



ACCOUNTING SYSTEM OF OPERATING AND NON-OPERATING INCOMES OF POWER COMPANIES: AN OVERVIEW

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Abstract

Accounting is often called the language of business through which the business entity communicates with the outer world. In order to make the language of accounting to convey the same meaning to all people as far as practicable, it is necessary that it should be based on certain uniform and scientifically laid down standards. So the accountants from all over the world have developed certain rules, procedures and conventions that represent a consensus of the profession of a good accounting practices and procedures and are generally referred as 'Generally Accepted Accounting Principles' (GAAP). In the simple words, it can be stated that generally accepted accounting principles, concepts and conventions are the fundamental rules of Accounting which are universally used and accepted by the accountants all over the world as general guidelines for preparing accounting statements. In other words, the rules and conventions of accounting are commonly referred to as principles. The word principle is here used to mean a general law or a rule adopted or professed as a guide to action; or a settled basis of conduct or practice. These principles have developed in accordance with usage, experience, historical precedents, and professional bodies, government regulations with the passage of time and with changing needs of business. Under the hybrid of the accrual and cash system of accounting, expenses are reflected in the accounts for the period in which they accrue whereas incomes are reflected in the accounts for the period in which they are received. This system is adopted in the institution in which the revenues are uncertain but the expenses are fixed. This system follows the convention of conservatism and 'Receipts and Expenditure Account' is prepared on this basis by the institutions such as local authorities, professionals and government institutions. In this paper I have discussed about the Accounting System of Operating and Non-Operating Incomes of Power Companies.

Keywords: GAAP, Accounting System, Operating & Non-Operating Income, Grants-in-aid, Exploration Costs.



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Introduction

The following accounting system is used by the Power companies in India:

BASIS OF PREPARATION: The financial statements are prepared on accrual basis of accounting under historical cost convention in accordance with generally accepted accounting

principles in India and the relevant provisions of the Companies Act, 1956 including accounting standards notified there under.

USE OF ESTIMATES: The preparation of financial statements requires estimates and assumptions that affect the reported amount of assets, liabilities, revenue and expenses during the reporting period. Although such estimates and assumptions are made on a reasonable and prudent basis taking into account all available information, actual results could differ from these estimates & assumptions and such differences are recognized in the period in which the results are crystallized.

GRANTS-IN-AID

1. Grants-in-aid received from the Central Government or other authorities towards capital expenditure as well as consumers' contribution to capital works are treated initially as capital reserve and subsequently adjusted as income in the same proportion as the depreciation written off on the assets acquired out of the grants.
2. Where the ownership of the assets acquired out of the grants vests with the government, the grants are adjusted in the carrying cost of such assets.
3. Grants from Government and other agencies towards revenue expenditure are recognized over the period in which the related costs are incurred and are deducted from the related expenses.

FIXED ASSETS

1. Fixed Assets are carried at historical cost less accumulated depreciation/amortisation.
2. Expenditure on renovation and modernisation of fixed assets resulting in increased life and/or efficiency of an existing asset is added to the cost of related assets.
3. Intangible assets are stated at their cost of acquisition less accumulated amortisation.
4. Capital expenditure on assets not owned by the Company is reflected as a distinct item in Capital Work-in-Progress till the period of completion and thereafter in the Fixed Assets.
5. Deposits, payments/liabilities made provisionally towards compensation, rehabilitation and other expenses relating to land in possession are treated as cost of land.
6. In the case of assets put to use, where final settlement of bills with contractors is yet to be effected, capitalisation is done on provisional basis subject to necessary adjustment in the year of final settlement.
7. Assets and systems common to more than one generating unit are capitalised on the basis of engineering estimates/assessments.

CAPITAL WORK-IN-PROGRESS

1. In respect of supply-cum-erection contracts, the value of supplies received at site and accepted is treated as Capital Work-in-Progress.
2. Administration and general overhead expenses attributable to construction of fixed assets incurred till they are ready for their intended use are identified and allocated on a systematic basis to the cost of related assets.
3. Deposit works/cost plus contracts are accounted for on the basis of statements of account received from the contractors.
4. Unsettled liability for price variation/exchange rate variation in case of contracts is accounted for on estimated basis as per terms of the contracts.

OIL AND GAS EXPLORATION COSTS

1. The Company follows 'Successful Efforts Method' for accounting of oil & gas exploration activities.
2. Cost of surveys and prospecting activities conducted in search of oil and gas are expensed off in the year in which these are incurred.
3. Acquisition and exploration costs are initially capitalized as 'Exploratory Wells-in-Progress' under Capital Work-in-Progress.

