

# Identifying, developing and moving sustainable communities through application of bioenergy for energy or materials: Future perspective through energy efficiency

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## Abstract

Energy demand continued to surpass supply, necessitating the development of biomass alternatives. The most popular kinds of renewable energy were residues, and biofuel production has recently become considerably more promising. Agricultural wastes have a high moisture content and were easy for bacteria to breakdown. Agricultural wastes were plentiful over the world, and a variety of microbes could convert them to energy and useful compounds. The injection of suitable thermophiles bacteria into compost or bio fertilizer boosted the decomposition rate, decreased the maturity period, and improved the compost (or bio-fertilizer) quality. The goal of this study was to promote biomass technology through adaptive research, demonstration, and distribution of findings. A vast field study was done to examine the availability of raw materials as well as the current state of biomass technology in order to achieve the goal. An attempt was also made in this message to provide an overview of the current and future usage of biomass as an industrial feedstock for the manufacture of fuels, chemicals, and other materials. The review article concludes that biomass technology should be supported, promoted, invested in, implemented, and proven not only in cities but also in rural areas.

It accounted for over 20% of world primary energy consumption in 2006, while its closest competitor, China, accounted for 15%. (IEA, 2009). However, given concerns about oil import security, recent price volatility, and the greenhouse gas emissions linked with energy consumption, using energy more effectively has become a top issue.

It outlines their current status of development, their potential for application, as well as the performance, prices, and environmental implications that come with them. However, in order for these technologies to make an impact, they must be widely accepted. As a result, the chapter also discusses the often difficult barriers to market penetration as well as the lessons learned from policies and initiatives. Although the terms "energy efficiency" and "energy conservation" are frequently used interchangeably, they refer to two distinct concepts. Increasing energy efficiency is achieving a goal, such as heating a room to a specific temperature, while using less energy. Energy conservation entails doing things differently, which may include lifestyle modifications such as lowering the temperature. The focus of this chapter is on energy efficiency.

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