

A review of technical and economic aspects of biomass briquetting

ABSTRACT

Growing global demand and utilization of fossil fuels has elevated wealth creation, increased adverse impacts of climate change from greenhouse gases (GHGs) emissions, and endangered public health. In most developing countries, biomass wastes, which include but are not limited to agricultural residues, are produced in large quantities annually. They are either inefficiently used or disposed of indiscriminately, which threatens the environment. It is possible to convert these wastes, through densification, into high-density and energy-efficient briquettes. Densification of biomass into briquettes presents a renewable energy option as an alternative to fossil fuels. This paper reviews biomass briquetting with reference to biomass resources, feedstock pre-processing, briquetting process parameters, briquetting technology, and briquettes quality evaluation parameters. The review also includes the economic aspect of briquetting relating to costs and feasibility.

Keyword: Biomass; Briquette; Densification; Technology; Production costs; Economic feasibility