

Leading NH's Wastewater Treatment Plants to Energy Efficiency

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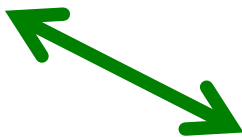


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U.S. DEPARTMENT OF
ENERGY

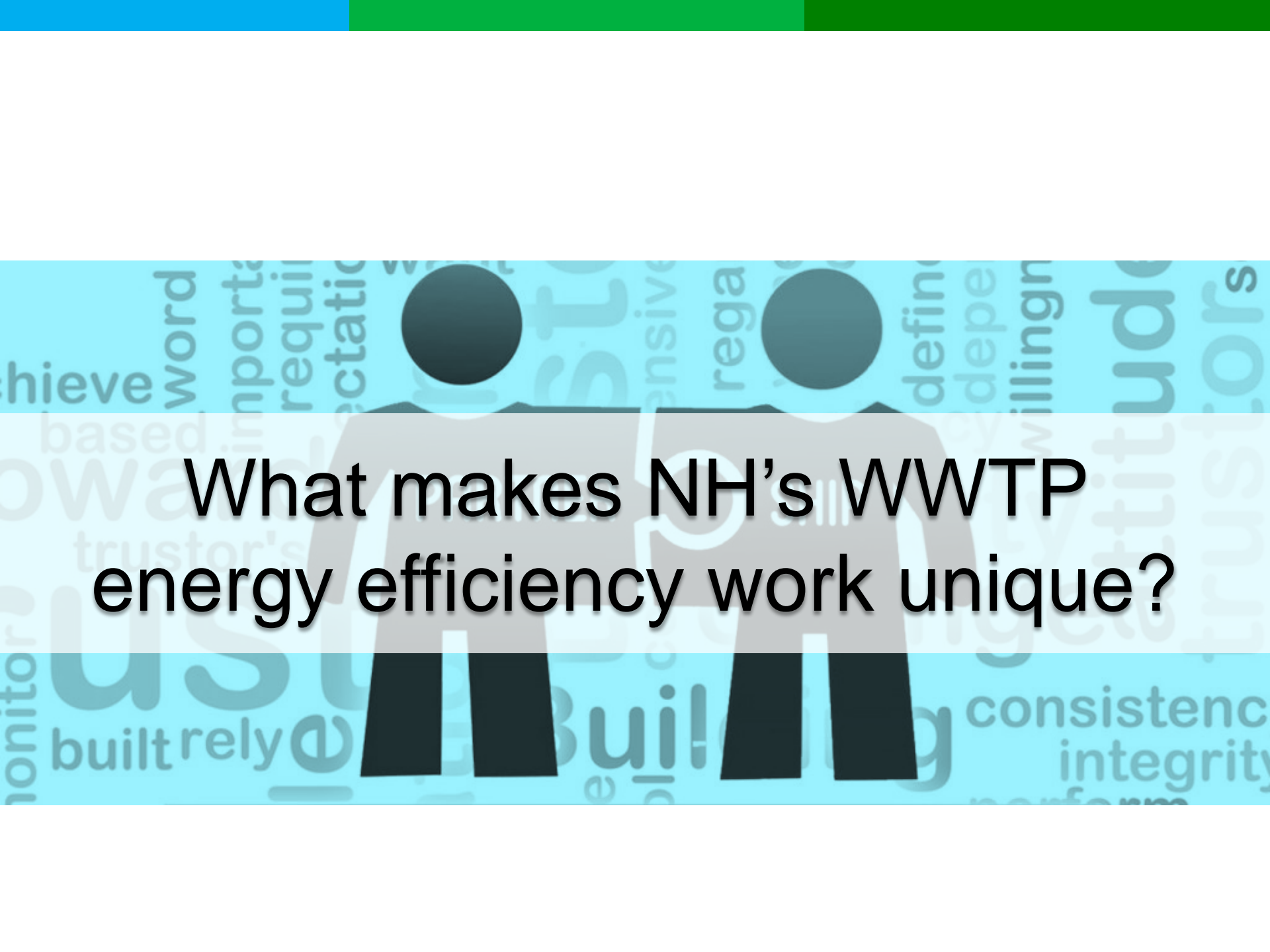
Energy Efficiency &
Renewable Energy



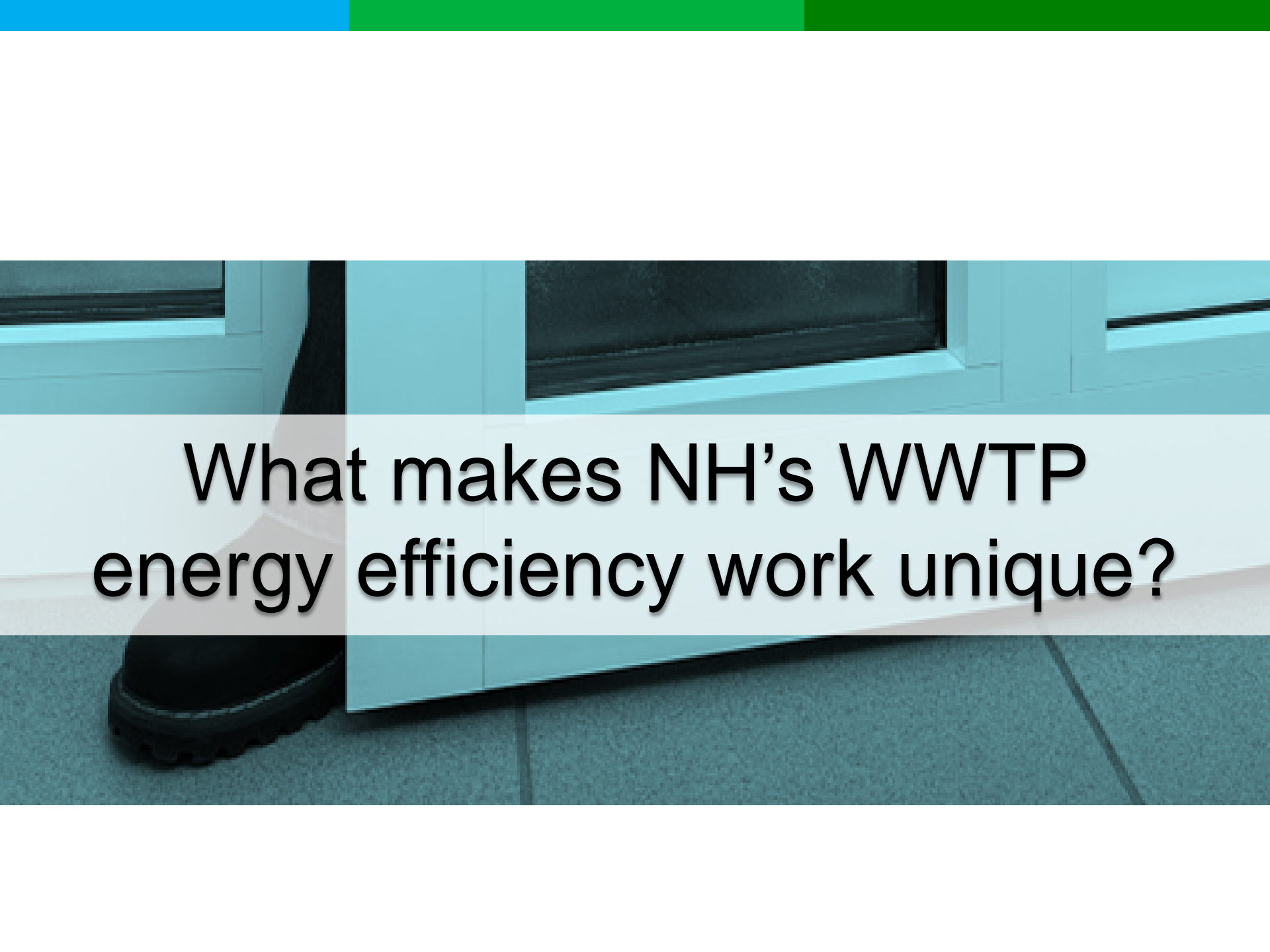
NH's
WWTPs

Wastewater Opportunities

- Largest energy user in municipality
- Tight budgets – do more with less
- Aging equipment
- Over-designed

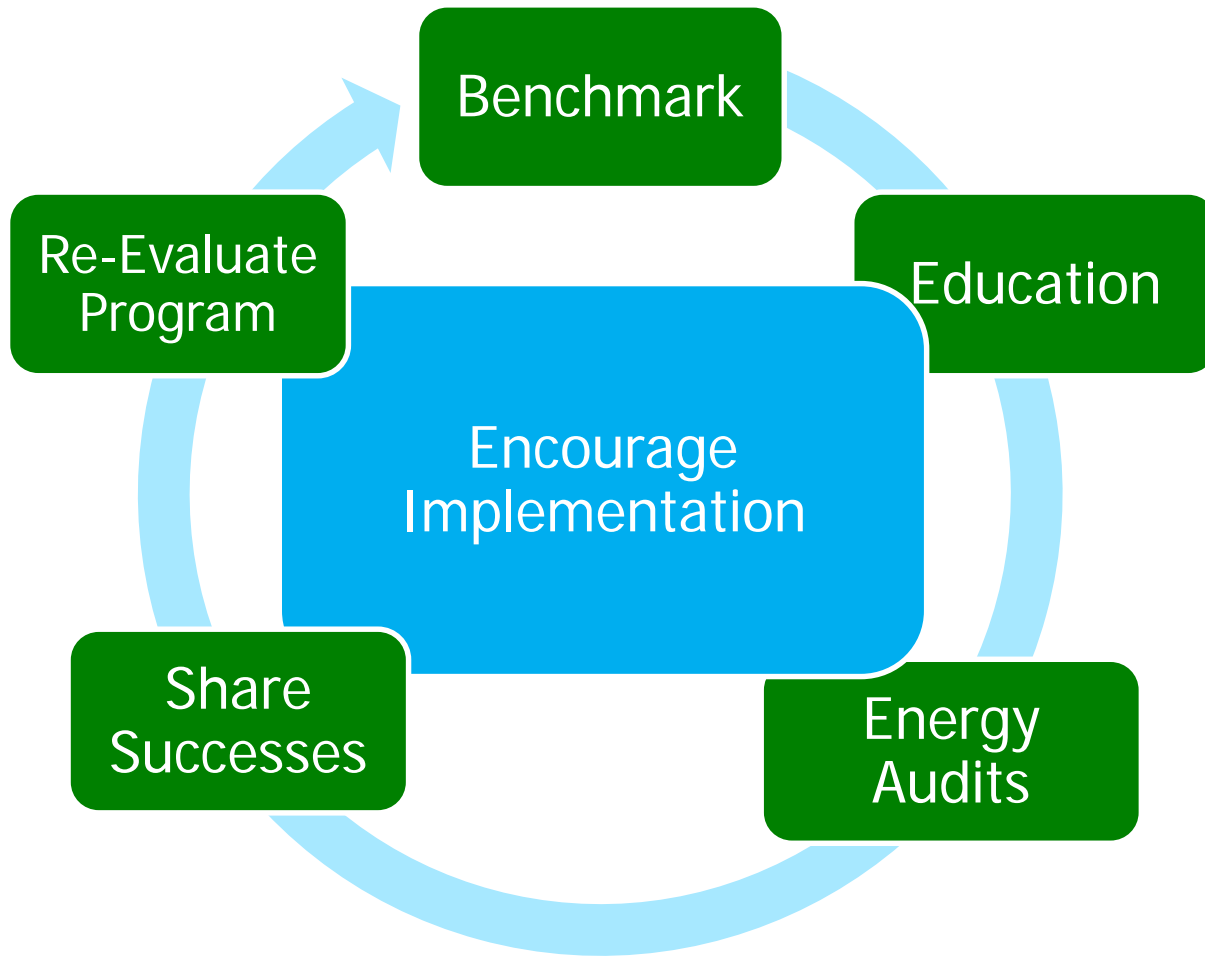
The background features a light blue horizontal band containing a word cloud of various terms such as 'word', 'important', 'require', 'practical', 'sensitive', 'regal', 'define', 'depend', 'willing', 'achievement', 'based', 'monitor', 'built', 'rely', 'consistency', 'integrity', 'perform', 'trustors', 'attitude', 'regulator', 'definition', 'dependence', 'willingness', 'achievement', 'based', 'monitor', 'built', 'rely', 'consistency', 'integrity', 'perform'. Below the band are two dark grey silhouettes of people standing side-by-side. The text 'What makes NH's WWTP energy efficiency work unique?' is centered over the silhouettes in a large, bold, black font.

