

IMPACT OF CARBON CREDIT ON ENVIRONMENT: THEORETICAL ASPECTS

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Abstract

Worldwide environmental change is inseparably connected with the upgraded develop of ozone harming substances. Discharges exchanging the type of carbon credits or CERs are opening up another vista of exchange openings with prospect for progressive decrease of outflows, especially by the created countries. Different national and global projects embraced by the legislature and willfully by the non-administrative organizations have decidedly affected on dynamic decrease of emanations in numerous pieces of the world. The paper features the rising issues connected to the modalities of expulsion exchanging, together with extension for creating sound accounting strategies for exchanging carbon credits. The paper examines the open doors for building up a sound promoting arrangement of carbon credits with inherent proficiency in exchanges, responsibility and straightforwardness in announcing frameworks with spotlight on India. A dangerous atmospheric devotion is the present theme in the political motivation over the globe. Each nation is by all accounts investing time, vitality, and cash to discover answers for one of the real global issues of climatic change. Carbon credits are issued to organizations that lessen their ozone harming substance credits are then offered to organizations that can't satisfy the convention standards, it helps the creating begin with clean advances; since these machines are costly in this manner assets are given to nations as carbon credits. 60-70% of discharge is through fuel explosion in businesses, for example, concrete, steel, material. A few gases are discharged as side-effects of modern procedures which influence the ozone layer. Carbon Trading is in its early stage as far as improvement, which requires time and exertion to be prepped as one of the developed markets. Carbon credit has been given the acknowledgment of an impalpable ware and can be exchanged on the items advertise. Exchanging of vehicle bon credit occurs as Carbon Emission Reduction (CER). A CER is given by the CDM official board extends in creating counts-attempts to confirm that they have decreased ozone depleting substances emanations by one tons of carbon dioxide every year.

INTRODUCTION

Increasing the needs of pollution control, greenhouse gases and carbon dioxide is the existence of carbon credit. Now a days global warming is recent and current topic at international level. Each and every country facing such types of problems, due to rapid industrialization and technology advancement. Every country spending lot of time, energy, and money to find out solutions of most significant worldwide issues of climatic change. Carbon credits are provided to those corporates that reduce their greenhouse gas effects or credits and then sold to those corporate who cannot fulfill the protocol norms of environmental protection. Corporate starts developing and installing those types of clean technologies which are quite expensive but for that purpose funding is provided by or in the form of carbon credit. In the most of the industries such as cement, steel, textile has a major emission of Carbon dioxide (CO₂) through fuel combustion in industries. Carbon Dioxide (Co₂), Nitrous Oxide (N₂O), Methane, Perfluoro carbons (RFC), and Shurtful Hexafluoride (Sf₆) are released or emitted as by-products of industrial processes which destroy the ozone layer. Carbon credit is in its charm stage in terms of growth, which requires time and effort to be groomed as its best possible practices in environmental protection and reached at matured markets in current scenario. Carbon credit has been given the gratitude of an intangible commodity and can be imported and exported on the commodities market. Carbon credit Trading happens in the form of Carbon Emission Reduction (C.E.R). CDM executive board is an evaluation body in developing countries to certify that they have reduced C.E.R or greenhouse gases emissions by an enterprise.

Meaning of carbon credit

Carbon credit is a terminology which representing a tradable certificate of rights of emission of one tons of carbon dioxide or the mass of greenhouse gases.

In simple words "Right of emission of carbon dioxide or greenhouse gases". In other words Carbon credit is a certificate of right of emission of carbon dioxide in one tones or its equivalent.

Increasing awareness and the need for pollution control at international level is a birth of carbon credit and as a result of Kyoto protocol come into existent which is an international agreement between 169 countries. The Kyoto protocol is an international agreement on legally binding emission targets for developing nation of greenhouse gases. The Kyoto Protocol objective to reduce greenhouse gas emission. One carbon credit equals

to one ton of carbon. According to Kyoto protocol carbon credit means one metrics of carbon emitted by burning of fossil fuels in equals to a number of credits that they use in certain period of time.

