



GREEN ACCOUNTING AND DISCLOSURE PRACTICES IN THE INDIAN PETROLEUM SECTOR

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ABSTRACT

Industrialization on one hand contributes in a very big way towards economic development of a country while on other hand it leads environmental deterioration. Today it has been globally accepted that economic development must be environmentally sustainable. Traditional accounting systems do not account for the costs arising out of the use of environmental and natural resources. Environmental Accounting aims at incorporating both economic and environmental information at the corporate level as well as at the national economy level. However in India there is currently no common style for environmental accounting and reporting at corporate level. The current research is an attempt to understand the concept of environmental accounting and also make an evaluation of environmental accounting and disclosure practices in the Indian petroleum sector. Two companies viz. Bharat Petroleum Company Limited and Oil & Natural Gas Company Limited have been considered for the purpose of the study. The Environmental Policy of both the companies indicate that they have taken efforts for the better protection of the environment but there is need for further push when it comes to companies following and reporting on green practices in India.

Keywords: environment, environmental accounting, corporate, reporting

I. INTRODUCTION

Industrialization is a major contributor of economic development and prosperity of a country. On one hand it provides employment opportunities and wealth generation while on other hand it leads environmental deterioration. Until recently industrial operations were neither clean nor green, and companies gave little consideration to the environmental impact of their business. Gradually as awareness about environment protection spread, not only industry but also society at large has begun to see the potential of major environmental problems. This realization brought environmentalism into the world of business. Today businesses face a ladder of environmental regulations and industries from manufacturing to technology must now consider their ecologic and social impact. Environmental and social accounting grew out of an imperative to balance a company's financial health with its broader obligations. Corporate environmental reporting and accounting is almost two decades old now. Rising pressures on the environment and increasing environmental consciousness have generated the need to account for the various interactions between all sectors of the economy and the environment. Environmental issues have unfavorably affected most of the business transactions and promoted companies to recognize ecological and social sustainability practices as part of their broader goals.

An important function of environmental accounting is to bring environmental costs to the attention of corporate stakeholders who may be able and motivated to identify ways of reducing or avoiding those costs, while at the same time, improving the environmental quality. The implementation of environmental accounting can help achieve the objective of corporations and other stakeholders in reducing the costs and decreasing the pollution respectively.

II. LITERATURE REVIEW

Minimol and Makesh (2014) have described the major environmental parameters reported by Indian corporates as part of their environmental reporting practices and the extent to which Indian corporates exercise voluntary environmental reporting with regard to the environmental parameters identified. The researchers have developed a model which specifies six aspects to be covered in environmental accounting in order to measure the ultimate environmental performance of the organisation, the aim of which is to present a novel view of the different activities to be undertaken by organizations to facilitate environmental accounting and reporting.

Mukesh Chauhan (2005) explained the various forms of environmental accounting, its scope, limitations and legal framework in the Indian context. The research came out with a suggested framework for implementing green accounting practices in India and concluded that it is high time for corporates to start preparing a firm environmental policy, take steps for pollution control, comply with the related rules and regulations and mention adequate details of environmental aspects in their annual statements. For sustainable development of a country, a well-defined environmental policy as well as proper follow up and proper counting procedure is a necessity.

McManners (2014) proposed sustainability economics as subservient to society. The concept of sustainability is important for all stakeholders who take and implement the concept of sustainability in different stakes. As per the Economic Policy, 1991, the increased international competition has made eco auditing essentially related to green accounting.

III. OBJECTIVES

1. To understand the concept of environmental accounting.
2. To make an evaluation of environmental accounting and disclosure practices of select companies in the Indian petroleum sector.

IV. RESEARCH METHODOLOGY

The present study is focused on evaluating environmental accounting and disclosure practices of select companies in the Indian petroleum sector. Two companies from the petroleum sector viz. Bharat Petroleum Company Limited & Oil & Natural Gas Company Limited have been considered for the purpose of the study. The study is based entirely on secondary data for the four year period commencing Financial Year 2012-13 to Financial Year 2015-16. Data collected from the Annual Reports, environmental/sustainability reports and other relevant reports of selected companies for the period of the study have been analysed.

