

# Review Paper on Automatic Meter Reading and Instant Billing

Tanu T. Patel<sup>1</sup>, Snehal V. More<sup>2</sup>, Rohan M. Chavahan<sup>3</sup>, Ashish S. Bhimte<sup>4</sup>, Vishal P. Ingale<sup>5</sup>,  
Sumit P. Sabale<sup>6</sup>, Vijay G. Neve<sup>7</sup>

B.E. Students, Department of Electrical Engineering & Technology<sup>1-6</sup>  
HOD and Guide, Department of Electrical Engineering & Technology<sup>7</sup>  
Jagadambha College of Engineering, Yavatmal, Maharashtra, India

**Abstract:** Existing systems are electric energy meters, and the use of the energy meter is now limited to writing kWh units. The kilowatt-hour units recorded monthly by the meter reader must be filled in by the reader company. In order to benchmark, companies must link each usage data to a specific account holder and then determine the balance based on the specific usage rate. Researchers have proposed several automatic readout meters (AMRs) based on various platforms. There are many telephone-based AMR systems such as Power Line (PLC) and Telephone Line Network (Fiber Optic/Cable) and wireless AMR systems such as GPRS, Bluetooth, GSM-based electronic measurement systems. Creating a GPRS-based remote data transmission system, but knowledge of this system is not easy, because today the use of GPRS is still a dream for ordinary people. The launch of GSM as a fast-charging power meter is a good thing, but the problem of missing SMS still degrades accuracy and performance. By using the advanced Visual studio .net framework to create a web portal for various logins, you get a more reliable and effective way to keep good information even if SMS is lost. It makes the design different from previous ideas and also improves the material. The GSM/GPRS channel is a useful communication tool because of its good coverage and cost effectiveness; Sending information in the form of SMS is a very useful tool. The front-end portal is user-friendly and any employee with minimal computer knowledge can use the software. Employees can read the indicators while sitting in the office. There are number of app are available for instant billing such as MGVCL app, Adani electricity, MSEB Electricity bill, Vidyut Saathi, ePayon, etc.

**Keywords:** Automatic Meter Reading system (ARMS), GSM, PIC, Short messaging system (SMS), Visual Studio.NET, MGVCL, MSEB.

## REFERENCES

- [1]. Ask. Gao et al., "A solution to the "silent" problem of automatic reading of electrical parameters using electronic communication, IEEE vol. 23. No. January 1, 2008
- [2]. Subhashi Maitra et al, "Embedded Energy Meters - A New Concept for Measuring Energy Consumed by Consumers and Paying Bills", 978-1-4244-1762-9/ 08 IEEE 2008< br>
- [3]. Nhat-Quang Nhan et al, "Using Wireless Sensors to Improve Performance of Mobile Data Acquisition Systems for Electric Meter Reading Networks", 2012 International Conference on Advanced Communication Technologies (ATC) 2012), p. 241-246
- [4]. K. Others from S. K. Weranga, "Next Generation Intelligent Measurement for Energy Efficiency and Conservation", IEEE PES ISGT Asia 2012, p. 1-8
- [5]. Sudhish N George et al, "GSM Raws li> A Meter Reading System with Instant Billing,978-1-4673-5090-7/13IEEE 2013, pp. 61-72
- [6]. Mpendulo Ndlovu et al., "Subcarrier permutation coding scheme for OFDM inter-power line communication", 18th IEEE International Symposium on Powerline Communications and Applications, p. 10 -17. 196-201, 2014
- [7]. Mohamed Chaker Bali et al, "Advanced Physical Layer for Coded Modulation Based Robust Power Line Communication", 978-1-4799- 5874 -0/14, IAB 2014

