

# RCM NEWS

## RCM News for August 2012

A newsletter for Resource Conservation Managers in the Northwest

*In this issue:*

Buildings  
Building Interiors  
Retrofits  
Water  
Upcoming Events & Training Opportunities  
Resources for You

### Buildings

"[2012 White Paper: High-Performance Reconstructed Buildings: The 99% Solution](#)" includes a brief description of and a link to a 64-page [white paper](#) on the subject; this white paper is a supplement to the May 2012 issue of *Building Design + Construction*. The term, "99% solution," refers to the enormous opportunity that the existing building stock represents for resource conservation and greenhouse gas reduction. Resource Conservation Managers at schools, universities, and government buildings are strong candidates for this approach.

"[Systems Integration Benefits](#)" was jointly authored by Mike Walters, PE, Confluenc, and Paul Oswald, Environmental Systems Inc.; it was published in the May 2012 issue of *Consulting-Specifying Engineer*. An intelligent building architecture (IBA) is the foundation of the integration of building systems that results in resource efficiencies and emissions reductions that lead to sustainability. An added benefit is that, since the involved data collection is so sophisticated, the resources and emissions savings can be demonstrated in the public areas of buildings to show the excellent results of IBA.

The following two articles appeared in the June 2012 issue of *Building Operating Management*:

1. "Close-Up: Energy Upgrades," by Ben Ikenson, is a three-part article showing the high performance that existing buildings can achieve when upgraded with what is termed "deep, integrated energy solutions." The Beardmore Building and the Aventine Building are two of nine office buildings featured in a Northwest Energy Efficiency Alliance (NEEA) study; the article links to a NEEA Web page that includes links to that study and several related documents.

Part 1 is [Beardmore Building Shows How Deep Retrofits Can Bring Big Savings](#).

Part 2 is [Off-the-Shelf Energy Efficiency Strategies Can Pay Big Dividends](#).

Part 3 is [Deep Retrofits Mean Better Buildings, Higher Rents, Happier Tenants](#).

2. "Exteriors" is a four-part article by David Reid, AIA, LEED AP, and John Wilkins, AIA; both are Design Principals at Gould Evans. The authors call attention to and explain the weak point in energy modeling that can be corrected through building commissioning. They emphasize that while energy modeling is a valuable tool, it should not be viewed as a replacement for

commissioning. Performance testing, energy waste, and commissioning for the building façade are covered along with a sidebar focusing specifically on roof commissioning:

Part 1 is [Water and Air Infiltration Can Quickly Compromise Building Exterior](#).

Part 2 is [Building Envelope Commissioning Ensures Exteriors Perform as Planned](#).

Part 3 is [Performance Testing Helps Ensure Air-Tight, Water-Tight Construction](#).

Part 4 is [Finding Energy Waste Requires Knowledge of How Energy Transfers through Building Components](#).

### Building Interiors

"What Makes a Building Green" was written by Casey Laughman, Managing Editor, *Building Operating Management*; it is a six-part article published in the June 2012 issue of that journal. It offers advice on selecting the appropriate rating system for the building and includes discussion of several rating systems including LEED, Green Globes, Living Building Challenge, SERF, and BOMA:

Part 1 is "[Facility Managers Have More Green Building Ratings Systems Choices than Ever](#)."

Part 2 is "[LEED Offers Guidelines for Green Design, Construction, and Operations](#)."

Part 3 is "[Green Globes Program Covers Wide Range of Buildings](#)."

Part 4 is "[Living Building Challenge is Advanced Green Building Standard](#)."

Part 5 is "[SERF Offers Affordable Alternative to Other Green Building Ratings Systems](#)."

Part 6 is "[BOMA 360 Includes Sustainability as Part of Focus on Efficient Operations](#)."

### Retrofits

"[Reducing Operating Costs through Energy Retrofits](#)," by Lance English, Southland Industries, was published in the May 2012 issue of *HPAC Heating/Piping/AirConditioning Engineering*. It shows a detailed, step-by-step plan for accomplishing an energy retrofit with excellent results. The building used as an example in this article is a manufacturing facility, but the well-developed plan is, generally, applicable to schools and state buildings, as well.

### Water

The following two articles appeared in the June 2012 issue of *Water Efficiency*:

1. "[The Dry and Dusty Lone Star: The Challenge of Water Resource Management in Drought-Stricken Texas](#)" is a four-Web-page article authored by Carol Brzozowski. Texas is suffering from a long-term drought which may not end for decades. The shortage of water and how it is being handled in Texas should be of great interest to others, given that clean water may, in time, be in short supply elsewhere in the country.
2. "[What in the World Is the Water Efficiency Equation?](#)" was written by Cindy Wallis-Lage, President of Black & Veatch's global water business. The complexity and changing nature of the water-efficiency equation makes it somewhat illusive. This article discusses some of the variables that have to be considered in order for the equation to be balanced.

