



ENERGY/FACILITIES CONNECTIONS

WASHINGTON STATE UNIVERSITY
EXTENSION ENERGY PROGRAM



9th Annual Energy/Facilities Connections Conference

*“From Coveralls to the
Corner Office”*

May 7-9, 2013

Enzian Inn • Leavenworth, Washington



Welcome to the Energy/Facilities Connections 2013 Conference *From Coveralls to the Corner Office*

Welcome to Leavenworth! The Washington State University Energy Program is proud to host the 9th Annual Energy/Facilities Connections



Conference. Our conference theme – ***From Coveralls to the Corner Office*** – speaks to the need to develop partnerships and share insights so we can efficiently achieve shared goals in the energy and facilities areas. Helping each other by sharing professional wisdom is what makes this conference so timely.

Be prepared to fully engage in this customized training event. Participate in discussions, offer your perspectives, ask key questions, develop professional relationships and carry the lessons you learn back into your own operations.

I trust you will benefit greatly from your experience over the next few days. Enjoy the 9th Annual Energy/Facilities Connections Conference.

Sincerely,

Jacob C. Fey, Director,
WSU Energy Program

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Building Operator Certification
Puget Sound Energy
Snohomish County PUD

Partners: Northwest Energy Efficiency Council, University of Washington, and Wenatchee School District.

Tuesday, May 7, 2013

7:00 - 9:00 a.m.	Registration (Early registration also available Monday from 4:30 to 9:00 p.m.) A full breakfast is available in the Continental Room with your Enzian reservation	
8:00 - 8:30 a.m. <i>Continental Room</i>	Welcome and Introductions	
Keynote 8:30 - 9:25 a.m. <i>Continental Room</i>	Heart and Vision – “Obtaining a Seat at the Table” <i>Bob MacKenzie, former Manager of the Plant Operations Support Consortium</i>	
Session 1 9:30 - 10:25 a.m.	<i>(Alpine)</i> Low-Hanging Fruit: Simple Steps Toward Energy-Effective Building Operations <i>Instructor: Roger Ebbage, Lane Community College</i>	<i>(Danube)</i> Energy Integration at the Olympia School District <i>Instructors: Bonnie Meyer and Greg Deer, Olympia School District</i>
10:25 - 10:40 a.m.	Break	
Session 2 10:40 a.m. – 11:35 a.m.	<i>(Alpine)</i> The Art of Selling an Energy Efficiency Plan to Executive Management <i>Instructors: Stan Price, Northwest Energy Efficiency Council (panel facilitator); see list of other panelists on page 7.</i>	<i>(Danube)</i> The Cutting Edge of LED Technologies <i>Instructor: Eric Strandberg, Lighting Design Lab</i>
Lunch 11:45 a.m. - 1:20 p.m. <i>Continental Room</i>	Introducing the EFC Innovations Award <i>Entertainment: Clovis Point Intermediate School Jazz Band and Wenatchee High School Drama Phantom of the Opera Cast</i>	
Session 3 1:25 - 2:20 p.m.	<i>(Alpine)</i> Lessons Learned in Emergency Preparedness – Reliving the 2012 Central Washington Fires <i>Presenters: Bryan Visscher, Wenatchee School District; and Glenn Johnson, Cashmere School District</i>	<i>(Danube)</i> How Ventilation Affects the Health and Performance of Building Occupants <i>Presenter: Richard Shaughnessy, University of Tulsa</i>
Session 4 2:25 - 3:20 p.m.	<i>(Alpine)</i> Utility Panel <i>Presenters: Allison Grinczel, Snohomish County PUD; Rick Hodges, Bonneville Power Administration; Ryan Linstrom, Puget Sound Energy; and Levi Westra, Avista Corporation</i>	<i>(Danube)</i> Security Innovations – A Case Study <i>Presenters: Nolan Duce, Port Angeles School District; and Steve Rice, Pelco by Schneider Electric</i>
3:20 - 3:35 p.m.	Break	
Session 5 3:35 - 4:30 p.m.	<i>(Alpine)</i> Innovative Leadership: A Common-Sense Approach <i>Presenter: Tom Adams, Portland Public Schools</i>	<i>(Danube)</i> Biomass Combined Heat & Power: Wood Waste and Biogas <i>Presenter: David Sjoding, WSU Energy Program</i>
5:00 - 7:00 p.m.	Network Connections – Sponsored by ESC Automation/Delta Controls	

