

Smart Energy Meter using IOT

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Abstract: *In order to transform the monitoring of energy use, this study presents a Smart Energy Metre (SEM) system that is integrated with Internet of Things (IoT) technology. IoT-enabled sensors are used by the system to gather data on electricity use in real time. With the use of cloud-based analytics and seamless connectivity, the suggested solution gives consumers insight into their patterns of energy consumption. Predictive analytics, anomaly detection, and remote monitoring are important aspects that support well-informed decision-making for efficient resource management. In addition to improving energy efficiency, the deployment of an Internet of Things-based Smart Energy Metre also helps create a more robust and sustainable energy infrastructure.*

Keywords: Smart energy meter, IOT ,Energy consumption monitoring , Real time data collection ,Cloud based analytics ,Remote monitoring

REFERENCES

- [1] "Smart Metering and the Internet of Things" (V. C. Gungor et al., IEEE Transactions on Industrial Informatics) explores IoT integration in energy systems.
- [2] "Internet of Things in Smart Grid" (Zhe Fan et al., IEEE Access) covers IoT architecture, applications, and challenges in smart grids.
- [3] "Smart Energy Metering System: A Review" (M. Gopinath et al., Procedia Computer Science) provides an overview of smart energy meters.
- [4] "Smart Grids and the Internet of Things" (Antonio J. Jara et al., Journal of Computer Networks and Communications) examines the synergy between smart grids and IoT.
- [5] "IoT-Based Smart Grid: A Comprehensive Review" (G. S. Rajasekaran et al., Journal of Ambient Intelligence and Humanized Computing) surveys IoT applications in smart grids.
- [6] "Smart Meter Data Analytics: Systems, Algorithms, and Applications" (Xiaoxi Zhang et al., IEEE Transactions on Industrial Informatics) focuses on data analytics for smart meters.
- [7] "Internet of Things (IoT) in Energy: A Review" (Zhiwei Luo et al., Energy Reports) provides insights into IoT applications in the energy sector.
- [8] "Applications of IoT in Smart Grids: A Comprehensive Overview" (M. Salman Niazi et al., IEEE Access) offers a comprehensive view of IoT applications in smart grids.