### Upcoming Events & Training Opportunities

Portland General Electric Seminars and Webinars

Portland General Electric offers educational seminars and webinars free of charge to its commercial, industrial, and institutional customers. Similar customers of other utilities are welcome to attend for a small fee.

- Energy Efficiency for Small and Mid-sized Businesses – Sept. 5, 2012 online webinar
- Energy & Water Trends – Sept. 11, 2012 in Salem, OR
- What is Power Quality and Why it's Important – Sept. 12, 2012 online webinar
- Better Lighting, Lower Cost – Sept. 18, 2012 in Clackamas, OR
- Understanding Demand Response – Oct. 2, 2012 in Salem, OR
- Understanding Demand Response – Oct. 3, 2012 in Portland, OR
- Understanding LEDs – Oct. 9, 2012 online webinar
- Intro to Energy Monitoring for Energy Savings – Oct. 10, 2012 online webinar

[http://portlandgeneral.com/business/news\\_classes/classes/default.aspx](http://portlandgeneral.com/business/news_classes/classes/default.aspx)

*Portland General Electric, Energy Trust of Oregon, NEEA, Better Bricks*

### **AEE (Association of Energy Engineers) Realtime 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. Dates following course names below are start dates.

Below is a sampling of courses – refer to website for complete list.

- High Bay Lighting Advances – Sept. 6, 2012
- Understanding & Profiting from Electricity Tariffs – Sept. 6, 2012
- Thermodynamics Principles & Practices – Sept. 10, 2012
- BEP Training Certification Course for Business Energy Professionals – Sept. 10, 2012
- The Future of Retrofitting Lighting Systems – Sept. 17, 2012
- Developing an Energy Management Master Plan – Sept. 19, 2012
- Justifying Energy Efficiency as a Business Investment – Sept. 28, 2012
- LED vs. Everything Else – Oct. 1, 2012
- CEM Preparatory Course for Energy Managers – Oct. 3, 2012

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

### **Energy Star Portfolio Manager Update Webinars**

- Sept. 12, 2012 – 12:00-1:30 pm EDT
- Sept. 12, 2012 – 3:00-4:30 pm EDT
- Sept. 20, 2012 – 12:00-1:30 pm EDT
- Sept. 20, 2012 – 3:00-4:30 pm EDT

A quarterly update webinar to learn about new features in the new and improved Portfolio Manager to be released in June 2013. Topics at the webinar include new data quality checks, updated report features, and information on data exchange services.

[Click here](#) for more information about Portfolio Manager Upgrade and quarterly webinars

*US EPA*

### **Energy Diagnostics Using Data Loggers**

A half day class to learn the basics of using data loggers to record performance data, and how to use that data for diagnosing and troubleshooting energy-related issues in commercial and institutional buildings. BOC graduates receive 3.5 continuing education credits for attending.

- Sept. 13, 2012 in Auburn, WA

<http://www.theboc.info/wa/wa-ce-datalogger.html>

*Building Operator Certification*

### Whole Building Performance M&V – How and Why

A free webinar exploring the question of whole building measurement & verification and why it is so important to make it happen. Deeper energy savings will happen only if a M&V procedure is agreed upon and developed.

- Sept. 14, 2012 at noon Pacific time.

Email [info@neec.net](mailto:info@neec.net) for more information and registration  
*Northwest Energy Efficiency Council*

### Motors and Motor Controls

At this 7-week course, meeting on Wednesday evenings, you will learn how to optimize industrial and commercial system reliability using your motors and motor drive systems, and gain understanding of the principles of motor fundamentals, including single- and three-phase motors and variable frequency drives. Attendees may be eligible to earn up to 21 CEUs for their Oregon or Washington electrical license.

- Sept. 19 to Nov. 7, 2012 in Tualatin, OR

[http://portlandgeneral.com/business/news\\_classes/classes/docs/details\\_motors\\_controls\\_sept.pdf](http://portlandgeneral.com/business/news_classes/classes/docs/details_motors_controls_sept.pdf)

*Portland General Electric, Energy Trust of Oregon, NEEA, Better Bricks*

### Energy Savings through Recovery

Learn about energy recovery ventilation (ERV), a cost-saving strategy for meeting the ASHRAE ventilation & energy standards. Open to everyone. BOC graduates receive CEU for successful completion of webinar and quiz.

- Sept. 19, 2012 – live technical webinar

<http://www.theboc.info/m-live-webinars.html>

*Building Operator Certification*

### 12 Opportunities to Reduce Energy Usage

Hosted by Onset, this live 2-hour online course will give you a better understanding of how to use low-cost data loggers to find opportunities to reduce energy waste in industrial and commercial facilities.

