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Prospects of solar energy in the coastal areas of Nigeria

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Moses E. Emeteri^{1, a)} and Marvel L. Akinyemi^{1, b)}

Abstract

The climatic factors in the coastal areas are cogent in planning a stable and functional solar farm. The experiment performed in this study entails a day-to-day solar radiation pattern in coastal areas. The results show that the solar radiation pattern in coastal region portends danger to the performance of solar photovoltaic (PV) module and its lifecycle. The efficiency of the PV module was tested in the harmattan where dust is a major hindrance. The results were related to meteorological parameters which influences the solar radiation over an area. The solar radiation pattern in coastal areas was traced to the solar sectional shading theory which was summarized and explained.

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