Weather Effect on Photovoltaic Module Adaptation in Coastal Areas

**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. Two dissimilar photovoltaic modules (SW 175 poly solar world and sharp solar module) were adopted under two conditions- clean surface module and dusty surface module. Meteorology parameters for the days were monitored using the Davis Pro weather station and ground data set from the Nigerian Meteorological Center. The results show that the solar radiation pattern in coastal region portends danger to the performance of solar PV module and its lifecycle. The solar radiation pattern in coastal areas was traced to the solar sectional shading theory which was summarized and explained.