GSM BASED AUTOMATIC ENERGY METER READING

***Abstract*:-The domain of Electric Energy Consumption-Metering has been undergoing numerous rapid technological advancements as there is an increased demand for a fool-proof, reliable and efficient Automatic Meter Reading (AMR) system. Constant efforts in this field have led to a variety of meters being created today. However, newer challenges sprout up every day causing considerable heart-burn and anxiety for the common customer, who would like to be free from unreliable, uncertain, and haphazard electricity charges, which alarmingly keep increasing every day.**

***This Project Paper humbly endeavours to present the design of a simple GSM based Energy Meter and its associated Web Interface, for automatic billing and seamless management of data collection with easy and real time relay of information to the end-users. The proposed system replaces traditional meter reading methods which are static and non-dynamic. It enables remote-controlled access of consumption data from the existing energy-consumption meters by the energy provider to the consumer in real-time. This empowers the consumer to monitor, verify and regulate the usage of electricity at his domestic end. In addition, the energy provider can effortlessly monitor the meter readings regularly without the tedious and costly process of the company officials visiting each house.**

The device is designed in the following way - an IR sensor and GSM communication module is integrated with the electro-mechanical energy meter of each consumer to facilitate remote access of the usage of electricity. A PC with a GSM receiver at the other end and SQL server for database management acts as the billing point. Live meter reading from the GSM enabled energy meter is sent back to this billing point periodically and these details are updated in a central database (SQL Server).A new interactive, user-friendly Graphic User Interface (GUI) equipped with Microsoft Visual Studio.NET framework and C#. With proper authentication, users can access the developed web page details from anywhere in the world.

The project abstract - (Branch – Electrical) and video link - https://www.youtube.com/watch?v=BdSGkmKVBDQ

The Achievements of the project:-

- **1st Runner-up,Army Institute of Technology,Pune -** Solution 2015-Project Competition on 17th February 2015.
- The article published in **Pudhari Marathi Newspaper** on 2nd February 2015.
- **1st Runner-up, IIT Bombay Techfest 2015**-Ujjwal(Project Competition)-2-4th January 2015.
- The article published in **Sakal Marathi Newspaper** on 31st December 2014.
- **1st Runner-up, VJTI Technovanza 2014** – Xcon (Project Competition) – 28-30th December 2014.