

hpb+w  
HIGH-PERFORMANCE  
BUILDINGS+WORKPLACES

# DIRECTORY



MAY 17-18, 2017

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HPB+W Booth 712

# WELCOME!

## TABLE OF CONTENTS

Welcome to HPB+W .....	1
Show Highlights .....	2
Schedule at a glance .....	3
HPB+W Partners .....	4
Sessions by Track/CEU details .....	5
Conference Sessions .....	7
QuickFire Sessions in Expo .....	17
Exhibitors .....	18
Exhibitors by Category .....	26
HPB+W Expo Map .....	28
Upcoming Events .....	31
Show Extras .....	32
HPB+W Conference Rooms Map .....	33
Ad Index .....	33

*"If you want to build a high performance organization, you've got to play chess, not checkers."*

*- Mark Miller, Vice President of High Performance Leadership, Chick-fil-A Inc.*



Welcome to the chess board, otherwise known as the High-Performance Buildings + Workplaces conference and expo. Here, you'll have access to education, products and conversations to help you develop a strategic approach to optimizing building operation, staff performance and occupant comfort. Our agenda is geared toward helping you make the right decisions for your facility, whether it's brand new or an existing one. From financing energy efficiency initiatives

to training staff on the latest technologies to understanding how codes and rating systems impact your organization, HPB+W gives you the insights you need to create a winning approach to facility management.

The term 'high-performance' is making its way to all aspects of an organization, and nowhere is this more evident than in the technologies and innovations on display in the HPB+W Expo. Each day you'll have an unbeatable opportunity to explore and discover how advances in building automation, IoT, building envelope applications, HVAC equipment and sustainable furnishings all contribute to a green, efficient, smart facility. We've also brought back the popular QuickFire sessions—20-minute informational presentations designed to get you up to speed with the latest technology and trends, directly from the vendor. Make your way to the QuickFire theatre in the Expo, and see the complete presentation schedule on page 17.

We're thrilled to see the evolution of High-Performance Buildings + Workplaces; in just three years, this vital industry movement has been embraced throughout the facility management community. We look forward to great conversations among attendees, speakers and exhibitors in the coming days and discovering new ways to work together to advance the important mission of optimizing the performance and value of every building. Enjoy the show.

Best regards,

Wendy Dietzler  
Vice President, Education  
wendy.dietzler@tradeexpress.com

## SHOW SCHEDULE

### TUESDAY

1:00 PM - 3:00 PM

Workshop: Evaluating Building Water Use Efficiency and Future Costs, Room M1/2

### WEDNESDAY

8:00 AM - 11:00 AM Conference Sessions

11:00 AM - 3:00 PM Expo Hall Open

2:00 PM - 3:00 PM Opening Day Reception in Expo

3:10 PM - 5:00 PM Conference Sessions

### THURSDAY

8:00 AM - 11:00 AM Conference Sessions

11:00 AM - 2:00 PM Expo Hall Open

2:10 PM - 4:00 PM Conference Sessions

# SHOW HIGHLIGHTS

## QUICKFIRE SESSIONS/DEEP DIVES

Wednesday, 11:30 a.m. – 2:00 p.m.

Thursday, 11:30 a.m. – 1:30 p.m.

### EXPO HALL

Join leading equipment and service providers and HPB+W speakers for some rapid learning directly on the expo hall floor. These presentations are designed to get you up to speed with the latest technology and trends in the industry. For more information and a complete session schedule, see page 17.

## OPENING DAY RECEPTION

Wednesday, 2:00 – 3:00 p.m.

### EXPO HALL

To celebrate the first day of HPB+W, we're hosting a reception in the expo hall! Join your fellow industry experts for a chance to meet and connect, all while enjoying free appetizers and cocktails.

## VIP PIN PROGRAM

### EXPO HALL

Sport your VIP Pin and connect with exhibitors on the expo floor for a chance to win \$50 on the spot. Pins can be found at the HPB+W booth, #601. The undercover HPB+W Prize Team will select winners at random, every half hour.

## \$500 DAILY CASH PRIZE DRAWING

Wednesday, 2:45 p.m.

Thursday, 1:45 p.m.

### EXPO HALL

We're awarding a cash prize of \$500 to a lucky HPW+W attendee Wednesday afternoon at 2:45 and Thursday afternoon at 1:45. Drawings will take place on the Main Stage in the Expo Hall. Be sure to drop your entry form off — found on the back of your attendee badge — at the prize ballot box in Booth #306.

In addition to the cash prize, the winner will receive a free, one-year membership to NFMT's exclusive member program. You must be present to win – good luck!

## LUNCH IS ON US!

### EXPO HALL

You don't have to go far to get a quick bite to eat at HPB+W. Redeem your complimentary \$10 lunch coupon at the HPB+W Café in the expo hall.

## SOCIAL MEDIA

Use the hashtag #HPBW17 to stay connected. We love seeing pictures, posts, feedback and aha moments from you!



# CONFERENCE SESSIONS AT-A-GLANCE

## SESSION ROOM TITLE

## TUESDAY, MAY 16

### 1:00 – 3:00 p.m.

WK1 M1/2 Evaluating Building Water Use Efficiency and Future Costs

## WEDNESDAY, MAY 17

### 8:00 – 8:50 a.m.

W1.1 M1/2 Converged Building Networks: The Foundation of a True Intelligent Building  
 W1.9 M9/10 What Goes Wrong with LED Lighting and Why  
 W1.11 M11/12 Finding the Money: Leveraging New Financing Tools for Energy Efficiency and Renewable Energy

### 9:00 – 9:50 a.m.

W2.5 M5/7 Trends in Commercial Real Estate: A Study of IEQ, WELL Building Standard, BREEAM and ASHRAE Standard  
 W2.6 M6/8 Strategies for Improving Energy Performance in Existing Buildings

### 10:00 – 10:50 a.m.

W3.1 M1/2 Understanding Your Smart Building Cyber Vulnerabilities  
 W3.5 M5/7 Innovative Workplaces and WELL Certification  
 W3.6 M6/8 An Energy Saving Project Report Card: Six Criteria to Evaluate Energy Efficiency Projects  
 W3.9 M9/10 How Buildings Use Water  
 W3.11 M11/12 PACE Financing: Overcoming the Domino Effect of Comprehensive Building Upgrades

### 3:10 – 4:10 p.m.

W4.1 M1/2 Assembling an Open Sourced Smart Building Team  
 W4.5 M5/7 Using Efficiency to Afford Improved Indoor Environmental Quality  
 W4.6 M6/8 Direct Current Energy Systems: The Buildings of the Future are Here  
 W4.9 M9/10 Leak Detection in Today's Connected Buildings  
 W4.11 M11/12 100% Financing for Efficiency Projects in Commercial Buildings

### 4:10 – 5:10 p.m.

W5.1 M1/2 What's LED Lighting Without Controls  
 W5.5 M5/7 New Standards for Indoor Environments  
 W5.6 M6/8 When the Machines Take over the Buildings  
 W5.9 M9/10 The Role of the Roof in Resilient Building Design  
 W5.11 M11/12 Drones: The New Frontier in Building Performance Testing

## SESSION ROOM TITLE

## THURSDAY, MAY 18

### 8:00 – 8:50 a.m.

T1.1 M1/2 Let the Data Do the Heavy Lifting: Using Advanced Data Analytics to Improve Your Building  
 T1.9 M9/10 Navigating New LEED EB Certifications  
 T1.11 M11/12 The VRF Advantage - And What it Means for Your Project

### 9:00 – 9:50 a.m.

T2.5 M5/7 Low-Hanging Fruit Grows Every 2 Years: Achieving Sustained Building Performance!  
 T2.6 M6/8 Large-Scale Building Technology Deployment Planning at the Pentagon  
 T2.9 M9/10 Building Intelligence – Massive Disruption Ahead

### 10:00 – 10:50 a.m.

T3.1 M1/2 Using Big Data and Building Energy Simulation Models for Smart Energy Efficiency Investments  
 T3.5 M5/7 Building Performance Strategies  
 T3.6 M6/8 The Whole Building Design Guide: The Right Tool to Achieve Resilient, High-Performance Buildings  
 T3.9 M9/10 Mission-Critical Retrofits in High Threat Environments  
 T3.11 M11/12 ASHRAE 90.1 2016 and IECC 2015: Understanding their Impact

### 2:10- 3:00 p.m.

T4.1 M1/2 How AI, BioT and Advanced Modeling Tools Impact the Design and Operations of High Performance Build  
 T4.5 M5/7 How to Overcome Facility Management Challenges and Improve Performance  
 T4.9 M9/10 Direct Current Battery technologies in Mission Critical and Commercial Buildings  
 T4.11 M11/12 Existing Building Commissioning for High-Performance Buildings

### 3:10- 4:00 p.m.

T5.1 M1/2 BIM2FM: Leveraging BIM to Achieve High-Performance Facility Management  
 T5.9 M9/10 Commissioning to Ensure Performance in Data Centers and Mission Critical Buildings  
 T5.11 M11/12 Why Today's Design, Controls and Commission Construction Process Delivers Inefficient Buildings

# THANK YOU

## Thank You to HPB+W 2017 Partners



## SESSIONS BY TRACK

5 tracks, 40 sessions, a wealth of education. We've built an agenda that lets you select the information you need now to run a high-performance facility tomorrow – and well into the future.



### Energy, Sustainability and Technology

Whether defined as a LEED-certified building that is energy and water efficient, or a people-friendly facility that earns high marks from occupants for creature

comforts, a high-performance building requires specific technologies to operate optimally. This track highlights products and strategies and that enhance building systems and buildings alike.

