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SYSTEM FOR REMOTE METER READING AS A POWERFUL TOOL IN A DEREGULATED MARKET

ABSTRACT

A paper provide a partial overview of the utilities response to deregulation and liberalization process in Europe and world-wide. Deregulation on the energy market accelerates evaluation of a new measuring and controlling devices as well as some new communication technologies that are applicable in telemetry systems for remote meter reading and some DA/DSM functions. Special focus has been put on a systems for automated meter reading and parameterization (AMR) for residential customers (electricity, gas, water and heat) as well as on a communication techniques that use a radio communication link in ISM band, both 433MHz and 868MHz band, as well as a communication over power lines (DLC). On a higher level of a system, GPRS communication shows a very important role in a reliable, fast, but also economical feasible way of how to bring data from data concentrators to the utility billing centers as well as to have an "on-line" supervisory control over data concentrators.

Beside description of devices and used communication techniques, applicable on RF and DLC based AMR system, a paper provide also a case study on a test trial that is running on several locations in Slovenia and on Scandinavia that incorporate remote meter reading and parametrising electricity meters. A case study brings some analyses of suitability to use RF and DLC communication network for an AMR system.

Keywords: deregulation, AMR system, DA/DSM functions, RF communication, DLC communication, electricity meters, gas meters, water meters, data concentrators, network management, network maintaining, test installations, test results.