Best Practices and Successes in Wastewater and Water Treatment Plants

Session #4 Webinar

Wastewater/Water Sustainable Energy Cohort (WWSEC)

December 5, 2012

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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

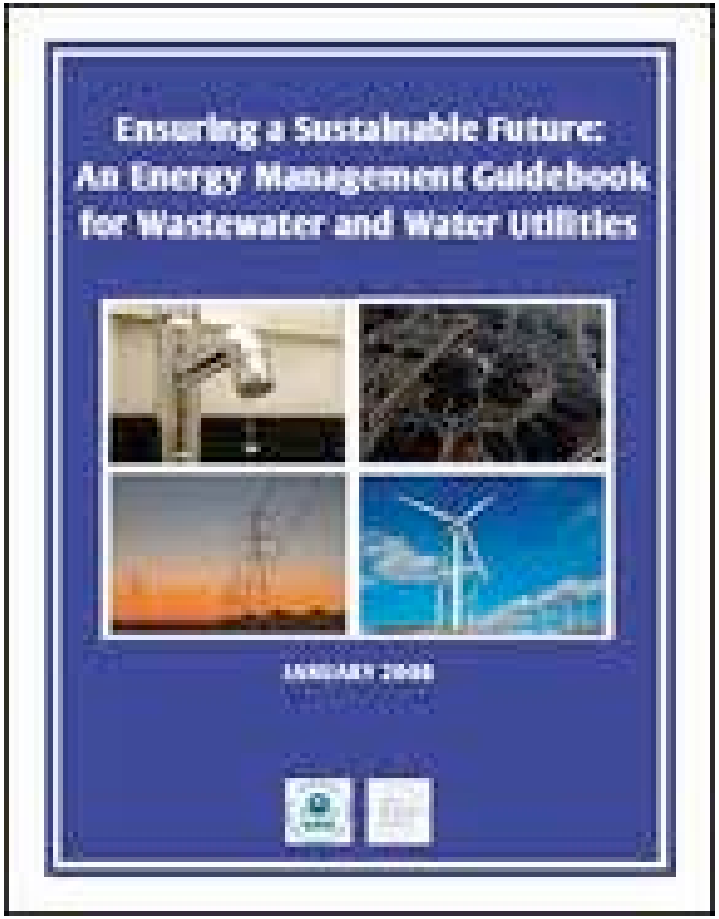
Time	Average/Month	kWh/MGD		kWh/1,000 # BOD Removed		Natural Gas Use Therms/MGD	Load Factor	Energy Costs	
								Electric	Nat. Gas
		Winter	*Summer*	*Winter*	*Summer*				
Baseline -June 2012									
June 2013									
% improvement									
$$ saved									
KWH Saved									

- 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)