<i>Keynote Speaker</i>	<i>Leadership Track</i>	<i>Technical Track</i>	<i>Custodial Connections</i>
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Wednesday, May 8, 2013

7:00 a.m.	A full breakfast is available in the Continental Room with your Enzian reservation.	
7:30 a.m.	Welcome and Introductions	
Keynote Breakfast 7:35 - 8:35 a.m. Continental Room	Where We Learn Matters – What Schools Tell Us About Work Environments <i>Anisa Baldwin Metzger, Green Center for Schools (U.S. Green Building Council)</i>	
Session 6 8:40 - 9:35 a.m.	<i>(Alpine)</i> Insights into Lean Management <i>Presenters: Jim Chrisinger, King County; LuAnn Stokke, University of Washington; and James Goodman, State Liquor Control Board</i>	<i>(Danube)</i> Shared RCM Insights into Solid Waste Management <i>Presenters: Debbie Campbell and Jay Donnaway, Sumner School District</i>
Session 7 9:40 - 10:35 a.m.	<i>(Alpine)</i> Commission and Updates on the State Energy Code <i>Presenter: Gary Nordeen, WSU Energy Program</i>	<i>(Danube)</i> Encapsulation Carpet Cleaning: Where Did the Dirt Go? <i>Presenter: Dan Joner, Carpet Cleaners Institute of the Northwest</i>
10:35 - 10:50 a.m.	Break	
Session 8 10:50 - 11:45 a.m.	<i>(Alpine)</i> Rapid Energy Saving\$, a Case Study <i>Presenter: David Cone, Evergreen School District</i>	<i>(Danube)</i> What it Means to be Clean <i>Presenter: Richard Shaughnessy, University of Tulsa</i>
Lunch 11:50 a.m. - 1:20 p.m. Continental Room	Success in Facilities Management – The Necessary Ingredients <i>Teena Shouse, IFMA Fellow</i> <i>Entertainment: Wenatchee High School Mariachi Azteca</i>	
Session 9 1:25 - 2:20 p.m.	<i>(Alpine)</i> Submetering – The Good, the Bad and the Ugly <i>Presenters: Jon Sargeant, McKinstry; and Norm Menter, University of Washington</i>	<i>(Danube)</i> Infection Control and Disinfection <i>Instructor: Nancy Bernard, Washington State Department of Health</i>
Session 10 2:25 - 3:20 p.m.	<i>(Alpine)</i> Asset Sustainability – Uniting Capital Asset Management, Energy Efficiency and Maintenance Management <i>Presenter: David Molinaro, Ameresco</i>	<i>(Danube)</i> ATP Meters and Innovative Custodial Cleaning Tools <i>Presenter: Chris Saffel Ryan, Saffel & Associates</i>
Session 11 3:25 - 5:00 p.m.	Hot Shop: A hands-on training with demonstrations of useful, cutting-edge energy and facilities technologies.	
5:00 - 7:00 p.m.	Hot Shop Reconnections <i>Sponsored by MacDonald-Miller Facility Solutions/Honeywell</i>	

Keynote Speaker	Leadership Track	Technical Track	Custodial Connections
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Thursday, May 9, 2013

