

Subject: Consumer's Expectations toward Deployment of AMI in Taiwan
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Abstract

Small grid has become an established energy policy in Taiwan. Extensive deployment of AMI (Advanced Metering Infrastructure) is the first step to realize that policy and to improve electricity consumption efficiency. In its Gooden Decade Vision announce on Oct. 12, 2011, the Council for Economic Planning and Development (CEPD) aims to complete the deployment of high-voltage AMI within one year. It also intends to deploy smart meters in two million households within five years and six millions in ten years.

Smart meters allow two-way communication between power consumption side and power company. By acquiring real-time information, consumers are able to change their power consumption behaviors by acquiring real time consumption information, thus lowering their electricity bills and enjoying various services, whereas the power companies can improve power supply quality.

In addition, the value of smart meter can only be maximized by coupling the implementation of TOU (Time of use) system. The price difference of peak and off-peak time can lure consumers to change their consumption behaviors, and detent the power company's investment of power generation. On the other hand, the power companies are able to slash their investment in spinning reserve by leveling off power generation. Thus, it creates a win-win situation for both users and power companies.

Aiming to propose AMI and TOU systems that meet Taiwan's environment and user's demand, this study investigates 300 households in Taiwan. The researchers wish to know how the electricity tariff rates influence consumer's behaviors and demand for services derived from the use of smart meters. The survey covers the derived service business models and the consumer's reactions to day and night peak time tariff during summer time.

The findings of this research can be of great reference to the formulation of TOU catering to user's needs. The extended functions of AMI and services proposed in this report, such as tariff rate related information, and fire and security warning, will add a good deal of value to the deployment of AMI, as they have higher degree of acceptance by consumers.