- WK1** Evaluating Building Water Use Efficiency and Future Costs
- W1.9** What Goes Wrong with LED Lighting and Why
- W2.6** Strategies for Improving Energy Performance in Existing Buildings
- W3.6** An Energy Saving Project Report Card: Six Criteria to Evaluate Energy Efficiency Projects
- W3.9** How Buildings Use Water
- W4.6** Direct Current Energy Systems: The Buildings of the Future are Here
- W5.9** The Role of the Roof in Resilient Building Design
- W5.11** Drones: The New Frontier in Building Performance Testing
- T1.11** The VRF Advantage - And What it Means for Your Project
- T1.9** Navigating New LEED EB Certifications
- T2.5** Low-Hanging Fruit Grows Every 2 Years: Achieving Sustained Building Performance!
- T2.6** Large-Scale Building Technology Deployment Planning at the Pentagon
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- T3.6** The Whole Building Design Guide: The Right Tool to Achieve Resilient, High-Performance Buildings
- T4.5** How to Overcome Facility Management Challenges and Improve Performance
- T4.11** Existing Building Commissioning for High-Performance Buildings
- T5.11** Why Today's Design, Controls and Commission Construction Process Delivers Inefficient Buildings



### Funding High Performance

For facility professionals seeking funding for cost-saving, sustainable projects, identifying just how these initiatives will be paid for is a must. Sessions in this track offer insights into programs that help building owners and managers locate and obtain financial options for a variety of energy efficiency, water conservation, and renewable energy projects.

- W1.11** Finding the Money: Leveraging New Financing Tools for Energy Efficiency and Renewable Energy
- W3.11** PACE Financing: Overcoming the Domino Effect of Comprehensive Building Upgrades
- W4.11** 100% Financing for Efficiency Projects in Commercial Buildings



### Health, Wellness and IAQ

One of the ultimate objectives of a high-performance building is a safe, secure, and healthy environment for occupants—one that simultaneously promotes their well-being and performance. These sessions feature impactful discussions of systems, technologies and strategies to create user-friendly facilities.

- W2.5** Trends in Commercial Real Estate: A Study of IEQ, WELL Building Standard, BREEAM and ASHRAE Standard
- W3.5** Innovative Workplaces and WELL Certification
- W4.5** Using Efficiency to Afford Improved Indoor Environmental Quality
- W5.5** New Standards for Indoor Environments

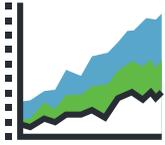


### Mission Critical Focus

The dual imperative of energy efficiency and power reliability require that data centers, hospitals and other mission critical facilities track, manage and optimize energy use 7x24x365. This track takes a deep dive into emerging innovations and methodologies.

- T3.9** Mission-Critical Retrofits in High Threat Environments
- T4.9** Direct Current Battery technologies in Mission Critical and Commercial Buildings
- T5.9** Commissioning to Ensure Performance in Data Centers and Mission Critical Buildings

## SESSIONS BY TRACK



### Smart Strategies: IoT, Data and Automation

The concept of a smart building has evolved to define one that includes data mining, the Internet of Things, automation and improved control over

various building systems. This track defines smart building concepts and offers examples of best practices in automation, data gathering, occupant behavior and monitoring.

- W1.1** Converged Building Networks: The Foundation of a True Intelligent Building
- W3.1** Understanding Your Smart Building Cyber Vulnerabilities
- W4.1** Assembling an Open Sourced Smart Building Team
- W4.9** Leak Detection in Today's Connected Buildings
- W5.1** What's LED Lighting Without Controls
- W5.6** When the Machines Take over the Buildings
- T1.1** Let the Data Do the Heavy Lifting: Using Advanced Data Analytics to Improve Your Building
- T2.9** Building Intelligence – Massive Disruption Ahead
- T3.1** Using Big Data and Building Energy Simulation Models for Smart Energy Efficiency Investments
- T4.1** How AI, BioT and Advanced Modeling Tools Impact the Design and Operations of High Performance Build
- T5.1** BIM2FM: Leveraging BIM to Achieve High-Performance Facility Management

### Become an INSIDER Today!

Sign up as a member today for just \$99 at booth #701 in the Expo and access the following HPB+W sessions at your convenience:



- W2.5** Trends in Commercial Real Estate: A Study of IEQ, WELL Building Standard, BREEAM and ASHRAE Standards
- W3.5** Innovative Workplaces and WELL Certification
- W4.5** Using Efficiency to Afford Improved Indoor Environmental Quality
- W5.5** New Standards for Indoor Environments
- W2.6** Strategies for Improving Energy Performance in Existing Buildings
- W3.6** An Energy Saving Project Report Card: Six Criteria to Evaluate Energy Efficiency Projects
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- T2.5** Low Hanging Fruit grows every 2 years: Achieving sustained building performance
- T3.5** Building Performance Strategies
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- T4.9** Direct Current Battery technologies in Mission Critical and Commercial Buildings
- T5.9** Commissioning to Ensure Performance in Data Centers & Mission Critical Buildings

## CONTINUING EDUCATION

Earn Continuing Education Units while attending HPB+W sessions....

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- Have your badge scanned as you enter each session
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- Click on each session title to access that session's specific 4-question learning outcome assessment. Score 70% or greater on each assessment to earn your CEU credit.



- Once you've completed the assessments for each session you attended, you can download and print your CEU transcript for your files.
- Self-report to the appropriate professional organizations using your HPB+W CEU transcript.

Questions? Please stop by the Continuing Education booth #723 in the HPB+W Expo, or contact Wendy Dietzler, vice president of education at [wendy.dietzler@tradepress.com](mailto:wendy.dietzler@tradepress.com)

# CONFERENCE SESSIONS

WEDNESDAY, MAY 17

8:00 AM

W1.1 • Room M1/2

SMART STRATEGIES: IOT, DATA AND AUTOMATION

## Converged Building Networks: The Foundation of a True Intelligent Building

*Bob Allan, Global Business Development Mgr, Intelligent Buildings, Siemon*

The Internet of Things (IoT) is changing the way of life as we know it, and low-voltage building system devices and LED lighting with advanced, embedded sensors are now converging on a single IP network and being powered by advanced power over Ethernet (PoE) technologies. These trends are reshaping buildings and workspaces, providing substantial capital and operational savings. For these advantages to come to fruition, the physical cabling infrastructure that supports it all must ensure maximum reliability and performance for devices and should be designed in way that is ideally suited for the convergence of devices over one unified network.

**Audience:** Beginner | **CEU:** 0.1

W1.11 • Room M11/12

FUNDING HIGH PERFORMANCE

## Finding the Money: Leveraging New Financing Tools for Energy Efficiency and Renewable Energy

*Billy Grayson, LEED AP, Principal, Bent Branch Strategies*

There is never enough money to pay for energy efficiency and renewable energy projects. As energy efficiency and renewable energy projects are getting more attractive, a number of new financing tools have hit the market. These programs will allow most building owners to make energy efficiency and renewable energy investments that reduce operating expenses and are cash-positive from day one. This session gives you practical advice about where to start looking for energy efficiency and renewable energy financing, and how to look out for pitfalls when choosing the right strategy to pay for your project.

**Audience:** Intermediate | **CEU:** 0.1

W1.9 • Room M9/10

ENERGY, SUSTAINABILITY AND TECHNOLOGY

## What Goes Wrong with LED Lighting and Why

*John Curran, PhD, President, LED Transformations, LLC*

LED technology offers building owners and facility managers opportunities to providing lighting effects impossible with traditional sources. Combined with control systems, the possibilities are almost endless. However, so too are the potential problems. This presentation will examine where things go wrong when characteristics of LED lighting are not fully considered. For example, legacy wiring and equipment can often create unexpected performance problems while forgotten bits of old control software can also create havoc. New features often provide unexpected consequences. Numerous field examples will be discussed, showing what can go wrong and how to avoid many of the problems.

**Audience:** Intermediate | **CEU:** 0.1

9:00 AM

W2.5 • Room M5/7

HEALTH, WELLNESS AND IAQ

## Trends in Commercial Real Estate: A Study of IEQ, WELL Building Standard, BREEAM and ASHRAE Standard

*Jake Steiner MSE, MBA, CEP, LEED AP WELL AP, Regional Manager, Healthy Buildings*

It is widely known that buildings have the potential to cause great swings in the performance of occupants. Owners and occupants of buildings have the common financial goal of economic returns, yet efficiencies have traditionally been measured in energy use. Decision makers have been reluctant to use human productivity as a tool because it has been hard to measure. With over 25 studies completed, capped by a landmark Harvard Study, the jury is in. There is a spectacular relationship between indoor air quality and human cognitive function, unleashing an entirely new set of economic considerations when operating commercial property.

**Audience:** Intermediate | **CEU:** 0.1

# CONFERENCE SESSIONS

**W2.6 • Room M6/8****ENERGY, SUSTAINABILITY AND TECHNOLOGY**

## Strategies for Improving Energy Performance in Existing Buildings

*Nick T. Floyd, Senior Project Manager,  
Simpson Gumpertz & Heger*

*Amrish K. Patel, Senior Staff II, Simpson Gumpertz & Heger*

Improving energy performance of existing buildings can be challenging. Existing building design and performance criteria may not be available, requiring investigation and analysis to understand a baseline level of performance before considering upgrades. Building envelope improvements in particular may not significantly improve the overall building energy performance if improperly designed or implemented. This presentation reviews existing building energy performance assessment, examines a variety of building envelope upgrades and modifications, and presents practical examples showing how poorly thought out improvements provided little to no improvement to the building's energy performance or resulted in detrimental to long-term effects.