7:00 a.m.	A full breakfast is available in the Continental Room with your Enzian Inn reservation	
Session 12 7:30 - 8:25 a.m.	<i>(Alpine)</i> Cost-Effective Management Tools Showcase, Part One: No-Cost Tracking Methods <i>Presenters: Tony Simon and Lee Link, WSU Energy Program</i>	<i>(Danube)</i> Improving Results through Standardization and Accountability <i>Presenter: Michael Gibson, Diversey</i>
Session 13 8:30 - 9:25 a.m.	<i>(Alpine)</i> Cost-Effective Management Tools Showcase, Part Two: Effective Facilities and Energy Self-Assessment Tools <i>Presenters: Larry Covey and Marcia Karr, WSU Energy Program</i>	<i>(Danube)</i> Hot Topics: Successful Team/Day Cleaning and "Engineered Water Cleaning in the Era of the Superbug" <i>Presenter: Michael Smith, Western Washington University</i>
9:25 - 9:40 a.m.	Break	
Session 14 9:40 - 10:35 a.m.	<i>(Alpine)</i> Mini Data Loggers and How to Achieve Low-Cost Operational Improvement <i>Presenters: Greg Jourdan, Wenatchee Valley College; and Rich Prill, WSU Energy Program</i>	<i>(Danube)</i> Emergency-Ready Profile: A Startup Approach to Begin Mitigation and Recovery Services <i>Presenter: Joe Feola, ServPro</i>
Session 15 10:40 - 11:35 a.m.	<i>(Alpine)</i> The What, When and Why of Variable Refrigerant Flow <i>Presenter: Marcia Karr, WSU Energy Program</i>	<i>(Danube)</i> Workplace Tragedy – When it Happens to You <i>Presenter: Gene Woodard, University of Washington</i>
Session 16 11:40 - 12:35 p.m.	<i>(Danube)</i> Custodial Roundtable	
12:40 p.m.	Adjourned	

<i>Keynote Speaker</i>	<i>Leadership Track</i>	<i>Technical Track</i>	<i>Custodial Connections</i>
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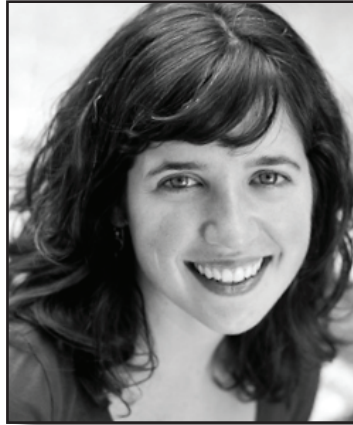
Featured Speakers



Bob MacKenzie

Former Manager of the Plant Operations Support Consortium

Bob MacKenzie has served for more than 38 years in various leadership positions, including uniformed command, corporate and public-sector management settings. He holds three masters degrees and is a retired Army (Cavalry) officer. Bob founded the Plant Operations Support Consortium and served as its manager for more than 15 years before retiring in 2011. He has also served as Facilities Operations Manager of the State Capitol Campus and as Public/Legislative Affairs Director of the State Housing Finance Commission. He is a winner of the Governor's Distinguished Manager Award and the recipient of seven national and international awards for excellence and innovation. Bob and his wife, Anita – a retired public school teacher – spend their retirement speaking, traveling, volunteering and pursuing other long-time interests.



Anisa Baldwin Metzger

Center for Green Schools at the U.S. Green Building Council

Anisa Baldwin Metzger is the Manager of School District Sustainability at the Center for Green Schools at the U.S. Green Building Council. She manages the Center for Green Schools Fellowship Program and leads strategy for the Center's interaction with those who implement LEED and those who study the effect of buildings on childhood health and learning. Ms. Baldwin Metzger acted as the first Green Schools Fellow before the formal program existed, placed by USGBC in New Orleans to work in school district offices after Hurricanes Katrina and Rita. She helped the schools change perceptions of what public education can mean to the people of New Orleans with four LEED-certified schools and over 30 LEED-registered schools, a core group of LEED Accredited Professionals on school project management staff, an Indoor Air Quality Manager and Energy Manager in place, a district recycling program, and a green school curriculum resource in circulation. Ms. Baldwin Metzger has worked with architecture firms in Little Rock and Seattle on commercial, institutional and residential projects, and she holds a BS in architecture from Washington University in St. Louis and a Master's Degree in Architecture from the University of Washington in Seattle.



