

Critical Review of Clean Energy Mix as Means of Boosting Power Generation in Nigeria

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Abstract : Adequate power generation and supply are enormous challenges confronting Nigeria state today. This is a powerful mechanism that drives industrial development and socio-economy of any nation. The present level of power generation and supply have become national embarrassment to both government and the citizens of Nigeria, where over 60% of the population have no access to electricity. This paper is set to review the abundant clean energy alternative sources available in abundance that are capable of boosting power generation. The clean energy sources waiting to be exploited include: nuclear, solar and wind energy. The environmental benefits of these sources of power generation are identified. Nuclear energy is a powerful clean energy source. However, Africa accounted for 20% of known recoverable reserve and uranium produces heat of 500,000 MJ/kg. Moreover, Nigeria receives average daily solar radiation of over 5.249 kWh/m²/day. Researchers have shown that wind speed and power flux densities varied from 1.5 – 4.1 m/s and 5.7 – 22.5 W/m² respectively. It is a fact that the cost of doing business in Nigeria is very high, leading to winding up of the multi-national companies and then led to increase unemployment level. More importantly, readily available vast quantity of energy will reduce cost of running industries. Hence, more industries will come on board, goods, services, and more job creation will be achieved. This clean source of power generation is devoid of production of green house gases, elimination of environmental pollution, and reduced waste disposal. Then Nigerians will live in harmony with the environment.

Keywords : power, generation, energy, mix, clean, industrial

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