**Audience: Beginner | CEU: 0.1**

**10:00 AM**

**W3.1 • Room M1/2****SMART STRATEGIES: IOT, DATA AND AUTOMATION**

## Understanding Your Smart Building Cyber Vulnerabilities

*Fred Gordy, Director of Cyber Security, Intelligent Buildings*

The race to Smart Buildings systems interoperability has not been the only thing to create "holes" in cyber security of these systems. These systems and the integration practices around them along with high priority on the openness and ease of use have multiplied the risk. Attendees will come away with an understanding of how to review their systems as whole to identify risk.

**Audience: Advanced | CEU: 0.1**

**W3.11 • Room M11/12****FUNDING HIGH PERFORMANCE**

## PACE Financing: Overcoming the Domino Effect of Comprehensive Building Upgrades

*Scott Ringlein, BSME, MSME, Founding Partner, The Energy Alliance Group of North America*

Comprehensive approaches to building upgrades can be likened to dominos falling: One element of an upgrade affects another, and can be delayed completely in favor of a piecemeal approach. While comprehensive upgrades undoubtedly save money in the long run, paying for them is the main obstacle. An emerging approach is the Property Assessed Clean Energy program, better known as PACE. This session provides an in-depth overview of the program and demonstrates how it can cover 100 percent of project costs to eliminate the domino effect of a comprehensive facility upgrade.

**Audience: Intermediate | CEU: 0.1**

**W3.5 • Room M5/7****HEALTH, WELLNESS AND IAQ**

## Innovative Workplaces and WELL Certification

*Raymond Carney, WELL AP, Vice President, Markon Solutions*

The WELL Building Standard™, is the first building standard to focus on enhancing people's health and well-being through the built environment. WELL Certification (and enhancing the seven concepts of air, water, nourishment, light, fitness, comfort, and mind) will assist you in designing and operating a work place that benefits your employees' overall well-being. The WELL Building Certification is an evidence based system for measuring, certifying, and monitoring the performance of building features that impact health and well-being of our workers. Learn what you can do to improve the work space for your employees.

**Audience: Beginner | CEU: 0.1**



For more information on CEUs for HPB+W sessions, please see page 6 for details, or contact Wendy Dietzler, vice president of education at [wendy.dietzler@tradepress.com](mailto:wendy.dietzler@tradepress.com)

# CONFERENCE SESSIONS

## W3.6 • Room M6/8

### ENERGY, SUSTAINABILITY AND TECHNOLOGY

#### An Energy Saving Project Report Card: Six Criteria to Evaluate Energy Efficiency Projects

*Jeff Julia, Manager, Energy Project Advisors*

The process of evaluating energy efficiency projects is a murky one that time and resource constrained professionals are challenged with. After working on nearly \$500M in energy efficiency projects over the last 6 years, the presenter has committed himself to making the process transparent and consistent. In this presentation, Julia presents the six tried and true criteria for effective evaluation of a project. These include provider, equipment, savings/benefits, incentives/tax credits, payment terms/options and needs alignment. Participants will gain an understanding of each criteria and a framework to evaluate them gaining firsthand experience using the tools provided.

**Audience: Advanced | CEU: 0.1**

## W3.9 • Room M9/10

### ENERGY, SUSTAINABILITY AND TECHNOLOGY

#### How Buildings Use Water

*Bill Hoffman, Principal, H.W. Hoffman and Associates*

The water and sewer bills come and get paid, but how is the water used—and how much should a typical commercial operation use compared to the competition? This presentation is based on the examination of current literature, decades of facility audits, extensive literature reviews, and benchmarking studies from across the USA and world that include tens of thousands of data points. Attendees will discover how building location impacts water use, and learn about of the most current building water use information from national sources including the EPA Water Sense Program, the DOE Energy Information Administration Commercial Buildings Energy Consumption Survey, EPA Energy Star Portfolio Manager database, and cities across the nation now requiring benchmarking of water use in commercial buildings.

**Audience: Intermediate | CEU: 0.1**

## 3:10 PM

## W4.1 • Room M1/2

### SMART STRATEGIES: IOT, DATA AND AUTOMATION

#### Assembling an Open Sourced Smart Building Team

*John Fabian, Director of Business Development, LVC*

*Ross Nelson LEED AP BD+C, CEM, General Manager, Harris Controls*

“Technology meets energy and resource efficiency” is at the heart of today’s smart building. Whether a new building or converting an existing structure, assembling the right team is imperative. Building design and uses vary, and its rare a single contractor will completely fit the bill, forcing you to compromise to accommodate their capabilities. Learn how to assemble a team that eliminates compromise and results in the end product you want. We will walk you through the process of identifying the anatomy of your dream team, sourcing experts and discuss the ongoing benefits of an open sourced smart building.

**Audience: Beginner | CEU: 0.1**

## W4.11 • Room M11/12

### FUNDING HIGH PERFORMANCE

#### 100% Financing for Efficiency Projects in Commercial Buildings

*Jonathon Blackburn, Managing Director, Texas PACE Authority*

The property assessed clean energy (PACE) model is an innovative mechanism for financing efficiency and renewable energy improvements, allowing commercial property owners to fund up-front costs of energy and water improvements from HVAC to building envelope upgrades to solar and more. This session provides real-world examples of how to leverage this financing to initiate an energy or water retrofit project.

**Audience: Intermediate | CEU: 0.1**

## W4.5 • Room M5/7

### HEALTH, WELLNESS AND IAQ

#### Using Efficiency to Afford Improved Indoor Environmental Quality

*Christopher Walinski, CEA, Building Operations Manager, Munich Reinsurance America, Inc*

Increasingly, studies are providing empirical evidence of the health benefits of improving indoor environmental quality. Reports such as Harvard University’s, “The Impact of Green

# CONFERENCE SESSIONS

Buildings on Cognitive Function,” and studies released in areas such as circadian rhythm lighting, show the potential health and productivity benefits to occupants and employers. This conversation will discuss strategies of how facilities can implement some of these improvements while still operating in a manner that was energy efficient and cost conscious.

**Audience:** Advanced | **CEU:** 0.1

## W4.6 • Room M6/8

### ENERGY, SUSTAINABILITY AND TECHNOLOGY

#### Direct Current Energy Systems: The Buildings of the Future are Here

*Andrew Yip, Manager - Business Development, Bosch*

Direct current (DC) microgrid technology is redefining how energy is generated and consumed, proving to be more attractive and innovative for commercial building owners than existing state of the art technologies. The DC microgrid removes power conversion devices to lower the cost of solar PV and energy storage ownership, improves building

load efficiencies, and provides reliability and resiliency to these facilities. The DC microgrid approach promotes the penetration of renewable energy and energy efficiency technologies to better serve emission reduction and zero net energy goals. Attendees will gain an understanding of DC microgrids and its applicability to their facilities.

**Audience:** Beginner | **CEU:** 0.1

## W4.9 • Room M9/10

### SMART STRATEGIES: IOT, DATA AND AUTOMATION

#### Leak Detection in Today's Connected Buildings

*Laurie Conner, President and CEO, The Detection Group, Inc.*

Water leaks in commercial buildings are the leading cause for insurance claims and add up to more than claims for theft and fire combined. Water leaks also have a negative effect on tenants and can require relocating tenants for extended periods of time, which impacts rents. The advent of wireless technology has changed this equation. Now, low cost wireless sensors that detect and notify management instantly of water leaks can be installed throughout commercial buildings wherever there is a potential for leaks. This presentation will discuss what to look for in a commercial-grade leak detection system.

**Audience:** Intermediate | **CEU:** 0.1

## 4:10 PM

## W5.1 • Room M1/2

### SMART STRATEGIES: IOT, DATA AND AUTOMATION

#### What's LED Lighting Without Controls

*Marc Migliazzo, Vice-President / Partner, EIS Lighting*

It's not just about how to pick the right LED lights or retrofit kits, you need to look past that and see the big picture. And what is the big picture? It's answering the questions like; how will you use the new lights and what is the best plan to control them? LEDs can do so much; on/off at will, dimming, daylight harvester, etc., but only if you have the right controls that work with the new LEDs. From wall switches to building controls: what is your plan? Attend this session to put a solution in place.

**Audience:** Beginner | **CEU:** 0.1



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## W5.11 • Room M11/12

### ENERGY, SUSTAINABILITY AND TECHNOLOGY

#### Drones: The New Frontier in Building Performance Testing

*Gerald Delaune RRO, RRC, REWC, WUFI, ITC, Project Consultant, Conley Group*

*Gary Williams, PMP, Senior Project Manager, Conley Group*

*Grant Hagen, EIT, Virtual Design & Construction Manager, The Beck Group*

*Thea Junt, LEED AP BD+C, Associate Director for Energy Conservation and Sustainability, UT Dallas Facilities Management*

*Norma Lehman, Associate Principal, The Beck Group*

As the market drives toward a net zero energy economy and increased emphasis on occupant health and well-being, the importance of the building envelope is paramount in both new and existing buildings. Traditional thermal imaging is a common, non-destructive way to uncover thermal bridging, insulation failures, air leakage, moisture intrusion and degradation of infrastructure but can be limiting, labor intensive and pose safety issues. By utilizing the cutting edge application of drones, we can now investigate building performance issues in a fast, safe, and non-destructive manner. This session will provide an overview of the issue, tools for investigation, evaluation methods, solution and results for a building on the campus of the University of Texas at Dallas.

**Audience:** Intermediate | **CEU:** 0.1

## W5.5 • Room M5/7

### HEALTH, WELLNESS AND IAQ

#### New Standards for Indoor Environments

*Simon Turner, LEED AP, WELL AP, CEO, Healthy Buildings*

The intersection of cognitive function research, WELL standards and new legionella standards from ASHRAE; breathing new life into our understanding of how humans interact with their indoor environments. During this session, attendees will gain an understanding on integrating the big picture of recent, game-changing studies that are revealing the power of indoor environmental quality and the impact on human performance. IAQ has massive potential to improve corporate productivity. Mr. Turner will share results of the most recent study (published by the Harvard School of Public Health), as well as anecdotes from his 30+ years of indoor environmental experience.

