

ABSTRACT

In the afternoon until night, an electrical load is increased, it happened because to increase the usage of electrical devices by customers. These conditions in which increased electricity consumption by buyers at the same time with the quantity a large power have not been able to handle properly by PLN as the supplier of electrical energy in Indonesia. The impact is the occurrence of the power outage in rotation, to reduce these all, needs to be setting the use of electric power appropriate, in order to achieve the purpose of balance between demand and supply for electricity energy; especially on the household sectors. One of the tricks is enacting the management of the load on the side of their customers or well known as Demand-Side Management (DSM) and apply dynamic pricing on electricity tariff from the peak load (WBP) and time beyond peak load (WLBP) [1].

Home Electrical Energy Management System (HEEMS) is a system for managing electrical energy-based method DSM and apply dynamic pricing. HEEMS allows users to manage and monitor the usage of electricity. HEEMS serves to do scheduling on the use of an electrical device DijCostMin Algorithm based on data planning the use of devices electricity or load forecasting entered by users.

The method that proposed is a success and effective to reduce energy demand is about 22.69% when peak time and reduce bills of electricity is about 8.38%.

Keywords: Scheduling electricity devices, Peak Time, Non-Peak Time, DijCostMin Algorithm, Demand Side Management (DSM), and Dynamic Pricing.