

**EVENT:** 2<sup>nd</sup> Water-Wastewater Focus Meeting

**MEETING DATE:** July 28, 2005 1 pm EST

**MEETING LOCATION:** Telephone Conference

**HOST ORGANIZATION:** EPA, The Cadmus Group, Inc.

**GOALS/ACTION ITEMS FOR THE FOCUS:**

For those that newly joined the Focus ....

A Focus through ENERGY STAR<sup>®</sup> on water and wastewater is a natural expansion of EPA's ENERGY STAR commercial and industrial efforts with public and private sector organizations. For many ENERGY STAR partners, water and wastewater energy performance improvement represents a significant opportunity. Therefore, EPA's ENERGY STAR program is building an energy efficiency Focus in the water and wastewater industries. Focus participants will provide input to EPA about the following future program resources, tools, and opportunities:

- A strong network of partners, including public and private drinking water organizations, publicly owned treatment works (POTWs), local governments, and related industry, national, and state associations.
- An Energy Performance Rating System (EPRS) for each industry that is normalized for the appropriate variables such as weather, climate, plant/system characteristics, and regional differences.
- An Energy Efficiency Assessment and Opportunities Report for each industry that describes best practices to increase energy and water efficiency.
- Energy Management Guidelines to help organizations set goals and determine action steps.
- Financing information that provides innovative solutions to paying for energy efficiency projects.
- Technical training and support for use of the EPA's energy performance rating system and other ENERGY STAR tools.
- EPA recognition of energy performance improvement.
- Typically, a Focus lasts one to two years. After the focus phase and the successful development of the above program elements, EPA plans to expand the invitation to participate to all organizations from the water and wastewater industries.

**ATTENDEES**

Table 1 Focus Attendees, July 28, 2005

Company	Last Name	First name	Title	Phone	Email address
ACEEE	Elliot	Neil			
Alliance to Save Energy	Tutterow	Vestal	Program Manager	(202) 530-2241	vtutterow@ase.org
ASDWA	Mason	Deirdre		(202) 293-4643	dmason@asdwa.org
California Energy Commission	Chaudhry	Shahid			schaudhr@energy.state.ca.us
Catalyst Financial Group, Inc.	Zobler	Neil	President	(203) 790-4177	nzobler@catalyst-financial.com
CDH Energy Corp.	Carlson	Steven	Principal	(608) 882-0111	carlson@cdhenergy.com
CEE	Navarroli	Amanda	Intern		abn@duke.edu
CEE	Jones	Ted	Industrial Program Manager	617-589-3949, Ext. 230	tjones@cee1.org
City of Atlanta	Bhedwar	Cyrus			chbhedwar@atlantaga.gov
Columbus Water Works	Arnett	Cliff	Senior Vice President	(706) 649-3458	carnett@cwvwa.org
Connecticut Department of Public Utility Control	Mann	Sharon	Utilities Examiner/Chair NARUC Staff Subcommittee on Water	(860) 827-2675	Sharon.Mann@po.state.ct.us
EPRI Solutions	Carns	Keith	Director	(559) 642-2082	kcarns@gepllc.com
Lawrence Berkeley National Laboratory	Brown	Rich		(510) 486-5896	REBrown@lbl.gov
Lawrence Berkeley National Laboratory	Galitsky	Christina			
MCES	Willett	Jason	Finance Director	(651) 602-1196	
Metropolitan Council	Mereness	Mike	Manager Support Services	(651) 602-8296	mike.mereness@metc.state.mn.us
NACO	Zonderwyk	Kelly	Community Services Division	(202) 342-4224	kzonderwyk@naco.org
NAWC	Clark	Cade	Director of State Relations		cade@nawc.com
NYSERDA	Visalli	Joseph	Program Director	518-862-1090, ext. 3205	jrv@nyserda.org
NYSERDA	Joseph	Janet			jj2@nyserda.org
NYSERDA	Hanna	Liz	Project Coordinator		ebh@nyserda.org
Oak Ridge National Laboratory	Sharp	Terry	Project Manager	(865) 574-3559	sharptr@ornl.gov
Pennsylvania Dept. of Environmental Protection	Halterman	Kammy		(814) 332-6648	khalterman@state.pa.us
PGE	Fok	Steven			
Public Technology Institute	Mosley	Ronda	Director	(202) 626-2455	rmosley@pti.org
The Cadmus Group, Inc.	Cook	Leslie	Research Analyst	(703) 247-6148	lcook@cadmusgroup.com
The Cadmus Group, Inc.	Utebay	Kudret	Project Manager	(703) 247-6138	kutebay@cadmusgroup.com
U.S. EPA	Hatcher	Katy	ENERGY STAR National Manager	(202) 343-9676	hatcher.caterina@epa.gov
USEPA-OW-OGWDW	Shanaghan	Peter		(202) 564-3848	shanaghan.peter@epa.gov
USEPA-OW	Wheeler	James			Wheeler.james@epa.gov
Washington Suburban Sanitary Commission	Taylor	Robert	Energy Manager	(301) 206-7122	rtaylor@wssewater.com
WEF	Thomas	Sharon		(703) 684-2423	sthomas@wef.org

