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A Study on Carbon Credit Trading: An Overview

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Abstract

One of the environmental dangers our planet faces today is the potential for the drawn out changes in Earth's environment temperature known as global climate changes. Scientists and researchers gauge that because of worldwide environmental change, the Earth's normal temperature could increase as much as six and one-half degrees Fahrenheit continuously. While this may not seem like a lot of an expansion, if the temperature increment moves toward the six and one half degree mark, the earth will be a very different spot than we know it today. The need to represent the environment and the economy in a coordinated manner arises due to the urgent functions of the climate in economic execution and in the human welfare. These all functions incorporate the arrangement of natural resources to manufacture and consumption, waste absorption by natural media and environmental services of life support and other human conveniences. Indian businesses had the option to take advantage of the unexpected blast in the carbon market making it a favored area for carbon credit purchasers. It is anticipated that India will acquire at least $5 billion to $10 billion from carbon trading (Rs 22,500 crore to Rs 45,000 crore) throughout some undefined time frame. Likewise India is probably the biggest beneficiaries of the total world carbon trade through the Clean Development Mechanism asserting around 31% (CDM). The principle focus of this idea is to exchange the carbon credit in the market which is produced from the Kyoto Protocol. This study is focuses towards advantages and challenges which are straightforwardly or by implication related with carbon credit trading. This paper expects to investigate the carbon credit trading among Indian Industry.

Keyword: Carbon Credit Trading, Carbon offset Cap and Trade

Introduction

Carbon Credit

Carbon credits are a key element of worldwide carbon emission trading plans that have been executed to reduce global warming. A carbon credit is universal term for any tradable certificate or grant addressing the right to emit one tons of carbon dioxide or the mass of another greenhouse gas with a carbon dioxide equivalent. The idea of carbon credits appeared because of increasing awareness and the requirement for pollution control. Carbon credits were one of the results of Kyoto protocol. The Kyoto Protocol was started by the United Nations Framework Convention on Climate Change and confirmed by 181 nations and the European Union all in all, individual entity in 1997, and was put into effect in 2005. This protocol was proposed by the international community to address and reduce greenhouse gas emission that has prompted global climate change. The Protocol makes it required for business entities emitting over the allowed limit of carbon dioxide to cut down their emission to endorsed levels, or they should purchase carbon credits certificates which can be transacted in the market, or on the other hand pay a charge for the emissions, which is imputed to as carbon charge. Carbon credits are recognized as an Intangible Assets (as per AS-26) and Stock (as per AS-2) which can be traded between organizations on the commodities market or global markets at the market price. Credits can be utilized to finance

carbon reduction plans between trading partners and all throughout the world. The currency for exchanging of carbon credits is called Certified Emissions Reductions (CER). CERs are as certificate of declarations, like a stock. A CER is given by the CDM Executive Board to projects in developing nations to affirm that they have diminished greenhouse gas emissions by one ton of carbon dioxide each year.

It can be said that, 1 CER = 1 tonne of CO2 (or equivalent gases)

For instance: If a project creates energy utilizing solar power as opposed to consuming coal, and in the process saves, say 50 tons of carbon dioxide each year, it can claim 50 CERs.

Need of Carbon Trading:

Over the most recent couple of years, the sky is darkened due to effects of all the carbon dioxide. This consistent accumulation of carbon dioxide in the environment has added to what is known today as Global Warming. The few different causes other than consuming of petroleum product which has expanded the level of carbon dioxide in the climate are the systematic clearing of forests to make way for various industrial facilities and different other human structures. A number of human activities are responsible for it like:

- Manufacturing industries and construction
- Oil and natural gas
- Burning fuel
- Energy consumption in various industries
- Chemical factories
- Transportation
- Fugitive emissions from fuels
- Production of Metal
- Consumption of halocarbons and sulphur hexafluoride
- Production of halocarbons and sulphur hexafluoride

The understanding about adverse levels of Greenhouse Gases (GHG) and the subsequent Worldwide Warming phenomena, has constrained the public authority specialists and private organizations to execute frameworks that would help in decreasing the measure of carbon dioxide in the air.

Carbon dioxide, the main greenhouse gas produced by fuel burning, has become a reason for concern. Industrial emission is the main source of greenhouse gases. Gases incorporate Carbon Dioxide (Co2) from fuel burning, Nitrous Oxide (N2O) used in agriculture as fertilizer, Methane used in landfills, livestock digestive processes and waste, Hydrofluorocarbon gases (HFC) used in refrigeration; solvents or cleaning agents, Perfluorocarbons (RFC), or Perfluorocompounds used as a purging agent for semi-conductor manufacture and small amounts are produced during uranium enrichment processes, Sulphur Hexafluoride (Sf6) used as insulating material for high-voltage equipment like circuit breakers at utilities. Also used in water leak detection for cable cooling systems which is a man-made gas are included in Greenhouse Gases (GHG). To control the GHG emission and protect the environment; carbon credits are introduced as a weapon to fight this enemy which is Global Warming.

