

Prachya Suri 2012: Development of Electric Energy Monitoring System for Residential Application. Master of Engineering (Electrical Engineering), Major Field: Electrical Engineering, Department of Electrical Engineering. Thesis Advisor: Assistant Professor Chugiat Garagate, Ph.D. 62 pages.

This research presents development of electric energy monitoring system for residential application. System development consist of smart meter for measurement of electrical energy usage and send data by Zigbee communication. Data concentrator unit is used for receiving energy usage information from smart meter through Zigbee communication and send data to computer server by using GPRS communication through internet network system. Finally, computer server is used for storing data and present these data to user by web pages for further analysis.

Development result found that the developed smart meter has accuracy comply with IEC 62053-21 class 1 standard. System was installed and used for collect electrical energy usage data every 15 minutes, so the user will know about behavior of electrical energy usage. The result can be used to change behavior of electric energy usage in order to reduce using energy.

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Thesis Advisor's signature