Teena Shouse

IFMA Fellow

Teena G. Shouse, CFM, IFMA Fellow, has 26 years of experience in service-related fields, predominately in facility management. Her primary expertise includes project management, business process improvement, sustainability in FM, staff development, outsourced contract governance, capital planning and budgeting, and operations and maintenance. Before joining Facilities Engineering Associates (FEA), she held the position of VP Strategic Partnerships with ARAMARK overseeing collaborative strategies. Prior to ARAMARK, Teena was the GM of Employee Services at Sprint for 18 years. She was part of the design and construction team that researched, planned and built the 4.2 million square foot campus in Overland Park, Kansas. As GM, she was involved in all aspects of campus operations – from day-to-day operations to sustainability strategies. Her more recent projects include consulting on the FM operational plan for the Kaufman Center for the Performing Arts in Kansas City. She creates and teaches courses in facility management and sustainability for IFMA and FEA and is a guest speaker at numerous conferences and universities in North America and abroad. From 2005 to 2007, she served as the Chairman of the IFMA Board of Directors. From October 2010 to January 2013, she served as the Chair of the Global FM Board of Directors, a global federation of FM organizations based in Brussels, Belgium, which allowed her to truly influence the facility management profession on a global basis.

Session Descriptions

Day One – May 7

Leadership Session 1 9:30-10:25 a.m.

Low-Hanging Fruit: Simple Steps Toward Energy-Effective Building Operations

Instructor: Roger Ebbage, Lane Community College

Synopsis: This session will cover simple steps that facility operation practitioners can take to ensure the energy-efficient operation of their buildings. Roger will cover topics including building benchmarking for energy efficiency, the big three energy targets, facility operator certification, and other considerations brought forth by participants.

Technical Session 1 9:30-10:25 a.m.

Energy Integration at the Olympia School District

Instructors: Bonnie Meyer and Greg Deer, Olympia School District

Synopsis: See how the Olympia School District team works by combining people, equipment and controls for efficient operations. By effectively implementing data and tools in a variety of situations, Bonnie and Greg will demonstrate how they addressed and solved complicated issues involving impacts on cost, student and staff comfort, efficiency and safety.

Leadership Session 2 10:40-11:35 a.m.

The Art of Selling an Energy Efficiency Plan to Executive Management

Instructors: Stan Price, Northwest Energy Efficiency Council (panel facilitator); Chuck Davis, Seattle Central Community College; Fritz Feiten, Ameresco; Barry Holldorf, Highline Community College; Jim Worsdale, King County Library System; Dave Nieman, Kemper Development Company

Synopsis: This workshop will focus on the elements of a highly effective energy efficiency (EE) plan and what needs to happen to gain executive management's approval for its implementation. What are the barriers, the land mines, the out-of-body experiences and contortions required to get EE projects approved? The instructors will also demonstrate the methods used to make the outcomes of EE investments real and relevant to all stakeholders.

Technical Session 2 10:40-11:35 a.m.

The Cutting Edge of LED Technologies

Instructor: Eric Strandberg, Lighting Design Lab

Synopsis: As LED product development continues at a dizzying rate, it is difficult to know which products to use and which to avoid. Eric will look at LEDs in various fixture types and in a number of applications, and compare them to existing products. This information will give facility operators the knowledge they need about product performance and cost effectiveness so they can make informed choices.

Leadership Session 3 1:25-2:20 p.m.

Lessons Learned in Emergency Preparedness – Reliving the 2012 Central Washington Fires

Instructors: Bryan Visscher, Wenatchee School District; and Glenn Johnson, Cashmere School District

Synopsis: The night of Saturday, September 8, 2012, was an amazing show of fireworks in the Cashmere/Wenatchee area as lightning storms blanketed north-central Washington. However, this display had alarming ramifications for the Cashmere and Wenatchee school districts as they were forced to employ the principles of emergency preparedness. Hear their stories and lessons learned as Bryan and Glenn revisit the chaos.

Technical Session 3 1:25-2:20 p.m.

How Ventilation Affects the Health and Performance of Building Occupants

Instructor: Richard Shaughnessy, University of Tulsa

Synopsis: Learn about how indoor environmental quality (IEQ) affects the performance and health of building occupants. Richard stresses the role of ventilation, provides strategies and describes lessons learned in developing an effective IEQ environment.

