

Introduction of Next-gen AMI System in Taiwan

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Keywords: *Advanced Metering Infrastructure (AMI), Communication System*

Abstract

Advanced Metering Infrastructure (AMI) is one of the strategies that Taiwan Power Company (Taipower) is pursuing in order to support demand-side management, with the aim of reducing electricity consumption by consumers and increasing the efficiency of energy utilization. In accordance with this AMI strategy, Taipower had installed 24,123 AMI meters for extra-high and high voltage customers by June 2013 that covers over 60% of the electricity usage in Taiwan. However, the deployment of low-voltage AMI is not as smoothly.

After the failure of a 10,000-household low-voltage AMI deployment pilot project, we have learned several lessons. In Taiwan, since the building types and density are of complexity, and many meters are installed in the basements or communication dead zones, resulting in poor communication signals due to shading. To solve the above issue, Taipower has drawn up an appropriate AMI functional specification and established a communication technology evaluation mechanism. Furthermore, to accommodate government's policy of cultivating the domestic AMI communications industry and the rapid progress of AMI's communications technology, and different communications technologies must be compatible with the meters of different brands, Taipower has designed the next-gen smart meter to be modularized with pluggable communication modules.

In this session, a brief introduction of the next-gen AMI system designed by Taipower will be discussed including the overall design, interface and performance evaluation methods, pilot project results, etc.