

Energy + Water Strengthens Both

Energy use is embedded in the supply, gathering, and treatment of clean and wastewater in U.S. infrastructure, and water is embedded in the generation and application of energy. Where the two converge is a crossing point that is poorly understood outside facilities management. This nexus represents significant strategic opportunities.

The result of a 2016 NEMA Strategic Initiative to study the relationship of electricity and water in urban water systems, the Water Energy Toolkit¹ provides resources to educate water utility owners, managers, and employees about:

- Improvements and upgrades to water systems
- Paying for energy-saving programs
- Pump, motor, metering, and control systems training

This online toolkit compiles information that can be used to identify potential improvements and to explore the use of an energy service company (ESCO)² to justify and encourage private improvements.

Out of Sight, Out of Mind

Many people see water infrastructure only when they are stuck in traffic during the trenching operations necessary to lay pipe and culverts. Thus it is easy to lapse into an “out of sight, out of mind” frame of reference. The result is that water facilities fare poorly when it comes to improvements and maintenance. Tight budgets leave facility managers unable to undertake elective maintenance upgrades while privatized utilities can find themselves at the mercy of shortsighted shareholders who do not favor investments in efficiency.

Only in areas where water is increasingly scarce, such as the ongoing California drought, are we beginning to see public campaigns that might begin to incentivize and promote water–energy efficiency efforts.³ Elsewhere, water management regulations and laws, if any, tend to focus on low-water usage appliances only.

Many NEMA Members function as ESCOs in the energy sector, selling energy savings performance contracts (ESPCs) contracts for energy-efficiency upgrades and services. This contrasts with far fewer ESCO businesses for energy embedded in the water supply or for water savings through efficiency improvements.

¹ www.waterenergytoolkit.org

² energy.gov/eere/femp/energy-savings-performance-contracts

³ www.dgs.ca.gov/dgs/Home/water.aspx



Water + Electricity Mix Well in Toolkit

Making the energy–water nexus a strategic reality begins with these tactical pursuits. Visit the Water Energy Toolkit for information on:

- Improvements and upgrades to water systems
- Paying for energy-saving programs
- Pump, motor, metering, and control systems training
- Pursuing a foundation for ESPC activity in the water sector
- Encouraging private facility upgrades

It costs money to source, deliver, gather, and treat water, but with these resources facility owners and managers can perform upgrades beyond expansion and leak mitigation. ☺