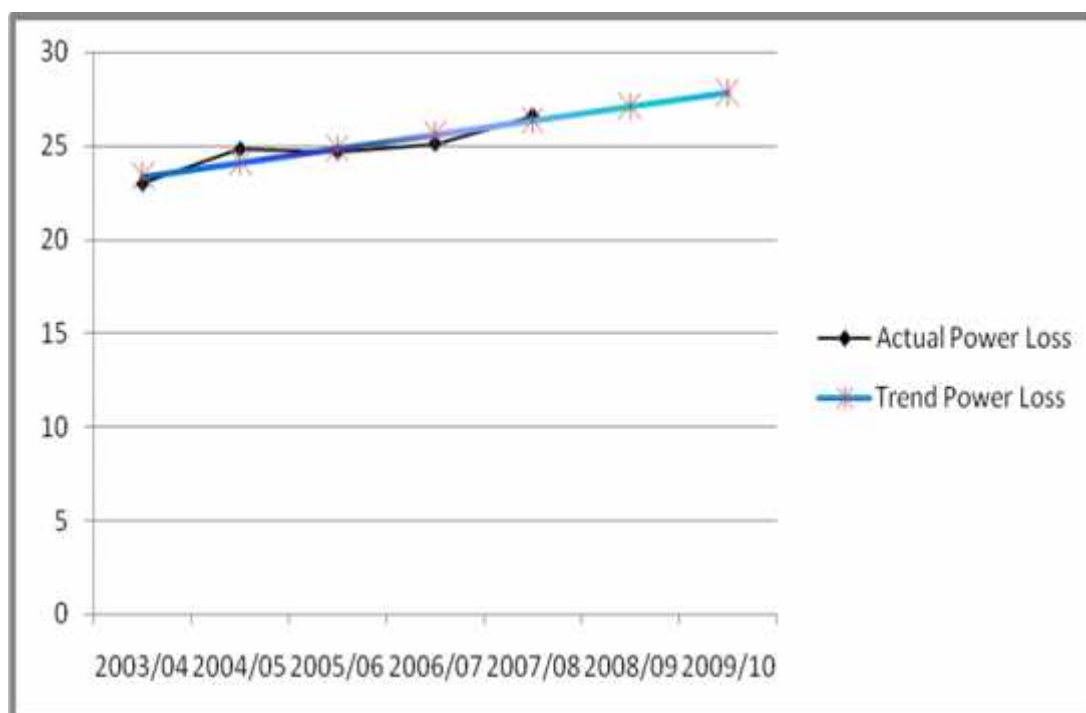
The trend value of Power Loss calculated from this regression equation is presented in the following table.

**Table 4.21**  
**Trend Analysis of Power Loss**

<b>Fiscal Year</b>	<b>NEA</b>	
	<b>Actual Power Loss</b>	<b>Trend Power Loss</b>
2003/04	23	23.36
2004/05	24.83	24.11
2005/06	24.7	24.86
2006/07	25.12	25.61
2007/08	26.59	26.36
2008/09		27.11
2009/10		27.86

The table shows that the trend Power Loss follows increasing trend. The table depicts that the Power Loss of NEA in the fiscal year 2008/09 and 2009/10 will be 27.11% and 27.86% respectively. The trend shows that each year the power loss of NEA on Sales increases by 0.75% per year if other variable remains constant.

**Figure 4.20**  
**Trend Analysis of Power Loss**



#### 4.8 Regression Analysis: Net Profit (Loss) on Sales Revenue

To find the relationship of Net Profit with sales revenue, the simple regression line has been analyzed.

Let the dependent variable NPAT is denoted by Y and independent variable Sales Revenue is denoted by X, then the regression equation of NPAT on Sales is given by: (*Appendix II*)

$$Y = a + b X$$

$$\text{NPAT} = -4834.18 + 0.28 \times \text{Sales}$$

**Table 4.22**

#### **Regression Analysis of NPAT on Sales Revenue**

Company	No. of observation (n)	Constant (a)	Regression coefficient (b)
NEA	5	-4834.18	0.28

(*Source: Appendix II*)

The Table depicts the major output of simple regression analysis of NPAT on Sales Revenue of NEA.

