

Transforming Water-Energy-Gas Industry through Smart Metering and Blockchain Technology

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Abstract : Advanced metering technologies coupled with informatics creates an opportunity to form digital multi-utility service providers. These providers will be able to concurrently collect a customers' medium-high resolution water, electricity and gas demand data and provide user-friendly platforms to feed this information back to customers and supply/distribution utility organisations. With the emergence of blockchain technology, a new research area has been explored which helps bring this multi-utility service provider concept to a much higher level. This study aims at introducing a breakthrough system architecture where smart metering technology in water, energy, and gas (WEG) are combined with blockchain technology to provide customer a novel real-time consumption report and decentralized resource trading platform. A pilot study on 4 properties in Australia has been undertaken to demonstrate this system, where benefits for customers and utilities are undeniable.

Keywords : blockchain, digital multi-utility, end use, demand forecasting

Conference Title : ICMLDA 2018 : International Conference on Machine Learning and Data Analysis

Conference Location : Tokyo, Japan

Conference Dates : May 28-29, 2018