**What makes NH's WWTP
energy efficiency work unique?**

A photograph showing a person's foot in a black boot stepping on a blue carpet. The foot is positioned near a window with a white frame. The image is overlaid with a semi-transparent white banner containing text.

**What makes NH's WWTP
energy efficiency work unique?**

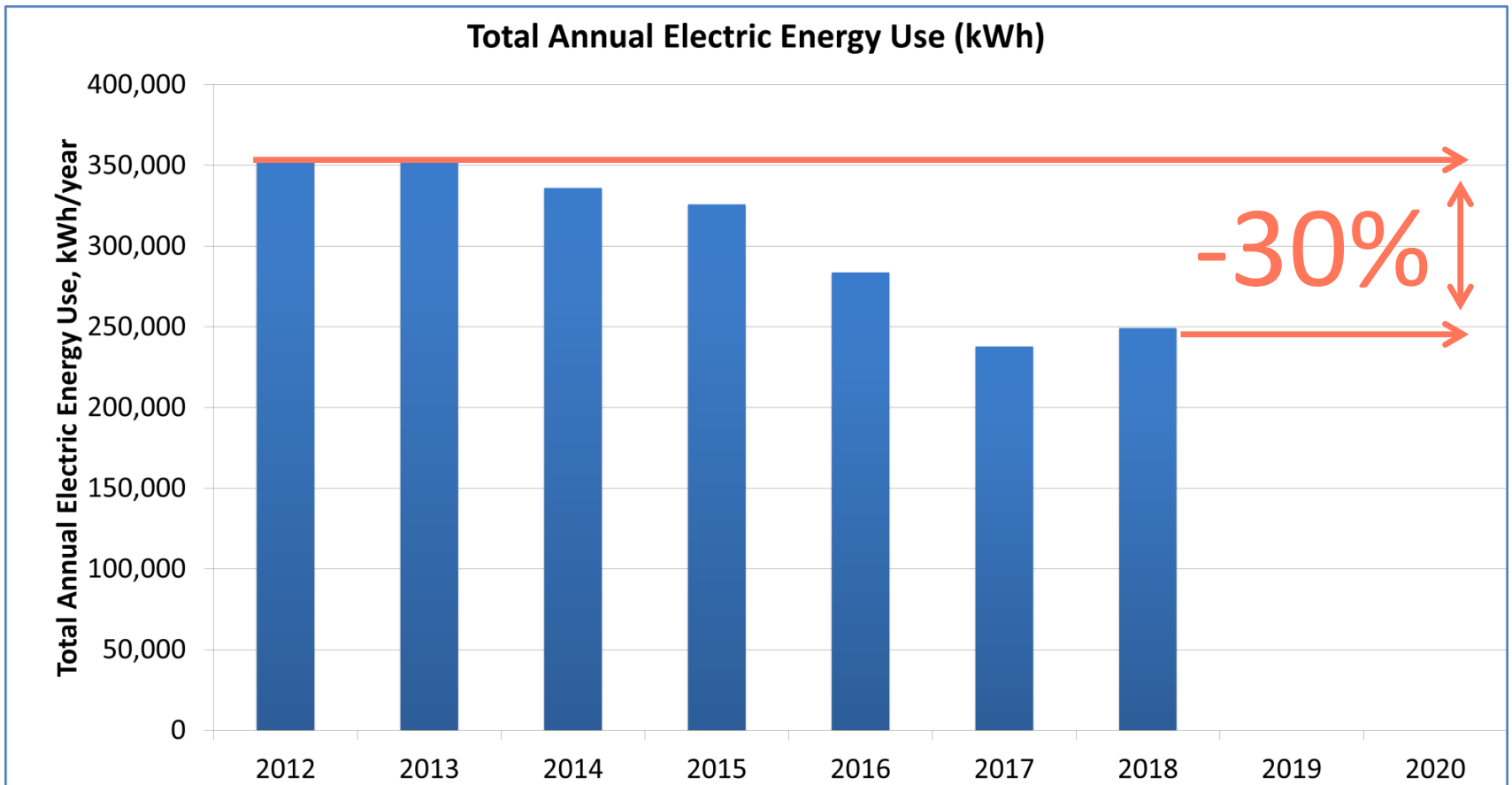
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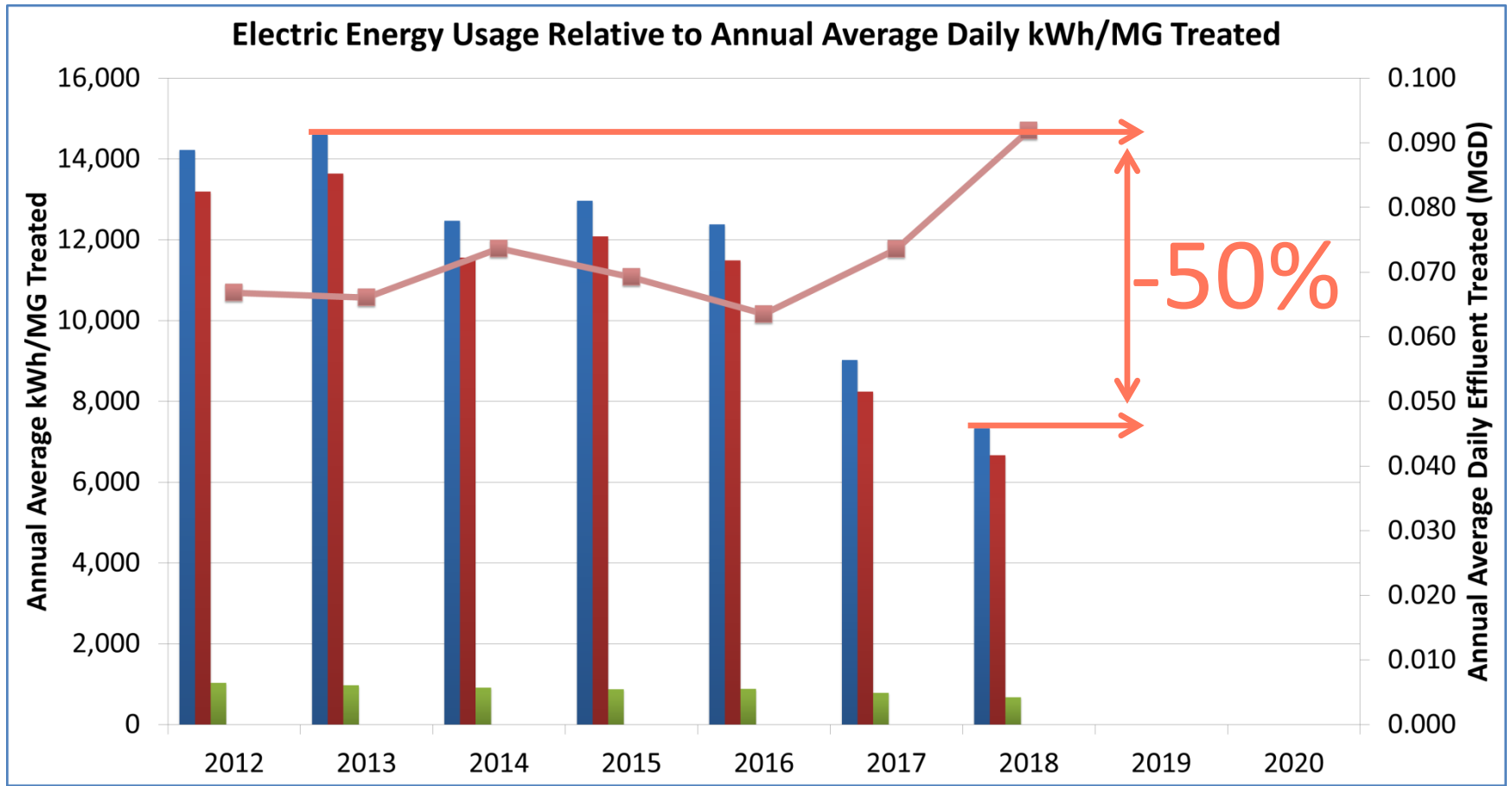
Benchmarking

- Compile total energy use for WWT
- Evaluate single WWTP
- Compare similar NH WWTPs
- Compare NH WWTPs to other states
- Track improvements or changes over time
- Increases awareness

