

Online Monitoring of Energy Consumption and Remote Operation of Switches

Anusha Pillay^{[1]*}
School of Electrical
Engineering^[1]
VIT University^[1]
Vellore, TamilNadu , India
pillayanusha@gmail.com

Leena Jeslin J K^[2]
School of Electronics and Communication
Engineering^[2]
VIT University^[2]
Vellore, TamilNadu , India
leenajeslin@yahoo.com

Roshan P. Shajan^[3]
School of Electronics and Communication
Engineering^[3]
VIT University^[3]
Vellore, TamilNadu , India
roshanp.shajan2011@vit.ac.in

Abstract—Cognitive energy management is the need of the hour. Today, we are in the dilemma to minimize the energy consumption, while at the same time we have to catch up with the economic developments happening worldwide. A lot of focus has been given recently to bridge that gap between the ever increasing power demand and the necessity to meet that at reasonable rates in a reliable manner. A considerable change could be brought about if the user is totally aware of his consumption. And this could be done, if there is a cost effective, efficient online monitoring system that could surveil this squander, measure the real-time electricity usage and intimate the user of an excess usage beyond the prescribed limits. Further, it would be an icing in the cake if this system can also identify any unnecessary wastage and would allow the user to even remotely switch off the causing equipment. The data stored with the system can also serve different other purposes. It can be used for studying the load distribution patterns and power factor at various locations and instants, helping in energy auditing. Also the user now being aware of the sources of unwanted wastage in his premises, can take actions to ameliorate the situation. The system may be used anywhere: homes, commercial establishments, educational institutions or government buildings.

Index Terms— Digital Power Meter, Ebus, Ethernet, Microcontroller, Online Monitoring System, Printed Circuits, Remote Switching