**Smart Energy Meter with load controller to regulate domestic power consumption**

**Advanced Metering Infrastructure with GSM module and load controller**

The advanced metering infrastructure (AMI) is a crucial component of the smart grid, replacing traditional analog devices with computerized smart meters. In our project we would like to facilitate in improved cash flow management in energy utilities , which mainly takes place because of the lack of awareness of the energy usage , and can reduces problem associated with billing consumer living in isolated area and reduces deployment of manpower for taking meter readings by implementing various ways using microcontrollers and GSM Modules .  
We have suggested ways to implement a real time cost calculating meter which displays as well as gives the audio output of the cost in regular time interval . So as to implement a critical energy and a power quality management scheme we have included a Cost Controller with GSM module in which the user can input a specified cost as constraint. By this implementation the user receives constantly the usage readings via their mobile phone , which eliminate the difficulty of approaching the meter constantly as well as , the meter upon encountering the above cost could in turn produce voice warnings/alarms. It can also shutdown some low priority load automatically programmed by the consumer. The project’s aim to introduce an automatic meter reading mechanism which can be implemented by means of Broadband network over a secured 128 bit encrypted channel , which also eliminates the labour to collect electricity usage which in turn becomes economical as well as accurate.

Objective of the project : To make an advanced metering infrastructure with load controller to regulate domestic power consumption and an automatic metering infrastructure to improve accuracy in the meter reading .