

Attaining GHG Emission Reduction in Electric Power Industry

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Abstracts

The Greenhouse Effect is an environmental reality which is now felt even more closely in the daily lives of populations across the planet than ever before. This heat trapping effects of Greenhouse Gases - primarily water vapor, carbon dioxide (CO₂), methane (CH₄), and nitrous oxide (N₂O) - trap the heat received from the sun, preventing radiation which is carrying heat in various spectrum bands from dispersing back into space. Though this delicate environmental system had been created with a positive objective of keeping the earth's temperature conducive to human existence, the absence of this process would have brought the average temperature on earth to -18° C, instead of the current average of 15°C.

The past two decades have, however, seen the increase of GHG Emissions due to human activities and the atmospheric presence of these gases has been projected to be decades to centuries. The Industrial Revolution has contributed to the growth of these GHGs by magnitude proportions.

The increased usage of Fossil Fuels in industrial as well as societal applications coupled with the clearing of lands for human usage has led to a loss of forests and wetlands making the ecology incapable of absorbing GHGs to regulate the atmosphere.

Some of the earliest initiatives in this regard as taken up by the UN in May 1992, the United Nations Framework Convention on Climate Change (UNFCCC) drew up a structure for dealing with the challenges posed to human sustenance by climate change. This framework is known as the Kyoto Protocol, which is an international treaty that demands strict committed emission controls from industrialized nations and overall limit on global GHG emissions. The strongest opposition in complying with this treaty has come from the US which sees this treaty as an erosion of its industrial competitive

advantages in progressing the entire industry to these standards.

The US in its staunch opposition to the treaty has undertaken steps to restrict the treaty's demands on its industries in order to safeguard the competitive position of the US industry. The electricity sector, being the primary contributor to the GHG emissions pool, is in a dilemma to conform to the guidelines which will require higher emission control technologies thereby passing on the costs to the households which may not go down favorably with the masses and meeting its global commitments.

The US Government has introduced several incentivized measures in order to initiate voluntary GHG reduction practices in its industries through subsidies in technical assistance, publicity. The industry has also favorably responded to such measures as the National Energy Strategy, the Climate Change Action Plan, etc., in place of the pollution taxes or the trading of pollution permits. These programs have achieved only measured results which would have been much better if in the form of mandate.

Aruvian's Research's report on Attaining GHG Emission Reduction in Electric Power Industry takes a non-partisan look at the affect of Greenhouse Gases on climate change and the preceding contribution of the electric power industry to the concentration of these gases in the atmosphere.

The report is an open analysis of the historical lineage of GHG gases emission from industrial activity conducted by the society which has been tabulated as the present level of GHG gases in the atmosphere and the steps taken globally in recognition of these climate changing activities.

The report takes a critical stance on the Kyoto Protocol and its endorsement status by the leading nations of the world. This report explains the issues facing GHG emission reduction efforts and the inception of the concept of voluntary GHG emission reduction programs. The industry's concerns about the commercial impact of GHG reduction efforts are also explained in this report and various means to manage GHG reduction in the electric industry.

The various voluntary programs undertaken by the US government to inculcate a culture of GHG emission reduction in the industry are also explained in detail in this report. The contribution of the industry in such programs or other independent programs run by the industry are also explained in depth in this report. The report also presents a profiling of the major industry players which are furthering the goal of achieving GHG emission reduction in the US industry.

The report is a complete analysis of the realization faced by world economies to contain GHG emissions and thereby reverse climate changes in order that the sustenance of human needs can be ensured for all generations to in conjunction with cleaner plant.

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