Meaning of carbon reduction credits (CRCs)

A carbon offsets credits means clean forms of production of solar energy, wind energy, and hydro and bio fuels energy. Carbon offsets credits mean that from atmosphere, ocean and soil, collection and storage of carbon through biosequestration, reforestation and forestation. All those methods of reducing carbon credit are a better way to reduce carbons emissions crises at globe.

There are two types of Carbon Credits:

- 1 Carbon Offset Credits (wind, solar, hydro and biofuels)
- 2 Carbon Reduction Credit

Meaning and need of carbon trading

Corporate house uses carbon credit that is allocated to them (One carbon credit equals to one ton of carbon) and beyond their allocated limited or quota of carbon credit then purchases carbon credit from the markets. Buying and selling of carbon credit from markets is called carbon credit trading. Carbon credit trading is a technique of reducing overall emissions from atmosphere

Needs of carbon trading

Ways to control green house gases emissions such as Carbon dioxide (CO₂) through fuel combustion in industries. Carbon Dioxide (Co₂), Nitrous Oxide (N₂O), Methane, Perfluoro carbons (RFC), and Shurtful Hexafluoride (Sf₆) etc. that becomes a causes of concern. An industrial emission is a major source of carbon dioxide. Global warming climate change, ozone depletion, sea level arises and biodiversity are affected by harmful green house gases. Green house gases enter in the atmosphere through reflected energy from sun and then release that radiation back to earth. There are many human activities which produce green house gases such as: Fuel combustion, Energy industries, Manufacturing and construction industries, Transport services, Fugitive emissions from fuels, Oil and natural gas, Chemical industries, Metal production industries, Production and Consumption of sulphur hexafluoride, halocarbons and sulphur hexafluoride etc. are those types of human activities which produce greenhouse gases and carbon dioxide.

SOURCE OF CARBON DIOXIDE AND GREEN HOUSE GASES

Carbon Dioxide (Co₂)

CO₂ emissions from fuel burning, is the major source of greenhouses gases and responsible for global warming for more than 1/3 part of total. In global warming major gases due to which level of green houses gases increases.

Nitrous Oxide (N₂O)

Due to more agriculture activates in India, used fertilizer in agriculture for more productivity, Nitrous Oxide has a highest potential to causes Global Warming.

Methane

Methane is majorly used in landfills, livestock digestive processes and waste and in global warming, methane has a potential to causes more than 20% in comparison to co₂

Hydrofluoro carbon gases (HFC)

It is majorly used in refrigeration and also as supplement used to blow foams or insulation, solvents or cleaning agents and especially in semi-conductor manufacturing.

Capacity of Hydrofluoro carbon gases in causing Global warming is more than 4,000 to 10,000 times in comparison to CO₂.

Perfluorocarbons (RFC), or Perfluorocompounds

Perfluorocarbons (RFC), or Perfluorocompounds is used as a purging agent for semi-conductor manufacture and small amounts are produced during uranium enrichment processes.

It has a capacity of causing Global warming is more than 6,000 to 10,000 in comparison to CO₂.

Sulphur Hexafluoride (Sf₆)

Sulphur Hexafluoride is used as insulating material for high-voltage equipment like circuit breakers at utilities. Also used in water leak detection for cable cooling systems. SF₆ is a man-made gas.

It causing to Global warming in 25,000 times more than Co₂.

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Significance of Kyoto protocol

Addressed to the global warming crisis, in 1992, at Rio de Janeiro of Brazil, in UN Conference on the Environmental and Development clearly raised up the concept of “sustainable development”. In this conference more than 150 countries had participated and established “United Nations Framework Convention on Climate Change”, which is known as UNFCCC. It is a first conventional talk at international level on full control of greenhouse gas emissions including Carbon dioxide discharge. It is an international talk to fight against global warming which causing a lot of adverse effect to the development of society. UNFCCC organized third conference of parties (COP) in December, 1997 which is held on Kyoto of Japan, on limiting carbon emission in developed countries. Limiting carbon emission is a way to control global warming and is known as Kyoto protocol. Carbon credit is a clean development mechanism which aims to reduce greenhouse gases and carbon dioxide by turning carbon emissions into carbon credit as a tradable commodity. Each country is given an annual emission quota. For preventing dangerous anthropogenic interface in the climate system therefore stabilization and reconstruction of greenhouse gas concentration in the atmosphere at a level.

