**Voice Of Energy Meter**

1. WORKING OF TALKING ENERGY METER BASED ON MICROCONTROLLER:

* The purpose behind this system is to design a circuit which aware the consumer about their energy usage by giving them voice alert when user according to their requirement.
* An AC source is given to the electric energy meter and from this; the load is connected to the meter via a relay switch.
* The fourth LED of the energy meter is given to one of the digital pins of microcontroller ATMEGA 328 at port C.
* The microcontroller is connected to the voice module and the GSM module. The GSM module is used to send and receive messages via a mobile network to give daily alerts.
* The energy values once taken from the energy meter are digitized and processed with the help of a microcontroller ATMEGA 328.
* The billing of the corresponding energy usage is determined and per unit rate of consumption is set at the time of programming.
* The threshold unit value is set for which the consumption level increase is notified to the user. And the user can change that threshold limit according to the requirement by using dome switch.
* A relay switch is connected with the microcontroller and the load which is used to cut the supply if someone tries to steal the electricity. It is used as protection purpose.
* Voice Module is used to give the alert when consumption of units exceeds the set limit by user.
* As soon as the limit exceeds, the voice alert occur and SMS get send on registered mobile number.

1. Results:

* The project "Design a Talking Energy Meter based on Microcontroller" is design such that whenever the usage of energy exceeds the threshold value which is set by user, it announces an alert message which was already predefined in the voice circuit.
* The SMS of monthly billing status is also sends on user's mobile number which is mentioned in program. The snapshot of SMS is shown in below figure.

1. Block Diagram

