GSM BASED REAL TIME ENERGY MANAGEMENT SYSTEM

E. MOHAN, C. PUTTAMADAPPA, M. VENKATESAN AND M. SARAVANAN

Abstract

The development of a GSM based Real Time Energy Management (GRTEMS) System is presented in this paper. The GRTEMS System is consists of GSM Digital Power Meters installed in every consumer unit and an Electricity eBilling System at the energy provider side. The GSM Digital Energy Meter (GEM) is a single phase 1EC61036 standard compliance digital kWh energy meter with embedded GSM modem which utilize the GSM network to send its power usage reading, fault and tampering analysis in meter using Short Messaging System (SMS) back to the energy provider wirelessly. At the power provider side an eBilling system is used to manage all received SMS meter reading, compute the billing cost, update the database, and to publish billing notification to its respective consumer through SMS, email, Web Portal and Printed postage mailing. Finally we are going to analyze about working ant tampering of meter from the SMS received from energy provider. Based on the information provided in the SMS actions are going to be taken. A working prototype of the GRTEMS system was build to demonstrate the effectiveness and efficiency of automatic meter reading, billing and notification through the use of GSM network.

Keywords: Automatic Meter Reading, Digital Energy Meter, GRTEMS, Global System Mobile, Modem, Short Messaging System, meter verification and tampering.