Leadership Session 4 2:25-3:20 p.m.

Utility Panel

Instructors: Ryan Linstrom, Puget Sound Energy; Levi Westra, Avista Corporation; Allison Grinczel, Snohomish County PUD; and Rick Hodges, Bonneville Power Administration

Synopsis: Hear from industry experts about how energy providers have adjusted to the changing energy landscape. You'll get insider information about myriad energy-related issues, including opportunities for incentives, upgrades, rebates and more.

Technical Session 4 2:25-3:20 p.m.

Security Innovations – A Case Study

Instructors: Nolan Duce, Port Angeles School District; and Steve Rice, Pelco by Schneider Electric

Synopsis: This case study will feature the successes of Port Angeles School District in its recent security camera project. Nolan and Steve will review the process the District used to determine the scope of work/bill of materials, the procurement process, installation, and startup and end-user training.

Note: All sessions subject to last-minute changes.

Session Descriptions

Leadership Session 5 **3:35-4:30 p.m.**

Innovative Leadership: A Common-Sense Approach

*Instructor: Tom Adams,
Portland Public Schools*

Synopsis: This promises to be a lively discussion for new, current and future leader/managers that will provide an overview of three common-sense leadership styles. Because mass retirements are inevitable, people are often promoted for having an outstanding hard discipline skillset; however, we subsequently fail to train them in the soft skillset of leadership. This is especially onerous because, after promotion, they are expected to accomplish their workload through other people's hands, often without having the leadership skills necessary to accomplish that mission.

Technical Session 5 **3:35-4:30 p.m.**

Biomass Combined Heat & Power: Wood Waste and Biogas

*Instructor: David Sjoding,
WSU Energy Program*

Synopsis: This presentation is in response to the wide variety of biomass-related questions that surfaced at last year's conference. Join Dave in a discussion about feedstock supply, technologies, permitting, environmental concerns, utility relations, greening the campus and more! Both wood waste and biogas pathways will be covered.

Day Two – May 8

Leadership Session 6 **8:40-9:35 a.m.**

Insights into Lean Management

Instructors: James Goodman, Washington State Liquor Control Board; Jim Chrisinger, King County; and LuAnn Stokke, University of Washington

Synopsis: If you haven't heard of lean management, you will soon – it is quickly moving from the private sector to public sector. Learn from the experiences of three different public organizations about how they have increased operational efficiency and effectiveness by implementing lean management strategies.

Technical Session 6 **8:40-9:35 a.m.**

Shared RCM Insights into Solid Waste Management

Instructors: Jay Donnanway and Debbie Campbell, Sumner School District

Synopsis: Hear about the successes of the Sumner/Bonney Lake Resource Conservation Manager partnership, which has proven its worth through utility cost savings, improved building system performance, reduced environmental impacts and the award of over \$1.1 million in grants that the district otherwise would not have been able to pursue. The emphasis of this session will be on solid waste efforts and successes.

Leadership Session 7 **9:40-10:35 a.m.**

Commission and Updates on the State Energy Code

*Instructor: Gary Nordeen,
WSU Energy Program*

Synopsis: This session will provide a clearer understanding of what has been gained through energy conservation in Washington state and where energy codes are headed in the near future. With this perspective, Gary shares insights on how to improve efficiency while saving dollars in your own facilities.

Custodial Session 7 **9:40-10:35 a.m.**

Encapsulation Carpet Cleaning: Where Did the Dirt Go?

*Instructor: Dan Joner, Carpet Cleaners
Institute of the Northwest*

Synopsis: Encapsulation is becoming an increasingly popular method of commercial carpet maintenance. Dan will discuss the chemistry, equipment, advantages and limitations of encapsulation carpet cleaning.

Leadership Session 8 **10:50-11:45 a.m.**

Rapid Energy Saving\$, a Case Study

*Instructor: David Cone,
Evergreen School District*

Synopsis: David has been involved with two highly successful energy conservation programs that have saved two school districts over \$11 million since 2005. This presentation will characterize the tools used to obtain those savings. These tools are available to any building owner and/or operator, often at low cost or no cost.

