ABSTRACT

Electricity is a source of energy that is needed because it helps the welfare of people's lives. The State Electricity Company (PLN) has a duty as a provider and regulator of electricity needs in Indonesia. It is expected that the supply of electric power needs from PLN is continuous from time to time, so planning supply-demand operations is an important matter to pay attention to. Therefore, in this study, electric load forecasting is implemented to plan the scheduling of the given power to match the load requirements.

This website-based system helps distribute information to PLN officers so they can find out the estimated power load needed. This website was built using the Python programming language and also machine learning using fractal and linear regression methods. On the website there are features including the dashboard menu, calculations, and also settings. PLN officers can make predictions of electric power loads in the calculation feature, where this feature can predict two times, namely predictions of long-term electricity loads and also predictions of short-term electricity loads.

Based on the trials that have been carried out, it can be said that the fractal method is suitable for predicting short-term electrical loads compared to the long term, because in the long term the fractal method cannot produce fractal dimensions, where fractal dimensions are needed to obtain fractal characteristics to be tested and trained on machine learning to create specified predictions.

Keywords: Electricity, Fractal, Website, Long Term, Short Term.