IoT Based Smart Energy Meter

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Abstract*: Efficient energy management is critical for modern power distribution systems. This paper proposes an IoT-based smart energy meter that enhances monitoring and control of energy consumption. Using real-time data acquisition and communication via IoT, the proposed system enables consumers to optimize power usage while assisting utility providers in managing demand efficiently. The system integrates advanced metering infrastructure (AMI) with machine learning algorithms for predictive analytics, ensuring cost-effectiveness and sustainability. Key features include remote monitoring, dynamic billing, and tamper detection, offering a robust solution for modern energy challenges.*

Keywords: IoT, Smart Energy Meter, Energy Management, Predictive Analytics, AMI

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