Custodial Session 8 **10:50-11:45 a.m.**

What It Means to be Clean

*Instructor: Richard Shaughnessy,
University of Tulsa*

Synopsis: Indoor air quality is not only a challenge for those maintaining HVAC equipment; custodians are major players as well. Join this intriguing discussion about what "clean" really looks like, and learn distressing truths about the potential impact of residual surface contamination.

Technical Session 9 **1:25-2:20 p.m.**

Sub-metering – The Good, the Bad and the Ugly

*Instructors: Norm Menter, University
of Washington; and Jon Sargeant,
McKinstry*

Synopsis: Keeping up with the newest gizmos and gadgets is nearly impossible these days, yet tracking

Session Descriptions

energy usage is becoming an essential aspect of running a business. Sub-metering enables an organization to focus conservation efforts where needed, which can potentially lead to significant dollar savings. Norm and Jon will lead participants in a discussion of how the recently implemented Enterprise Management System at the University of Washington Seattle campus is providing real-time energy data analysis to its stakeholders within the campus environment.

Custodial Session 9

1:25-2:20 p.m.

Infection Control and Disinfection

Instructor: Nancy Bernard, Washington State Department of Health

Synopsis: We all know how important cleaning for health is, but what does that mean? How do we clean and disinfect to prevent disease transmission and protect the health of students and staff, including the custodial staff? Does your organization have an infection control program protocol and policy for infectious diseases? What are your organization's standard precautions? What are "high-touch surfaces," how often should they be cleaned and with what products? What do we know about the types of disinfectants available, their efficacy and their impact on human health? Nancy will address these questions and discuss the revised guidelines and recommendations in the update to the Infectious Disease Control Guide for Schools from the Office of the Superintendent of Public Instruction and the Washington State Department of Health.

Leadership Session 10

2:25-3:20 p.m.

Asset Sustainability – Uniting Capital Asset Management, Energy Efficiency and Maintenance Management

Instructor: David Molinaro, Ameresco

Synopsis: Managing and maintaining a sustainable portfolio of buildings is

becoming increasingly challenging. As buildings continue to age, the need for capital investment to manage deferred maintenance is growing at an escalating rate. This session will explore two key steps that help capture total cost of ownership of the buildings and uncover strategies that can be used to "create capital" to close the funding gap and create a sustainable funding environment. Join Dan as he shares energy management approaches and best practices in preventive maintenance vs. reactive maintenance.

Custodial Session 10

2:25-3:20 p.m.

ATP Meters and Innovative Custodial Cleaning Tools

*Instructor: Chris Saffel
Ryan, Saffel & Associates*

Synopsis: Explore the use of new cleaning technologies that emphasize more efficient and effective tools and processes. Chris will examine the use of ATP metering technologies that determine the true cleanliness of hard surfaces. After all, if we can't measure cleanliness, we can't determine which processes work best.

Session 11, Hot Shop!

Hot Shop! is a hands-on training offered in a noncommercial way that supports the theme of the conference – **From Coveralls to the Corner Office**. This is a session you won't want to miss, with ten stations featuring a variety of cutting-edge facility and energy management technologies. Instructors are available at each table to answer questions and provide guidance.

Stick around after the session for **Hot Shop Reconnections** for sponsored appetizers and beverages and additional opportunities to visit the tables you found most relevant and interesting.

Day Three – May 9

Technical Session 12

7:30-8:25 a.m.

Cost-Effective Management Tools Showcase, Part One: No-Cost Tracking Methods (featuring Motor Master+ and Microsoft Excel)

Instructors: Tony Simon and Lee Link, WSU Energy Program

Synopsis: While there are tracking tools aplenty on the market, you do not have to spend a fortune to provide good motor tracking. This session showcases Motor Master+, a free web-based tracking software application, as well as methods of graph and data manipulation with Microsoft Excel to better track and tell your story to fiscal decision-makers.

Custodial Session 12

7:30-8:25 a.m.

Improving Results through Standardization and Accountability

Instructor: Michael Gibson, Diversey

Synopsis: Join the discussion of how to improve overall custodial team results by setting realistic standards. This session will also focus on establishing effective programs, tools and training, and implementing a method of accountability.

