THE ENERGY CONSUMPTION PREDICTION MODEL BASED ON GREY MARKOV MODEL

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ABSTRACT

To grasp the overall situation of energy consumption in our country, constructing grey markov model, which through the process of energy consumption from 2001 to 2013 in our country history data, the GM (1, 1) model is established, and the application of markov model is revised, on this basis to predict energy consumption data from 2014 to 2015, finally, the prediction result was analyzed. The calculation results show that the grey markov model can not only eliminate the traditional grey GM (1, 1) model the inherent deviation, and can improve the prediction accuracy especially for medium and long-term prediction accuracy. The grey markov average relative error was 1.4876%, lower than 13.88% of the traditional grey GM (1, 1) model.

Key words: GM (1, 1) model; Markov model; energy consumption; prediction.