

Abstract

As the number of people in Indonesia increases, the need for various basic things, such as food, house, and even electric energy demand, is also increasing. Emerging technologies and increased use of electronic devices increase electrical demands. In metropolitan cities such as Jakarta and Banten, the need for electrical energy is higher due to reasonably rapid development. An accurate electricity forecasting is needed to increase the efficiency of electricity generators. This research aims to forecast the electricity load in Jakarta and Banten using the Transformer method to perform time series forecasting. We use four years electricity load dataset, ranging from January 2018 to October 2021 in Jakarta and Banten areas. We investigate the sensitivity of the method in terms of length of lookback to forecast electricity load for seven days ahead. By using the best lookback setting, we obtain the best accuracy value for prediction is with MSE of 78.35, RMSE of 8.85, and R^2 of 0.994.

Keywords: forecast, electricity, transformer