**Audience:** Intermediate | **CEU:** 0.1

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## CONFERENCE SESSIONS

**W5.6 • Room M6/8****SMART STRATEGIES: IOT, DATA AND AUTOMATION****When the Machines Take Over the Buildings**

*Jim Sinopoli, Managing Principal, Smart Buildings, LLC*

Building automation, building operations and related controls are going to be quite different in the near future: Automation will be less about wrenches and screwdrivers and more about a new vocabulary that includes artificial intelligence, robotic process automation, open edge software, self-managing systems, self-organizing networks, self-optimization systems and self-learning systems. These newer concepts will take some time to understand and absorb for facility owners and staff but in time it will become clear that self-learning systems can be just “another tool for the tool belt” providing key information for the issues facility engineers are addressing. Attend this session to learn what’s needed for higher-level building automation.

**Audience: Intermediate | CEU: 0.1**

**W5.9 • Room M9/10****ENERGY, SUSTAINABILITY AND TECHNOLOGY****The Role of the Roof in Resilient Building Design**

*Tom Hutchinson AIA, CSI, FRCI, RRC, RRP, Principal, Hutchinson Design Group, Ltd.*

*Ellen Thorp, CAE, Associate Executive Director, EPDM Roofing Association*

Recent powerful climate storms have the government discussing the need for resilient buildings: buildings that can withstand the storms, provide life safety and be repairable. Facility managers require sustainable, energy efficient and resilient buildings. The roofing system is often the first line of defense in catastrophic natural disasters. The roof can mitigate the impacts of these emergencies and allow a building to withstand and recover from the disruption. Resilience is increasingly being viewed as an important performance objective for construction and is being actively discussed at all levels of the building industry.

**Audience: Intermediate | CEU: 0.1**

THURSDAY, MAY 18

8:00 AM

**T1.1 • Room M1/2****SMART STRATEGIES: IOT, DATA AND AUTOMATION****Let the Data Do the Heavy Lifting: Using Advanced Data Analytics to Improve Your Building**

*Keith La Rose, Director of Business Development, CopperTree Analytics*

Many buildings have building automation systems which are producing massive amounts of data each day. That data is often discarded and not used to its full potential to bring value to the building owners, operators and occupants. This session will explore how advanced analytics software technology is unlocking the power of that data, by turning it into actionable insight which helps improve energy efficiency, occupant comfort, and capital equipment longevity. Real-world case study examples will be showcased, as well as a broad technical discussion about the state of the art in building analytics technologies.

**Audience: Intermediate | CEU: 0.1**

**T1.11 • Room M11/12****ENERGY, SUSTAINABILITY AND TECHNOLOGY****The VRF Advantage - And What it Means for Your Project**

*Jim Benville, Senior Manager of National Sales, LG Electronics USA*

Variable refrigerant flow (VRF) technology offers a unique set of advantages to both users and owners of the equipment, including cost-savings and a superior user experience, making it the smartest HVAC choice for new construction and renovation. This presentation will cover how VRF enables enhanced design opportunities, reduces building design and construction costs, and provides exceptional energy efficient operation.

**Audience: Beginner | CEU: 0.1**

# CONFERENCE SESSIONS

## T1.9 • Room M9/10

### ENERGY, SUSTAINABILITY AND TECHNOLOGY

#### Navigating New LEED EB Certifications

*Craig Sheehy, CPM, LEED AP, President/CEO, Envision Realty Services*

The session will include ways to simplify the LEED EB process and how to drive the business case value proposition. LEED EB Re-Certification Guidelines have been released; are your previously certified projects collecting the necessary documentation between certifications to become re-certified? Will the process be easy or painful? What do you need to know about LEED EB V.4? What is LEED Dynamic Plaque?

**Audience: Beginner | CEU: 0.1**

## 9:00 AM

## T2.5 • Room M5/7

### ENERGY, SUSTAINABILITY AND TECHNOLOGY

#### Low-Hanging Fruit Grows Every 2 Years: Achieving Sustained Building Performance!

*Mahesh Tharoor, Energy & Sustainability Consultant*

Building managers often wish for technology and major capital upgrades for their buildings. As the quick ROI projects gets done first, the higher capital projects often get left behind. But, the low hanging fruit continues to grow every year. This presentation explores Transwestern's best practice approach and ongoing measurement system to ensure buildings operate at high performance and opportunities are uncovered frequently. A few case study examples will be shared on uncovering low cost/no cost opportunities. Finally, examples of implementing capital projects with zero upfront capital will be discussed.

**Audience: Intermediate | CEU: 0.1**

## T2.6 • Room M6/8

### ENERGY, SUSTAINABILITY AND TECHNOLOGY

#### Large-Scale Building Technology Deployment Planning at the Pentagon

*Steven M. Carter, Consultant,*

*Richard K. Warner, PE, CxA, DCEP, EBCP, President/CEO, OME*

Get a firsthand account of how the U.S. Pentagon approached a major high-performance smart building project using adaptable processes that helped streamline

the planning process, reduces costs and enhance technology applications. Hear from the former government official who helped drive the high-performance building vision for the Pentagon Renovation project to learn how top federal agencies are implementing today, the technologies to enhance ROI, and how those benefits can be accessed by a range of commercial facilities as well.

**Audience: Advanced | CEU: 0.1**

## T2.9 • Room M9/10

### SMART STRATEGIES: IOT, DATA AND AUTOMATION

#### Building Intelligence — Massive Disruption Ahead

*Kurt Karnatz, President, Environmental Systems Design*

Intelligent building solutions have become core to real estate strategy. Service and solution providers embracing experiential outcomes (beyond the economic and environmental prerequisites) will thrive on the massive disruption ahead. In this session, Kurt Karnatz will articulate the state and misconceptions of building intelligence, the compelling business case for support and the future, including the technologies that will transform building experiential outcomes.

**Audience: Advanced | CEU: 0.1**

## 10:00 AM

## T3.1 • Room M1/2

### SMART STRATEGIES: IOT, DATA AND AUTOMATION

#### Using Big Data and Building Energy Simulation Models for Smart Energy Efficiency Investments

*Mark Ellsworth, Vice President of Sales, Bractlet*

Buildings are complex, with millions of interactions between equipment systems, the environment, and occupants. How can you know exactly how your building will respond to system optimization and equipment retrofits? How do you make sense of all the technology out there being offered to improve your facilities energy efficiency? This session will give attendees insight into how they can unlock the value of their buildings using big data analytics and building energy simulation (BES) models. Have confidence that you'll get the ROI you want with every investment using data analytics and physics-based digital representations of your facilities.

**Audience: Advanced | CEU: 0.1**

# CONFERENCE SESSIONS

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**T3.11 • Room M11/12****ENERGY, SUSTAINABILITY AND TECHNOLOGY**

## ASHRAE 90.1 2016 and IECC 2015: Understanding Their Impact

*Gary Short, PE, President, sys-tek*

This presentation will examine how energy codes develop and how they have evolved over the last 20 years. It will also focus on the positive impacts the energy codes and high performance buildings have had on the U.S. economy and how they have contributed to the reduction of carbon emissions. Gary will discuss how to interpret the energy codes and how these codes will have an impact on both new construction and existing renovation. Finally, it will explore the various options in implementing the codes and discuss the advantages and disadvantages of the various options allowed.

**Audience: Advanced | CEU: 0.1**

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**T3.5 • Room M5/7****ENERGY, SUSTAINABILITY AND TECHNOLOGY**

## Building Performance Strategies

*Doug Pearson PhD, EM, CEA, CFM, LEED, Executive Director  
Facilities Planning and Management, UW-La Crosse*

Sustainable building performance strategies consist of six fundamental components; site, energy, water, materials, indoor air quality, and maintenance. Optimizing the site takes into consideration the location, orientation, landscaping, impact on neighborhood and local ecosystems, transportation, parking, and physical security. Optimizing energy use will minimize dependence on fossil fuels by maximizing energy efficiency, and incorporating renewable energy technologies into the final design. Architects, builders and owners need to consider the concept of net zero energy buildings on every project.

**Audience: Intermediate | CEU: 0.1**

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**T3.6 • Room M6/8****ENERGY, SUSTAINABILITY AND TECHNOLOGY**

## The Whole Building Design Guide: The Right Tool to Achieve Resilient, High- Performance Buildings

*Richard Paradis, P.E., BSCP, Bd. Cert NCE, Director, Whole  
Building Design Guide, National Institute of Building Sciences*

Craftsmen, no matter how experienced, need the right tools to create a masterpiece. For building designers, contractors and facility managers, their masterpiece is a functional, resilient, high-performance building. To achieve that goal,

they also need the right tools, among which are BIM, GIS, COBie, CAFM and CMMS. But there is one more indispensable tool missing from this list - the Whole Building Design Guide® (WBDG). The recently updated WBDG is an online resource that provides information for the entire project team from an integrated, whole building, perspective. WBDG offers hundreds of topics, case studies, tools, and CE courses.

**Audience: Beginner | CEU: 0.1**

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**T3.9 • Room M9/10****MISSION CRITICAL FOCUS**

## Mission-Critical Retrofits in High Threat Environments

*Richard Hill, Facilities Administrator, Hawaii Electric Light*

Are you responsible for a data center, communications facility or central plant vulnerable to hurricanes, earthquakes or other lurking natural disasters in your area? Then your CIP must be both aggressive and effective in protecting your facility and its assets. You must do more than risk analysis. You must develop an action plan that adequately funds, accurately plans and properly executes a defense against nature's most awesome threats which can easily jeopardize your enterprise. This case study details an award-winning team-approach to ensuring success in one of the highest threat environments a facility manager can face - Hawaii Island.