V. ENVIRONMENTAL POLICY OF SAMPLE UNITS

A] Environmental policy of BPCL



Given the nature of the business, the company is very much aware that their operations have large impact on the environment and its resources. Preserving the natural resources and ensuring minimum damage during the course of the business operations is the prime focus of the company. The company has put in place number of policies and systems to mitigate thenegative impact on the environment at all their operating locations. The R&D department is not only looking for new and innovative products but also innovate methods of producing them such that the environmental impact is reduced.

Elaborate and systematic Energy Accounting and Management Information Systems are important features of the Refinery operations. The company's refineries have been committed to conserve energy at all levels, through sustained efforts. The Mumbai based refinery has a very robust and effective Energy Accounting and Management System accredited with ISO50001:2011 certification and is one of the first refineries to achieve this landmark certification in India.

The company as part of its commitment to the environment engaged M/s Plan Earth, a registered NGO, working for environmental protection, for disposal of various waste paper varieties and also to clean plastic from the company premises. This is sent straight for pulping to ITC Ltd under the WOW Project. The company, in the year 2014 has received for the eighth time in a row The Kerala State Pollution Control Board Award for Excellence position among Very Large Industries for substantial and sustained efforts in Pollution Control and for initiatives in environment protection. The refinery was also awarded the Corporate Excellence Award for Green Initiatives by the Kerala management Association for environment management efforts in the year 2014.

Environmental policy of ONGC

ONGC group has policy which is focused on compliance to law of the land, sustainable development, minimizing generation of waste, minimizing the risk of environmental pollution and conducting awareness programmes for the employees and concerned members of society. The company boasts of an efficient air, water and soil quality management system. All the company's installations have established management systems based on ISO 14001 and OHSAS 18001. The Energy Management Systems of the individual installations are periodically audited by Corporate/Sectoral HSE and reviewed by top management for continuous improvement. To tackle any emergency and disastrous situation, an Emergency Response Plan has been prepared at Installation level and there is Disaster Management Plan in place at the Asset level. Mock drills are conducted regularly for different emergency situations for enhancing effectiveness of the response plan. ONGC has adequate resources to handle oil spills upto 700 Tons.

As an innovative solution, bio-remediation technology has been extensively and effectively used for treating oil contaminated soil within installations. ONGC has associated with TERI for implementation of this technology and Oil Zappers technology developed by them has been applied for bio-remediation oil contaminated soil and oily sludge. ONGC has demonstrated its commitment for environmental protection by undertaking extensive mangrove plantation for marine environment protection in Gandhar area of Gujarat. ONGC keeping up with its commitment to promote and develop renewable energy resources is producing 50 MW of energy through wind energy at Kutch, Gujarat. ONGC is the first PSU to initiate a renewable energy project of this magnitude.

VI. DATA ANALYSIS

A] Environmental Performance of BPCL

Table 1 - Environmental Performance Indicators of BPCL

INDICATORS	2012-13		2013-14		2014-15		2015-16	
	KOC HI	MUMB AI	KOC HI	MUMB AI	KOC HI	MUMB AI	KOC HI	MUMB AI
Direct energy Consumption	25.20 million giga joules	36.60 million giga joules	26.38 million giga joules	30.60 million giga joules	31.27 million giga joules	25.06 million giga joules	28.10 million giga joules	24.58 million giga joules
Indirect energy Consumption	191.70 million giga joules	130.07 million giga joules	282.5 million giga joules	704.47 million giga joules	182.80 million giga joules	266.21 million giga joules	117.40 million giga joules	371.40 million giga joules
Water Withdrawal	3.11 million KL		3.69 million KL		3.15 million KL		3.32 million KL	
Green House Gas Emission	183.13 thousand tonnes		176.26 thousand tonnes		159.35 thousand tonnes		164.18 thousand tonnes	

