

ABSTRACT

Energy saving has attracted great attention as a global issue because of recent environmental problems. An energy saving system refers to a system that saves the energy consumed in a building or home, by cutting off the wasted electric power such as standby power. As a part of energy saving efforts, governments are operating policies that encourage the distribution of energy saving systems. Also, individual households are voluntarily installing energy saving systems to reduce electric power consumption. However, due to fixed system architecture, the existing systems have a disadvantage, lacking in scalability and usability. In addition, the existing systems bring up immense inconvenience as it returns to standby mode after automatic standby power cut-off.

This paper employed an effective method to identify load characteristics of appliances in different operation states and a smart home electric energy saving system (SHESS) was built up to implement the method. Standby power refers to the electric power consumed by electronic appliances while they are in a standby mode. As the electronic appliance has become smarter, they consume more standby power.

To reduce wasted electricity, techniques to save standby power have been developed in conjunction with network and communication technologies. Automatic standby powers saving systems have been developed. This project develops a cloud based on demand standby power management using consumer pattern racking to address these problems to deal with these issues. The proposed system offers rules based on management services with three usage types determined by user preferences and living patterns. The total power consumption is measured to verify the performance of the system. The proposed system reduces the power consumption up to 9.3% than the existing system.