**Audience: Advanced | CEU: 0.1**

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**2:10 PM**

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**T4.1 • Room M1/2****SMART STRATEGIES: IOT, DATA AND AUTOMATION**

## How AI, BioT and Advanced Modeling Tools Impact the Design and Operations of High Performance Build

*David Ellis, PE, LEED AP, Principal, Green MEP Engineering PLLC*

It is an exciting time to be involved in the design and management of facilities focused on high performance buildings. In the near future, emerging technologies in sophisticated energy modeling, growth in the Internet of Things into distributed components, and the potential of design and operations enhancements through the application of Artificial Intelligence tools will provide the foundation for growth in high performance buildings. This presentation provides an overview of how these technologies are evolving and will be employed.

**Audience: Intermediate | CEU: 0.1**

# CONFERENCE SESSIONS

## T4.11 • Room M11/12

### ENERGY, SUSTAINABILITY AND TECHNOLOGY

#### Existing Building Commissioning for High-Performance Buildings

*Tony DiLeonardo, LEED AP, CxA, President, Wick Fisher White*

In today's economy and culture, more owners, facility managers and building operators are looking for ways to decrease utility and maintenance costs. However, their time ends up being spent trying to maintain and repair building systems that should be working properly but, over time, have deteriorated. The presentation will guide attendees through each phase of the existing building commissioning process based on BCxA Best Practices and other industry resources, and will show how this process can be implemented into a facility's annual routine in an effort to improve building maintenance and operation.

**Audience:** Intermediate | **CEU:** 0.1

## T4.5 • Room M5/7

### ENERGY, SUSTAINABILITY AND TECHNOLOGY

#### How to Overcome Facility Management Challenges and Improve Performance

*Mike Stone, Product Manager, Infor*

35 percent of all physical assets are facilities and the majority of organizations consider maintaining facilities to be among their top costs. Almost half of all greenhouse emissions are generated by facilities and 75 percent of all generated electricity is consumed by facilities. Challenges like cost control, safety and security, optimizing operations, vendor and service management, and decision support all play a large role in the efficiency of the facilities organizations operate. Thankfully, technology has come a long way in helping improve facility management and operations, making them as high-performance as possible. Explore these challenges and their solutions in this session.

**Audience:** Intermediate | **CEU:** 0.1

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# CONFERENCE SESSIONS

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**T4.9 • Room M9/10****MISSION CRITICAL FOCUS**

## Direct Current Battery Technologies in Mission Critical and Commercial Buildings

*David Geary, PE, Vice President, Power Analytics*

*Keiichi Hirose, PhD, Executive Manager, NTT Facilities Inc.*

*Joe Suppers, Vice President & Senior Editor, DC-Nexus*

Sustainability, reliability, capital and operating expenses, these terms drive decisions during the design, construction and maintenance of facilities. A central focus within these decisions is the electrical requirements of facility inhabitants. Even as technology has changed on a variety of levels, the basic infrastructure that generates and distributes electricity has not. Today's business and social challenges require new solutions for electricity generation and distribution. Solutions based on direct current technology (DC) provide a path forward. Although DC based power was discounted many years ago, technology and process improvements have made DC solutions a viable and attractive options for mission critical and commercial properties.

**Audience: Intermediate | CEU: 0.1**

**3:10 PM**

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**T5.1 • Room M1/2****SMART STRATEGIES: IOT, DATA AND AUTOMATION**

## BIM2FM: Leveraging BIM to Achieve High-Performance Facility Management

*Michael Tardif, Managing Partner, Building Informatics Group, LLC*

Have you ever been able to extract building equipment data from a Building Information Model — easily, efficiently, and completely — project closeout? Isn't that the whole point of BIM? Learn how to specify, compile, validate, and receive from your design and construction teams the asset data you need to support high-performance facility management and operations and maintenance. This session explains how you can bridge the BIM2FM gap by specifying an electronic building information deliverable so that you receive information in a format compatible with your CAFM, CMMS, or IWMS systems without laborious, time-consuming, and error-prone manual data re-entry.

**Audience: Intermediate | CEU: 0.1**

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**T5.11 • Room M11/12****ENERGY, SUSTAINABILITY AND TECHNOLOGY**

## Why Today's Design, Controls and Commission Construction Process Delivers Inefficient Buildings

*William Gnerre, CEO and Co-Founder, Interval Data Systems*

*Gregory Cmar, CTO and Co-Founder, Interval Data Systems*

In this session you'll learn why most new buildings run inefficiently, wasting energy and maintenance labor. A case study will show how each of the three main players--design engineers, control contractors and commissioning authorities--contribute to this situation. The presenter will show why today's purchasing process is a main culprit in inefficient buildings, and participants will also learn how ASHRAE 36-P can be used to operate buildings more efficiently.

**Audience: Intermediate | CEU: 0.1**

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**T5.9 • Room M9/10****MISSION CRITICAL FOCUS**

## Commissioning to Ensure Performance in Data Centers and Mission Critical Buildings

*Wade Messer, PhD, Chief Operating Officer, Genelco Inc.*

There are many reasons for the paradigm shift in commissioning strategies. One of them is the understanding that self-performing the Cx portion of a project is like "the fox guarding the hen house". This mindset and recent trend is no longer the norm when it comes to commissioning. There is a real sense of urgency to develop a sound and thorough testing and scripting mindset, which can prevent costly disasters post turnover. Find out about this and other reasons to utilize a commissioning company at our session titled: "Commissioning to Ensure Performance".

**Audience: Intermediate | CEU: 0.1**



# QUICKFIRE SESSIONS

Join us in the HPB+W Expo for these rapid-fire presentations lasting only 20 minutes!

## WEDNESDAY, MAY 17

### 11:30 AM • Active Archive Seminar: Interactive Dashboards to Manage Facilities Information

Sponsored by: **ARC Technology Solutions • Booth 600**



Plan sheets, warranties, O&M manuals, maintenance logs, equipment lists, inspection reports, emergency procedures, as-builts: Do you know where each of these documents is located? Could you find them within 10 seconds? Learn how organizing your critical facilities documents into an effective active archive will boost efficiency and team productivity by creating a single-source for your facilities documents accessible from any device wherever you are at any time.

### 12:00 PM • Advantages of using Duro-Last: Custom Fabrication and Full Assemblies

Sponsored By: **Duro-Last Roofing • Booth 620**



Buddy Wilson be speaking on the advantages of using Duro-Last: Custom Fabrication and Full Assemblies. This will highlight the custom fabrication of our membrane, along with what items we offer to give building owners a full assembly under one warranty from our certified contractors.

### 12:30 PM • HVAC Controls - IoT in Commercial Facilities

Sponsored By: **Network Thermostat • Booth 420**



IoT (Internet of Things) is everywhere, including building HVAC controls. This session will explore the differences between residential 'smart' thermostats and commercial-grade 'network' thermostats, including comparisons of hardware, feature sets, network topology, user interface options and building automation integration.

### 1:00 PM • Next Generation Analytics for Continuous Commissioning and Predictive Monitoring

Sponsored By: **FacilityConneX • Booth 408**



Continuous commissioning introduced the idea that commissioning and energy management work should be ongoing to drive greater savings. However, the volume of information, equipment complexity, and operational demands make this difficult. Monitoring based Commissioning (MBCx) builds off the concept of continuous commissioning, but uses automation to deal with the complexity. MBCx combines continuous monitoring, fault detection and diagnostics, and building performance dashboards based on predictive analytics to provide continuous energy savings with full mobile visualization.

### 1:30 PM • The Future of Data Center Cooling

Sponsored By: **STULZ Air Technology Systems • Booth 607**



Don't just reject heat, put it to use. Join James Betts and discover how to address heat at the source by harnessing its energy, and employing it as an integral part of the entire data center cooling infrastructure. Outlining the potential of performance enhancements along with efficiency gains and footprint reductions. Elaborate on how scalable such solutions can be in a stand-alone configuration, within Micro-DC's, as an element of modular DC structures or fully integrated as part of large scale deployments.

### 2:00 PM • Window Replacement: Unrealized Benefits to Building Owners & Occupants

Sponsored By: **Apogee Enterprises • Booth 720**



Case studies will be presented to illustrate today's energy efficient glass, windows, curtainwall and storefront will greatly improve the work environment for building occupants. These products will stabilize the indoor temperature next to the windows, reduce noise, and provide more natural daylight while reducing glare. High performance window systems will improve a building's energy efficiency plus reduce the amount of capacity required for HVAC and lighting systems.

## THURSDAY, MAY 18

### 11:30 AM • The Benefits of Combined Heat and Power

Sponsored By: **White Harvest Energy • Booth 514**



For energy users in any industry, White Harvest Energy has a turnkey solution for you: we use our knowledge of available systems to help you determine what Combined Heat and Power technology you can incorporate to help reduce your energy costs. We also work with your current energy supplier to encourage them to help you install that technology.

## HPB+W DEEP DIVES

We've invited thought leaders to the podium to share high-performance studies, taking place Thursday afternoon at the QuickFire theater. Each takes place Thursday at the conclusion of the QuickFire Sessions.

### 12:00 PM • The Value of Engaging an Energy Efficiency Advisor

Presented by: **Jeff Julia, Energy Project Advisors**

The management team at an Austin high-rise condominium was evaluating the potential benefits of a lighting upgrade. In order to validate proposal claims, the team requested an Energy Project Report Card as part of its due diligence. This presentation details the results of the report card and the final decision of the management team to alter the original scope of the project for a more cost-effective outcome.

### 1:00 PM • Single Point of Infrastructure at the Pentagon

Presented by: **Rick Warner, OME**

As headquarters for the U.S. Department of Defense operations, the Pentagon was challenged to create a unified, open-system, integration of all facility infrastructure systems. This presentation presents the unique foundational approach taken to enable the Pentagon to navigate, monitor, and control all infrastructure systems at a single workstation and enjoy complete situational awareness.