Carbon Trading

Carbon trading is a complicated system which lays out itself a straight goal: to make it less expensive for companies and governments to meet emission reduction targets, despite the fact that, carbon trading is planned so that the goals can be met without real reductions taking place. Purchasing the carbon credits shows the decrease in carbon emission by giving good monetary benefits to the cost of polluting the air. The general significance of this concept is that carbon emission turns into a cost of business. This might see like to be some other inputs such as labor, plant or raw materials in an organization.

Two main forms of Carbon trading

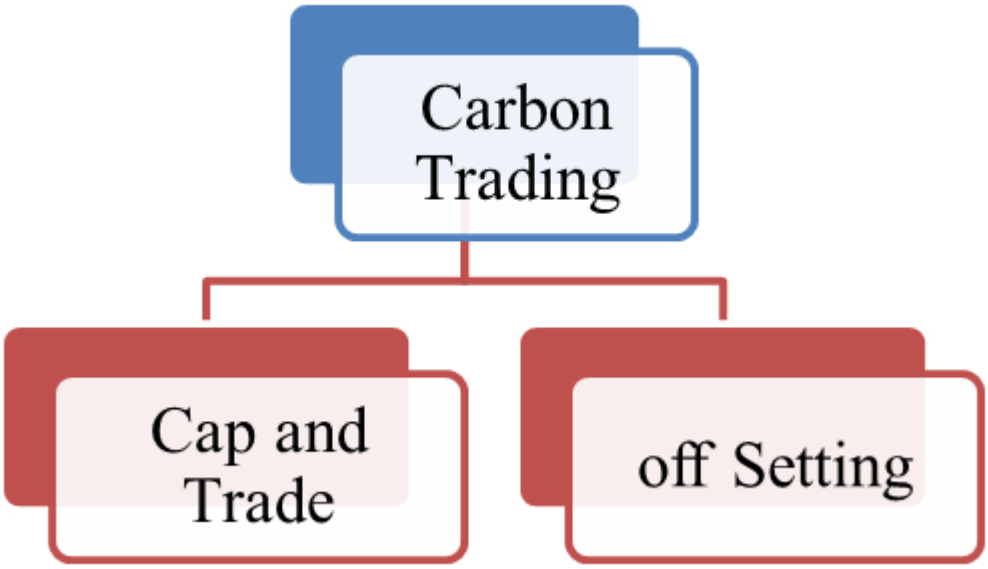

Figure 1: Forms of Carbon Trading

Cap and trade

Under a plan called 'cap and trade', governments or intergovernmental bodies like the European Commission hand out licenses to pollute (or 'carbon permits') to significant companies or industries. Cap and trade is a term or a framework for controlling carbon emission and different types of atmospheric pollution by which a maximum limit is set on the sum a given business or other organization may produce but which permits further ability to be purchased from other organizations that have not utilized their full allowance. This is a government regulatory program designed to limit, or cap, the total level of emissions of certain chemicals, especially carbon dioxide, because of industrial activity. In cap and trade, a government gives a limited number of yearly permits that grant companies to emit a specific amount of carbon dioxide. The total amount allowed thus becomes the cap on emissions. Companies are taxed if they produce more level of emissions than their allowed permit. Companies can sell, or trade, their reduced emissions or unused permits to different companies. The trading part of such a scheme doesn't really diminish any emission. It basically gives companies more space to move in tending to the emission problem, for which reason carbon trading proposals are sometimes also referred to as flexible mechanisms.

Below figure shows that companies emitting less than the cap are permitted to sell the excess carbon permits to companies that are polluting more. Lesser is the emission, more will be the profit.

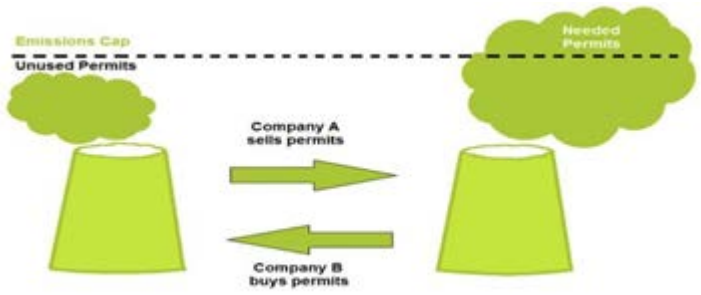

Figure 2:Cap and Trade

Source:http://climatepolicyinfohub.eu/eu-emissions-trading-system-introduction

Carbon off sets

The second kind of carbon trading is off setting which is another financial solution for diminishing greenhouse gas emission, which works on a similar strategy. Rather than cutting emission at source, companies, and sometimes worldwide monetary and financial institutions, governments and individuals, finance emission saving projects external the capped area. A carbon offset credit is equivalent to reduction of one metric ton of CO2 or equivalent greenhouse gas in the climate. It helps in promoting renewable and green energy choices like solar energy and wind energy, and in subsidizing projects on nature protection and reforestation. Utilizing renewable energy sources helps with accomplishing this critical reduction. The carbon savings are calculated by how considerably less greenhouse gas is presumed to enter the atmosphere than would have been the situation in the absence of the project. As per Dan Welch 'Off sets are a nonexistent product made by deducting what you trust occurs from what you theory would have occurred.' Since carbon off sets replace a requirement to verify emanations reductions in a single location with a set of stories about what might have happened in an imagined future somewhere else, the net outcome tends to be an increase in greenhouse gas emissions.

