UNIVERSITI TEKNOLOGI MARA

REAL-TIME MONITORING SYSTEM OF ELECTRICITY CONSUMPTION IN OFFICE SPACE OPERATION

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ABSTRACT

Electricity is an ever-essential issue catching the attention of all developed countries in the world. Individuals on the planet has been subjected to power and overrun all parts of human lives. Despite the ongoing advances in technology, there was augmentation in energy demand in these previous years which trade off the few responsibilities to lessen ozone depleting substance emanations to the environment since the electrical energy generation is still profoundly dependent on the utilization of non-renewable energy sources. With real-time monitoring system, the expense per kWh varies with time as an outcome of the changing supply and demand in the market based on the energy consumption by the consumers. The system would have the capacity to decrease the electricity cost by knowing the load consumptions for their day by day energy consumptions. The Internet of things (IoT) is getting more attention in these ongoing years. Allows gadgets connected to the web to be observed and controlled by remote users. Nonetheless, users need to know the vital utilization of IoT for instance providing energy efficiency and energy monitoring. The purpose is to give better understanding on their electricity usage patterns. Henceforth expedites them to the mindfulness on the amount of electricity consumed by various appliances and equipment and improving their understanding on electric bills. To be more transparent and informative to users.

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CHAPTER ONE
INTRODUCTION

1.1 Research Background

Electricity is an ever-essential issue catching the attention around the world. Every individual on the planet has been subjected to electric power and overrun all parts in human lives. Despite the ongoing advances in technology, there are augmentation in energy demand in these previous years which trade off few responsibilities to lessen ozone depleting substance emanations to the environment since electricity generation is still profoundly dependent on utilization of non-renewable energy sources. There are lot of smart technologies have been proposed along the years with the reason in giving enhanced administration conveyance and to diminish environmental impact to citizens. Under real-time monitoring system, the expense per kWh varies with time as an outcome of the charging supply and demand in the market based on the energy consumption by consumers. Anyhow, they should have the consciousness to decrease their electricity cost by acknowledging the load consumptions of their daily energy utilizations.

Internet of things (IoT) is getting more attention in these ongoing years. It allows gadgets connected to the web to be observed and controlled by remote users. Nonetheless, they need to know the vital utilization of IoT in providing energy efficiency and monitoring. In Malaysia, electricity is monopolised by Tenaga Nasional Berhad (TNB). Customer will receive summary of electricity consumption in the form of electric bill including billing amount, types of meter reading and so on. However, do they simply pay the sum and proceed onward without knowing which electrical appliances they were using. As a matter of fact, consumers could make improvement on the most proficient method to lessen energy consumption by knowing which electrical appliances used the most and hence manage the usage. For example, set timer on air conditioner on when to turn on and off dependent on their inclinations. Every electrical machine has its very own characteristics which vary by brand and model.

Reducing or streamlining electrical power utilization is one of the most major