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IoT Based Smart Energy Meter

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Abstract: *In Modern day smart grid technology relies heavily on communication networks for two way communication between load, generation, transmission, and control centre. As a part of the smart grid, smart meters use advanced metering infrastructures (AMI) that are widely distributed and interconnected to the communication network. In modern Technology the smart grid plays very important role for two way communication between Supplier and consumer. Smart meter is main component of smart grid. Currently we are paying electricity bill like one person came to home to read the electricity board and handover the bills to the owner of that house. The drawback of this it requires more man power, time, and many times it has error in bill amount. To eliminate this error smart energy meter is introduced. This system also helps in detecting and control over power theft. this smart energy meter helps us in home automation using IoT and enabling wireless communication which is a great step towards Digital India .Efficient energy utilization plays a very vital role for the development of smart grid in power system By providing real-time monitoring and control of energy consumption, it can help users to reduce their energy usage, save money, and promote sustainable energy consumption. As a first step towards such cyber-attack related researches and searching for possible mitigation techniques, it is necessary that a smart meter be developed that has the feature of network integration. The present contribution reports the design, fabrication, and operation of an Internet of Things (IoT) based smart meter using Arduino to serve as an integral part of a smart grid system.*

Keywords: smart grid technology

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