Benchmarking Energy Efficiency Progress: NH Lagoon Facility



Benchmarking Energy Efficiency Progress: NH Lagoon Facility

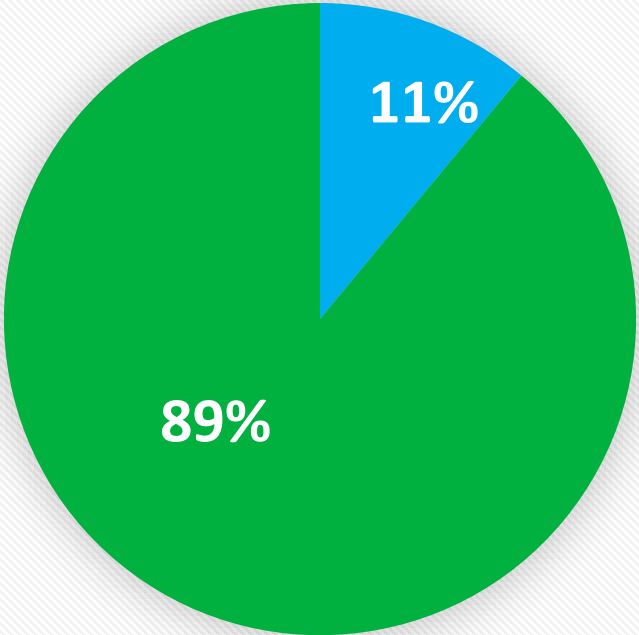


A horizontal band of a presentation slide. At the top, there are three colored bars: blue, green, and dark green. Below them is a light blue gradient background. In the center, a row of black silhouettes of people in various poses stands on a light-colored path that recedes into the distance. The text 'Why should we do energy audits?' is overlaid on this path in a large, bold, black font.

Why should we do energy audits?

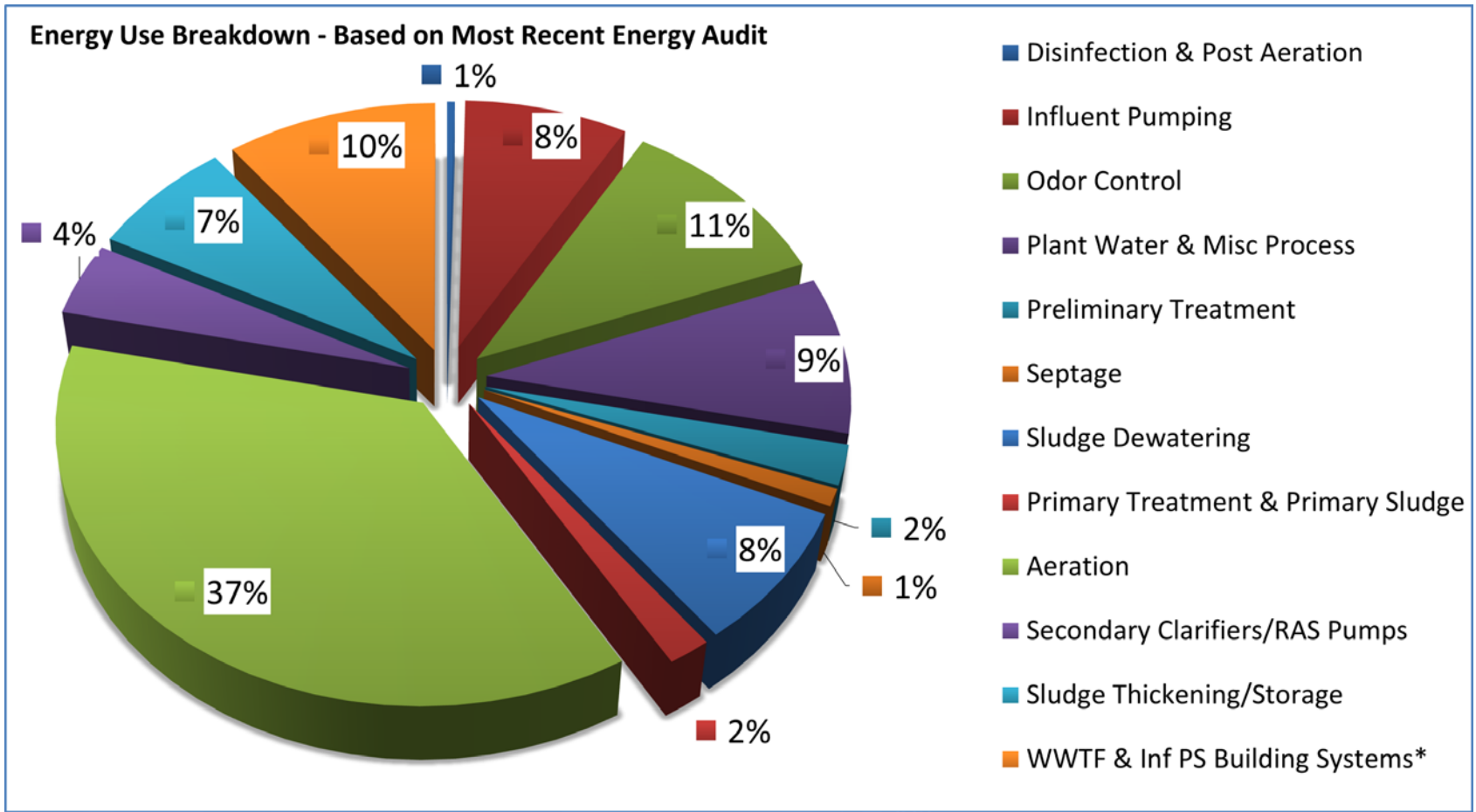
Make mine a comprehensive energy audit!

