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Accelerating the Integration of Distributed Water Solutions: A Conceptual Financing Model from the Electricity Sector

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Abstract

Modern challenges require new approaches to urban water management. One solution in the portfolio of potential strategies is the integration of distributed water infrastructure, practices, and technologies into existing systems. However, many practical barriers have prevented the widespread adoption of these systems in the US. The objective of this paper is to address these challenges by developing a conceptual model encompassing regulatory, financial, and governance components that can be used to incorporate new distributed water solutions into our current network. To construct the model, case studies of successfully implemented distributed electricity systems, specifically energy efficiency and renewable energy technologies, were examined to determine how these solutions have become prominent in recent years and what lessons can be applied to the water sector in a similar pursuit. The proposed model includes four action-oriented elements: catalyzing change, establishing funding sources, using resource pathways, and creating innovative governance structures. As illustrated in the model, the water sector should use suite of coordinated policies to promote change, engage end users through fiscal incentives, and encourage research, development and dissemination of new technologies over time.

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