Advanced metering infrastructure and an implementation in Malaysia

ABSTRACT

The conventional billing system uses a lot of manpower and cost of utilities especially on technical issues and billing process. Besides, the consumers are passive participants and unaware with their energy consumptions discipline. The network design for both energy and data transfer is one-way flow with limited information exchange process for utilities, and thus obviously does not meet the expectation of consumers. AMI is introduced to perform a system that is capable to operate smoothly for better monitoring and billing system. Malaysia has an ongoing pilot test project on the smart meter system and the main purpose of the project is to test the reliability of the meter system and the effectiveness of different types of communication technology and also the cost effectiveness. Based on the report, the network issues are the main problem in the pilot test that affected the data transfer process. As an example, data delays due to weak RF links, poor GPRS coverage and LAN interface on PLC DCU were down. Poor networking has caused delays and backlog data stored in the meter, hence, it is contributing to overload data issues because data is too big to be pushed to HES through GPRS network. It can be concluded that the network issues contribute to the expensive maintenances and complex processes during the pilot test.