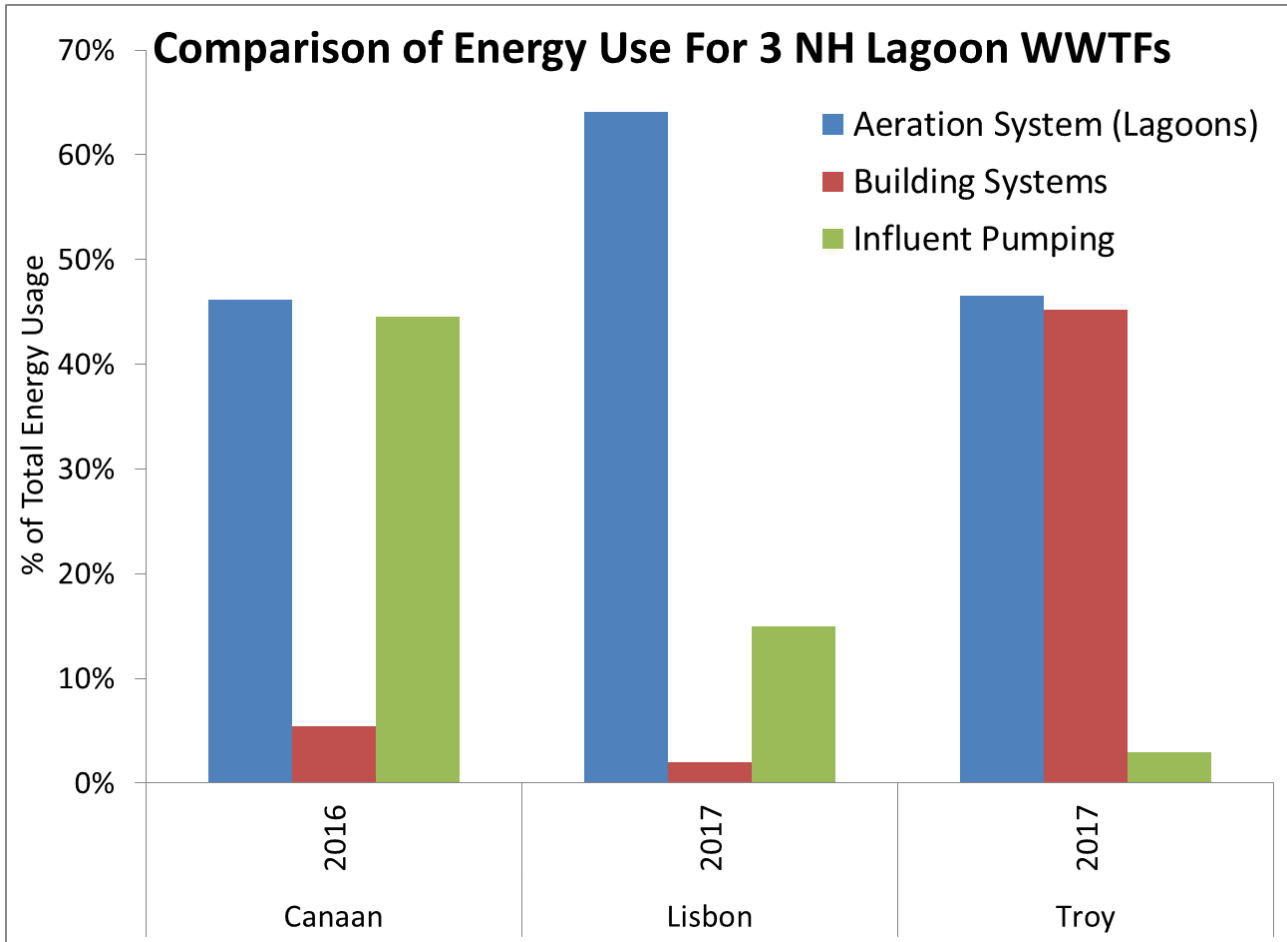
Energy Use Breakdown

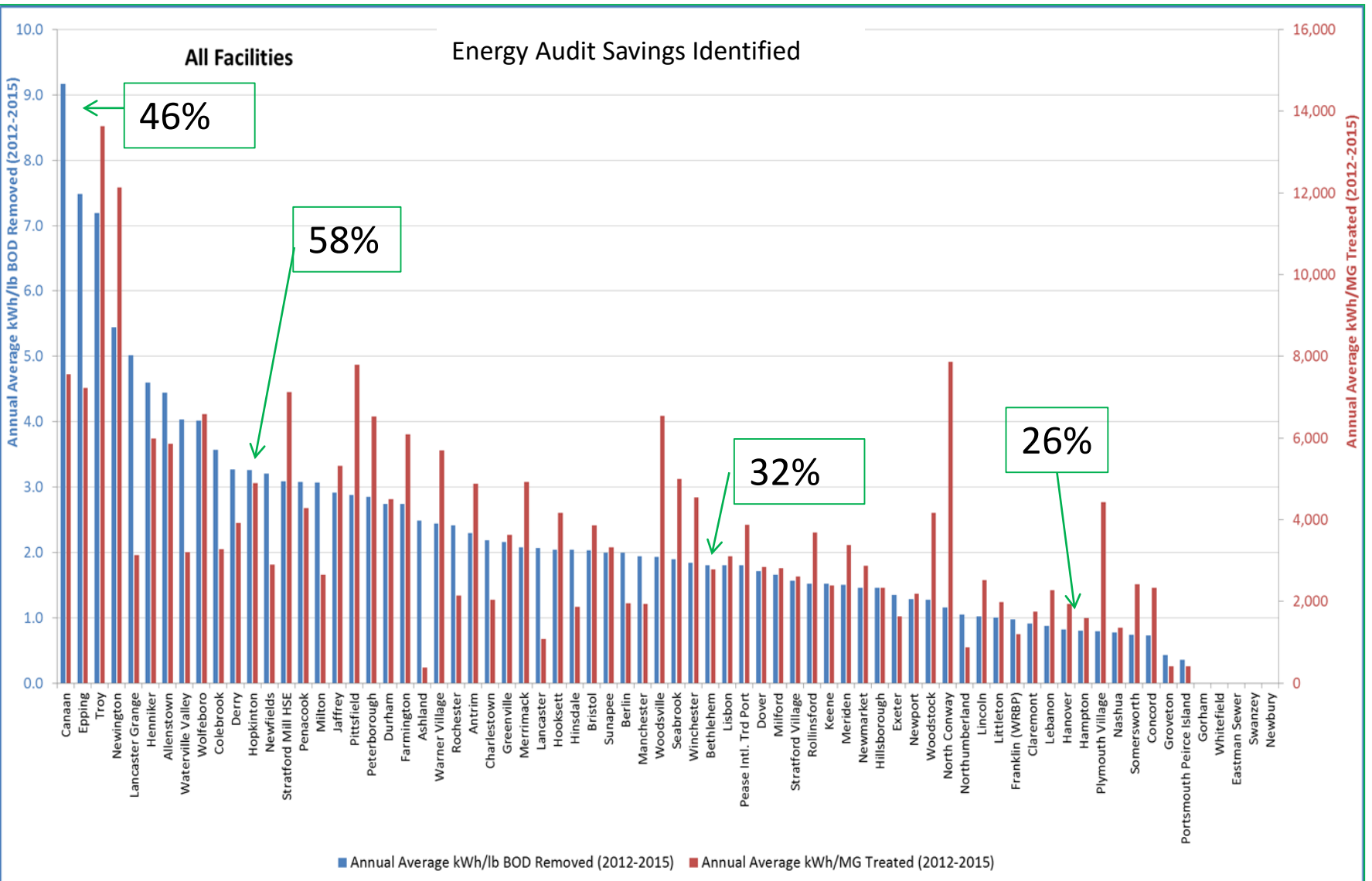


■ Lighting/HVAC ■ All other processes

Make mine a comprehensive energy audit!



