

RCM NEWS

RCM News for May 2012

A newsletter for Resource Conservation Managers in the Northwest

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Buildings

"[Retro-commissioning and Existing Building Commissioning](#)" was written by Janelle Penny, Associate Editor, *Buildings*, and published in the April 2012 issue of that journal. This is a good introduction for the facilities manager on to how to engage in a commissioning process for an existing building. It includes some background information on costs and the like, and it lists and explains four steps to take on the road to retro-commissioning: planning, investigation, implementation, and handoff. Several valuable tips round out the article.

Two articles of interest on building efficiencies were published in the March/April 2012 issue of *Distributed Energy*:

1. "[A Dynamic Duo](#)," by Dan Raftner, discusses the ways school districts, municipalities, and owners of small to large commercial facilities can benefit financially by incorporating audits and energy management systems into their strategies to reduce energy and their carbon footprint. It, also, shows the challenges to be met particularly with small- to medium-sized businesses where the ROI needs to be a very brief two to three years.
2. "[Setting an Efficient Example](#)" was written by Carol Brzozowski. Arizona State University (ASU) is cited for its early adoption of solar, San Diego State University (SDSU) for its new PV system, the University of Central Florida (UCF) for a lighting retrofit, Haltom High School (Haltom City, Texas) for its chillers replacements, the University of Toledo in Ohio for its newly designed power system, and the University of North British Columbia (UNBC) for its highly-acclaimed sustainability effort. Each is discussed in detail.

CHP (Combined Heat and Power)

"[Plug-and-Play Units Expand US Market for Small-Scale CHP](#)" was co-authored by Owen Duffy, President, and Uday Purani, Sales and Marketing Director; both with Kraft Energy Systems. The article was published in the January-February 2012 issue of *Cogeneration & On-Site Power Production*. In part because engineering costs for smaller CHP systems are no less expensive than they are for very large systems, smaller systems have been at a disadvantage. The authors explain that with the arrival of plug-and-play systems for smaller applications, the game has changed. The article includes discussion of ROI

(return on investment) as it applies to the pre-engineered systems, the market potential of plug-and-play, and expectations for the future of CHP now that smaller applications can be better accommodated. The authors give examples of plug-and-play CHP systems at seven sites – these are not specifically identified by name – and briefly describe them; these examples include municipal and state buildings.

Facilities Management

"Building Automation" is a three-part article written by Josh Thompson, Principal Consultant, Point Source, LLC, and published in the March 2012 issue of *Building Operating Management*: it is a discussion of various aspects of wireless BA:

[Part 1](#) is "Wireless Building Automation: EnOcean and Zigbee." It addresses key matters of languages, protocols, translation, and the needed energy that must be considered before selecting one system over another. Two systems are highlighted.

[Part 2](#) is "WiFi Is Still Leading Option for Wireless BMS." Part 2 is devoted to the most popular of the wireless technologies, WiFi.

[Part 3](#) is "Wireless BAS: Factors Facility Managers Should Consider." The author refers to these factors as "pros and cons(iderations)" and includes a section on each.

Federal Buildings

"[Facilitating Sound, Cost-Effective Federal Energy Management](#)" is a two-page, March 2011, fact sheet from the U.S. DOE's Federal Energy Management Program (FEMP). It highlights several areas where FEMP's resources can be brought to bear to save energy. They include high-performance buildings, efficient products, renewables, water, greenhouse gases, vehicles, and energy management, in general.

HVAC/R (Heating, Ventilation, Air Conditioning, and Refrigeration)

"[Analyze the Life Cycle of HVAC Systems](#)", in the March 2012 issue of *Consulting-Specifying Engineer*, was co-authored by Cole Roberts, Principal and Energy and Resources Business Leader, Andrew Rhodes, Senior Engineer, and Alexander Hespe, Senior Energy and Sustainability Designer; all of Arup. The authors urge reliance on lifecycle cost analysis (LCCA) as the tool that best discovers the true financial costs and benefits of proposed HVAC systems, but only if the analyses are done correctly. The major part of the article is an informed discussion of LCCA basics which is distinguished from the larger field of LCA (lifecycle analysis) that includes environmental and social costs and benefits.

