

Nowadays, electricity production from photovoltaics power plants is becoming important increasingly. In order to set production to other power plants, it is necessary to predict the generation of electricity from these sources. The thesis is mainly devoted to models for short-term prediction, which is based on weather forecast. The models were designated by beta regression and linear regression with transformed explanatory variable. One part of thesis is devoted to Clear sky model, which is used to estimated the maximum possible production at given hour.