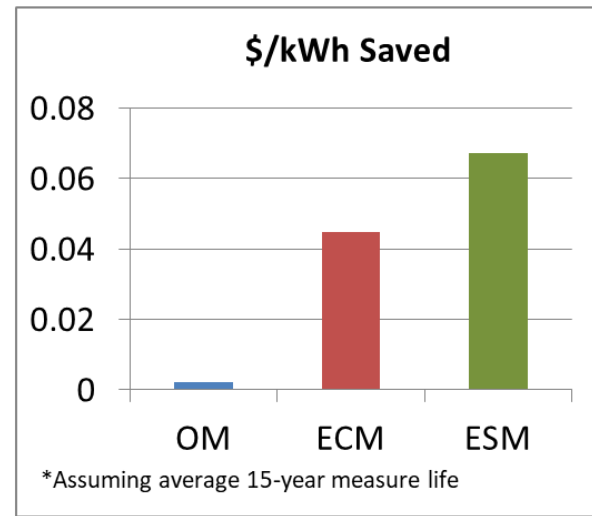
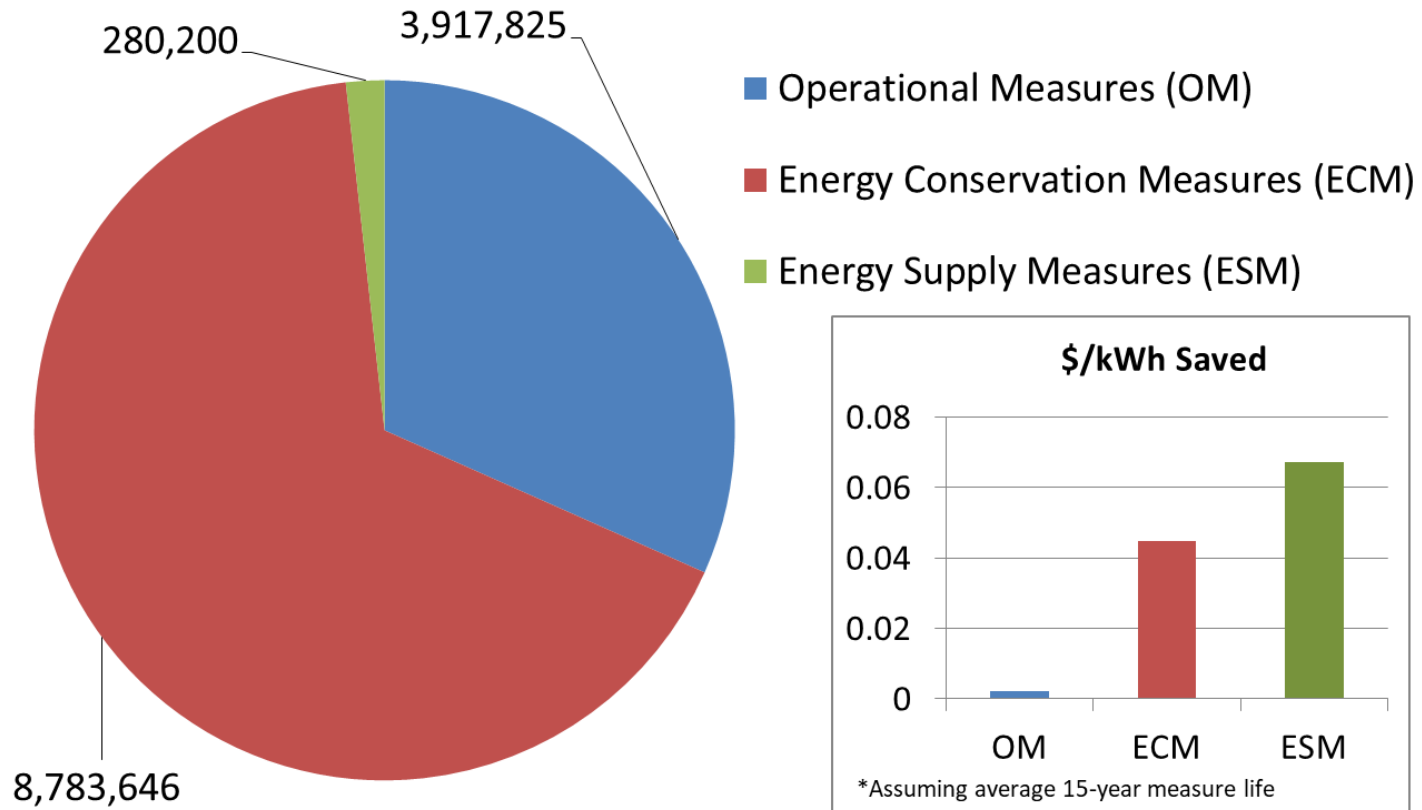




Potential Savings

- **29%** Overall Energy Use
- **1300** MWh Electricity
- **72,000** therms NG
- **35,000** gallons propane and oil

Distribution of Total Annual Energy Savings [kWh] (Based on findings from 35 CEAs)



Implementation

- **\$6.3M** Estimated Implementation Costs
- **\$1.72M** Estimated Annual Avoided Costs
- **3.2** Year Payback (before incentives)

Implementation Funding

- **NH Saves**
 - CORE Electric Funds
 - RGGI Municipal Funding
- **CWSRF Loan Forgiveness**
 - 50% up to \$400,000



Implementation Challenges

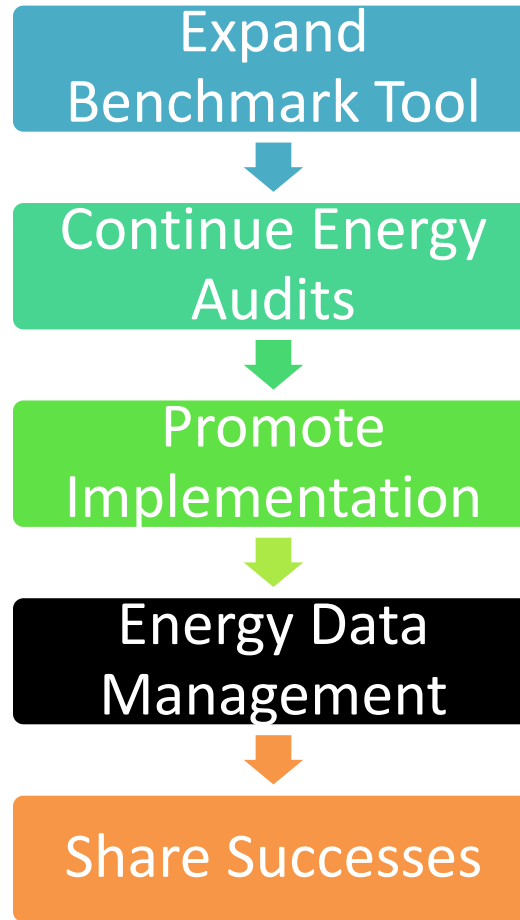
- Municipalities can't move quickly
- Perceived funding limitations
- Fear of WWTP upset
- Incentive paperwork burdens
- EE seen as a burden more than an opportunity
- Gets lost in the pile of “to do”



Implementation – Continuous Improvement

- Education – repeated and varied
 - One on one
 - Workshop setting
 - Success stories – peer to peer
- Technical assistance
- Funding opportunities
- Checking back in on a regular basis





Continuous Education

Questions?

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