



INVESTIGATION OF SOLAR PHOTOVOLTAIC AND WIND POWER GENERATION

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ABSTRACT

Integration of the solar photovoltaic and wind power stations that use renewable energy keeps progressing in Lithuanian energy system. Assessment of the influence of intermittent power stations with variable power output is highly significant for the operating regimes and frequency management in the energy system.

In this paper, energyPRO program consists of solar photovoltaic and wind power parks in the model. Based on the data of Lithuanian Hydrometeorological Service, power generation by the power plants in farms under consideration has been estimated, and distributions of variance in power generation and their parameters as well as dependencies of correlation coefficients of power generation variation have been calculated. The inter correlation between power generations in solar photovoltaic and wind farms, and that between power generation and the load have been determined.

Keywords: correlation, energyPRO, power generation