

RCM NEWS

RCM News for June 2011

A newsletter for Resource Conservation Managers in the Northwest

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Building Holiday

One of the easiest ways to save energy is to turn off equipment when it's not needed. Make sure that your building takes a long weekend by checking to see if your building management system is set for a holiday schedule on **Monday, July 4th for Independence Day**. Most systems let you designate holidays for the entire year, saving staff time and ensuring holiday weekdays are in unoccupied mode. Remember to check your lighting system too, since it may have separate controls. More information about building scheduling can be found at [BetterBricks](#).

Building Science

"Focus on Energy" is a two-part article by Eric Taub, Co-Founder and Managing Partner, Verus Carbon Neutral; it was published in the May 2011 issue of *Building Operating Management*.

Part 1 is [Carbon Footprint Gaining a Place on the FM Agenda](#). This clearly describes the various ways that emissions may be generated, identifies the six major greenhouse gases (GHG), explains why five of them are converted to carbon equivalents when measuring a carbon footprint, and shows the inextricable connection between energy use and emissions.

Part 2 is [Focus on Buildings to Cut Your Carbon Footprint](#). Buildings, as explained in Part 1, use energy directly to heat and cool, provide power for appliances, and such, but they also use energy in less obvious ways. The point is to get a true accounting of energy used in order to understand and develop the measurement of the carbon footprint of the building.

Dining Services on Campus

"[Greening Your Dining Services: Key Opportunities](#)" was written by Daniel Fusch, *Academic Impressions*, and appeared in the April 28, 2011, issue of *Higher Ed Impact*. Tips offered are applicable to schools and

academic institutions, as well as government facilities that maintain dining rooms for staff. For one thing, success is more likely when the issue of greening the dining facility is considered as an integrated effort to accomplish comprehensive changes. One small change at a time with no overview of major goals will not accomplish much. Carbon footprints should be considered along with good staff training.

Energy Efficient Computing

The [Open Compute Project](#) is a website that approaches energy efficient computing from efficient (and freely shared) hardware. "Hacking Conventional Computing Infrastructure" is an article on the home page explaining the route taken by Open Compute Project developers; scroll about halfway down the web page to see an **Energy Efficiency** section. The video at the top of the home page explains the project well with an emphasis on the various ways that energy has been saved including reductions in embodied energy. IT groups in universities, schools, and government agencies may be interested in using Project resources to save energy dollars.

Green Wire

June's issue of the [Green Wire](#), Resource Conservation News from the Olympia School District, includes articles on how to avoid vampire loads and how to stay cool during summer (it will come!) without an air conditioner. This newsletter is compiled by Bonnie Meyer, RCM for the Olympia School District.

Hazardous Materials

EPA has a new fact sheet, [Before You Tear it Down, Get the Mercury Out](#), about the hazards of mercury-containing devices during demolition of buildings. Although written about residential buildings, some previous personal residences are owned by public agencies and in an RCM's scope of work.

Lighting

"Lighting Upgrades: Small Steps, Big Gains" is a three-part article by Lindsay Audin, EnergyWiz and Contributing Editor for *Building Operating Management*; it was published in the May 2011 issue of that journal:

Part 1 is [Taking Extra Steps in a Lighting Upgrade Can Have Big Payoff](#). Given new lighting technologies that continue to appear, the author urges the facilities manager to consider adding a bit more to what was thought of as a finished plan for a lighting upgrade or even a completed or nearly-completed lighting upgrade project. It is possible to gain much more in energy savings than the small cost of employing the new technology. Lighting upgrades are divided into three types, each reflecting the time, effort, expertise, and money expended. There is the low-cost, low-hanging fruit, no-need-for-an-outside-expert upgrade – the basic upgrade – which is the subject of this Part 1 of the article. (The intermediate upgrade and the advanced system upgrade are the foci of Part 2 and Part 3, respectively.) The author offers some suggestions to consider for the basic upgrade. For example, some four-lamp fixtures might be converted into two-lamp fixtures with the same total lumens. Another example is that the number of ballasts might be reduced by using them in tandem instead of having one for each fixture.

Part 2 is [Making an Intermediate Upgrade Better](#). For the intermediate upgrade, the author suggests the facilities manager consider using outside experts such as professional auditors and energy service companies. Several possible extra upgrades are described such as replacing recessed parabolic fixtures with recessed indirect ones and adding bi-level occupancy sensors.

Part 3 is [Making an Advanced System Stellar](#). The author tackles advanced systems in Part 3 and warns against over-lighting, a common error. Sensors should be considered in places not occupied all day, and they could be solar powered. Additionally, smart grid technology brings with it demand-response technologies that have lighting applications.

Restrooms

"Don't Flush Your Cash" is a three-part article by James Piper, PE, Contributing Editor, *Building Operating Management*; it was published in the May 2011 issue of that journal:

Part 1 is [Considering Life Cycle Costs Can Pay Off in Restroom Renovations](#). Restrooms differ in their design and the kinds of components used in their various fixtures. The author explains why by describing the three different restroom types – high-demand, high-profile, and at-high-risk-for-damage. Life-cycle cost analyses can take the measure of what each different application needs. Additionally, water costs are discussed.

Part 2 is [Lighting Options Can Cut Restroom Electricity Usage](#). These options include appropriate and energy-efficient lighting fixtures, lighting controls, electric hand dryers, and automatic dispensers.

Part 3 is [Design Can Help Cut Cleaning Costs](#). Tile and grout colors, countertop and fixtures finishes, fixture mountings, touch/touch-less controls, and partition types all present opportunities for low initial cost or for lower long-term cost but rarely for both.