Source: Author's Compilation from Annual Sustainability Reports

B] Environmental Performance of ONGC

Table 2 - Environmental Performance Indicators of ONGC

INDICATORS	2012-13	2013-14	2014-15	2015-16
Total Primary Energy Consumption	1.16 lakh terra joules	1.87 lakh terra joules	1.93 lakh terra joules	1.79 lakh terra joules
Water Usage	25.79 billion liters	26.00 billion liters	24.57 billion liters	24.29 billion liters
Green House Gas Emission	9.11 million tonnes	11.71 million tonnes	12.02 million tonnes	11.21 million tonnes

Source: Author's Compilation from Annual Sustainability Reports

DISCUSSION

A] Energy Consumption

The direct energy consumption at the Kochi plant of BPCL has shown an upward trend over the period of the study. The direct energy consumption at the Kochi plant was 25.20 million giga joules in the year 2012-13 and went up to 31.27 million giga joules in the year 2014-15. However it subsequently reduced to 28.10 million giga joules in the year 2015-16. The Mumbai refinery of BPCL however reported a continuous decline in the direct energy consumption which was 24.58 million giga joules in 2015-16 as against its peak consumption of 36.60 million giga joules in 2012-13. The indirect energy consumption of both the refineries



of BPCL displays a volatile utilisation pattern over the years of the study. The total primary energy consumption of ONGC has shown a consistently increasing trend except for the Financial Year 2015-16. The energy consumption was recorded at 1.16 lakh terra joules in the year 2012-13, 1.87 lakh terra joules in the year 2013-14 and 1.93 lakh terra joules in the year 2014-15. However the total primary energy consumption of ONGC decreased to 1.79 lakh terra joules in the year 2015-16.

B] Water consumption

As part of its commitment to safeguarding resources BPCL has over the years used the water which was already used previously by them, thereby recycling and saving on further usage from fresh water sources. On the other hand ONGC has used fresh water each year indicating a lack serious commitment to avoid wasteful usage of water.

C] Green house gas emission

As far as BPCL is concerned, its green house gas emissions have decreased over the years. BPCL had the highest emission of 183.13 thousand tonnes in the year 2012-13, which reduced to 176.26 thousand tonnes in the year 2013-14 and furthermore to 159.35 thousand tonnes in the year 2014-15 indicating the company's commitment to protecting the environment. However the company's green house gas emissions increased to 164.18 thousand tonnes in the year 2015-16. On the other hand the green house gas emissions of ONGC have shown an increasing trend with every passing year. In the year 2012-13, the emissions stood at 9.11 million tonnes, which increased to 11.71 million tonnes in 2013-14 and furthermore to 12.02 million tonnes in the year 2014-15. However the company's green house gas emissions reduced to 11.21 million tonnes in the year 2015-16.

VII. CONCLUSION

Environmental accounting is in its infancy stage in India and whatever data is reported by companies in the accounts in this regard is more or less compliance of relevant rules and regulations. There is a lack of environmental reporting guidelines which makes inter-company comparison cumbersome as every company follows diverse reporting practices.

The current study is an attempt to evaluate the environmental accounting and disclosure practices in the Indian petroleum sector. Two companies viz. Bharat Petroleum Company Limited and Oil & Natural Gas Company Limited have been considered for the purpose of the study. A slight difference can be seen in the environmental policy of both the companies. The Environmental Policy of both the companies indicate that they have taken efforts for the better protection of the environment but there is need for further push when it comes to companies following and reporting on green practices in India. However the reports of both companies reviewed as a part of the study, did not explain how Indian companies decide on what issues are to be addressed or left out in its environmental report. It can be concluded that Indian companies are yet to develop a holistic approach to environmental accounting.

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