As far as the regression of NPAT and Sales is concerned, the regression coefficient of NEA is 0.28. It indicates that a one-rupee increase in Sales leads to an average of Rs. 0.28 increase in profit, if the other variable remains constant.

#### 4.9 Major Findings

The major findings after the detailed analysis of financial statement of NEA are listed below:

- ) Liquidity ratio is very poor in NEA. In none of the fiscal year, the current ratio and quick ratio have not met the benchmark of 2:1 and 1:1

respectively. The average current ratio and quick ratio during the research period is 0.47:1 and 0.29:1 respectively.

- ) NEA kept approximately 10% of the sales as inventory in average. Also, the average debtor turnover ratio is 2.98 times during the five fiscal years and takes 125 days to collect the receivables.
- ) The mean fixed assets turnover ratio is 0.26 times, which clearly indicates the inefficiency of NEA to effectively mobilize its fixed assets in sales generation. Similarly, the average total assets turnover ratio is 0.22 times and the capital employed turnover ratio is 0.21 times only, which are very low.
- ) NEA uses high portion of debt capital compared to internal financing to meet its cash requirements. The debt to equity ratio is 2.70 times and debt covers 73% of the total capital employed in average.
- ) The interest coverage ratio is 0.65 times in average and does not meet the benchmark of 6 to 7 times. Also, the coefficient of variation, 38.18%, implies high volatility in the interest coverage ratio.
- ) The average gross profit ratio during the period taken for research is 38.87% and the net profit ratio is -8.22%. Similarly, the operating expense covers 91.70% of the net sales in average.
- ) Both ROA and ROSE are negative. The ROA is -1.75% and ROSE is -6.72%. However, the ROCE is positive but less in value, 2.68% only.
- ) Power loss is significantly high in NEA. This is due to theft, leakage, and outage and unsystematic distribution channel. The average power loss is 24.85% of sales which is out of normal loss. The power loss accounts Rs. 3855.78 million of lost sales revenue.
- ) The trend Analysis shows that NPAT will increase by Rs. 252.40 million per year. Similarly, Power Loss increases by 0.75% per year. Also, the regression line of NPAT on Sales indicated that NPAT increases by Rs. 0.28 on per rupee increase in sales.

## **CHAPTER-V**

### **SUMMARY, CONCLUSION AND RECOMMENDATIONS**

#### **5.1 Summary**

Nepal Electricity Authority is one of the leading public enterprises of Nepal. It is a large-scale power section organization. It is functioning under twins commercial and service motive. It was named as "Bijuli Adda" to operate and maintenance powerhouse, transmission lines and distributes electricity to the public at the time. After the various diesel plants and hydro plants construction were made, Bijuli Adda was reconstructed as Nepal Electricity Corporation under Electricity Department in 2018 B.S. as an autonomous body. NEA is responsible for operating and maintaining the powerhouse, transmission lines and distributing electricity to public as reasonable price. NEA came into existence under the development committees to develop hydro power plans transmission lines and small hydropower plans in 2042 and started its operation from the same year.

NEA is playing a vital role for the development of hydro section. It is working for planning, design, construction, operation, maintenance, transmission and electricity distribution. NEA has proved as the key player in the nation in power sector.

Financial performance of any organization predicts the long run of such organization. The organization remains success if it timely reviews its financial performance and try to improve on the weakness. Similarly, being the sole authority of the nation in electricity, NEA needs to timely review its financial status. Hence, the main objective behind doing this research to examine and evaluate the financial performance of NEA. To achieve the objective different financial and tools and statistical tools have been applied.

The study is divided in five chapter, viz. i) Introduction, ii) Review of Literature iii) Research Methodology iv) Data Presentation and Analysis and V) Summary, Conclusion and Recommendations.

## **5.2 Conclusion**

On the basis of the data analysis and major findings it can be concluded that the liquidity position of NEA is poor and NEA faces problem while clearing its debt. Both current ratio and quick assets ratio have not met the standard ratio in any of the fiscal year taken for research. Similarly, the collection policy of NEA is very long and the mobilization of assets and capital to generate profit is depressing. NEA has the practices of financing major portions of assets through debt as a result the company is facing the high burden of interest. It seems that the capital structure of NEA should be restructured.

