

Jumpon Thummawat 2012: Model of Web Application for Using Smart Meter in Advanced Metering Infrastructure of Provincial Electricity Authority. Master of Engineering (Electrical Engineering), Major Field: Electrical Engineering, Department of Electrical Engineering. Thesis Advisor: Assistant Professor Ekachai Phaisangittisagul, Ph.D. 68 pages.

Currently power systems around the world are focusing on the intelligent power systems or smart grids. The key features of this novel system are highly based on communication and information technologies for communication management, electric generation, and distribution of electricity. They can also support alternative green energy resource with the goal to manage energy consumption and maximize the benefits. Advanced metering infrastructure (AMI) is considered an important system in which smart meter plays a major role for sensing electrical quantities. Provincial Electricity Authority (PEA) has launched a pilot project of smart grid using smart meters in 2011. Researchers are assigned to develop a model of web applications for demonstrating the interface of the smart meters to the network. The basic features of the proposed model are based on the PEA's smart grid roadmap. In addition, more features are also implemented so that the users can easily access to view the electrical quantities via the internet and manage the use of electrical energy effectively. The results of the proposed model will be tested to the pilot project in the future.

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