Lighting

"[Flipping the Switch](#)," by Lori Lovely, was published in the March/April 2012 issue of *Distributed Energy*. It is a discussion of the current state of affairs in office lighting given advances in both fluorescent and LED technologies. The author covers efficiencies, color, glare, life expectancies, and daylighting as an addition to the mix, and more.

Water

"[10 Ways to Save Water in Commercial Buildings](#)" was written by Mark Spigarelli, CCJM Engineers Ltd., and published in the March 2010 issue of *Consulting-Specifying Engineer*. The author encourages the facility engineer to develop a water-savings plan for the office building. Then, the tips can be addressed; they include attention to low-flow fixtures, grey water and rainwater harvesting, water-pressure reduction, pipe insulation, irrigation-water reduction with the help of rain sensors, recovering water from cooling towers, and more.

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. Topics include energy management, lighting, commercial and industrial systems, as well as special topics such as water, smart grid, and leased space issues.

- A CFO's Perspective of Energy Efficiency & Renewables – Jun. 5, 2012 in Portland
- Smart Lighting Seminar & Portland Lights Trade Show – Jun. 6, 2012 in Portland
- Energy Champions Workshop – Jun. 20, 2012 in Portland

See website for more events.

http://portlandgeneral.com/business/news_classes/classes/docs/class_schedule.pdf or
http://portlandgeneral.com/business/news_classes/classes/default.aspx

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

Industrial Refrigeration Systems Energy Management

- Jun. 5, 2012 in Bellevue

All day training provides knowledge and tools to reduce energy usage and operative costs with refrigeration systems.

<http://neea.org/participate/calendar.aspx?eventID=3458>

PSE, Seattle City Light, SnoPUD, BPA, WSU Energy Program, NW Food Processors Assoc.

AEE (Association of Energy Engineers) Realtime Online Seminars

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.

- Smart Metering, Load Profiling & Demand Response – Jun. 6, 2012
- Advanced Lighting Retrofit Options – Jun. 12, 2012
- Certified Renewable Energy Professional Preparatory Training Program – Jun. 18, 2012
- Choosing and Using Lighting Controls – Jun. 21, 2012
- Energy Auditing Fundamentals – Jun. 25, 2012
- Certified Energy Auditor Preparatory Training Program – Jun. 25, 2012
- Boiler & Steam System Cost Control – Jul. 10, 2012

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

Conveyance Systems Energy Management

- Jun. 7, 2012 in Portland

Full day training that provides skills and knowledge necessary to optimize existing pneumatic conveying systems.

<http://neea.org/participate/calendar.aspx?eventID=3398>

Pacific Power, Energy Trust of Oregon, Clark Public Utilities, OR DOE, PGE, BPA, WSU Energy Program, NW Food Processors Association

Adjustable Speed Drives - Webinar

- Jun. 8, 2012

How adjustable speed drives work, savings potential, best applications, sizing, and how to solve variable frequency drive power-quality issues.

<http://neea.org/participate/calendar.aspx?eventID=3411>

NW Regional Industrial Training, NEEA

Energy Benchmarking using Energy Star Portfolio Manager – Seattle compliance

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.

- Jun. 13, 2012 in Seattle

<http://esbworkshop03.eventbrite.com/>

NEAA BetterBricks and City of Seattle

Idaho Energy and Green Building Conference

- Jun. 20 - 22, 2012 in Boise

26th Anniversary of the Idaho Energy Conference, focusing on energy codes and energy efficiency programs.

<http://idahocities.org/index.aspx?nid=229>

International Building Operators (IBOA) Annual Convention

- Jun. 21 - 22, 2012 in Great Falls, MT

Focus of the convention is low-cost/no-cost solutions to maintain ailing building systems.

https://internationalbuildingoperators.org/IBOA_Annual_Convention.html

Certified Sustainable Building Advisor Information Session

- Jun. 21, 2012 in Portland

Free information session to learn about this national certificate program for professionals in building and community development. Course meets for one weekend per month over nine months.

<http://www.mhcc.edu/sbap/>

Workforce.training@mhcc.edu for more information

Mt Hood Community College, Cascadia Green Building Council, Green Building Services, Earth Advantage, Energy Trust, BetterBricks

Energy Management Certification ("Boot Camp") – NW Energy Education Institute

- July 9 through 20, 2012 in the classroom, Eugene, OR

The Northwest Energy Education Institute (NEEI) is running its twelfth annual Energy Management Certification Program (EMC) (aka Energy "Boot Camp") July 9th – 20th, 2012.

