

Municipal Water Pumping Breakout Session 1:30 – 3:00 p.m.

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Working Together, Advancing Efficiency

Today's Session

Opportunities for programs to achieve energy savings in municipal water pumping systems

- Introduction to CEE Water and Wastewater Initiative
- A Look at SCE's Pump Test and Hydraulic Services Program: Going from Pump Test to Energy Savings
 - Gary Suzuki, SCE Program Manager
 - Danny Johnson, Supervisor of SCE Pump Test Program
- Discussion of Program Approaches and Experience



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CEE's Interest in the Municipal Water and Wastewater Sector



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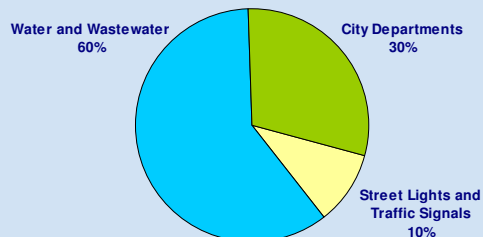
Energy Savings in Water and Wastewater Treatment

National Opportunity

- 60,000 community drinking water systems and 15,000 wastewater systems in U.S.
- Water and wastewater industries account for approximately 3 percent of total U.S. electric load

Municipal Opportunity

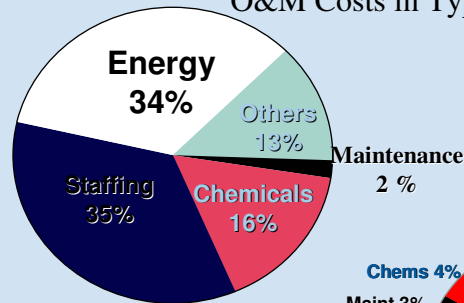
- Energy account for about 35% of municipal energy usage, sometimes more.
- Energy use in Austin, TX:



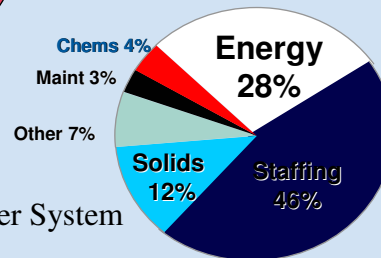
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Energy is Significant O&M Cost for Most Water and Wastewater Facilities

O&M Costs in Typical Water System



O&M Costs in Typical Wastewater System



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Industry Trends Point to an Increase Demand for Energy Efficiency

- Industry Trends
 - Aging systems/infrastructure
 - Population shifts/increases
 - Current treatment may not be sufficient to meet future stds. requiring new, more energy-intensive treatment technologies
 - Energy management not widely adopted in the industry
- Major investment needed over the next 20 years to maintain infrastructure and meet water quality stds. represents a significant opportunity for efficiency



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Member Interest in Municipal Water and Wastewater Sector

- Strong presence in member service territories
- Similarities among facilities (processes, decision-making, motivations, mission)
- Members are serving this sector
 - dedicated programs
 - existing incentive programs (e.g., lighting, motors, drives, etc.)
 - custom programs (e.g., pump system improvement projects, process enhancements)



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Challenges

- Understanding the market
 - How energy is used
 - Energy saving opportunities
 - Decision-making process
- Identifying best practices for energy-efficiency
- Promoting awareness in the market
- Gaining support for enhanced energy performance from water/wastewater customers and their suppliers (services and products)



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CEE Municipal Water and Wastewater Facility Initiative - 2005

- **Objective:** increase awareness of and demand for energy efficiency within the municipal water and wastewater sector
- **Strategy:** To build a template of nationally consistent tools and messages for members to incorporate into their programs and to deliver nationally



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Initiative Elements

- Mobilize the energy efficiency community, using local programs to demonstrate the benefits of facility energy efficiency
- Develop national alliances with key water and wastewater associations to help raise awareness among utility managers
- Foster greater demand for energy efficient water and wastewater facilities
- More product and service providers incorporating energy efficiency as standard business practice



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Water/Wastewater Facility Initiative – Proposed Direction for 2007

- Continue to support national efforts to educate water and wastewater customers about the benefits of efficiency
 - ENERGY STAR's Water and Wastewater Focus
 - Development of an energy performance benchmark
- Continue to provide a forum for members to exchange innovative program approaches in the sector.
 - Identify best practices for programs serving municipal water and wastewater customers and serve as a clearinghouse.
- Develop program guidance on specific energy-saving opportunities will be through the development of application guidelines for key systems, such as water pumping, variable speed drives and blowers.
- Continue to foster relationships with national water-wastewater industry associations, water-related research associations, as well as product and service providers, including the pump industry.



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Discussion Questions

- What kind of guidance could/should CEE offer to programs in this area?
- What should program designers/administrators know (keep in mind) when it comes to pumping system efficiency?
- What have programs, like SCE, learned through past experience that could benefit other programs?
- What barriers currently exist that programs could address by working together nationally?
- What aspects of pump system efficiency are universal and what aspects are site-specific?



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Model Program Approaches

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Next Steps for the CEE Water and Wastewater Committee

Developing Guidance for Programs on Pump System Optimization.



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Join the CEE Municipal Water and Wastewater Committee

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