DEVELOPMENT OF COAL MINES

Expenditure on exploration of new coal deposits is capitalized as 'Development of coal mines' under Capital Work in-Progress till the mines project is brought to revenue account.

FOREIGN CURRENCY TRANSACTIONS

1. Foreign currency transactions are initially recorded at the rates of exchange ruling at the date of transaction.
2. At the balance sheet date, foreign currency monetary items are reported using the closing rate. Non-monetary items denominated in foreign currency are reported at the exchange rate ruling at the date of transaction.
3. Exchange differences (loss), arising from translation of foreign currency loans relating to fixed assets/capital work-in-progress to the extent regarded as an adjustment to interest cost are treated as borrowing cost.
4. Exchange differences arising from settlement / translation of foreign currency loans (other than regarded as borrowing cost), deposits / liabilities relating to fixed assets / capital work-in-progress in respect of transactions entered prior to 01.04.2004, are

adjusted in the carrying cost of related assets. Such exchange differences arising from settlement / translation of long term foreign currency monetary items in respect of transactions entered on or after 01.04.2004 are adjusted in the carrying cost of related assets.

5. Other exchange differences are recognized as income or expense in the period in which they arise.

BORROWING COSTS

Borrowing costs attributable to the fixed assets during construction/exploration, renovation and modernisation are capitalised. Such borrowing costs are apportioned on the average balance of capital work-in-progress for the year. Other borrowing costs are recognised as an expense in the period in which they are incurred.

INVESTMENTS

1. Current investments are valued at lower of cost and fair value determined on an individual investment basis.
2. Long term investments are carried at cost. Provision is made for diminution, other than temporary, in the value of such investments.
3. Premium paid on long term investments is amortised over the period remaining to maturity.

INVENTORIES

1. Inventories are valued at the lower of, cost determined on weighted average basis, and net realizable value.
2. The diminution in the value of obsolete, unserviceable and surplus stores and spares is ascertained on review and provided for.

PROFIT AND LOSS ACCOUNT

INCOME RECOGNITION

1. Sale of energy is accounted for based on tariff rates approved by the Central Electricity Regulatory Commission (CERC) as modified by the orders of Appellate Tribunal for Electricity to the extent appreciable. In case of power stations where the tariff rates are yet to be approved, provisional rates are adopted.
2. Advance against depreciation considered as deferred revenue in earlier years is included in sales, to the extent depreciation recovered in tariff during the year is lower than the corresponding depreciation charged.

3. Exchange differences on account of translation of foreign currency borrowings recoverable from or payable to the beneficiaries in subsequent periods as per CERC Tariff Regulations are accounted as 'Deferred Foreign Currency Fluctuation Asset/Liability'. The increase or decrease in depreciation or interest and finance charges for the year due to the accounting of such exchange differences as per accounting policy no. 8 is adjusted in sales.
4. Exchange differences arising from settlement/translation of monetary items denominated in foreign currency (other than long term) to the extent recoverable from or payable to the beneficiaries in subsequent periods as per CERC Tariff Regulations are accounted as 'Deferred Foreign Currency Fluctuation Asset/Liability' during construction period and adjusted in the year in which the same becomes recoverable/payable.
5. The surcharge on late payment/overdue sundry debtors for sale of energy is recognized when no significant uncertainty as to measurability or collectability exists.
6. Interest/surcharge recoverable on advances to suppliers as well as warranty claims/liquidated damages wherever there is uncertainty of realisation/acceptance are not treated as accrued and are therefore accounted for on receipt/acceptance.
7. Income from consultancy services is accounted for on the basis of actual progress/technical assessment of work executed, in line with the terms of respective consultancy contracts. Claims for reimbursement of expenditure are recognized as other income, as per the terms of consultancy service contracts.
8. Scrap other than steel scrap is accounted for as and when sold.
9. Insurance claims for loss of profit are accounted for in the year of acceptance. Other insurance claims are accounted for based on certainty of realisation.

The present study

Accounting discipline deals with measurement of economic activities affecting inflow and outflow of economic resources to develop useful information for decision making. At household level, information about inflow and outflow of cash resources helps to assess liquidity position and plan household activities. At Governmental level, information about inflow from taxes and expenditure on various activities is needed for planning and budgeting. Although accounting can be thought of as a discipline having universal applicability, but its growth is closely related to the developments in the business world. Thus, to understand accounting as field of study for universal application, it is best

identified with recording of business transactions and communication of financial information about business enterprises to facilitate decision making.