- Sept. 20, 2012 – 11:00 – 1:00 pm Pacific time

<https://www2.gotomeeting.com/register/183539746>

*Onset*

### Energy Benchmarking using Energy Star Portfolio Manager – Seattle

Intended to support compliance with the City of Seattle's building energy benchmarking and disclosure ordinance, this hands-on session teaches how to benchmark your building's energy performance.

- Sept. 20, 2012 in Seattle

<http://esbenchmarkingworkshop04.eventbrite.com/>

*NEAA BetterBricks and City of Seattle*

### Are LED's Ready for Prime Time?

The focus of the Oregon Association of Professional Energy Managers (APEM) 2012 Fall Forum is on solid state lighting, otherwise known as LEDs. Presentations by experts include new lighting technology, lighting design incorporating LEDs, case studies, and innovative design strategies,

- Sept. 21, 2012 – Newberg, OR

<http://www.oregonapem.org/>

*Oregon Association of Professional Energy Managers*

## Building Operator's Certification

74 hours of training and project work in building systems maintenance.

- Washington State
  - Level II – Oct. 31, 2012 through Feb. 12, 2013 in Renton
  - Tri-Cities and Spokane courses are planned for 2013  
<http://www.theboc.info/wa/wa-schedule.html>
- Oregon
  - Level I – Sept. 25, 2012 through Mar. 2013 in Medford, OR
  - Level I – Sept. 12, 2012 through Dec. 5, 2012 in Tigard, OR
  - Level II – Oct. 3, 2012 through Mar. 2013 in Wilsonville, OR  
[http://www.nweei.org/images/pdf\\_files/current\\_master\\_oregon\\_sched.doc](http://www.nweei.org/images/pdf_files/current_master_oregon_sched.doc)

### *Building Operator Certification*

## Adjustable Speed Drive Applications and Energy Efficiency

This course address the use of adjustable speed drives with electric motors, and demonstrates how they can promote energy cost savings and other benefits.

- Oct. 4, 2012 – Roseburg, OR

[www.neea.org/get-involved/calendar](http://www.neea.org/get-involved/calendar)

NEEA

## Resources for You

### ALG Online

Developed by the New Buildings Institute, [Advanced Lighting Guidelines](#) (ALG) Online is web based and provides a comprehensive, one-stop resource for advanced lighting theory, design guidance, real-life applications, lighting technologies and more. It is written and updated by expert lighting industry professionals for practicing professionals, and also provides basic information free to the public.

### Energy Efficiency Grant Opportunities

Public higher education institutions and local governments are eligible to apply for 2012 energy efficiency grants from the Washington State Department of Commerce. Round one is now closed. Round two applications are due December 31, 2012. <http://www.commerce.wa.gov/site/1403/default.aspx>.

K-12 school districts are also eligible for energy grants, specifically for energy operational cost savings, through the Office of Superintendent of Public Instruction. Applications due November 9, 2012 for round one, and February 15, 2013 for round two. School districts must conduct an investment grade audit, and use either Energy Savings Performance Contracting or traditional design-bid-build contracting method. <http://www.k12.wa.us/SchFacilities/Programs/EnergyImprovement/EnergyGrantProgram.aspx>.

### Facilities Web Resources

[WSU Energy Program Plant Operations Support Consortium](#) staff selects web resources to best assist you in maintaining and operating your facility.

### Building Operations Tools and Technical Advice

[BetterBricks](#), the commercial building initiative of the Northwest Energy Efficiency Alliance (NEEA), provides tools and resources to help operate, maintain, and build more energy efficient buildings.

### March to Savings

March to Savings is a call to action to encourage all Washington state employees to save energy during the spring of 2012. Yet it's so much more than that – it's useful for all employees and managers everywhere. Designed and implemented by WSU Energy Program, in partnership with the Department of Enterprise Services, the program features the [March to Savings website](#) providing myriad resources such as fact sheets to save energy at work, links for saving energy at home, interesting how-to videos, tips on changing work habits, examples of energy-saving success stories, and plenty of resources for more information.

### Energy Experts eNews

You can now get energy-related news from EnergyExperts.org and other energy-related organizations on Facebook and Twitter. <http://www.energyexperts.org/NewsFeeds.aspx>

### Energy Events Calendar

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

### Washington RCM Support

Washington State University Energy Program RCM Support

Check out the "RCMx". 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.

<http://www.energy.wsu.edu/PublicFacilitiesSupport/ResourceConservation/RCMx.aspx>

### RCM News is prepared by the Washington State University Energy Program

This activity is funded by the U.S. Department of Energy State Energy Program. Funds provided through the Washington Department of Commerce Energy Division.

This project is funded in whole or in part by funds made available through the American Recovery and Reinvestment Act (ARRA). This funding was awarded by the US Department of Energy through the Energy Policy Division of the Washington State Department of Commerce under Energy Efficiency and Conservation Block Grant No.DE-EE0000849

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)