The background of the slide is a close-up, high-resolution photograph of numerous water bubbles. The bubbles vary in size, from small pinpoints to larger, more defined spheres. They are densely packed in some areas, particularly towards the top and right, and more sparse in others. The lighting creates bright highlights on the upper surfaces of the bubbles, giving them a three-dimensional appearance. The overall color palette is a range of blues, from deep, dark navy to lighter, almost white highlights on the bubble surfaces.

Best Practices and Successes in Wastewater and Water Treatment Plants

Session #4 Webinar

Wastewater/Water Sustainable
Energy Cohort (WWSEC)

December 5, 2012

Session 1 - Deliverables

Send to WSU as follow up

- Commitment Letter
- Energy policy
- Spider Diagram
- O&M list of 10 plus top 3
- SOP of Energy Tracking method



Other Items:

- Establish Baseline period and dashboard
- Establish Energy team and champion
- Meet with Energy Utility rep.

Session 2 – Deliverables

- Start at least one O&M Projects
- Calculate Key Performance Indicators (min. below)

For wastewater plants:

–kWh/MG treated and mmBTU/MG treated

–kWh / 1000 lb BOD Removed and mmBTU/1000 lb BOD removed

For water plants:

–kWh / MG produced and mmBTU/MG produced



Session 3 – Deliverables

- Create Opportunity Register - build on O&M ideas
- Draft a master calendar (year-long) include frequency and time of:
 - Energy Policy review;
 - Energy measurement reviews against baseline;
 - Energy Team meetings;
 - Milestones for major projects – employee engagement; communication updates
- Deploy an employee engagement activity
- Check-in with peer mentor



Project Reporting

Project Template

- Policy
- Energy Goals and Targets
- Energy Dashboard
 - Baseline in June 2012
 - Improvements over One Year
- Energy Improvement Project Summary
- Energy Opportunities Register
- Two-year Plan

Examples from Report Template

- Example Dashboard

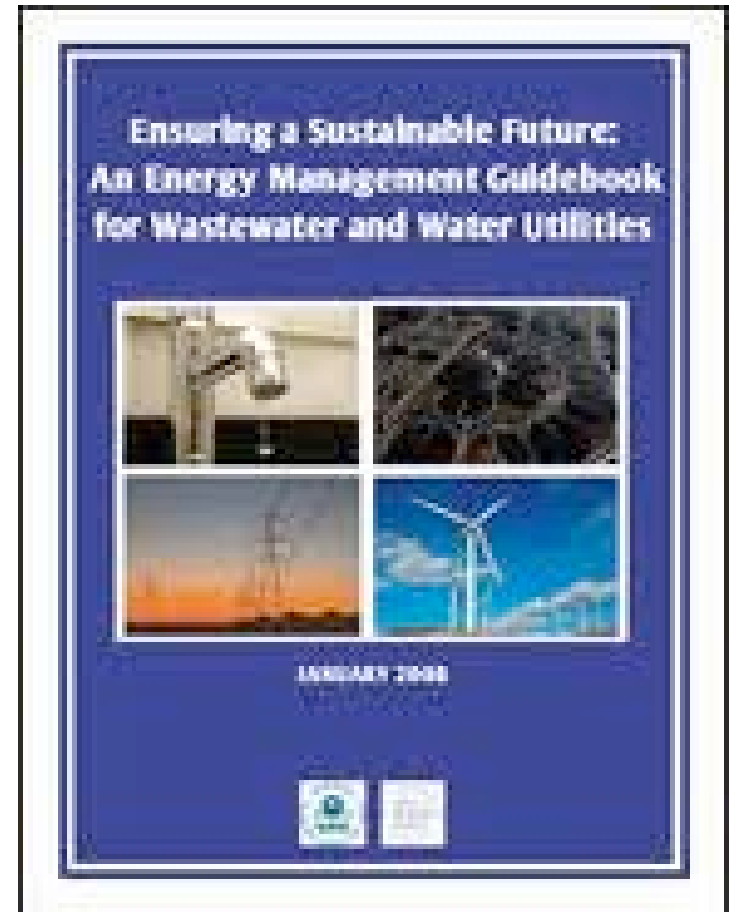
Time	Average/Month	kWh/MGD		kWh/1,000 # BOD Removed		Natural Gas Use Therms/MGD	Load Factor	Energy Costs	
								Electric	Nat. Gas
		Winter	Summer	Winter	Summer				
Baseline -June 2012									
June 2013									
% improvement									
\$\$ saved									
KWH Saved									

- Example Project Summary

Measure Identified	Evaluated?	Cost-Effective?	Included in CIP, if needed?	Date Completed

EPA Energy Management Guidebook

- PLAN
 - Session 1 through 4
- DO
 - Session 5
- CHECK & ACT
 - Sessions 6 and 7



US DOE Website Tools

- <https://save-energy-now.org/EM/tools/Pages/HomeTools.aspx>
- US DOE eGuide Lite: https://save-energy-now.org/EM/SSPM/Pages/SSPM_UserHome.aspx
- US DOE eGuide: <https://save-energy-now.org/EM/SPM/Pages/Home.aspx>
- Others: motors, pumps, Plant energy profiler (PEP)