

Addressing California's Water Needs Through Data and Collaboration

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Guest Lecturer Dr. Frank Loge

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Dr. Frank Loge

Abstract:

California has been struggling with serious water issues for some time now. Dwindling water supply and repeated droughts have escalated the need for consumers, businesses, utilities, and government to better manage this precious resource. Stakeholders across the ecosystem need to come together to develop better mitigations. These include creating new tools for analyzing water use, deploying new technologies, updating processes, and issuing new policies. Stakeholders need a way to proactively share information, tools, insights, and solutions to achieve greater water efficiency and help guide decision makers. Collectively stakeholders need to reduce water loss, minimize energy usage, and better manage demand through pricing, education, rebates and other conservation actions. Agencies are responding and have started to make significant investments. Understanding the interdependencies of the issues and assessing how well these programs are performing is a critical capability. Recent advances in data science can help detect where water loss is happening, identify the best pricing models, and hone the effectiveness of these interventions. These insights are fueled by data—the more reliable and comprehensive the data is, the more impact it will have on optimizing our water systems locally, nationally, and globally.

Biography:

Frank Loge is Director of the UC Davis Center for Water-Energy Efficiency, a professor in the Department of Civil and Environmental Engineering, and the current holder of the Ray B. Krone Endowed Professorship in Environmental Engineering at the University of California, Davis. He began his career studying water and wastewater treatment, and has developed a strong interest in the relationship between energy, water, and health. Frank advocates performing fundamental research to advance knowledge and developing and deploying technologies and policies that improve environmental quality and the efficiency of resource consumption. His research efforts focus on the energy and health implications of engineered and natural systems, designing sustainable systems and technologies, and entrepreneurship and finance. He is a licensed Professional Engineer in California.



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