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SIMULATION MODEL - SUPPORT TO INVESTMENT DECISION-MAKING IN THE COAL INDUSTRY

ABSTRACT

The paper deals with the problem of using coal as an energy resource bearing in mind the requirements of the modern society. Necessary changes in the coal industry demand a certain level of investments. Making relevant investment decisions is of crucial importance for the future efficiency of the system mine-power plant. The proposed model incorporates the procedure of decision-making simulation under the conditions of uncertain parameters. Net Present Value is used as the main criterion in decision-making. Different functions of probability distribution (normal, uniform and triangular distribution) are applied for the estimation of uncertainties related to certain parameters. For others, the estimation of future conditions is based on the Monte Carlo method and the simulation of geometric Brownian motion.

KEYWORDS

Coal Industry, investment, fuzzy logic, simulation model

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