



ASSESSMENT OF WIND ENERGY RESOURCES IN COASTAL PART OF NIGERIA

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Abstract:

This study examines wind energy resources in coastal region of Nigeria, from 1992-2010 using 18 years hourly wind speed data from HYCOM at a 10m height. The wind speed was extrapolated to hub height 100m. Weibull distribution function was employed for the assessment. The mean wind speed calculated at 10m height and 100m height were 4.64m/s and 6.44m/s respectively with their corresponding mean power as 64.9kW, 174.2Kw having mean power densities of 67.51W/m², 181.29W/m² accordingly. The influence of data set on weibull parameters depicts significant difference between the first five years. It can be concluded that additional of more data set improve the accuracy of the distribution.

Keywords: Wind energy, weibull distribution function, wind power density, wind power.

Biography:

Wasiu Olalekan Idris has completed his Bachelor at the age of 22 years from Department of Faculty of Ocean Engineering Technology and Informatics, Universiti Malaysia Terengganu, 21030, Kuala Terengganu, Terengganu, Malaysia



Publication of speakers:

1. Masud, A.A et al (2015): An assessment of renewable energy readiness in Africa: Case study of Nigeria and Cameroon, *Journal of Renewable and Sustainable Energy Reviews* pp 776-783.
2. El-Abubakar Sadiq Aliyu, Joseph O. Dada, Ibrahim Khalil Adam: Current status and future prospects of renewable energy in Nigeria, *Journal of Renewable and Sustainable Energy Reviews*,pp 337-343.
3. Olaofe, Z.O (2018) Review of energy systems deployment and development of offshore wind energy resource map at the coastal regions of Africa, *Journal of Energy*, pp161 (2018) 1096-1114.

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