

Title of Article : Wind Energy Potential in Nigeria

Author(s): S Dike U. Ike, Anthony U. Adoghe, Ademola Abdulkareem

Outlet: International Journal of science & Technology Research (IJST) Vol. 1, Issue 1 (2014)

Abstract: Improved Quality of Service and cost reduction are important issues affecting the telecommunication industry. Companies such as Airtel, Glo etc believe that the solar powered cellular base stations are capable of transforming the Nigerian communication industry due to their low cost, reliability, and environmental friendliness. Currently, there are several research efforts directed on the use of solar power in the Nigerian telecommunication industry. In this paper, the importance of solar energy as a renewable energy source for cellular base stations is analyzed. Also, simulation software PVSYST6.0.7 is used to obtain an estimate of the cost of generation of solar power for cellular base stations. The simulations were carried out for the Grid-Connected and the Stand-Alone solar power systems by using Benin City, Nigeria as a case study. The PVSYST6.0.7 simulation results shows that the power generation costs for the grid connected solar powered system is less when compared to standalone solar powered system in Benin City, Nigeria.