

# RCM NEWS

## RCM News for October 2014

A newsletter for Resource Conservation Managers in the Northwest

*In this issue:*

Commissioning  
HVAC  
Lighting  
Pumps  
Water  
Upcoming Events & Training Opportunities  
Resources for You

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### Commissioning

“Sustainable Operations” is a three-part web article written by Todd Kuhn and published in the October 2014 issue of *Building Operating Management*. The 2011 recommissioning effort of the 2006 Heifer International headquarters included interviews with facility managers, review of as-built drawings, and a plan for testing and corrective action. Some of the significant issues are bulleted in the article, which includes discussion of the comprehensive approach to commissioning.

Part 1: [Building Recommissioning Helps Heifer International Meet Challenges Of Reliability, Efficiency, And Sustainability](#)

Part 2: [Main Problems Identified During Commissioning Included Malfunctioning Sensors And Water Valves](#)

Part 3: [Ongoing Commissioning Is Part of Comprehensive Approach](#)

In the same October 2014 issue of *Building Operating Management*, a two-part web article titled “FM Strategies: Retrocommissioning”, written by Jerry Schmits, examines a retrocommissioning (RCx) project in Illinois. A few of the project’s tests and findings are illustrated, and the importance of performing RCx for energy management, not just LEED certification points, is stressed.

Part 1: [Retrocommissioning Improves Energy Efficiency in High-Performing Buildings](#)

Part 2: [Key Findings from Retrocommissioning a High-Performance Building](#)

### HVAC

A three-part article in the October 2014 issue of *Building Operating Management* titled “HVAC Efficiency”, written by Bruce McKinlay and Jamey Lyzun, highlights efficient HVAC strategies to achieve net-zero energy or substantial energy use reduction. Reducing demand load, designing the best active or passive

energy efficient HVAC system for the building, and dealing with waste heat must be well planned. An integrated, collaborative approach with all stakeholders including owners, engineers, and contractors, can lead to a successful goal.

Part 1: [Innovations Offer Reductions In HVAC Energy Consumption But Are Often Ignored](#)

Part 2: [Consider These Passive Or Energy-Efficient Active HVAC Systems](#)

Part 3: [Net-Zero Energy Buildings: Waste Heat Recovery And Renewable Energy](#)

## Lighting

A five-part web article, “Energy Strategies” by Daniel Forino, appearing in the October 2014 issue of *Facility Maintenance Decisions*, looks at energy use and savings strategies for lighting and lighting control systems. Different methods to determine the energy use of lighting systems include an ASHRAE Level 1 Energy Audit and the Leadership in Energy & Environmental Design (LEED) rating system. In addition, lighting controls and sensors are important in reducing energy use.

Part 1: [Lighting Systems, Energy Use, and Strategies for Savings](#)

Part 2: [Consumption Concerns: Use ASHRAE Guidelines](#)

Part 3: [Taking the LEED Approach to Reducing Lighting Use](#)

Part 4: [Occupancy Sensors Help Reduce Energy Use](#)

Part 5: [Common Lighting Control Issues](#)

[Comparing Efficiencies of LED Fixtures, LED Retrofit Lamps, and Non-LED Lamps](#), written by Eric Strandberg of the Lighting Design Lab, appears in the Fall 2014 issue of *Shop Talk*, a publication of the WSU Energy Program Plant Operations Support Consortium. When calculating delivered lumens of LEDs or non-LED lamps, the efficiencies of the luminaires must be taken into account. Different fixture optics, directionality, and fixture shape (for retrofits) are some of the light loss factors to consider.

## Pumps

“[Pre-Screening Unlocks Savings Potential in Large Pump Systems](#)” by Ray Hardee is a three-page web article in the September 2014 issue of *Pumps & Systems*. A pre-screening process is a useful tool to help identify which pump systems should be at the top of the list for improvements. Factors taken into account are weighed differently depending on whether the goal is to reduce operating and maintenance costs or to reduce energy consumption. This article describes using a spreadsheet to track the screening process and the type of data to collect.