A company has two options that would be available for reducing greenhouse gases or carbon dioxide

- (1) Reduce the green house gases GHG (ases) by using new technology or upgrade existing technology which is attaining new norms of emission of gases.
- (2) Help them to set up new technology that is eco friendly and thereby earn credits.

The Clean Development Mechanism (CDM):

The spotless advancement mechanism is a task based framework. This implies it achieves its targets at the moderately fine-grained size of individual tasks that are approved by assigned elements and enlisted with the CDM official board (CDM EB), the system's administering body, as opposed to at an industry or division wide scale. Each venture wishing to take part in the CDM must set up a Project Design Document (PDD) that clarifies in detail how its future outflows decreases will be genuine, extra, and not prompt spillage. It should likewise set up an observing approach that clarifies in detail how it will screen emanations decreases made by the task. A task may likewise use a recently endorsed observing procedure. Genuine discharges decreases are ones that are observed with adequate consideration to guarantee that they really happen. Extra outflows decreases are ones that are notwithstanding any that would have happened missing the CDM appropriation. Spillage of emanations happens when discharges decreases that would have happened inside a venture missing the CDM appropriation, rather happen outside it due to the sponsorship.

REVIEW OF LITERATURE

Karimullah et al. (2007) study reveals that now a day's every countries facing with global warming crisis and due to rapid industrial development and technological advancement. There is a big challenge faced by all the developed countries that how to reduce green houses gases and carbon dioxide from an atmosphere. Kyoto protocol is a roadmap in this direction which introduces a carbon credit. Carbon credit means that one carbon credit equals to one ton of carbon. In global scenario carbon credit trading is also markets where allocated quota of carbon credit is used and thereafter exceed carbon credit are sale and purchase at international level. A business prospective is also an important marketable platform for buying and selling of carbon credit.

Bhargava et al. (2006) study suggested that greenhouse gases are the manmade substances that polluted environment. Global warming is causes by following greenhouse gases such as Carbon Dioxide (Co₂), Nitrous Oxide (N₂O), Methane, Perfluoro carbons (RFC), and Shurtful Hexafluoride (Sf₆). There are two ways to reduce green house effects, that one is Carbon Offset Credits (wind, solar, hydro and biofuels) second is Carbon Reduction Credit. Carbon offsets credits means that clean forms of production of solar energy, wind energy, and hydro and bio fuels energy.

Ricardo et al. (2007) study reveals that environment is polluted by every substance of production and manmade activities and has big issues that are discussion at every international platform and level of global warming increase day by day. Global warming is addressed in 1992, at Rio de Janeiro of Brazil, in UN Conference that is a milestone in carbon credit. This study mainly focus on “sustainable development” it means that utilization of resource in an optimum manner so it will be available for near future. Resources are in limited but wants are unlimited so therefore always resource is exploited by man. Sustainable development is focusing on that, resource is use in limited so it can be save for near future and it reduces global warming.

CONCLUSION

Carbon credits compare to a decided tradable amount of ozone depleting substance (GHG) emanations. They are basically a license to radiate one metric ton of CO₂ into the air. The objective is to accomplish a zero net increment in GHG emanations, on the grounds that every ton of expanded outflows is 'balance' by undertaking based GHG decreases (They are a key segment of national and global discharge exchanging plans. Credits can

be traded between organizations or people, or purchased and sold in worldwide markets at the common market cost. Carbon credits make a potential market for diminishing nursery outflows by giving money related an incentive to discharges, making as a result emanations aware. Credits can be utilized to finance carbon decrease plots between exchanging accomplices and around the globe. They are regularly cited in metric huge amounts of carbon dioxide comparable, and are utilized to balance discharges from any procedure that radiates GHGs, (for example, the ignition of non-renewable energy sources), regardless of whether in industry, transportation or the family unit. Carbon credits are utilized in signatory nations to the Kyoto Protocol to meet outflow decrease targets reported yearly through universal shows.

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