## EXHIBITOR LISTINGS

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952-487-7558  
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www.cleantx.org**

CleanTX is an economic development and professional association for cleantech.

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The Dallas 2030 District is a unique private/public partnerships initiative in designated urban areas across North America, committed to reducing energy use, water use, and transportation emissions. Within this District, property owners and managers, local businesses, local government, utilities, and community stakeholders together benchmark, develop, and implement creative strategies for measuring progress towards common goals.

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Electro Industries/GaugeTech, a worldwide leader in sub-metering and power monitoring, manufactures products that reliably track energy usage and identify inefficiencies, while offering the latest technology in remote monitoring and self-calibration.

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Portsmouth, VA 23701  
757-392-3218  
www.li-hvac.com

Lindab Safe® HVAC duct systems are well-known, tested, and documented. Safe saves important installation time and is part of a reduced building energy plan. The system incorporates gasketed connections that fold forming a seal against the inside of the duct eliminating the need for duct sealer. Safe is a tight system that can be cleaned and recycled at the end of its lifecycle.

**Mitsubishi Electric US, Inc.  
Cooling & Heating****BOOTH# 500**

9730 Parkford Drive  
Dallas, TX 75238  
469-275-6846  
www.mehvac.com

Mitsubishi Electric's VRF technology can change the way you look at HVAC. City Multi is the perfect zoning and comfort solution for many buildings in the commercial market today. Through inverter technology City Multi can help save energy and be the green solution that you may be looking for. Come see how City Multi can help with your HVAC needs.

**Morton designBUILD****BOOTH# 715**

252 W. Adams St.  
Morton, IL 61550  
800-447-7436  
www.mortonbuildings.com

Morton designBUILD is a team of experienced construction professionals that works with customers and architects, from concept to completion, to create custom multi-use and commercial buildings. Supported by the full resources of industry-leading Morton Buildings, designBUILD uses a proven project delivery system to provide a seamless and transparent building experience.

**NEBB****BOOTH# 415**

301-591-0481  
www.nebb.org

**NetworkThermostat****BOOTH# 420**

5128 Strickland Ave.  
The Colony, TX 75056  
214-270-1974

**www.networkthermostat.com**

Since 1995, NetworkThermostat™ maintains the position of industry leader in providing internet thermostat solutions for facilities, small businesses, and commercial or light industrial applications. Our award winning products and technologies give simple, reliable HVAC controls, anywhere and anytime, to maximize energy savings while providing comfort to the occupants.

**New Age Casting****BOOTH# 508**

12630 W. Airport Blvd., Suite 100  
Sugar Land, TX 77478  
919-410-4857

**www.newagecasting.com**

Epoxy cast iron pipe.

**NICOR Inc.****BOOTH# 623**

2200 Midtown Place, N.E.  
Albuquerque, NM 87107  
800-821-6183  
www.nicorlighting.com

At NICOR, we're always looking for ways to make your lighting better. We continue to challenge our thinking, innovate, and improve our processes. Our success over the past 36 years has been built on delivering progressive lighting solutions designed to balance value with the highest design performance possible. We offer a complete line of LED and traditional lighting solutions in the residential, commercial and industrial lighting markets.

**ONICON Incorporated/Air Monitor Corporation****BOOTH# 406**

11451 Belcher Road S.  
Largo, FL 33773  
727-447-6140

**www.onicon.com www.airmonitor.com**

ONICON Incorporated and Air Monitor Corporation are manufacturers of water flow, airflow & energy meters for HVAC applications. These meters are ideal for campus energy, central plant, mixed use



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HPB+W Booth 601

## EXHIBITOR LISTINGS

facilities, multi-family residential buildings, etc. Retrofit kits are available for installation without shutdown, and communications protocols are available with all meters.

**Petasense Inc.****BOOTH# 314**

2 N 1st St., 5th Floor  
San Jose, CA 95113  
408-564-9815

[www.petasense.com](http://www.petasense.com)

Petasense builds wireless sensors and machine learning analytics software for predictive maintenance. We provide a simple, end-to-end solution to monitor the health of industrial equipment. Simply mount Petasense Vibration Motes to critical machines and start collecting conditional data in minutes. Our machine learning algorithms analyze sensor data, providing insights into the overall health of facilities in real time.

**PHILIPS****Philips Lighting****BOOTH# 320**

200 Franklin Square Drive  
Somerset, NJ 08873  
858-568-8962

[www.usa.lighting.philips.com](http://www.usa.lighting.philips.com)

Philips Lighting has more than 120 years of transforming how lighting is used to enhance the human experience. We provide a wide range of meaningful innovations — from light sources, luminaires and controls to lighting solutions and services — to address real needs and aspirations.

**Post-it® Brand****BOOTH# 416**

3M Center  
Maplewood, MN 55119  
651-733-4639

[www.post-it.com/dryerase](http://www.post-it.com/dryerase)

Post-it® Super Sticky Dry Erase Surface is a great way to save your company time and money. Easily transform ordinary old whiteboard, walls and tabletops into a writeable workspace. Please stop by for a free sample.

**Quench USA****BOOTH# 513**

780 5th Ave., Suite 200  
King of Prussia, PA 19428  
610-930-2325

[www.quenchonline.com](http://www.quenchonline.com)

Quench USA offers Water-as-a-Service™ solutions by providing filtered water systems, including bottleless water coolers, ice machines, sparkling water dispensers, and coffee brewers, to customers across the U.S., including over half of the Fortune 500. To learn more, please visit our website: [quenchonline.com](http://quenchonline.com).

**RE Whittaker Co.****BOOTH# 313**

302 S. Croton Ave.  
New Castle, PA 16101  
724-658-8568

[www.whittakersystem.com](http://www.whittakersystem.com)

R.E. Whittaker Company manufactures solutions for the long term maintenance of your carpet. The equipment and Crystal® family of chemistries form a system that has been globally proven over the last 25 years as an effective means to extend the life of your investment through low moisture carpet cleaning.

**SAME Dallas****BOOTH# 615**[www.samedallas.org](http://www.samedallas.org)**SAME Ft. Worth****BOOTH# 615**[www.samefortworth.org](http://www.samefortworth.org)**SecureTech Systems, Inc.****BOOTH# 616**

4500 Fuller Drive, Suite 135  
Irving, TX 75038  
817-869-0569

[www.securetechwave.com](http://www.securetechwave.com)

The WAVE Plus instant notification system transmits a detailed alarm message over the two-way radios carried by law enforcement officers and facility managers as soon as an alarm is triggered. The system also sends emails and text messages to personnel who do not carry radios. Other security and facility systems can be integrated with the WAVE Plus system to add radio annunciation to them.

**Siemon****BOOTH# 617**

101 Siemon Company Drive  
Watertown, CT 06795  
860-945-4200

[www.siemon.com](http://www.siemon.com)

Established in 1903, Siemon is an industry leader specializing in the design and manufacture of high quality, high performance low voltage infrastructure solutions and services. Headquartered in Connecticut, USA, Siemon is a global market leader offering the most comprehensive suite of copper and optical fiber cabling systems, cabinets, racks, cable management, data center power and cooling, and Intelligent Infrastructure Management solutions.

**SIMON**  
ROOFING™**Simon Roofing****BOOTH# 712**

70 Karago Avenue  
Youngstown, OH 44512  
330-629-7663

[www.simonroofing.com](http://www.simonroofing.com)

With 117 years of experience and 65 service centers, Simon Roofing is one of the largest, longest-operating commercial roofing manufacturers/contractors in the United States. Not only does Simon Roofing provide the highest-quality roof

# EXHIBITOR LISTINGS

repairs, restorations and replacements, but it also manufactures its innovative roofing products and houses a state-of-the-art laboratory dedicated to research and development, and sophisticated roof membrane testing and analysis.



## SPEER

**BOOTH# 707**

**3103 Bee Caves Road, Suite 135  
Austin, TX 78746  
512-279-0754  
www.eepartnership.org**

SPEER's mission is to accelerate the adoption of advanced building systems and energy-efficient products and services in the South-central U.S. Our purpose is to advance the understanding and adoption of energy efficiency as a low-cost energy resource, and to design, implement, coordinate, and support regional projects to promote high energy performance and clean distributed energy in the built environment.



## Starline

**BOOTH# 721**

**168 Georgetown Road  
Canonsburg, PA 15317  
724-597-7800  
www.starlinepower.com**

Starline products provides site managers with fast and economical solutions for supplying and expanding power distribution throughout facilities. Plug-In Raceway and Track Busway plugs can be accessed at any location to deliver a reliable and convenient power connection to keep offices, critical facilities and industrial environments working at peak efficiency. Take your facility to the next level with Starline.



## Stewart Engineering Supply

**BOOTH# 400**

**3221 E. Pioneer Parkway  
Arlington, TX 76010  
817-640-1767  
www.sesisupply.com**

Stewart Engineering Supply is a full service wide format print solution for architects, engineers and construction companies. We are an authorized dealer for Océ, KIP, and HP including the new HP PageWide. We offer supplies and repair for wide format printers, as well as reprographic services.

## STULZ Air Technology Systems

**BOOTH# 607**

**1572 Tilco Drive  
Frederick, MD 21704  
240-529-1265  
www.stulz-usa.com**

STULZ-USA is a manufacturer of precision environmental control equipment for data centers and mission critical applications. STULZ offers a full line of CRACs, CRAHs, air handling units (AHUs), ultrasonic humidifiers, and also engineers custom solutions. STULZ proudly designs and manufactures all products in their ISO-9001 facility in Frederick MD, USA

## sys-tek

**BOOTH# 722**

**2801 NW State Route 7  
Blue Springs, MO 64014  
713-225-9009  
www.sys-tek.com**

Since 1995, sys-tek has offered mechanical, electrical, plumbing consulting engineer and commissioning services. Sys-tek's hands-on experience spans a variety of industries including healthcare, life sciences, government/ municipal, mission critical and education. Our skill sets include both innovative design combined with real know-how commissioning. Services we provide include: MEP engineering, electrical engineering, TAB,

technical commissioning, construction management and ARC test flashing.