## Water

“Plumbing & Restrooms”, written by James Piper, appears in the October 2014 issue of *Facility Maintenance Decisions*. Water audits will convince top executives of the need for a plumbing system upgrade. Quantifying water use at the different points where water is used can be challenging – suggestions are given to measure use at sinks and water closets, as well as for mechanical systems such as cooling towers, boilers, and irrigation systems.

Part 1: [Making the Case for Plumbing Retrofits](#)

Part 2: [Low-Flow Urinals, Toilets and Sinks Reduce Domestic Water Use](#)

Part 3: [Strategies for Reducing Landscape Irrigation Water Use](#)

## Upcoming Events & Training Opportunities

### Adjustable Speed Drive Applications and Energy Efficiency

This all-day course discusses choices, issues, and energy cost savings related to adjustable speed drives with electric motors.

- Nov. 4 in Albany, OR

[Click here for more info](#)

*NEEA Industrial Training*

### Future Energy Conference

Washington State's clean energy event explores the nexus of energy, climate change, and the state's economy.

- Nov. 5, 2014 in Seattle

[Click here for more information](#)

*WA State Dept of Commerce & NW Environmental Business Council*

### ENERGY STAR® and Portfolio Manager Trainings

All are online webinars.

- Energy Savings Plus Health: IAQ Guidelines for School Building Upgrades – Nov. 5
- Successes in Sustainability: Tenants & Landlords Team Up on Energy Efficiency – Nov. 12
- The Value of ENERGY STAR® Certification – Nov. 12
- Portfolio Manager Office Hours: Weather Data and Metrics – Nov. 13
- Benchmarking Water/Wastewater Treatment Facilities in Portfolio Manager – Nov. 18
- ENERGY STAR® and Green Building Rating Systems – Dec. 2

[Click here for more webinars and information](#)

*US EPA*

### Portland General Electric Seminars and Webinars

Portland General Electric offers online webinars and paid courses open to everyone, and seminars and workshops free of charge to its commercial and industrial customers. All classes in Oregon or online.

- Employee Engagement in Energy Efficiency Workshop – Nov. 6 in Hillsboro
- Electrical Safety Awareness – Nov. 18 in Salem

[PGE Energy Education Classes](#)

*Portland General Electric, Energy Trust of Oregon, NEEA, BetterBricks*

### Compressed Air Challenge – Level 1

The first in a series of seminars to achieve cost-effective solutions to

- [Nov. 6 in Hermiston, OR](#)
- [Nov. 13 in Vancouver, WA](#)

*NEEA Industrial Training*

### School Environmental Health and Safety Workshop

Free one-day workshops held around Washington State. Topics this year include indoor air quality, cleaning and disinfection, and integrated pest management.

- Nov. 6 in Vancouver
- Nov. 21 in Wenatchee

- Dec. 10 in Silverdale
- Dec. 11 in Anacortes
- Dec. 18 in Tumwater

[Click here to register](#)

*Washington State Department of Health*

#### ENERGY STAR® Low Carbon IT Webinars

- Data Center Energy Efficiency Opportunities: What Managers Should Know – Nov. 13 online webinar
- Computer Power Management with ENERGY STAR – Nov. 20 online webinar

[Click here for more information](#)

*US EPA*

#### Energy Efficiency for Air Cooled Refrigeration Systems

- Nov. 19 in Billings, MT

[Click here for more info](#)

*NEEA Industrial Training*

#### Energy Efficiency for Industrial HVAC and Refrigeration Systems

- Nov. 20 in Moses Lake, WA

[Click here for more info](#)

*NEEA Industrial Training*

#### Optimizing Pumping Systems: A Measurement-Based Approach

- Nov. 19-20 in Port Angeles, WA

[Click here for more info](#)

*NEEA Industrial Training*

#### E3T Showcase – Next Generation Space and Water Heaters

This webinar describes three projects featuring CO2 refrigerant heat pump water heaters.

- Nov. 20 online webinar

[Click here to register](#)

*WSU Energy Program, BPA, WAPA*

#### Can Old HVAC Be Innovative? – Oregon APEM Winter Forum

This forum looks at innovative approaches to solving age-old building operations issues.