Technical Session 13

8:30-9:25 a.m.

Cost-Effective Management Tools Showcase, Part Two: Effective Facilities and Energy Self-Assessment Tools

Instructors: Larry Covey and Marcia Karr, WSU Energy Program

Synopsis: Part Two of Cost-Effective Management Tools Showcase focuses on computerized self-assessment tools. This session will introduce you to the Facilities Inventory and Condition Assessment Program (FICAP) and the Commercial Auditing Program (CAP 12), which focusses on energy.

Session Descriptions

Custodial Session 13

8:30-9:25 a.m.

Hot Topics: Successful Team/Day Cleaning and “Engineered Water Cleaning in the Era of the Superbug”

*Presenter: Michael Smith,
Western Washington University*

Synopsis: Join Michael as he discusses successful team/day cleaning in school districts, higher education and other commercial and institutional organizations. Stick around to learn more about reducing residues with nonchemical cleaning in the age of the superbug.

Technical Session 14

9:40-10:35 a.m.

Mini Data Loggers and How to Achieve Low-Cost Operational Improvement

Instructors: Greg Jourdan, Wenatchee Valley College; and Rich Prill, WSU Energy Program

Synopsis: Discover strategies to solve common low-cost energy and O&M challenges within your buildings. Greg and Rich will provide real-world examples and case studies for improving energy efficiency and improving

occupant comfort and productivity. What gets measured gets controlled; you can't manage what you don't measure.

Custodial Session 14

9:40-10:35 a.m.

Emergency-Ready Profile: A Startup Approach to Begin Mitigation and Recovery Services

Instructor: Joe Feola, ServPro

Synopsis: Learn how to complete a pre-emergency assessment and what critical information to gather so recovery and cleanup from a facility-damaging event can be completed thoroughly and quickly.

Technical Session 15

10:40-11:35 a.m.

The What, When and Why of Variable Refrigerant Flow

*Instructor: Marcia Karr,
WSU Energy Program*

Synopsis: The market share for VRF systems is soaring, dominating more than 80 percent of the Japanese and European markets. Find out what VRF can do for your energy savings, tenant comfort, design flexibility, tenant metering and more.

Custodial Session 15

10:40-11:35 a.m.

Workplace Tragedy – When it Happens to You

*Instructor: Gene Woodard,
University of Washington*

Synopsis: School shootings and other acts of public violence seem to be hitting the news more and more these days. When these kinds of tragedies hit, managing amidst the aftermath can be an extremely sensitive challenge. Gene recounts his experience of an employee-related tragedy at the University of Washington, offers guidance on how to deal with workplace tragedy and handle the aftermath, and discusses methods to help prevent such incidents.

Custodial Session 16

11:40-12:35 a.m.

Custodial Roundtable

Synopsis: Join us for a wrap-up of the Custodial Connections track, where we will discuss hot-button topics and share invaluable lessons learned and resources.

Introducing the EFC Innovations Award

We want to hear about your innovations! To help stimulate the submission of these creative best practices, we are creating the EFC Innovations Award. The award will be given out each year at the Energy/Facilities Connections Conference to recognize the most innovative success(es).

Submit your innovation online:
<http://www.energy.wsu.edu/PublicFacilitiesSupport/PlantOperations/EFCInnovationsAward.aspx>

Energy/Facilities Connections Lite

In an effort to expand on the Energy/Facilities Connections theme, we are planning to host one-day workshops at various locations around Washington state. Each workshop will have a focused topic (such as lighting, lean management and renewable energy). Keep your eyes peeled for additional information, and please send us your thoughts and ideas about topics you would be most interested in learning about at a one-day training event. Contact the EFC Planning team, 360-956-2057, or e-mail plantops@energy.wsu.edu.

Hot Shop! Guide – Wednesday, 3:25 - 5:00 p.m.