## HIGHLIGHTS

- A primary function of the ENERGY STAR Water-Wastewater (W-WW) Focus is for EPA to create momentum in energy efficiency within the industry and develop resources to the address opportunity barriers and share best practices.
- Resources to be developed will include:
  - Energy efficiency guidelines,
  - Benchmarking tools,
  - Financing tools, and
  - Best practices.
- Recognition for the Water-Wastewater Focus will be modeled after other ENERGY STAR recognition opportunities in the commercial sector and will require at least internal benchmarking and quantifiable improvement. Top performance as determined through a national benchmarking system may also be recognized. Once the tools and resources are developed for these two industries, the ENERGY STAR W-WW Focus may be folded into the ENERGY STAR Challenge which provides a national call to action. Organizations can meet the ENERGY STAR Challenge by improving there energy efficiency by 10% or more over there normalized baseline.
- This Focus is working to improve the energy efficiency (and water efficiency) of the public water supply and includes both private and publicly operated facilities.
- The Focus must address the different needs and barriers of both private and public facilities to foster total market transformation.
- Because of the amounts of energy utilized in the pumping, processing, distribution, and treatment of water resources, water efficiency and energy efficiency are directly related. Minimized water loss equals gains in energy efficiency.
- As it is impossible to manage what is not measured, unaccounted water losses contribute to a loss in energy efficiency.
- A national W-WW Focus will include attention to regional issues and water demand areas.
- ENERGY STAR guidelines are being developed for the W-WW sector and will include an assessment of energy efficiency in the industry, best practices for energy savings, examples of commercially available technologies, and implementation.
- The Guidelines will address both existing and new facilities.
- Outreach to promote the Guidelines must be targeted to all sectors of the W-WW industry—from utility associations to individual facility managers.
- As the Guidelines are developed, individuals with expertise in relevant fields review drafts and offer input.
- The metric/benchmarking effort is underway through AWWARF's metrics project performed by CDH Energy. Surveys were distributed to 2,700 wastewater treatment plants and are being returned at about a 20% response rate. The feedback has been positive and respondents have indicated that ~ 80% of them perform an annual energy bill evaluation. Surveys are currently being distributed to 3,600 water utility facilities and will be delivered the second week of August. It was projected that the results of the survey will be analyzed by October and reported on in December 2005.

- The need for an in-person meeting of the Water-Wastewater Focus committee has prompted the tentative planning of a two-day workshop to be held in Washington D.C. in February or May of 2006.

### **ACTION ITEMS**

- Develop a list of possible experts to sit on the Technical Steering Committee.
- Create list of associations and other organizations that might assist in the outreach of the W-WW Focus.
- Define steps to create an Intranet site for the Water-Wastewater Focus group to post documents, contact information, meeting minutes, and other resources.
- Develop an agenda for the possible workshop in February/May in order to accommodate speakers and participants.
- Schedule bi-monthly conference calls and presentations.

