

Mitigating the anthropogenic global warming in the electric power industry

ABSTRACT

One of the most current and widely discussed factors that could lead to the ultimate end of man's existence and the world at large is global warming. Global warming, described as the greatest environmental challenge in the 21st century, is the increase in the average global air temperature near the surface of the Earth, caused by the gases that trap heat in the atmosphere called greenhouse gases (GHGs). These gases are emitted to the atmosphere mostly as a result of human activities, and can lead to global climate change. The economic losses arising from climate change presently valued at \$125 billion annually, has been projected to increase to \$600 billion per year by 2030, unless critical measures are taken to reduce the spate of GHG emissions. Globally, the power generation sector is responsible for the largest share of GHG emissions today. The reason for this is that most power plants worldwide still feed on fossil fuels, mostly coal and consequently produce the largest amount of CO₂ emitted into the atmosphere. Mitigating CO₂ emissions in the power industry therefore, would significantly contribute to the global efforts to control GHGs. This paper gives a brief overview of GHGs, discusses the factors that aid global warming, and examines the expected devastating effects of this fundamental global threat on the entire planet. The study further identifies the key areas to mitigate global warming with a particular focus on the electric power industry.

Keyword: Anthropogenic; Global warming.