

Abstract

Global Warming at the present is the hot issue because its effect has been occurring in many countries. Greenhouse gas composed of water vapor, carbon dioxide (CO₂), methane (CH₄), nitrous oxide (N₂O), ozone, CFCs, is the cause of global warming but CO₂ is the most important greenhouse gas. On 16 February 2005 the Kyoto Protocol has entered into force, and affects many industries as an agreement to control CO₂ and other greenhouse gasses emissions in order to combat global warming. Even though the canned beverage industry does not emit as much CO₂ as other industry but it can reduce CO₂ emissions through industrial efficiency programmes. This paper is the guideline which gives an introduction on such available mechanisms, so as to evaluate the potential implementation of such projects, in alignment with its sound environmental commitment. The life cycle assessment (LCA) is used as a tool to evaluate the environmental impacts and they are emphasized in this paper in terms of energy consumption, water consumption and waste generation. From the results, energy consumption presented highest global warming potential and then this weak point is improved by using of clean technology (CT) concept to optimize the environmental performance of the canned beverage industry. Each projects which are CT concepts will be evaluated the potential implementation in terms of an eco-efficiency. The eco-efficiency refers to a process that seeks to maximize the effectiveness of business processes while minimizing their impacts on the environment. The optimization of running pattern of boiler is the best solution for choosing as the first priority to implement because it is an economically and environmental friendly process with the minimum use of energy.

Keywords: Life cycle assessment, eco-efficiency, global warming, clean technology