### **FEEDBACK/QUESTIONS FROM THE MEETING**

- The Municipal Technology Branch is working on two technology fact sheets. One is on energy conservation in wastewater treatment facilities. It is an overview of methods, equipment, and techniques that can or have been used to reduce energy demand within the plant. The other fact sheet is on auxiliary power options. Again, this is an overview of some viable auxiliary or supplemental power sources including some “green” energy options such as bio-gas, solar cells, and fuel cells. Both fact sheets will have case studies for actual operation facilities.
- Awards for energy conservation in the wastewater industry were discussed. The Office of Wastewater Management already has an awards program cosponsored with the Water Environment Federation. We give the winners a plaque, an EPA flag and invite them to Water Environment Federation's Technical Exhibition and Conference for a presentation and reception. We could add a category for energy efficiency and co-sponsor it with the ENERGY STAR program.
- For training: Office of Wastewater Management supports the state operator training program [section 104 (g) of the Clean Water Act] through congressional earmark. After the guidance is developed the training centers could add it to the training program. We also have an earmark grant to the University of West Virginia's National Environmental Training Center for Small Communities (NETCSC). Again, they could take the guidance and work it into their training program.
- WEF has a new Wastewater Treatment Plant Design Committee. WEF is looking at new design (rather than retrofit), but has members that would be interested in working on or reviewing the guidance.

- For future clarification, refer to Water Industry as a whole; using "municipal" implies that it is town or government run, and does not include privately-owned water companies.
- Outreach program can be through The National Association of Regulatory Utility Commissioners (NARUC) Water Committee meetings and presentations are added to the NARUC Web site for public access.
- Wastewater is not regulated in Connecticut. The Connecticut Department of Public Utility Control uses the NARUC 15% guideline for unaccounted for water when reviewing the private owned companies.
- In light of conservation and expense savings, a large water company in Connecticut runs certain processes in their plant on off-peak electric hours and receives a credit on their electric bill for doing so.
- The National Regulatory and Research Institute (NRRRI) may be worth contacting for information, reports, etc. to help with compiling info for the Water and Wastewater industries.
- Possibly pursue Winter NARUC meetings to be held in Washington, DC, Feb. 12-15, 2006 for a group meeting or presentation at a certain committee meeting.
- Please find the bibliography for CEE's National Municipal Water and Wastewater Initiative, attached to the e-mail, as well as the Initiative, itself, that was approved by CEE's Board in December of 2005.
- CEE's committee resources that were mentioned on the call can be found on this Web site: <http://www.cee1.org/ind/mot-sys/ww/cr.php3>
- Regarding the water loss discussion: In wastewater, we have a similar issue in that we have inflow and infiltration of clear/rainwater into our pipes, which then we pump around and waste energy doing so. However, as compared to overall energy used in wastewater, this isn't large.
- Regarding the revenue loss from lower flows discussion: This deserves some attention. Lower flow (due to elimination of waste) will mean higher a rate/unit of flow but that doesn't have to mean less revenue. Rates need to be raised to recover the loss, and while I admit that's sometimes a political issue, it should be doable because it's not only good for the environment, but people and businesses pay fewer actual dollars! We have had substantial reduction in our overall system flow (from about 105 billion gallons per year 10 years ago to 92 Bg in the last 12 months), and rates have had to go up. However, in the public process I try to focus on the cost per capita or cost per home, which is much easier and not much affected by the lower flow. I would think this could be generally applicable.

- **Questions:**

- Will the focus be just on energy use or also energy demand? If demand is included then perhaps some discussion about peak control programs and demand shedding would be in order.
- Will you be interested in energy generation from wastewater processes? We currently generate energy from both a micro turbine running on waste methane from anaerobic digestion and have recently installed a cogeneration unit that will produce over 3 MW from burning sludge. I would hope that the benchmark at least would include “net use” criteria.