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TOWARDS INCREASED WATER AND ENERGY EFFICIENCIES IN WATER DISTRIBUTION SYSTEMS

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Abstract

Along with nowadays growth of urban areas and population, it is more and more important to have better water resources management, especially regarding drinking water supply. Maintaining a good state of a water distribution network poses challenges that are addressed by research community. Two of the main challenges in management of water distribution systems are the reduction of energy consumption due to the high pumping requirements in some systems and/or reduction of water losses. European Commission is encouraging research in this area and currently has funded the EU FP7 project ICeWATER, that aims at development of new ICT strategies for management and operation of water supply systems. Present article focuses on the presentation of the solution for reducing energy consumption, as it was proposed within the project. The solution is applicable to any water distribution system; therefore the principles and methodology demonstrated herein are general.

Key words: sectorization, pump scheduling, optimization, water supply systems

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