- Dec. 5, 2014 in Wilsonville, OR

[Click here for more information](#)

*Oregon APEM*

#### Building Operators Certification

BOC Level I certification is 74 hours of training and project work in building systems maintenance. Level II certification is 61 hours of training and elective coursework in equipment troubleshooting and maintenance. Classes usually meet one or two full days a month over a period of four to six months.

*All dates below are for the first class.*

- **Washington State – NEW classes being scheduled for 2015 – sign up for notifications for specific dates and location**
  - Level I – Spring 2015 in Tacoma
  - Level I – Spring 2015 in Seattle
  - Level I – Spring 2015 in Everett
  - Level I – Fall 2015 in Renton
  - Level I – Fall 2015 in Olympia/Lacey
  - Level II – Fall 2015 in Seattle

[Click for BOC Washington State information](#)
- **Oregon**
  - Level I – Feb. 4, 2015 in Pendleton

[Click for BOC Oregon information](#)

*Building Operators Certification*

### AEE (Association of Energy Engineers) Real-time Online Seminars

Webinars and live interactive courses you can take from your computer. Programs are generally two to three hours long, over a period of days. Topics include energy auditing, lighting controls, HVAC systems and much more. Visit their website for a complete list:

<http://www.aeeprograms.com/realtime/>.

### Resources for You

#### 15 Years of ENERGY STAR Learning

In honor of their 15<sup>th</sup> anniversary of building certifications, the folks at ENERGY STAR have compiled a list of their [15 favorite ways to engage tenants and occupants to save energy](#). Other lists include 15 “quick and easy” ways to save energy in buildings, and 15 pieces of energy saving advice from leading organizations. How many of the items on these lists has your program implemented?

#### Green Building Standards and Certification System

Do you ever get confused about various certifications and standards pertaining to buildings? [Green Building Standards and Certification Systems](#) clarifies them for you. Written by Stephanie Vierra for the Whole Building Design Guide, a program of the National Institute of Building Sciences, the article even defines the basic terms “standard” and “certification”. Green product certifications, ISO-defined types of labels, single- and multi-attribute product certifications, as well as green building rating systems, are described and listed. The article ends with links to relevant codes and standards, and additional resources.

#### Green Ribbon School and District Applications now open

Washington State public and private schools, as well as public districts, are eligible to apply to be recognized as a U.S. Green Ribbon School/District. Applications are scored by a state committee, and up to four schools or districts are nominated as state finalists and forwarded on to the U.S. Dept. of Education, which selects national award recipients. Schools and districts are chosen based on significant progress towards reducing environmental impact and costs, improving the health and wellness of students and staff, and providing effective environmental and sustainability education. The deadline to apply is January 9, 2015. More information and applications are available at the [Office of Superintendent of Public Instruction website](#).

Do you have newsletters, websites and links to share? Do you have RCM questions?

RCM News is always looking for interesting information, tips and resources to share with other resource conservation managers. Our goal is to increase your success by sharing what you and your colleagues are doing – with energy efficiency measures, problem-solving, communication, data tracking, presentations, and more. In addition, WSU Energy Program can help find solutions to your RCM program's technical and programmatic questions. [Email Karen J](#) to share and ask!

### Energy Events Calendar

<http://www.energyexperts.org/TrainingEducationandEmployment/EventsCalendar.aspx>

### Washington RCM Support

The Washington State University Energy Program provides RCM support. Check out the “RCMx” website: <http://www.energy.wsu.edu/PublicFacilitiesSupport/ResourceConservation/RCMx.aspx>. We appreciate any feedback on this site and would also appreciate items to add to our resources, such as tools, examples of policies and job descriptions.

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Previous issues of RCM News may be viewed at <http://www.energy.wsu.edu/PublicationsandTools.aspx> (click on Resource Conservation in the right hand column).

We welcome comments or ideas for articles. Please send to Karen Janowitz - [janowitzk@energy.wsu.edu](mailto:janowitzk@energy.wsu.edu)

