



INVESTIGATION OF WIND CLIMATIC CHARACTERISTICS AND POWER GENERATION

D. Sankauskas, V. Katinas
Lithuanian Energy Institute
Breslaujos g. 3, LT-44403 Kaunas – Lithuania

ABSTRACT

This work analyses variation of energetic wind parameters in the Lithuanian seashore zone and in the continental part. Correlations of the wind speed in the seashore zone during a day and a month were determined. In the analysis of the one day wind speed, an average day of a month is analyzed – such analysis does not consider highest or lowest wind speeds. However, it reflects the pattern of wind speed variation during a day.

An analysis of the influence of air temperature, relative humidity and atmospheric pressure on wind turbines efficiency for different elevations was performed.

Wicom-C wind parameters measurement system was installed in the seashore zone, which enables to measure wind speed every 10 seconds at different elevations. LSI Lastem wind parameters measurement system was installed in Žiežmariai region. This system measures wind speed at different elevations, also wind direction and meteorological parameters, such as temperature, atmospheric pressure and relational humidity are measured. This system accumulates data in the same way as Wicom-C does. This enables to compare data of both systems.

Keywords: Wind speed measurements, wind energy, cup anemometer