Wastewater/Water Energy Training Program
(Washington)

Course and Training Details (Rough Outline)
June 2012 – June 2013

Structure

- Four on-site, day-long sessions – focused in a geographic area to reduce travel time
- Three one-to-two-hour webinar sessions—focused on technical topics
- Each utility is encouraged to dedicate one-to-three staff members to attend all sessions
- Optional tours before or after each on-site training session
- Variety of training instructors; build on expertise and training skills of Pilot Project participants
- A web page will be built to provide examples, documents and program information
- Set of NEEA training toolbox cards for each participating utility; open each session with that quiz
- Each utility will be asked to sign a letter commitment to the project; each utility will be asked for a $2,000 contribution to the project

Actions prior to first Workshop for Participating Utilities;

- Participating utilities will be strongly urged to install a 'smart meter' through their electric utility supplier – this information is very useful in setting baseline and tracking progress
- All participating utilities will have an updated energy audit completed prior to starting the training program
- All participating utilities will agree to meet with their energy supplier after the first workshop and before the second workshop

Session #2 (Webinar, September 6, 2012) & #3 (Olympia, October 11, 2012)

- Reporting out by each utility on baseline, energy 'fenceline', goal, energy team, discussion with senior management and communication strategy
  - Group reporting
- Calculating load factor
  - Group exercise – ideas to reduce load factor
- O & M Measure checklist
  - Walt Mintkeski
  - Small group work
    - Inventory all O & M measures possible
    - Use criteria to set priorities
    - Indicate how to measure results
    - Estimate savings
- Creating and maintaining an opportunities register
  - Include O&M opportunities
  - Potential capital projects
- Use of SCADA reporting
  - Example from pilot project
- Managing HVAC for efficiency, especially odor control

    - CH2M Hill
- Instituting a system approach – use of a master calendar
- Controlling energy use –controls might include: SOPs, preventative maintenance (program in Maximo), procurement policy, SCADA controls, 3- line instruction, SOP, other
    - Group work – inventory planned efficiency measures; match controls to projects
- Pump and Pump Station Efficiency
    - Jeff Foray, Kennedy/Jenks
- Renewable Example
    - Biogas generators with FOG addition
    - Biogas substitution for natural gas

Sessions #2 and 3 Assignments/Takeaway

- *Go back to Energy Team and build on O&M ideas and build on Opportunities Register*
- *Refine goals and action: Measureable goals; target dates; resources needed to accomplish*
- *Draft a master yearly calendar that includes frequency and time of:*
    1. *Energy Policy review;*
    2. *Energy measurement reviews against baseline;*
    3. *Energy Team meetings;*
    4. *Milestones for major projects (more?)*
- *Update your energy measurement data*

Sessions #4 (Webinar, November 9, 2012) and #5 (On-site; Location Pending, January 31, 2013)

- Report out on O & M Project selected, implemented and results; report out viable energy projects
- Communication
    - Examples from pilot project
    - Building enthusiasm
    - Communicating success
    - Small group work to share ideas
- Training
    - Effective training strategies
    - Use of NEEA training cards
- Incorporating SOPs and efficiency into procurement and CIP process
    - Examples from pilot project
- Ideas for keeping a system going
    - Small group work
    - Example from pilot project
- Improving Efficiency in Aeration
    - Don Reardon, HDR
- Renewable Example
    - Heat pumps in effluent – Silverton and McMinnville Example
- Saving energy in biosolids management
    - Steve Wilson, Brown & Caldwell

Sessions #4 and 5 Assignments/Takeaway

- *Review O&M ideas and Opportunities Register*
- *Update your energy measurement data*
- *Organize and conduct a staff communication / training event (could be an employee engagement event; technical vendor talk; contest for ideas; etc)*
- *Implement at least one idea for improvement through changes in SOPs; procurement or CIP process*
- *Draft an energy management plan to move forward*

Sessions #4 (Webinar; March 14, 2013) and #7 (Onsite; Location TBD, June 6, 2013)

- Report out by each utility – energy goals; energy saved by participating in program; efficiency projects identified/implemented; renewable projects identified/implemented; key lessons learned
- Keeping energy team working and motivated
  - Small Group Work
- Renewable Example
  - Solar P/V – Gresham or Pendleton

Sessions #4 and 7 Assignments/Takeaway

- *Report out to management and external parties*
- *Energy management plan*
- *Master calendar*
- *Ongoing energy measurement*
- *Energy policy statement*
- *Opportunities register*
- *Ongoing training and engagement*
- *Review and update of goals*