Water

"[Forget Taxes...It's Water We Need to Audit](#)" was written by Klaus Reichardt, Founder and CEO, Waterless Co. Inc.; Member, U.S. Green Building Council; and Member of the EcoEntrepreneur Advisory Board at the University of California Santa Barbara. It was published in the March/April issue of *Sustainable Facility*; free registration is required to read the entire article. Reducing water consumption will save the cost of water, which is expected to rise along with population, industrialization, and draughts in certain areas due to climate change. Any commercial or institutional facility would benefit on a large scale. The author suggests two tacks: conducting a water audit and providing information and training for staff using several steps that he specifically identifies. Water auditing is described in depth.

Upcoming Events & Training Opportunities

Fundamentals of Pumping System Assessments

- Aug. 4, 2011 webinar
- Sept 13, 2011 webinar

This awareness webinar gives an overview of the ASME Energy Assessment for Pumping Systems Standard.

Hydraulic Institute

<https://pumpsevents.webex.com/mw0305l/mywebex/default.do?siteurl=pumpsevents>

Energy Management Certification (EMC)

- July 11-22, 2011 in Eugene, OR

This is an advanced certification program that requires the student to implement an energy-saving project and measure the results. This program goes beyond the fundamentals and teaches a broad spectrum of energy management principles and techniques.

Northwest Energy Education Institute

<http://www.nweei.org/emc.html>

Lighting Solutions for IEQ and Energy Performance: 2011 BOC Technical Webinar Series

- New Lighting Technology: A showcase of products and applications
July 21, 2011
- Low Cost/No Cost Lighting Strategies for Cost Savings
Sept 8, 2011

Live instructional webinars. Open to all, BOC graduates receive CEUs.

Building Operator Certification

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

Building Operator's Certification

- BOC Level I
 - Sept 2011 through Mar 2012 in Portland OR
 - October 13, 2011, ending Mar 29, 2012 in Silverdale, WAOne day a month of training and project work in building systems maintenance.
- BOC Level II
 - Oct 2011 through Mar 2012 in Portland OR
 - Oct 18, 2011, ending Mar 6, 2012 in Renton, WAOne day a month of training and elective coursework in equipment troubleshooting and maintenance.

Northwest Energy Education Institute

Oregon: <http://www.nweei.org/boc.html>

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

AEE (Association of Energy Engineers) Realtime Online Seminars

Live interactive courses you can complete from your computer. Programs are generally two to three hours long, over a period of days. Dates following course names below are start dates. Check the schedule for more great courses.

- Developing an Energy Management Master Plan – July 13, Sept. 7 and Nov. 14, 2011
- Commercial HVAC Fundamentals – July 18, 2011
- Quality Lighting for High Performance Buildings – July 21 and Sept. 28, 2011
- Converting Energy Audits to Business Plans – Aug 12 and Nov. 18, 2011
- Energy Auditing Fundamentals – Aug.15, Sept. 26 and Dec. 12, 2011
- Interior Lighting: LED vs. Traditional – Aug. 15 and Dec. 1, 2011
- Boiler & Steam System Cost Control – Aug. 22 and Nov. 29, 2011
- Dimming vs. Non-dimming Ballasts – Aug. 29, 2011
- Advanced Lighting Retrofit Options – Sept. 6 and Dec. 12, 2011
- Justifying Energy Efficiency as a Business Investment – Sept. 9 and Dec. 9, 2011
- Smart Metering, Load Profiling & Demand Response – Sept. 14 and Dec. 5, 2011
- Choosing and Using Lighting Controls – Sept. 26 and Nov. 3, 2011
- Advanced Technologies in Outdoor Lighting – Sept. 29 and Dec. 15, 2011
- Life Cycle Costing for Energy Professionals – Dec. 19, 2011

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

BEEP Energy Program

This six-course series offers the information, strategies, technologies, how-to guides, and resources you need to reduce energy and costs...all without leaving your office.

<http://www.boma.org/TrainingAndEducation/BEEP/Pages/curriculum.aspx>

Federal Energy Management Program

Training for Federal agency managers on the latest energy requirements, best practices and technologies.

<http://apps1.eere.energy.gov/femp/training/index.cfm?CFID=1333092&CFTOKEN=cd5d7ac95e1cdc3c-A2C6A3B6-5056-BC19-15DEF0F48CE3756C>

Resources for You

Energy Conference

Speaker presentations from the May 2011 WSU Extension Energy Program Energy/Facilities Connections Conference are available at

<http://www.energy.wsu.edu/PublicFacilitiesSupport/PlantOperations/Conferences.aspx>.

BetterBricks Tools and Technical Advice for Building Operations

Best practices, tools and technical advice to help achieve more efficient, lower cost, building operations. These “tools” are grouped into: performance indicators such as tracking utility bills, benchmarking and trend logging; the top four common opportunities to reduce expensive energy-performance problems; a symptom-diagnosis tool to help identify and understand specific symptoms of poor energy performance, and; best O&M for major equipment.

<http://www.betterbricks.com/building-operations/tools-and-technical-advice>

US Department of Energy, Energy Efficiency & Renewable Energy, Building Technologies Program.

The mission of the Building Technologies Program (BTP) is to develop technologies, techniques, and tools for making buildings more energy efficient, productive, and affordable. BTP focuses on improving commercial and residential building components, energy modeling tools, building energy codes, and appliance standards. This Web site provides information and resources for industry professionals to help reduce the energy use of new and existing buildings and strengthen the nation's energy future.

<http://www1.eere.energy.gov/buildings/index.html>

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>

Oregon RCM Support

Oregon Department of Energy RCM Support

<http://oregon.gov/ENERGY/CONS/RCM/rcmhm.shtml>

RCM News is prepared by the Washington State University Extension 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).

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