

Abstract

The use of energy in electronic equipment to meet everyday life is quite a lot. Especially in the use of heating systems in drinking water dispensers. However, there are still many people who let the heating system on the drinking water dispenser turn on all day. So there is energy waste in the drinking water dispenser heating system. So, from these problems, this research focuses on saving energy in drinking water dispenser heating systems. Thus, in this study realizing an energy-saving system for heating systems in drinking water dispensers. The energy-saving system built is in the form of an energy-saving system application based on the Internet of Things. Also, this energy-saving system will analyze the user's habits in using the heating system in drinking water dispensers every day using a histogram. The results of the analysis using the user's habit histogram will automatically reveal the heating system in the drinking water dispenser at certain hours, and send recommendations to turn off the heating system in the drinking water dispenser at certain hours aimed at saving energy. From the analysis using the user habits histogram, the energy saved by the energy-saving system for five days is 5.4 kWh, with a percentage of energy savings of 68.3%. So, the performance of the histogram for saving electricity in an IoT-based drinking water dispenser is quite good.

Keywords: Energy Saving System, Histogram, Internet of Things (IoT)