

Consolidated Metering on the Client Side for Industrial and Home Utilities

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Abstract— This paper refers to the following directions: (a) the architecture and the communications issues related to the 'smart grid', and (b) the relations between the utilities and the end-users within the 'smart grid' in the framework of the accelerated implementation of the smart metering in Romania. Regarding the issue (a), we found that the implementation of the real-time smart metering at the home-area network level rise concerns about the end-user privacy and leads to a significant increase of the initial and maintenance costs of the smart grid. Within this work, we propose a solution to the problem by means of the local client-side area network concept. The experimental study related to issue (b) revealed that, in Romania, the decisionmakers dispose of acceptable technical knowledge about smart metering and they are interested about the matter. However, there is need of more learning activities and practical examples to overpass the decision-makers' concerns regarding the implementation of smart metering.

Keywords— smart grids; smart homes; network architecture; psychometric testing.

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