Likewise, NEA faces the difficulty in retaining its shareholders because both return on equity and return on assets are negative in the period taken for research. There is vast gap between sales and actual production. It indicates that NEA is suffering from huge power loss annually. Losses of electricity remain higher in Nepal in comparison to other countries of south Asia. Non-technical (commercial) losses arising from pilferage of electricity and other unauthorized use form a sizeable percentage of the total system losses. The huge power loss of NEA is caused due to theft, leakage, outage and undeveloped distribution channel. Similarly, the inventory policy of NEA is also very low. So the citizens of the nation are passing through the unexpected load shedding. It clearly indicates the failure of the policy makers of NEA.

NEA has been drastically running under a huge loss annually. The total loss of the authority is also increasing which is a major considerable aspect. So, it is being financial burden of the government. The first reason for the huge loss is due to huge amount of interest. NEA is paying a huge amount of interest every year and suffering from huge fixed cost as well. The reason is due to the high distribution, administrative cost. The third reason is due to political unrest and load shedding because NEA is unable to read the meters of more than one Lakh its consumers.

### 5.3 Recommendations

Based on the conclusions drawn and the major findings, the following recommendations have been made;

- ) NEA should increase its current assets and thus may not face difficulty in paying debts. Also, a quick collection policy should be adopted to decrease the receivables.
- ) Fixed assets turnover is low, so NEA should launch new policy and techniques to effectively mobilize its infrastructure to generate profit.
- ) To get relief from the high interest, use of high debt financing should be avoided and equity capital should be mobilized to meet the funds.
- ) Strict supervision is essential to abate the power loss. Punishment and fines should be strictly followed for the theft.
- ) NEA must have clear cut goals, objectives, policies, long term plans, strategic programs etc. Sales plans/budgets must be prepared on realistic responsible and committed to accomplish them within the specified period of time. NEA should have proper co-ordination between budget formulation implementation and evaluation of achievements.
- ) There should be continuous follow of information among various departments, directorates, different level of management and various groups of employees. The goals, objectives and strategies of the authority should be clearly communicated to lower level management.
- ) Electricity generation projects should be selected strictly based on low cost priority. Distribution projects should be implemented on the basis of relatively low power delivery cost and high potential load density for industrial growth and irrigation uses.
- ) NEA has been suffering from huge power loss annually which has great role for the huge loss. So, it is recommended that NEA should control leakage of the electricity at any cost with immediate effect. For this purpose, meter reading and meter joining system should be improved. Similarly, it should encourage its employees who are engaged in

transmission and distribution line to control the leakage. Theft of electricity should be identified and controlled. It can be done by giving strict punishment and making aware on negative outcomes of theft by advertising in the most popular newspaper and television programs.

- ) NEA should be free from political interference. Employees appointment, extension of transmission line to unprivileged sectors, revenue collection etc. should be free from political pressure. The manager familiar having advanced knowledge about the authority should be selected by authority itself. The authority should be granted with full autonomy in making its policy and decision.
- ) NEA should increase its operating capacity so as to meet the demand of electricity. Private sectors should be encouraged to invest in small hydro-power projects which will help the nation to be self dependent in electricity.
- ) NEA should pay more effort to manage the supply of electricity to the profitable sectors such as domestic, industrial, non-commercial sectors. Tariff rate for water supply and irrigation, transport service, street light, bulk supply to India, temples should be revised in such a way by which NEA could cover operating cost at least.
- ) Overhead costs of NEA have large proportion. NEA should reduce it by preparing overhead budgets in systematic and scientific way under production overhead, administrative overhead and selling and distribution overhead wise.
- ) It is an immediate need for NEA to develop efficient system for collecting revenue in time. It should formulate strict rules and regulations regarding revenue collection so as to reduce the bad debts and timely collection of receivable amount. Penalties for late payment consumers and rewards for timely payment consumers must be followed and implemented without any delay more.

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