## TEXAS PACE AUTHORITY

### Texas PACE Authority

**BOOTH# 421**

**98 San Jacinto Blvd., Suite 1900  
Austin, TX 78701  
855-738-7223**

**www.texaspaceauthority.org**

The Texas PACE Authority uses a market-based approach to energy finance to administer Texas' Property Assessed Clean Energy (PACE) program. PACE enables Texas businesses to access up to 100% long-term, affordable private financing for energy and water efficiency retrofits. PACE projects pay for themselves. Learn how PACE can help you increase net operating income and building value.

## Trane

**BOOTH# 613**

**1617 Hutton Drive  
Carrollton, TX 75006  
469-758-3083  
www.trane.com**

Trane®, a business of Ingersoll Rand, is the world leader in creating and sustaining safe, comfortable and energy efficient environments. Trane Building Advantage™ is a portfolio of energy services and solutions that turn buildings into business advantages by helping building owners realize real outcomes that matter.

## U.S. Department of State

**BOOTH# 713**

**1701 N. Fort Myer Drive, Suite 1140  
Arlington, VA 22209  
703-875-4523  
www.careers.state.gov**

The U.S. Department of State is the lead foreign affairs agency formulating and implementing the President's foreign policy and representing the interests of the United States throughout the world. The Department carries out this mission at over 270 embassies around the world.

# EXHIBITOR LISTINGS

A Foreign Service Facility Manager (FSFM) manages the operations and maintenance of the Department of State's real property assets abroad.



## TEXAS

### USGBC Texas

**BOOTH# 321**

**1909 Woodall Rodgers Freeway, Suite 100  
Dallas, TX 75201  
214-571-9244  
www.usgbcnorthtexas.org**

The mission of USGBC Texas is to transform the way buildings and communities are designed, built, and operated, enabling an environmentally and socially responsible, healthy, and prosperous environment that improves the quality of life for all Texans.

### Vector Concepts, Inc.

**BOOTH# 717**

**9010 N. Royal Lane, Suite 110  
Irving, TX 75063  
972-399-1303  
www.vectorconcepts.com**

We are a 25 year company that takes great pride in offering the best products and providing the best customer service. We are able to cover all your flooring needs.

### Vortex Industries

**BOOTH# 316**

**2210 Hutton Drive #103  
Carrollton, TX 75006  
800-698-6783  
www.vortexdoors.com**

Complete door and dock leveler service since 1937. We service, repair, and sell: rolling steel doors, sectional overhead doors, high speed doors, fire doors, security gates and operators, hangar doors, hollow metal doors, storefront doors, automatic doors, ADA compliant doors and hardware, storefront windows / emergency board up services, dock levelers, dock shelters, and roof hatches. 24/7/365 service available.

### Western Colloid Roofing Systems

**BOOTH# 520**

**402 Four T Ranch Road  
Georgetown, TX 78633  
512-948-2883  
www.westerncolloid.com**

Manufacturer of FM 4470 Class 1 approved fluid applied reinforced roof systems. Monolithic, sustainable, multi layered roof systems designed to meet your buildings needs. Warranties from 5 - 25 years. We also offer solutions for existing coal tar.

### White Harvest Energy

**BOOTH# 514**

**9709 Mountaineer Drive  
Ooltewah, TN 37363  
312-515-8032  
www.whiteharvestenergy.com**

For energy users in any industry, White Harvest Energy has a turnkey solution for you: we use our knowledge of available systems to help you determine what Combined Heat and Power technology you can incorporate to help reduce your energy costs. We also work with your current energy supplier to encourage them to help you install that technology.

### Wiss, Janney, Elstner Associates Inc.

**BOOTH# 612**

**6363 N. State Highway 161, Suite 550  
Irving, TX 75038  
972-550-7777  
www.wje.com**

WJE architects, engineers, and materials scientists investigate and design repairs for existing building envelope problems. Based on experience with new construction and the lessons learned from previous investigations of building envelope problems, WJE professionals are equipped to evaluate and design solutions based on an accurate diagnosis of each building's unique problem.



### Yardi Systems Inc.

**BOOTH# 417**

**430 S. Fairview Ave.  
Goleta, CA 93117  
858-737-2726  
www.yardi.com**

The Yardi® Smart Energy Suite includes mobile-enabled energy management solutions for managing costs, consumption and sustainability initiatives. Property owners and managers can gain new insight into a portfolio's energy consumption with solutions for utility expense analytics, automated utility payables processing, resident and tenant billing, expense management, HVAC optimization, and more. Visit Yardi at booth #417 to learn more.

Stop by the QuickFire Theatre in the HPB+W Expo for quick, incisive presentations on the latest in building technology and innovation!

See page 17 for the complete schedule.

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HPB+W Booth 601

# EXHIBITORS BY PRODUCT CATEGORY

## ACOUSTICAL SOLUTIONS/SOUND MASKING

Apogee Enterprises Inc.....	720
Linx Industries.....	317

## AIR DISTRIBUTION/HUMIDIFICATION

HTS .....	512
Linx Industries.....	317
STULZ Air Technology Systems .....	607

## ARCHITECTURAL AND ENGINEERING SERVICES

sys-tek .....	722
USGBC Texas.....	321
Wiss, Janney, Elstner Associates Inc.....	612

## BENCHMARKING

Dallas 2030 District .....	709
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## BUILDING AUTOMATION/CONTROLS

HTS .....	512
NetworkThermostat.....	420
ONICON Incorporated/Air Monitor Corporation.....	406
Petasense Inc. ....	314
Siemon .....	617
sys-tek .....	722

## BUILDING AUTOMATION/SYSTEM INTEGRATION

Trane .....	811
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## BUILDING ENVELOPE

Apogee Enterprises Inc.....	720
CentiMark .....	301
Morton designBUILD .....	715
Wiss, Janney, Elstner Associates Inc.....	612

## BUILDING RESTORATION

Apogee Enterprises Inc.....	720
Simon Roofing.....	712
Texas PACE Authority .....	421
Western Colloid Roofing Systems.....	520

## BUILDING SERVICE CONTRACTING

Morton designBUILD .....	715
Vortex Industries .....	316

## COMMUNICATIONS TECHNOLOGY

Post-it® Brand.....	416
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## CONSTRUCTION SUPPORT SERVICES

Morton designBUILD .....	715
Stewart Engineering Supply.....	400
sys-tek .....	722

## CONSULTING

White Harvest Energy .....	514
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## CONTROL SYSTEMS

Hubbell Control Solutions.....	716
NetworkThermostat.....	420
Philips Lighting .....	320

## CONTROL SYSTEMS

Trane .....	811
-------------	-----

## DATA MANAGEMENT

FacilityConneX.....	408
Petasense Inc. ....	314

## DETECTION/DIAGNOSTIC EQUIPMENT

FacilityConneX.....	408
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## ELECTRICAL DISTRIBUTION

Connectrac .....	401
------------------	-----

## ENERGY MANAGEMENT SYSTEMS

Dallas 2030 District .....	709
FacilityConneX.....	408
HTS .....	512
NetworkThermostat.....	420
Starline.....	721

## ENERGY METERING AND MONITORING

Electro Industries.....	521
FacilityConneX.....	408
Petasense Inc. ....	314
Starline.....	721
Yardi Systems Inc. ....	417

## ENERGY PRODUCTS AND SERVICES

Hubbell Control Solutions.....	716
ISAVE Team.....	300
Linx Industries.....	317
Philips Lighting .....	320
STULZ Air Technology Systems .....	607
Trane .....	811
White Harvest Energy .....	514
Yardi Systems Inc. ....	417

# EXHIBITORS BY PRODUCT CATEGORY

## ENERGY-RENEWABLE

Dallas 2030 District .....	709
SPEER .....	707
Texas PACE Authority .....	421
White Harvest Energy .....	514

## ENVIRONMENTAL PREFERRED PRODUCTS

Quench USA .....	513
Western Colloid Roofing Systems .....	520

## ENVIRONMENTAL SERVICES/PRODUCTS/IAQ

ISAVE Team .....	300
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## FILTRATION

Quench USA .....	513
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## FLOORING

Connectrac .....	401
Simon Roofing .....	712
Vector Concepts, Inc. ....	717
RE Whittaker Co. ....	313

## HVAC

HTS .....	512
ISAVE Team .....	300
Linx Industries .....	317
Mitsubishi Electric US, Inc. Cooling & Heating .....	500
NetworkThermostat .....	420
ONICON Incorporated/Air Monitor Corporation .....	406
STULZ Air Technology Systems .....	607
sys-tek .....	722
Trane .....	811

## INSULATION

CentiMark .....	301
ISAVE Team .....	300

## INTERIOR PRODUCTS

NICOR Inc. ....	623
Philips Lighting .....	320

## LIGHTING

Air Cycle Corporation .....	413
Hubbell Control Solutions .....	716
NICOR Inc. ....	623
Philips Lighting .....	320

## MAINTENANCE PRODUCTS/SERVICES

Air Cycle Corporation .....	413
-----------------------------	-----

## OPERATIONAL SUPPORT SERVICES

Post-it® Brand .....	416
SecureTech Systems, Inc. ....	616
SPEER .....	707
Texas PACE Authority .....	421

## PAINTS AND COATINGS

Western Colloid Roofing Systems .....	520
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## PORTABLE HEATING AND COOLING

STULZ Air Technology Systems .....	607
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## POWER DISTRIBUTION/GENERATION

Siemon .....	617
White Harvest Energy .....	514

## PUBLICATIONS

<i>Building Operating Management Magazine</i> .....	601
---	-----

## ROOFING

Duro-Last Roofing Inc. ....	620
FiberTite Roofing Systems by Seaman Corp. ....	501
Simon Roofing .....	712
Western Colloid Roofing Systems .....	520
Wiss, Janney, Elstner Associates Inc. ....	612

## SOFTWARE

ARC Technology Solutions .....	600
Petasense Inc. ....	314

## TRAINING/EDUCATION

BOMI International .....	621
<i>Building Operating Management Magazine</i> .....	601
Dallas 2030 District .....	709
NEBB .....	415
Post-it® Brand .....	416
SAME Dallas and SAME Ft. Worth .....	615
SPEER .....	707
Texas PACE Authority .....	421

## WATER TREATMENT

Quench USA .....	513
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## WINDOWS/WINDOW TECHNOLOGY

Apogee Enterprises Inc. ....	720
Wiss, Janney, Elstner Associates Inc. ....	612

## WIRING AND CABLING

Connectrac .....	401
Siemon .....	617

# EXHIBITOR MAP

## OPENING DAY RECEPTION IN EXPO HALL

Wednesday: 2 - 3 p.m.