Table 1 **EBCx, Facility Prime and Power Distribution Electrical Services**

Instructors: Dewayne Collins & Cassandra Beck, Siemens

Learn about Existing Building Commissioning (EBCx) for optimization and energy efficiency; Facility Prime, the user interface that works the building with you; and Power Distribution Electrical Services, which provides proactive protection of your infrastructure assets.

Table 2 **Alternative to Trenching: Industrial Wireless Communications**

Instructors: Mark Twietmeyer, URS Electronics; and Steve Rice, Pelco by Schneider Electric

URS Electronics and Pelco by Schneider Electric demonstrate the latest in thermal imaging for closed-circuit television (CCTV) applications. Items being showcased include a Digital Sentry Video Management System on a Digital Sentry Server, a Spectra HC PTZ camera and various Sarix IP Megapixel fixed cameras.

Table 3 **SmartDrive Variable Frequency Drive and Jade Economizer**

Instructors: Darrell Wilson & Tom Bissonnette, M.I. Controls

Learn about how the SmartDrive VFD can save energy and maintenance costs. Also featured at this table is the Jade Economizer, which works in concert with the HVAC system to bring in the free cool air of the Pacific Northwest whenever cooling is required.

Table 4 **Controls Integration Plan**

Instructors: Kim Kelley & Melinda Nelson, ESC Automation

Learn about the Controls Integration Plan currently being implemented in two schools. At this table you will

hear an overview of the methods used to integrate HVAC controls, lighting, access and security, and learn more about potential cost savings to the owner.

Table 5 **Rooftop Retrofit Technology**

Instructors: Justin Sipe & James Marker, Transformative Wave Technology

Hear about the Catalyst, a complete HVAC energy efficiency upgrade with numerous components. When applied, this technology can reduce HVAC energy usage by 25 to 40 percent. In addition, learn about the eIQ Energy Intelligence platform, which allows real-time monitoring and control over the web, as well as energy savings and historical behavior reporting, advanced fault detection and demand response.

Table 6 **Wireless Energy-Saving Retrofit Solutions for Lighting Systems**

Instructor: Josh Havekost, Lutron Electronics

This table showcases the ease of using Lutron's Lighting Control solutions in an existing building. These solutions are designed to save energy by reducing the lighting and electrical load.

Table 7 **Solar Technology**

Instructor: Phil Lou, WSU Energy Program

Learn about the power of sunlight: the most recent innovations in solar energy technology, decreasing costs, available incentives and optimal applications.

Table 8 **Measurement and Troubleshooting Tools**

Instructor: Greg Jourdan, Wenatchee Valley College

Professor Greg Jourdan at the Building Operator Certification table will offer a close-up look at an essential toolkit for building combustion, thermal and air quality analysis. Featured tools include hand-held temperature probes, pressure gauges, digital multimeters, calibration equipment, infrared cameras, light meters, data loggers and much more.

Table 9 **Security Card, Access and Video**

Instructors: Kenneth Young & Chuck Ross, Honeywell; and Michael Coffey, MacDonald-Miller Facilities Solutions

Discover how security card, access and video can be integrated with a common platform among multiple systems, such as security, lighting and HVAC. The results are cost savings, flexibility and a reduction in energy and lifecycle costs.

Table 10 **LED and Outdoor Lighting**

Instructor: Fritz Feiten, Ameresco

New LED light fixtures seem to be introduced on the market almost every day. But what really works? What kinds of LED retrofits are actually being done today? Ameresco and NW Edison will answer these and other questions about LED lighting with (vendor neutral) sample fixtures, rated life and payback information, and real-world retrofit examples from K-12 schools, higher education, and state and local government.

Stick around after the session for **Hot Shop Reconnections** – from 5:00 - 7:00 p.m. – for sponsored appetizers and beverages and additional opportunities to visit the tables you found most relevant and interesting.



Plant Operations Support Consortium

The award-winning Plant Operations Support Consortium is a self-sustaining unit of the WSU Energy Program. The Consortium provides vital facilities and operations support to professionals. Join more than 125 state agencies, schools, colleges, ports, utilities and municipalities, and tribal and non-profit agencies in a collaborative 'family' doing more with less. Consortium staff assist facility managers across the Pacific Northwest with their public works, project

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