Abstract

The wind characteristics of four locations in Algeria (Algiers, Oran, Adrar and Ghardaia) have been assessed. The data were collected over a period of 13 year. The wind speed characteristics and wind power potential of each station have been determined using Weibull distribution. The annual average wind speed for the selected sites ranged from 3.81 m/s to 6.38 m/s and a mean wind power density from 97.26 w/m² to 270.17 w/m² at standard height of 10 m. The wind data at heights 30 m and 50 m were obtained by extrapolation of the 10 m data using the Power Law. Power estimates use four configurations of the General Electric GE 1.5-MW series turbines that varied in rotor diameters, cut-in, cut-out and rated speeds.

References

Wind Characteristics Analysis for Selected Site in Algeria

- www.worldtravelguide.net/Algeria/weather-climate-geography.
- Johnson, G. L. 2006. Wind Energy Systems,

Index Terms

Computer Science
Power Systems

Keywords
Wind speed wind energy Weibull parameters wind generators capacity factor