

## ***Sustainable Development in Low Carbon, Cleaner and Greener Energies and the Environment***

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### ***Abstract***

The present review article makes an attempt to comprehensively review various aspects of biomass energy sources, environment and sustainable development. This includes all the biomass energy technologies, energy efficiency systems, energy conservation scenarios, energy savings and other mitigation measures necessary to reduce emissions globally. An attempt has been made to review the current literature regarding the ecological, social, cultural and economic impacts of biomass technology. The environmental problems are increasing. Nevertheless, some residues have negative effects and should be treated to preserve a durable environment. Hence, sensibility and legislative text to organise the treatments of industry activities waste should be more reinforced.

This study highlights the energy problem and the possible saving that can be achieved through the use of biomass sources energy. Also, this study clarifies the background of the study, highlights the potential energy saving that could be achieved through use of biomass energy source and describes the objectives, approach and scope of the theme. The purpose of this study, however, is to contribute to the reduction of energy consumption in buildings, industry, and agriculture and identify biomass as an environmental friendly technology able to provide efficient utilisation of energy in the buildings sector, promote using biomass technology applications as an optimum means of heating and cooling. Recent attempts to stimulate alternative energy sources for heating and cooling of buildings has emphasised the utilisation of the bio-energy from agricultural residues, industry wastes, forestry and other renewable energy sources.

The adoption of green or sustainable approaches to the way in which society is run is seen as an important strategy in finding a solution to the energy problem. The key factors to reducing and controlling CO<sub>2</sub>, which is the major contributor to global warming, are the use of alternative approaches to energy generation and the exploration of how these alternatives are used today and may be used in the future as green energy sources.



### ***Biography:***

Dr. Abdeen Mustafa Omer (BSc, MSc, PhD) is an Associate Researcher at Energy Research Institute (ERI). He obtained both his PhD degree in the Built Environment and Master of Philosophy degree in Renewable Energy Technologies from the University of Nottingham. He is qualified Mechanical Engineer with a proven track record within the water industry and renewable energy technologies. He has been graduated from University of El Menoufia, Egypt, BSc in Mechanical Engineering. His previous experience involved being a member of the research team at the National Council for Research/Energy Research Institute in Sudan and working director of research and development for National Water Equipment Manufacturing Co. Ltd., Sudan. He has been listed in the book WHO'S WHO in the World 2005, 2006, 2007 and 2010. He has published over 300 papers in peer-reviewed journals, 200 review articles, 17 books and 150 chapters in books.

### ***Speaker Publications:***

1. Abdeen M. Omer (2020) Different techniques and methods employed to maintain and provide specific environment in bioenergy. International Journal of Renewable Energy and its Commercialisation .5.2: 19-50.



2. Abdeen M. Omer (2020) Agricultural residues for future energy options in Sudan: An analysis. American Journal of Ethnomedicine 6.3: 45.
3. Abdeen M. Omer (2020) New managerial and technological advancements reinventing nanotechnology and materials engineering. Nano Research and Applications.5.2: 1-2.
4. Abdeen M. Omer (2020) Efficient use of biomass and biogas for sustainable energy generation: Recent development and perspectives. Journal of Bioanalysis and Biomedicine 10: 20,

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