Smart Energy Meter with Advanced Billing and Power Theft

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Abstract: *The remote energy monitoring system is a meter and IOT software combo that provides amenities for the consumer. Indonesia swiftly embraced smart metering over traditional metering. India still uses the conventional type, which has issues such as electromechanical meter errors, human errors, and processing flaws. Using an ATMEGA 328p and a node MCU Micro Controller, we constructed a power theft detection and invoicing system for this project. It contains tools to monitor power in real-time using Internet of Things technology and is capable of automatically generating power bills. Additionally, in addition to alerting the user when power changes such as undervoltage, overvoltage, or overload occur, our system also looks for instances of power theft. The Power Theft Detection and Power Billing System is a ground-breaking initiative that was created as a result of the energy management industry's unwavering quest of innovation. This project represents the future of intelligent energy management since it is based on the confluence of technology and pragmatism*

Keywords: Remote Energy Monitoring system, IOT software, ATMEGA 328p, Node MCU Micro Controller, Theft Defection, Power Billing System