Decision making has assumed great significance in the present day. To survive and grow in the competitive business environment, it is necessary that sound decisions are taken. These decisions may relate to starting of business, financing of business by raising funds from the capital market, expansion of business, diversification of business, employment in business, shut down (discontinuance) of business, investing in securities, formulation of monetary and fiscal policies and so on. Proper decision making requires financial information about a business enterprise. The aim of accounting is to meet the information needs of the rational and sound decision makers and, thus, called the language of business. Although accountings have universal applicability, it is best understood as the language of business.

The present study is an attempt to find the Accounting Practice and Procedure adopted by selected Power Companies in India.

Objectives of the Study:

Following were the main objectives of the study:

1. To study the accounting practices and procedure in Power Companies in India.
2. To understand the extent of the legal provision pursued.
3. To assess the usefulness of present internal accounting system.
4. To find out the financial performance of the power companies.
5. To develop standardised system of accounting procedure for Power Companies in India.
6. To develop standard format of Annual Accounts for Power Companies in India.

Hypothesis of the Study:

Following is the main hypothesis of the study:

H₀ : There is no proper accounting procedure and policies in Power companies.

H₁ : There is proper accounting procedure and policies in Power companies.

Methodology of the Study

For the purpose of this study, the following process were followed :

Collection of Information :

1. Primary sources of information : will be collected through personal contact with various units of the Power Companies in India.
2. Secondary source of information : will be on the present accounting procedure, annual accounts, administrative report etc. Power Companies in India

Source of Data

The data relating to the present study has been obtained from the annual accounts of the Power Companies in India. In addition to this, literature pertaining to the Power Companies in India, such as their annual administrative reports and articles published in various journals has been taken into consideration. Besides supplementary data has been collected from the different statement prepared by the units of study as well as the data published by the Power Companies in India.

For meaningful analysis facts has been collected from the sources other than the above. Accordingly executives on accounts, finance department of Power Companies in India has been contacted through personal meeting and useful discussion has been held with them. Apart from this the various reports, magazines, newspapers has been utilised for useful data.

Significance of the study

The proposed study has provide certain parameters and guidelines to the management of selected power companies in India to access the optimization of accounting practice and procedure in direction of financial plans, policies and targets or objectives.

This study also provides a good feedback to the government, investors, creditors, workers consumers and many others to take timely decision in their own area of interest.

Scope of the Study

The present study "Accountings Practices and Procedure in Selected Power Companies in India" covers a period of 5 years i.e. the financial year 2010-11 to 2014-15. The proposed study seeks to cover the following power companies of India:

1. Power Grid Corporation of India
2. NTPC Limited.

According to the need of research necessary changes can be made in power companies for drawing the ideal conclusions.

ACCOUNTING OF OPERATING AND NON-OPERATING INCOMES

The accounting of revenue in power companies is follows:

It is clear that the transmission income in Power Grid Corporation Limited is lowest at Rs. 657.63crores in 2010-11 and thenafter it increased to maximum Rs. 1469.29 crores in 2014-15. The trend was marked increased during the period of study. The trend in consult income of service was also marked increased. The trend was fluctuated from Rs. 26.91 crores in 2010-11 to Rs. 33.48 crores in 2014-15 forming a range of Rs. 10.80 crores.

The trend in consultancy income of sale of products was marked fluctuating. The trend was highest in 2010-11 at Rs. 14.75 crores and lowest in 2011-12 at Rs. 18.39 crores. The trend in telecom income was fluctuated from Rs. 8.64 crores to Rs. 29.40 crores. It was Rs. 15.77 crores in 2010-11 which increased to Rs. 18.72 crores in 2011-12 and Rs. 20.11 crores in 2012-13. Thenafter it decreased to Rs. 8.64 crores in 2013-14 and again in 2014-15 it increased to Rs. 29.40 crores. The trend in telecom income was marked fluctuating forming a range of Rs. 20.76 crores. The trend of other income in this company was also fluctuated from Rs. 3.57 crores to Rs. 12.41 crores from 2010-11 to 2014-15. The other income in this company was Rs. 12.41 crores in 2010-11 which was decreased to Rs. 5.52 crores in 2010 - 11 and thenafter it highly decreased to Rs. 3.57 crores in 2013-14. After this year it increased to Rs. 4.84 crores and Rs. 7.75 crores in 2013-14 and 2014-15. Overall, the trend of income in Power Grid Corporation Limited was marked fluctuating in good performance manner. In NTPC Limited, the trend of transmission income was marked increased trend forming a range of Rs. 1108.09 crores. It was Rs. 775.42 crores in 2010-11 which highly increased to Rs. 1884.21 crores in 2014-15. Similarly, the trend of consultancy service income was marked fluctuating forming a range of Rs. 5.72 crores. The ratio was highest in 2014-15 at Rs. 32.14 crores and lowest in 2012-13 at Rs. 26.42 crores.