Presently people are likewise utilizing this method and are purchasing carbon offset to make the climate cleaner and to spread awareness about climate protection. Purchasing carbon balance is clear and can be conveniently executed on the web through one of the few carbon offset provider sites. Yet, we should remember that just purchasing carbon offset doesn't remove our responsibilities and obligations, as all of us should play a significant part in diminishing our carbon footprints by carrying small alterations to our day by day lives.

Sectors in which Carbon Credits can work:

The following figure shown several sectors in which carbon credits work:

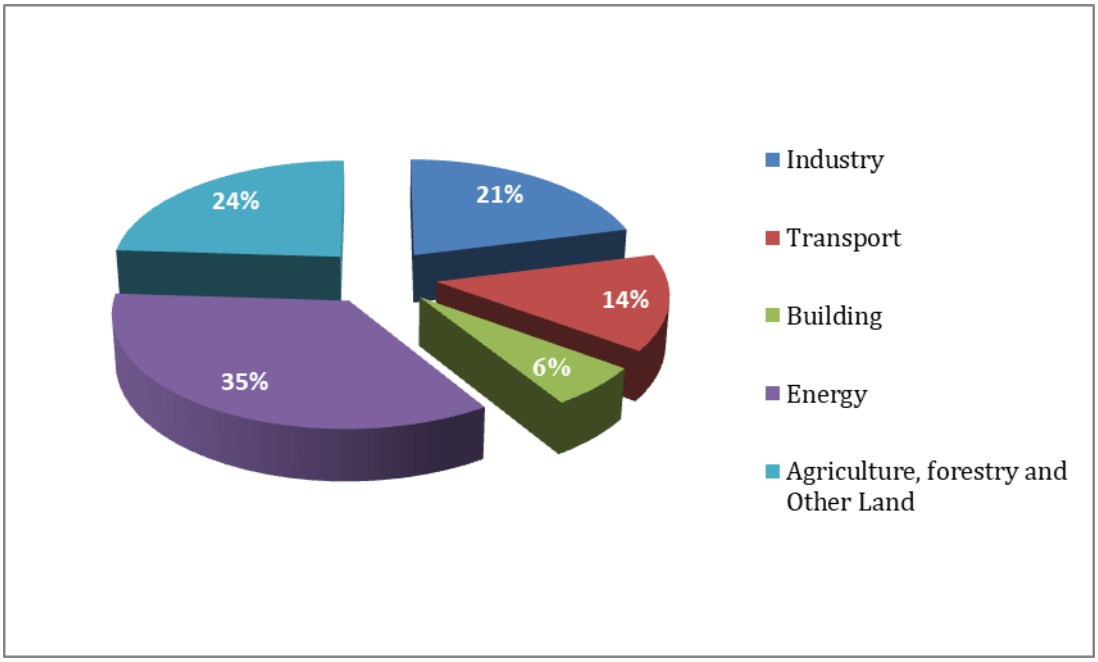

Fig. 3: Different Sectors in which Carbon Credit Works with Percentage

Source:https://ecowarriorprincess.net/2018/04/carbon-intensive-industries-industry-sectors-emit-the-most-carbon/

Conclusion

Carbon credit trading is a concept which is utilized to reduce the carbon emission level from the environment. Presently the majority of the industries adopts this idea and earns various kinds of advantages however they additionally face a few difficulties and challenges. According to above paper, there are a few business sectors which are directly engaged with carbon credits trading, for example, energy supply, transportation, infrastructure, farming, manufacturing industries, forestry, agriculture etc. The above study is additionally shows that the majority of the industries are taking interest in carbon trading. The primary advantage which companies earn other than monetary is improvement in earnings, societal position and market share. Carbon offset and carbon credit actually needs to discover its place in layman's vocabulary. Along these lines, mass awareness on the issue through widespread education is needed, to give our future generation the better cleaner climate. If we take natural fresh air, loads of issue will consequently settled or resolved. This is the premier advantage which we earn from carbon credits trading. Aside from benefits, there are loads of difficulties and challenges we face in carbon credits trading. At last, the carbon credit trading remains as a source of unreasonable incentive to the companies as well as individuals and country.

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