ABSTRACT

Short term load forecasting hold an important role in electric power system. The result of accurate forecasting is used as foundation of electricity energy supply in the future. So far, various methods or short term load forecasting have been done by target improving correctness of forecast. One of the method that have been expand is Fuzzy Linear Regression (FLR), with Simplex Method can forecast a maximum load in a holidays with the historical data of limited load and non linier. The error of FLR depends on fuzzy parameters, such as $a_0$, $\alpha_0$ and $a_1$, $\alpha_1$, so that we need an optimization algorithm. In this experiment, that parameter is optimized by Artificial Immune System (AIS), and so that can be used for forecast a peak load in system of South-Central Kalimantan. The result of error compare show that FLR-AIS is more better. The average of error peak load from FLR-AIS is 3.89%.

Keywords : Short term load forecasting, Fuzzy Linier Regression (FLR), Artificial Immune System (AIS), Peak load error.