The two-week, in-residence block of instruction is held at the University of Oregon in Eugene where students are immersed in energy efficiency fundamentals and practice in a hands-on learning environment. Students then return to their place of employment and, with NEEI assistance, identify, develop, implement, and measure a workplace project over a year's time. At the year's end, students give a written and verbal presentation of their project and receive their Certificate of Completion.

The required EMC project guarantees an excellent return on the original training investment. Resource Conservation Managers who have attended the course have completed projects that have saved their organizations thousands of dollars in energy costs.

Register now for the 2012 EMC before the maximum class size of 15 participants is reached. Visit the website <http://www.nweei.org/emc.html> or call Elaine at 541-463-3154 for more information.

Energy Efficiency of Chilled Water Systems and Cooling Towers

- Jul. 18-19, 2012 in Pocatello, ID

Attendees will learn how technology improvements to chilled water systems can reduce energy costs by more than half. Also includes case studies and cooling tower efficiency measures.

<http://neea.org/participate/calendar.aspx?eventID=3403>

NEEA Industrial Training Project, ID Power Co, ID Office of Energy Resources, Rocky Mountain Power, BPA, WSU Energy Program, NW Food Processors Assoc.

GovEnergy

- Aug. 19-22, 2012 in St. Louis, MO

Registration is now open for this annual event training for federal energy management community.

<http://www.govenergy.com/>

Building Operator's Certification

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

- Washington State
 - Level II – Aug. 28, 2012 through Jan. 12, 2013 in Seattle (*just added*)
 - Level II – Oct. 31, 2012 through Feb. 12, 2013 in Renton

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

- Oregon
 - Level I – Sept. 2012 through Mar. 2013 in Medford, OR
 - Level I – Sept. 12, 2012 through Dec. 5, 2012 in Tigard, OR
 - Level II – Sept. 2012 through Feb. 2013 in Wilsonville, OR

http://www.nweei.org/images/pdf_files/current_master_oregon_sched.doc

Resources for You

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. \$18 million is available to local governments, and \$20 million to higher education for projects using Energy Savings Performance Contracting or equivalent. Grants are awarded in two rounds – round one applications are due July 2, 2012 and are for applicants with ready to go projects (final investment grade audit completed). Round two applications are due December 31, 2012. Applications for both rounds will be available May 24, 2012 on Commerce's website (www.commerce.wa.gov/).

K-12 school districts are also eligible for energy grants, specifically for energy operational cost savings, through the Office of Superintendent of Public Instruction. \$40 million has been additionally allocated as part of the 2011-13 capital budget and will be awarded in three rounds. The first round has recently been granted from the previous budget year's applicants. \$14 million will be awarded in the second round in November 2012 and \$20 million in round three in February 2013. 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/Communications/PressReleases2012/EnergyGrants.aspx>.

Building Operator Certification – BOMI International Partnership

[Building Operator Certification \(BOC\) and Building Owners and Managers Institute \(BOMI\) International](#) have formed a partnership that provides additional education opportunities by awarding competency credit between BOC Level I and II and BOMI International's Systems Maintenance Technician (SMT®) and Systems Maintenance Administrator (SMA®) Programs. BOC graduates may earn competency credits for two of five SMT courses, and BOMI graduates may earn competency for four classes toward the BOC Level I and Level II.

Commercial Building Re-tuning Training

Pacific Northwest National Laboratory (PNNL) initiated the [Commercial Building Re-tuning](#) project for the U.S. Department of Energy's Building Technologies Program, as a low-cost path to energy efficiency and cost savings. PNNL offers on-site training as well as a free interactive e-learning course, enabling participants to reduce operating cost and provide energy savings to their building. The intended audience is employees responsible for daily building operations, contractors hired to improve a building's energy efficiency, and college students interested in entering the field.

The Green Wire

The June issue of the [Green Wire](#), Olympia School District's Resource Conservation News, provides information on end-of-school year actions, e-cycle Washington, and the Puget Sound Starts Here campaign.

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

