
REMOTE MONITORING SYSTEM

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ABSTRACT

The world economy is growing rapidly, and global energy demands are predicted to increase even more in the future. Energy-saving measures play a crucial role in addressing this challenge. Our project focuses on using sensors and Arduino-based system.

Keywords: Remote Control, Preventive Maintenance, Resource Usage And Output Tracking, Downtime Detection, Performance Metrics.

I. INTRODUCTION

The energy audit in a building is a feasibility study. For it not only serves to identify energy use among the various services and to identify opportunities for energy conservation, but it is also a crucial first step in establishing an energy management program. The audit will produce the data on which such a program is based. The study should reveal to the owner, manager, or management team of the industry the options available for reducing energy waste, the costs involved, and the benefits achievable from implementing those energy-conserving opportunities (ECOs). The energy management program is a systematic on-going strategy for controlling a building's energy consumption pattern. It is to reduce waste of energy and money to the minimum permitted by the climate the industry is located, its functions, occupancy schedules, and other factors. It establishes and maintains an efficient balance between a building's annual.

II. METHODOLOGY

Energy Monitoring System

In this technological world the electric power is the main source for the development and advancement. The technology develops the power requirement and increases the power demand. These power demands occur in both domestic and industrial sectors, which turn as the peak hour power cut. Due to this power cut industrial and domestic areas are affected. To avoid this uncomfortable situation our proposed system gives a solution to the power demand and energy management. The management of the power is also an important factor to reduce the energy demand, it means not only in the way energy is supplied but in the way it is used and reduces the amount of energy required to deliver various devices and loads. This smart energy management is achieved with the RF network and it communicate and control all the power outlets present in home and industry to make them ON and OFF the power supply.

Ems Context

Remote monitoring and control (M&C) systems are designed to control large or complex facilities such as factories, power plants, network_operations, centres, airports, and spacecraft, with some degree of automation. M&C systems may receive data from sensors, telemetry streams, user inputs, and pre-programmed procedures. The software may send tele commands to actuators, computer systems, or other devices. M&C systems may perform closed-loop control.

III. MODELING AND ANALYSIS

The empirical relationship used to plot production (X) against energy consumption (Y) is:

$$(Y = C + M \cdot X)$$

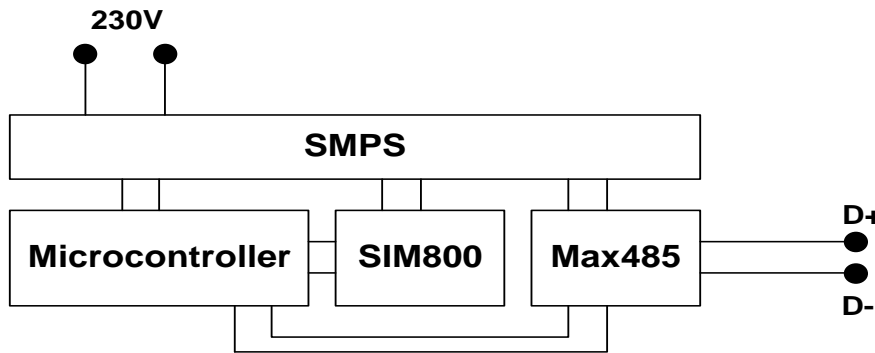


Figure 1: Proposed hardware modeling

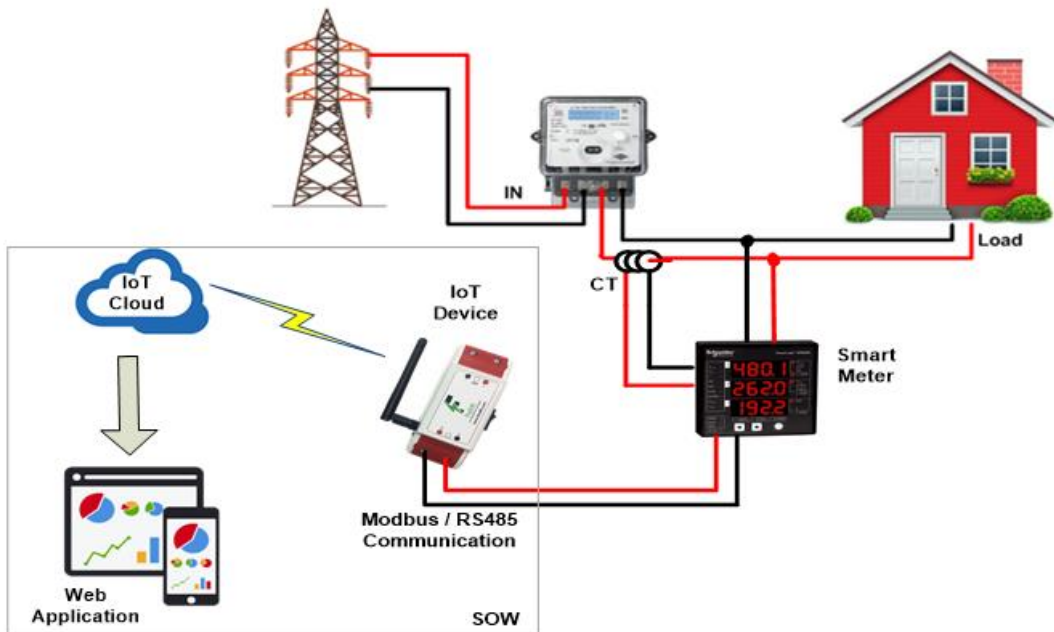


Figure 2: System Architecture

IV. RESULTS AND DISCUSSION

The results and discussion may be combined into a common section or obtainable separately. They may also be broken into subsets with short, revealing captions. An easy way to comply with the conference paper formatting requirements is to use this document as a template and simply type your text into it. This section should be typed in character size 10pt Times New Roman.

Table 1: Structure of Diagrams

SN.	Model Type	no	Components
1	Proposed hardware model	1	Smgs
2	System Architecture	2	Mobus

V. CONCLUSION

An Energy Monitoring System is a crucial tool in today's world where energy efficiency and conservation are of paramount importance. It provides real-time data on energy consumption, enabling users to identify patterns, inefficiencies, and opportunities for improvement. By facilitating proactive energy management, it not only helps in reducing energy costs but also contributes to sustainability efforts. In conclusion, an Energy Monitoring System is an indispensable asset for any energy-conscious organization or individual. It empowers users with

the knowledge and insights needed to make informed decisions about their energy usage, ultimately leading to cost savings and a reduced environmental footprint.

VI. REFERENCES

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