RCM NEWS

RCM News for June 2018

A newsletter for Resource Conservation Managers in the Northwest

In this issue:

While every URL in RCM News is checked for accuracy prior to distribution, URLs may change, and servers may temporarily fail to connect to working URLs.

Buildings

"Powering an Alaska Village", written by Jonathan Heller for the Summer 2018 issue of *High Performing Buildings*, discusses three case studies of renovated buildings in Sitka, Alaska. A goal of the major renovations was to eliminate the use of fuel oil by greatly increasing energy efficiency, which enabled electricity use without overloading the electrical grid. Design concepts that reduced energy use included heating load reduction, zonal heating systems, and right-sized equipment.

Building Automation Systems

A three-webpage article on Smart Buildings in the June 2018 issue of *Building Operating Management*, written by Matt Ernst, begins with an example of a DDC points list in order to identify operational problems. Operational issues are difficult to diagnose and not all create occupant complaints or set off alarms. A building analytic system can help diagnose problems, improve energy efficiency, occupant comfort, and reduce time spent on maintenance.

Part 1 – Smart Buildings: How to Justify an Investment in Analytics Software

Part 2 – 3 Smart Strategies for Using Analytics in Smart Buildings

Part 3 – 10 Benefits of Using Smart Building Analytics Effectively

Slashing energy costs through the use of Internet of Things devices and building automation systems is the topic of a June 2018 article in *Building Operating Management*, written by Greg Zimmerman. Smart meters and automated building systems can provide the tools to reduce loads during periods of high demand in order to save costs, and possibly prepare for a time when the utility will incentivize such demand-response behavior. Dimming LEDs or adjusting set points are specific examples of load management, as long as occupant comfort is not compromised.

Part 1 – Internet of Things Can Help Save Energy When It's Most Expensive

Part 2 – How to Take Specific Steps to Slash Energy Costs

"Streamline Predictive Maintenance with Internet of Things Devices", published in the June 2018 issue of *Buildings Magazine*, written by Janelle Penny, Senior Editor, provides a logical and understandable course of action to set up an Internet of Things (IoT) monitoring system which can prioritize maintenance when it is needed most. Beginning the process slowly with one data source considered the most important to monitor, and adding other data sensors over time allows for reevaluation of the maintenance schedule and phasing-out of calendar-based preventive maintenance.

Demand Reduction

"Four Peak Demand Reduction Strategies", written by Jeff Gorrie in the June 10, 2018 *Energy Manager Today*, describes four ways to reduce peak demand, with diagrams that graphically show their different effects. Changes in scheduling affect peak demand distribution, while capital projects shrink peak demand with energy efficient equipment. Peak shaving occurs when energy storage meets some of the peak energy needs, and energy generated from alternative energy also shaves peak demand by reducing power needed from the grid. A website link from the author explains peak demand, with a refresher on the difference between energy and power.

HVAC

A three-part article on HVAC Energy Strategies, written by Ben Shepard, appears in the June 2018 issue of *Facility Maintenance Decisions*. Diagnosing problems with an HVAC system can be difficult because of the many possibilities and paths that can be causing the trouble. Increased access to data for each part of the HVAC system does not make diagnostics easier, even for experienced operators. Diagnostic tracking tools are worth the investment, especially when customized. Monitoring, diagnosing, correcting, and tracking the HVAC system are more useful when combined with implemented energy measures.

Part 1 – HVAC: Diagnosing Energy Waste

Part 2 – HVAC: Monitoring and Reducing Energy Waste

Part 3 – HVAC: Bottom-Line Benefits of Reducing Energy Waste

Variable Refrigerant Flow

"VRF: Overcoming Challenges to Achieve High Efficiency" is a two-page article written by Cory Duggin for the April 16, 2018 issue of *Consulting-Specifying Engineer*. Types of variable refrigerant flow (VRF) systems are heat recovery, heat pump, and cooling only. These increase energy efficiency through heat recovery, inverter compressors, and decoupled ventilation loads. Advantages such as greater zone control, drawbacks such as limited ventilation capacity, and complying with ASHRAE standards are discussed from an articulate engineering viewpoint.

Waste Management

A short article, "Three Ways to Score Savings with Your Waste Program", in the June 18, 2018 online *Energy Manager Today*, reflects on the success of a zero waste professional football game, and more pertinently, ways to reduce an agency's expenses related to waste management.

Upcoming Events & Training Opportunities

ENERGY STAR® and Portfolio Manager® Trainings

All are online webinars.

- Portfolio Manager 101 – July 5
- Beat the Peak – Using Water Wisely for Commercial Outdoor Spaces – Jul 11
- Portfolio Manager 201 – July 12
- Portfolio Manager 301 – July 19
- Ask the Expert – Most Wednesday at 9:00 AM Pacific time

Click here for more webinars and information

US EPA

Financing 2.0: Navigating 3rd-Party Financing for Efficiency and Renewables

- July 10 webinar

Click here for more information

Better Buildings, USDOE

Why Smart Buildings – Deciphering Between Hype and Reality

2018 Executive Forum from the Smart Buildings Center

- August 24, 2018 in Seattle

Click here for more information

NEEC

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
  - Level I classes
    - Sept 25, 2018 in Renton

  Click here for BOC Washington State information
- Oregon
  - Level I classes
    - Sept 26, 2018 in the Portland area
  - Level II classes
    - TBA 2018 in Portland area

  Click here for BOC Oregon information

Building Operators Certification

Presentations and Videos

Energy/Facilities Connections Conference

Presentations from the WSU Energy Program Plant Operations Support Consortium Conference held May 8-10, 2018 are now available for viewing. Topics include gas-fired condensing rooftop units, LED comparison guide, and motors, power, and data loggers.

Smart Buildings Center YouTube Channel

The "Why Smart Buildings 2018 Executive Forum" in Seattle offers sessions on, well, why smart buildings. Highlights of the first event of the series, about The Edge, a smart technology building in the Netherlands, is available for viewing on the Smart Buildings Center YouTube Channel. Run by the Smart Buildings Center, which is a project of the Northwest Energy Efficiency Council, the next event will be Deciphering Between Hype and Reality on August 24 in Seattle. See above under Upcoming Events and Opportunities for more information.

Changing Behavior to Save Energy at University of New Mexico

Sponsored by EnergyCap Resource Accounting Software, this recent webinar focuses on energy management in general, and is applicable for RCMs, although experienced RCMs may find some of the information elementary. Specific parts include an energy conservation process flow chart at 33 minutes, continuous commissioning at 43 minutes, and energy conservation opportunities at 46 minutes.

Resources

Tools and Resources for Energy Efficient Buildings

The redesigned BetterBricks website features the Commercial Real Estate Hub (CREHUB) with easy to navigate webpages on building lifecycle, non-energy benefits, problems & solutions, and technology. Diagnose and get solutions to specific problems such as inadequate space heating or cooling, or a continuously running VAV box, on the problems & solutions pages. Learn about best practices for maintenance, tune ups, retrofits, or major renovations on the building lifecycle pages. Non-energy benefits include resources to increase occupant health, comfort, and safety. BetterBricks is a resource of the Northwest Energy Efficiency Alliance.

FREE AEE Video Series on CEM Basics

The Association of Energy Engineers (AEE) has produced a series of short videos on some of the basic concepts used by energy managers. These 13 videos are available to view for free and include such topics as the Concept of Net Present Value, Conducting an Energy Audit, Energy Bill Basics, Electric Motor Fundamentals, and Performance Metrics COP SEER HSPF.

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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 to share and ask!

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