Abstract

In this paper, we describe the development of smart meter using Advanced Metering Infrastructure (AMI). This entails transport of metering data from energy consumer's premises to the data management systems of energy provider using a practical mesh networking solution to realize metering communication. When the demand in the grid increases with decreased amount of power generated, this in turn leads to insufficient availability of power at the consumer premises. The proposed work employs a ZigBee based digital power meter in which prioritization of appliances are employed. If the power is less on the grid, the power will be automatically managed using the controller embedded in the digital meter. Constant
uninterrupted power is fed to the higher priority appliances connected to the meter, while the lower priority appliances receive power according to the power availability on the grid. The power usage of consumer is monitored through a Graphical User Interface (GUI) by the energy provider, in order to prevent the power theft.

References

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Index Terms

Computer Science

Wireless

Keywords

Ami Measurements Smart Grid Mesh Networking Smart Meter.