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A Primer on Energy Efficiency for Municipal Water and Wastewater Utilities



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Published

2012-02

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Abstract

This primer is concerned with energy use and efficiency of network-based water supply and wastewater treatment in urban areas. It focuses on the supply side of the municipal water cycle, including the extraction, treatment, and distribution of water, and collection and treatment of wastewater-activities which are directly managed by Water and Wastewater Utilities (WWUs). The main challenges to scaling up Energy Efficiency (EE) in municipal water and wastewater services stem from sector governance issues, knowledge gaps, and financing hurdles. Utility governance affects the overall performance of individual WWUs and influences decision making, incentives and actions for energy management. This is likely the most significant barrier to WWU EE in many developing countries. Addressing knowledge gaps requires efforts to systematize data collection, training, and capacity building at utilities, supported by local and national governments. Financing hurdles can be reduced by introducing dedicated EE funds to address large but disaggregated investment needs and by promoting third-party financing through energy/water savings performance contracts. This primer is part of Energy Efficient Cities Initiative's (EECI's) knowledge clearinghouse function to inform World Bank (WB) staff working in urban water supply and wastewater management, as well as in energy, about the opportunities and good practices for improving EE and reducing energy cost in municipal WWUs.

Citation

"Liu, Feng; Ouedraogo, Alain; Manghee, Seema; Danilenko, Alexander. 2012. A Primer on Energy Efficiency for Municipal Water and Wastewater Utilities. Energy Sector Management Assistance Program;technical report 001/12. World Bank, Washington, DC. © World Bank. <https://ec2-52-21-52-208.compute-1.amazonaws.com/handle/10986/18060> License: CC BY 3.0 IGO."

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