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PROBABILISTIC APPROACH OF THE GENERATED POWER OF A WIND TURBINE

BY

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Abstract. The aim of this paper is to develop an analytical model for the probabilistic functions of generated power wind turbine. The main aspect of this analysis is studying wind turbine generator performance with a continuous random wind speed considering the Weibull distribution curve. A numerical example application is presented to illustrate the validity of developed model; the results are compared with those using Monte Carlo Simulations.

Key words: probabilistic distribution, wind turbine.