

IDENTIFYING, DEVELOPING AND MOVING SUSTAINABLE COMMUNITIES THROUGH APPLICATION OF BIOENERGY FOR ENERGY OR MATERIALS: FUTURE PROSPECTIVE OF ENERGY EFFICIENCY

Abdeen Mustafa Omer

Energy Technologies Research Institute-University of Nottingham, UK

The demand for energy continued to outstrip supply and necessitated the development of biomass option. Residues were the most popular forms of renewable energy and currently biofuel production became much promising. Agricultural wastes contained high moisture content and could be decomposed easily by microbes. Agricultural wastes were abundantly available globally and could be converted to energy and useful chemicals by a number of microorganisms. Compost or bio-fertilizer could be produced with the inoculation of appropriated thermophilic microbes which increased decomposition rate, shortened the maturity period and improved the compost (or bio-fertilizer) quality. The objective of the present research was to promote the biomass technology and involved adaptive research, demonstration and dissemination of results. With a view to fulfill the objective, a massive field survey was conducted to assess the availability of raw materials as well as the present situation of biomass technologies. In the present communication, an attempt had also been made to present an overview of present and future use of biomass as an industrial feedstock for production of fuels, chemicals and other materials. We may conclude from the review paper that biomass technology must be encouraged, promoted, invested, implemented and demonstrated not only in urban areas but also in remote rural areas.

abdeenomer2@yahoo.co.uk