World Academy of Science, Engineering and Technology International Journal of Energy and Environmental Engineering Vol:12, No:05, 2018

Harnessing Renewable Energy as a Strategy to Combating Climate Change in Sub Saharan Africa

Authors: Gideon Nyuimbe Gasu

Abstract: Sub Saharan Africa is at a critical point, experiencing rapid population growth, particularly in urban areas and young growing force. At the same time, the growing risk of catastrophic global climate change threatens to weaken food production system, increase intensity and frequency of drought, flood, and fires and undermine gains on development and poverty reduction. Although the region has the lowest per capital greenhouse gas emission level in the world, it will need to join global efforts to address climate change, including action to avoid significant increases and to encourage a green economy. Thus, there is a need for the concept of 'greening the economy' as was prescribed at Rio Summit of 1992. Renewable energy is one of the criterions to achieve this laudable goal of maintaining a green economy. There is need to address climate change while facilitating continued economic growth and social progress as energy today is critical to economic growth. Fossil fuels remain the major contributor of greenhouse gas emission. Thus, cleaner technologies such as carbon capture storage, renewable energy have emerged to be commercially competitive. This paper sets out to examine how to achieve a low carbon economy with minimal emission of carbon dioxide and other greenhouse gases which is one of the outcomes of implementing a green economy. Also, the paper examines the different renewable energy sources such as nuclear, wind, hydro, biofuel, and solar voltaic as a panacea to the looming climate change menace. Finally, the paper assesses the different renewable energy and energy efficiency as a propeller to generating new sources of income and jobs and in turn reduces carbon emission. The research shall engage qualitative, evaluative and comparative methods. The research will employ both primary and secondary sources of information. The primary sources of information shall be drawn from the sub Saharan African region and the global environmental organizations, energy legislation, policies and related industries and the judicial processes. The secondary sources will be made up of some books, journal articles, commentaries, discussions, observations, explanations, expositions, suggestions, prescriptions and other material sourced from the internet on renewable energy as a panacea to climate change. All information obtained from these sources will be subject to content analysis. The research result will show that the entire planet is warming as a result of the activities of mankind which is clear evidence that the current development is fundamentally unsustainable. Equally, the study will reveal that a low carbon development pathway in the sub Saharan African region should be embraced to minimize emission of greenhouse gases such as using renewable energy rather than coal, oil, and gas. The study concludes that until adequate strategies are devised towards the use of renewable energy the region will continue to add and worsen the current climate change menace and other adverse environmental conditions.

Keywords: carbon dioxide, climate change, legislation/law, renewable energy

Conference Title: ICCCAE 2018: International Conference on Climate Change, Global Warming and Agricultural

Engineering

Conference Location: Berlin, Germany Conference Dates: May 21-22, 2018