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Energy Meter Billing and Monitoring System using IoT

Hemlata Kosare[1], Anchal Babhare[2], Aachal Narnaware[3], Advait Janai[4], Sanjana Tajane[5], Shubham Ghuge[6], Prajyot Chide[7]
Professor, Department of Computer Science and Engineering[1]
Students, Department of Computer Science and Engineering[2,3,4,5,6,7]
G. H. Raisoni Academy of Engineering and Technology, Nagpur, India

Abstract: *With the increasing demand for energy and the growing concern for sustainable development, energy conservation has become a necessity. It is essential to ensure that electricity is being consumed efficiently and not wasted, which can lead to a significant increase in energy bills. Moreover, the traditional energy billing methods are prone to errors and are not user-friendly, resulting in inaccurate bills and customer dissatisfaction. In light of these issues, a system that is based on the Internet of Things (IoT) has been proposed and analyzed for energy meter billing and monitoring. The proposed system employs cutting-edge technology to automate the energy billing process and provides real-time monitoring of energy consumption, which helps customers to keep track of their energy usage and reduce their electricity bills. One of the most significant advantages of the IoT-based energy meter billing and monitoring system is that it is highly scalable and can be easily customized to meet the specific needs of each customer. It provides a secure and reliable platform for data communication between the energy meter and the web server, which ensures accurate billing and eliminates the need for manual meter reading. Furthermore, the proposed system is also environmentally friendly as it promotes energy conservation and reduces the carbon footprint. With the help of real-time monitoring, customers can identify areas where energy is being wasted and take corrective actions, such as turning off appliances when not in use, which helps in reducing energy consumption and conserving resources.*

Keywords: IOT, Smart Energy Meter Billing, Relay, GSM, electricity, Energy, etc

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