The trend of consultancy income of sale of products was also marked increased trend forming a range of Rs. 13.46 crores. The trend was lowest at Rs. 15.75 crores in 2010-11 which highly increased to Rs. 29.21 crores in 2014-15. The trend of telecom income was also marked increased. This was highest at Rs. 31.24 crores in 2014-15 and lowest at Rs. 14.85 crores in 2010-11 forming a range of Rs. 16.39 crores. The trend of other income was fluctuating from Rs. 2.77 crores to Rs. 25.24 crores. It was highest at Rs. 25.24 crores in 2013-14 and lowest at Rs. 2.77 crores in 2010-11. Overall, the trend of revenue in NTPC Limited was marked fluctuating during the period of study. The trend of consultancy income of sale of products was also increased to Rs. 7.75 crores to Rs. 11.35 crores from 2010-11 to 2014-15. The trend was marking increased forming a range of Rs. 3.6 crores. The trend of telecom income was also increased from Rs. 9.28 crores to Rs. 18.22 crores forming a range of 8.94 crores. The telecom income was highest at Rs. 18.22 crores in 2014-15 and lowest at Rs. 9.28 crores in 2010-11. The other income was also marking increasing trend forming a range of Rs. 14.3 crores from 2010-11 to 2014-15. It was marked highest at Rs. 15.29 crores in 2014-15 and lowest at Rs. 0.99 crores in 2010-11. Overall, the trend of income in this company was marked increased during the period of study. On the other hand, the proportion

of transmission income on total revenue is more in Power Grid Corporation Limited while, in NTPC Ltd. this proportion is less which causes more dependency on the transmission income. The other parts of revenue income in the power sectors such as consultancy income, telecom income and other operating incomes are fewer effective.

Comparative Analysis of Raw Material

The comparative analysis of raw material defines actual amount input in raw material for production of power. The study is shown in the following table:

**Table: 1 Raw Materials of Selected Power Companies
For the period from 2010-11 to 2014-15**

Years	Power Grid	NTPC Limited
2010-11	0.03	32.63
2011-12	0.03	38.55
2012-13	0.05	48.02
2013-14	63.59	49.9
2014-15	219.46	52.02

It is clear from the above table that the proportion of raw material is very high in Tata Power in comparison to the other companies. The amount of raw material in Power grid is very low 0.03 crores in 2010-11 which is recorded highest at 204.73 crores in Tata Power Limited. While, in NTPC Limited, the proportion of raw material was satisfactory level.

Comparative Analysis of Power and Fuel

The comparative analysis of power and fuel defines actual amount input in power and fuel for production of power. The study is shown in the following table:

**Table: 2 Power and Fuel of Selected Power Companies
For the period from 2010-11 to 2014-15**

Years	Power & Fuel Cost	NTPC Limited
2010-11	68.27	30,429.41
2011-12	75.63	36,422.25
2012-13	85.01	43,311.75
2013-14	105.94	42,843.10
2014-15	122.17	50,771.68

It is clear from the above table that the maximum amount is consumed by NTPC Limited in power and fuels. While the Tata power is turned at II rank in spending the expenses. In the Jai Praksh Power Limited, the proportion of power and fuel was very low.

Comparative Analysis of Other Manufacturing Expenses

The comparative analysis of other manufacturing expenses defines actual amount input in other manufacturing expenses for production of power. The study is shown in the following table:

**Table: 3 Other Manufacturing Expenses of Selected Power Companies
For the period from 2010-11 to 2014-15**

Years	Power Grid	NTPC Limited
2010-11	164.71	1,460.70
2011-12	0	247.14
2012-13	0	325.18
2013-14	0	312.24
2014-15	0	317.47

The proportion of other manufacturing expenses is very high in Tata Power Limited and NTPC Limited it is low as compared to Tata Power Limited. While, in Power Grid, the ratio is very low in 2010-11 and then after it was nil.

Comparative Analysis of Miscellaneous Expenses

The comparative analysis of miscellaneous expenses defines actual amount input in miscellaneous expenses for production of power. The study is shown in the following table:

**Table: 4 Miscellaneous Expenses of Selected Power Companies
For the period from 2010-11 to 2014-15**

Years	Power Grid	NTPC Limited
2010-11	116.57	503.73
2011-12	623.27	5,202.34
2012-13	724.92	3,833.56
2013-14	765.51	4,471.53
2014-15	990.63	4,031.31

It is clear from the above table that the proportion was very high in NTPC Ltd. as compared to Power Grid.

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