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and Sustainability in Nigeria's Power Sector

FOSSIL-FUEL DISRUPTIONS AND LOW CARBON TRANSITION: LEGAL RESPONSES TO ENERGY SECURITY AND SUSTAINABILITY IN NIGERIA'S POWER SECTOR

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ABSTRACT

Energy is significant in any country; paucity of access to a constant energy supply fosters poverty and the decline in economic growth. Nigeria is endowed with copious low-carbon energy resources for sustainable development. However, it fails to optimize these resources. The study examines the potential of low-carbon energy that could be utilized for a constant energy supply. The study utilizes empirical, doctrinal legal research approaches with primary and secondary sources of laws such as textbooks, and peer-reviewed journals. Comparative legal analysis of low-carbon energy in China, Spain, Germany and Nigeria were done to gain valuable insights into the stable electricity supply. Theories and empirical procedures were used in the estimation of carbon emission with the instrumentality of the auto-regressive distributed lag model. The results of the short-run and long-run model estimates revealed a positive contribution of electricity consumed to significant variations in CO₂ emission. Variations in hydroelectric power sources accounted for a significant decline in carbon emissions. The error correction model provided evidence of a significant high mechanism for systemic convergence in the presence of exogenous shocks. The article designs a hybrid model for adopting low-carbon energy, and advocates reform of energy laws to mitigate environmental impact and ensure sustainability.

Keywords: Fossil-Fuel, Low Carbon Transition, Legal Response, Sustainability, Nigeria.

INTRODUCTION

Over the years, adequate and reliable energy supply in Nigeria has been the subject of intensive concern, as the world's glamour for low carbon energy sources is a veritable instrument in attaining sustainable energy development in any nation. Fossil fuel has had an enormous influence on the growth of Nigeria's economy as the country majorly on oil export revenues, thereby being vulnerable to the changing in global oil prices. However, it is worth of note that this industry is going to subsist in the period of global climate neutrality and national net zero decarbonisation policies. The colossal role of fossil fuels in Nigeria's energy mix has occasioned an unusual increase in carbon dioxide releases into the atmosphere, dangerous heat compared to other advanced countries. The revenues from fossil fuel export are about 86% of the country's

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