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Certified Emission Reduction (CER) – A Strategy of Environmental Protection

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Abstract

Global warming is much talked about word these days. Over few decades anthropogenic activities carried out in the developed and developing countries and economies in transmission have contributed towards the increase in the concentration of Green House Gas (GHG) in the atmosphere that causes the Global Warming leading to climate change The Kyoto Protocol. 1998, was adopted by the parties to the UNFCCC with the objective of achieving quantified emission limitations through specific policies and measures to minimize the adverse effect of climate change. The Protocol provides for Clean Development Mechanism (CDM) that enables countries or operators in developed countries to acquire greenhouse gas reduction credits. for meeting the emission reduction targets while the developing country would receive the capital investment and clean technology or beneficial change in land use Thus clean money for dirty air that's the premise of an emerging trade in carbon credits Climate Change conference held at Cancun, Mexico in 2010 also calls on rich countries to reduce their greenhouse gas emissions as pledged in the Copenhagen Accord and for developing countries to plan to reduce their emissions. The agreement includes a "Green Climate Fund' Proposed to be worth $100 billion a year by 2020. to assist poorer countries in financing emission reduction.

Keywords: Emission, Carbon Credits, Global Warming.

Introduction

Global climate change is one of the major threats facing mankind. CO_2, "emission resulting from human-induced activities and industrialization is the main cause behind global warming and subsequently global climate change. To become carbon natural (i.e. reducing the emission of CO_2 along with other GHG's) several initiatives have already been undertaken at many levels, both national and international The most prominent amongst which is the Kyoto Protocol, an international agreement setting targets on the companies and Governments to reduce emission levels. Among the three mechanisms offered by the Kyoto Protocol, CDM looks to be the most prominent and suitable mechanism for developing countries like India. CDM projects give Indian companies the opportunity of going green by reducing its carbon footprint and earning carbon credits altogether.

Aim of the Study

The Principal objective of this paper is to highlight how CDM projects will give Indian companies the opportunity of going green by reducing its carbon footprint and earning carbon credits altogether. The efforts are to address the challenge of climate change without sacrificing economic growth

Kyoto Protocol

The Kyoto Protocol was adopted as the first edition to the United Nations Framework Convention on Climate Change (UNFCCC). The most significant International Environmental treaty named for the Japanese city in which it was adopted in December 1997 that aimed to reduce the emission of Greenhouse gases such as CO_2, CH_4, N_2O, PFC's (Perfluorocarbons), HFC's (Hydrofluorocarbons) and SF_6 (Sulfur hexafluoride) that contribute to Global Warming. In force since February 2005, the protocol called for reducing the emission of above six greenhouse gases in 55 countries and European countries to 5.2% below 1990 levels during the first commitment period of 2008-12. Only countries which ratified the protocol are bound to it. The Protocol came into force from 16th Feb. 2005. As of 15th January 2008, as many as 178 countries have ratified the protocol.

Treaty Extension and Replacement at the Doha Amendment of the Kyoto Protocol

New Zealand accepted the Doha Amendment to the Kyoto Protocol at the 18th conference of the parties (COP 18) under the UNFCCC held in Doha, Qatar during the second commitment period (2013-20).

The delegates agreed to create a new comprehensive legally binding climate treaty for limiting and reducing emissions of the greenhouse gases by contributors of emission presently not abiding by the Kyoto Protocol including China/India/United States to be implemented from 2020 after the end of second commitment period of Kyoto Protocol. As of now, as many as 192 countries have ratified the protocol.

Clean Development Mechanism

A developed country can sponsor a greenhouse gas reduction project in a developing country where the cost of greenhouse gas reduction activities is usually much lower, but the atmospheric effect is globally equivalent. The developed country would be given credit for meeting the emission reduction targets, while the developing country would receive the capital investment and clean technology or beneficial change in land use.

It works this way – for each tonne of CO_2 that an industry in the developing world saves by adopting cleaner technology or energy efficiency or shifting to non-conventional sources of energy generation, the United Nations body on climate change gives a Certificate called "Certified Emission Reduction" (CER) to the concerned industry. The company receiving the CER can sell the surplus credits (collected by surpassing the emission reduction targets) if any, to entities in the developed countries either immediately or through a future market at a price that is mutually agreed upon by both the parties involved in the deal. In the process, the entities in the developed countries find it cheaper to buy "offsetting" certificates rather than achieving emission reductions in their work background.

Concept of Carbon Credit

Certified Emission Reductions (CER) is often referred to as carbon credits. The concept of carbon credit is that of incentivizing the industrial units which pollute less, and disincentivizing those that pollute more. A central authority fixes a limit to the amount of a pollutant that can be emitted into the environment. This permit or credit or allowances gives licenses to emit a fixed amount of pollutant into the environment.