## \$500 DAILY CASH DRAWING

2:45 p.m. Wednesday • 1:45 p.m. Thursday

Main Stage #306

## HPB+W CAFÉ OPEN DURING EXPO HOURS

Use your \$10 coupon!

## QUICKFIRE THEATER SCHEDULE

### Wednesday

- 11:30 a.m. Active Archive Seminar: Interactive Dashboards to Manage Facilities Information
- 12:00 p.m. Advantages of using Duro-Last: Custom Fabrication and Full Assemblies
- 12:30 p.m. HVAC Controls - IoT in Commercial Facilities
- 1:00 p.m. Next Generation Analytics for Continuous Commissioning and Predictive Monitoring
- 1:30 p.m. The Future of Data Center Cooling
- 2:00 p.m. Window Replacement: Unrealized Benefits to Building Owners & Occupants

### Thursday

- 11:30 a.m. The Benefits of Combined Heat and Power

## HPB+W DEEP DIVES @ THE QUICKFIRE THEATER

### Thursday

- 12:00 p.m. The Value of Engaging an Energy Efficiency Advisor
- 1:00 p.m. Single Point of Infrastructure at the Pentagon

### KEY

-  HPB+W
-  Prize Stage
-  QuickFire Theater
-  Continuing Education
-  NFMT Membership
-  HPB+W Café
-  Tables

QUICKFIRE  
THEATRE

322

320

321

420

316

317

416

314

315

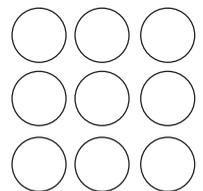
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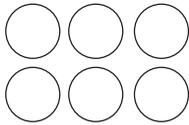
**EXPO  
HOURS**

**WEDNESDAY**

11:00 AM - 3:00 PM

**THURSDAY**

11:00 AM - 2:00 PM



421	520
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521	620
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623	722
621	720

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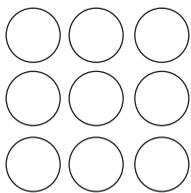
417	516
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413	512

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408	508
406	506



607	716
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709
707

401	500
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501	600
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BUILDINGS+WORKPLACES

601

701

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ENTRANCE

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HPB+W Booth 701

## FUTURE EVENTS

HPB+W is part of the NFMT family of events dedicated to advancing the mission of the commercial buildings industry. Please join us throughout the year at the following events.

## CRITICAL FACILITIES SUMMIT

criticalfacilities®  
SUMMIT

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Mission critical facilities can take on a life of their own within an organization, requiring skilled and specific engineering, operation and management strategies. That's why this event is tailored for 7x24 facilities such as data centers, hospitals, laboratories and trading centers. Attendees network, collaborate and learn in an intimate, focused environment. Whether you are implementing DCIM, considering colo, battling airflow issues or reinforcing security measures, this is the event for you.

[www.criticalfacilitiesummit.com](http://www.criticalfacilitiesummit.com)

## NFMT 2018

BUILDING OPERATING MANAGEMENT'S  
NFMT<sup>®</sup>2018  
National Facilities Management & Technology March 20-22, 2018 • Baltimore

Our flagship event, NFMT has been the premiere facilities management event for over 17 years. Over three days in Baltimore, attendees can attend sessions covering a wide range of topics including leadership, staff development, energy efficiency, safety and security, maintenance and operations and technology. Over 500 exhibitors offer attendees hands-on demonstrations of leading-edge technology to enhance the learning process.

[www.nfmt.com/baltimore](http://www.nfmt.com/baltimore)

## NFMT ORLANDO

BUILDING OPERATING MANAGEMENT'S  
NFMT<sup>®</sup>ORLANDO  
National Facilities Management & Technology November 14-15, 2017

NFMT Orlando is a complimentary two-day event attracting facilities professionals from government, education, commercial office, healthcare, retail, hospitality and industrial organizations. NFMT Orlando focuses on the key themes of sustainability, leadership and career development, safety and security, and maintenance and engineering.

[www.nfmt.com/orlando](http://www.nfmt.com/orlando)

FUTURE  
EVENT DATES

2017

## CRITICAL FACILITIES SUMMIT

October 23-25 • Minneapolis Convention Center

## NFMT ORLANDO

November 14-15 • Orange County Convention Center

2018

## NFMT 2018

March 20-22  
Baltimore Convention Center

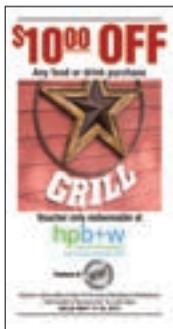


## SHOW EXTRAS

## SHOW CONCIERGE: BOOTH #601

Visit us during expo hours for all of your show needs:

- Additional directories
- Copies of *Building Operating Management* and *Facility Maintenance Decisions* magazine
- General show questions, comments, and feedback

CONCESSION  
STAND HOURS

Use your \$10 lunch coupon at the HPB+W Café located inside of the expo hall.

**Tuesday**  
11:00 A.M. – 3:00 P.M.

**Wednesday**  
11:00 A.M. – 2:00 P.M.

## SOCIAL MEDIA

#HPBW17

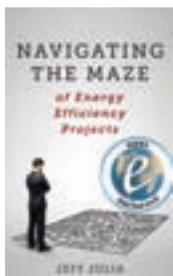
If you are posting about HPB+W on social media, make sure to include the official hashtag #HPBW17



## LOST AND FOUND

Misplaced something while you're at the Arlington Convention Center? Please check the Show Office, across the hall from Meeting room #9/10. Likewise, if you find an article left behind by a fellow attendee, please drop it off at the Show Office and we'll do our best to reunite it with its owner.

## MEET THE AUTHOR



Jeff Julia, HPB+W presenter and founder of Austin-based Energy Project Advisors, will have a limited number of signed copies of his latest book: "Navigating the Maze of Energy Efficiency Projects," available at the conclusion of his Deep Dive presentation Thursday afternoon at noon in the QuickFire theater in the HPB+W Expo. Stop by and pick up a copy before they're gone!

## SHOW HOTEL

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Arlington, TX 76011  
(800) 325-3535



## NFMT MEMBERS



Looking to know more about all things NFMT, the exclusive membership program for facility professionals? Learn more and become a member today – sign up at any HPB+W registration counter for only \$99! Here is a preview of

what our members receive:

- Access to handout materials prior to events
- Early sign-up for tours or events
- Special registration counters
- Members-only lounge on the expo floor
- Additional lunch coupons (1 per day)
- A NFMT Member shirt

Stop by Booth #701, learn more and sign up today!

## BATTER UP!

Try your hand at America's pastime in the HPB+W Expo! Clock your pitching speed and see how your at-bat average stacks up against the pros. We've set up batting and pitching cages in the Expo so you can channel your inner Jeter, Jackson, or Ruth!



## GET IN GEAR!



Are you a bandwagon Cubs fan? Or a down home Rangers fanatic? Score some MLB swag at our daily HPB+W Trivia test, taking place before the Daily Cash drawing in the Expo. Get to

the Prize Stage #306 at 1:30 p.m. Wednesday and 2:30 p.m. Thursday to test your high-performance know-how against fellow attendees –and take home some great gear along with serious bragging rights.

# CONFERENCE MAP

↑  
TO THE SHERATON

CONFERENCE ROOMS

M9/10    M11/12

M5/7    M6/8

M1/2    M3/4  
SPEAKER  
READY



## CONFERENCE HOURS

### WEDNESDAY

8:00 - 11:00 AM  
3:10 - 5:00 PM

### THURSDAY

8:00 - 11:00 AM  
2:10 - 4:00 PM

REGISTRATION

PARKING LOT

ENTRANCE

ENTRANCE

EXPO HALL

## EXPO HOURS

**WEDNESDAY**  
11:00 AM - 3:00 PM

**THURSDAY**  
11:00 AM - 2:00 PM

AD INDEX	BOOTH	PAGE
Critical Facilities Summit.....	#601	21
Mitsubishi Electric US, Inc. Cooling & Heating ....	#500	10
NFMT Membership .....	#701	30
NFMT Orlando Conference & Expo.....	#601	25
Simon Roofing.....	#712	C2
Starline.....	#721	C4
Stewart Engineering Supply.....	#400	15
Yardi Systems Inc. ....	#417	11

# Plug into the Power of Raceway.

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To learn more, visit [starlinepower.com/raceway](http://starlinepower.com/raceway).

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