

**REMOTE MONITORING**  
**OF DIGITAL ENERGY METER**

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## **SYNOPSIS**

Electrical Energy consumed is measured with the help of energy meter, which are of two types namely analog and digital meters. In analog meters consumed power is calculated under the basis of number of rotation made by the rotating disk. There are lot of errors which can occur and there are chances of tampering a meter reading.

The best solution to circumvent the problems is the digital technique. In this project we have used **DIGITAL ENERGY METER** for reducing the errors and for better accuracy. Thus digital energy meter is mostly preferred now a days. This meter works on the basis of energy metering IC ADE7757 which generate pulses according to the load.

In this project we are using microcontroller PIC16F87X in both receiving and transmitting section. The data from the personal computer is given to microcontroller through RS232 which is encoded by the encoder and transmitted to the consumer's house. After getting the signal from the control room the pulses generated by the IC ADE7757 is given to the interrupt pin of the microcontroller placed at consumer's house. The pulses are counted by the microcontroller and displayed on the LCD at consumer's house. The data from the microcontroller is encoded using IC HT12E and decoded using IC HT12D. The wireless transmission is carried out using RF module.

Hence the proposed system for the energy billing is automatic without human intervention and consumer can directly know the amount that is to be paid, which is displayed on the LCD. So its both supplier and consumer friendly.

The current project named as **REMOTE MONITORING OF DIGITAL ENERGY METER**, has few more features. In this project two way communication is introduced so that electricity control board can interrupt the power supply at consumers house, if they have not paid the bill on time.

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