Carbon credits are measured in units of CER's. Each Certified Emission Reduction (CER) is equivalent to one tone of CO_2 reduction. Each carbon credit represents one tone of CO_2 equivalent savings that offset 1 tonne of CO_2 equivalent at the place where it is emitted or elsewhere in any part of this planet. On top of that, surplus carbon credit can be sold in the international market. Developed countries, (whose GHG emission exceeds the target fixed by the Kyoto Protocol) can either reduce their emission levels or borrower or buy the surplus carbon credits that are sold by the developing countries in the global market immediately or through a future market, just like any other commodity.

Thus "clean money for dirty air" that's the premise of an emerging trade in carbon credits. The rich countries who have emission reduction targets to achieve, find it cheaper to buy 'off setting' certificates rather than do a cleanup in their own backyard. There are currently four major exchanges trading in carbon allowances:

1. Chicago Climate Exchange
2. European Climate Exchange
3. Nord Pool Exchange
4. Power Next

Supervisory Authority of CDM Projects

A board comprising 10 members supervises the operation of CDM. The Board has the final say on whether a project is approved or not and layout procedures and guidelines for CDM.

A CDM project is monitored or verified after the project has been approved or registered by the CDM Executive Board. After the project, is registered by the Executive Board, the Designated Operational Entity (DOE) Periodically checks whether emission reduction has actually taken place or not. It is after verification by the DOE that CERs are delivered. There is at present 11 DOEs globally, out of which 5 are represented in India.

As regards the emission certificates anticipated from the registered projects, India ranks second next to China despite being the leader in the CDM market. The reason for this is the large ratio of small and medium-sized CDM projects in India and high project rejection rate from UNFCCC Kyoto Protocol. In spite of all these difficulties,a large number of Indian Companies are opting for CDM projects.

Role of Indian's CDM Projects towards Global Warming

India is a developing economy the emission growth with increased energy demand is on the rise along with the rise in population and economic growth. Energy supply in India is highly dependent on coal – a major contributor to GHG emission. Therefore Indian industries play a very significant role in meeting the challenges of reducing GHG emission to achieve sustain clean environment whereby they can achieve higher productivity, greater access to global market and enhancement in its international competitiveness at the same time.

India along with other developing nations is at an advantage as it can implement approved CDM projects for the purpose of trading CERs. One-third of the total CDM projects registered with UNFCCC are from India, India's carbon credits' trading is expected to reach $700 billion by 2018. The biggest industrial players in India – Reliance, Tata, and ITC – are all putting their efforts to make the most out of it.

CDM projects mostly in key sectors such as manufacturing, energy, agriculture, mining, and mineral production, would thus result in providing a boost to the Indian Economy as approved CDM Projects can be implemented for the purpose of trading CERs.The major CDM projects are located in

Rajasthan, Andhra Pradesh, Maharashtra, Karnataka, Himachal Pradesh, and Punjab.

A US-based Research group has found that the US emits more carbon dioxide than China, India, and Japan, combined. If the Indian Companies meet $1/5^{th}$ of the carbon emission reduction demand, it works out to be 200 million tonnes of CO_2 reduction and with this Indian entities are expected to earn 6 million Euros by the year 2018.

Suggestive Measures for Reducing Emission of Greenhouse Gases

Industries in developing countries can achieve GHG emission reduction by adopting the following steps:

Adopting Energy Conservation and Improving Energy Efficiency

Energy conservation requires a reduction in energy needs which can be improved by proper selection and use of more energy efficient equipment.

Installing Cleaner Technology or Fuel Switching

This option is intended towards the use of less carbon-intensive fossil fuel such as natural gas and nuclear energy so as to move away from the use of coal.

Shifting to Renewable Sources of Energy Generation or Green Energy

Renewable technologies provide energy on a sustainable basis as they rope together energy resources that are unlimited in supply such as solar, hydropower, geothermal, ocean and modern biomass systems.

Alternative Products

Use of Green or environment-friendly products by the industries not only help them to protect the environment and ensure safety to the workers but also encourage them to use eco-friendly production processes and generate income to a number of people.

Emerging Market of Carbon Credit in India and CDM Projects

Carbon trading has brought a huge opportunity for Indian Companies to earn CERs by adopting energy saving and environmental protection methods, and in turn, can earn huge incomes by selling them. It is how clearly these companies make use of their opportunity that could give them a boost in their businesses. Many Venture Capital firms like IFIC Venture Capital Fund, Green India Venture Capital Fund are coming forward with the scheme of setting up exclusive Carbon Funds.

Conclusion

Trading in CER is still in the nascent stage. India enterprises have already made investments that will generate more than 379 million CERs and have the potential to generate Approx 1000 million CERs by 2020 provided that the projects approved by the Indian National CDM Authority get approved by the U.N. CDM Executive Board.

However, regardless of all the difficulties and hindrances, India continues to be the leader in the matter of registered CDM projects mainly in the area of energy efficiency, fuel switching industry processes, municipal solid wastes, and renewable energy and its journey to become the leading destination of carbon credit in the world looks quite promising.

The effort is to address the challenge of climate change without sacrificing economic growth.

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