2019 Summit
AGENDA & PROGRAM
July 10–11 ▪ Arlington, VA
Welcome to the 2019 Better Buildings, Better Plants Summit!

We are glad you are here and are excited to be working with you to improve the efficiency and resiliency of our nation’s buildings, manufacturing plants, and homes.

This annual Summit is the place for leaders like yourselves to exchange innovative, replicable energy, and technology management solutions. Together, you bring unique and valuable insights on pursuing affordable energy and economic growth across the country and I thank you for your willingness to share your success with others.

Over the next two days, you will participate in lively discussions with peers and industry experts on adopting advanced technologies, developing a skilled workforce, and building more resilient communities. We hope you leave the conference with actionable insights to advance your organization’s energy initiatives.

At the U.S. Department of Energy, we applaud your innovation, your achievements, and your commitment to America’s energy independence. We appreciate your leadership and look forward to our continued work as we strive for a more resilient, energy-efficient future.

Keep up the good work!

Sincerely,

Rick Perry
SECRETARY, U.S. DEPARTMENT OF ENERGY
### AGENDA AT-A-GLANCE
#### WEDNESDAY, JULY 10, 2019

#### MANUFACTURING
- **9:00 AM – 10:30 AM**: Executive Panel: Leadership in Efficiency and Sustainability
- **10:30 AM – 12:30 PM**: Concurrent Tracks
- **12:30 PM – 1:30 PM**: Networking Lunch**
- **1:30 PM – 3:00 PM**: MANUFACTURING Concurrent Tracks
- **3:00 PM – 3:30 PM**: Networking Break and Ask-an-Expert*
- **3:30 PM – 5:00 PM**: MANUFACTURING Concurrent Tracks
- **5:00 PM – 7:00 PM**: Networking Reception

#### SECTOR MEET-UPS
- **9:00 AM – 10:30 AM**: Sector Meet-Ups
- **12:30 PM – 1:30 PM**: Networking Break and Ask-an-Expert*
- **3:30 PM – 5:00 PM**: Sector Meet-Ups
- **5:00 PM – 7:00 PM**: Networking Reception

#### CONTINENTAL BREAKFAST
- **8:00 AM – 9:00 AM**: Registration Opens
- **9:00 AM – 10:00 AM**: Continental Breakfast

#### EXECUTIVE PANEL: LEADERSHIP IN EFFICIENCY AND SUSTAINABILITY
- **9:00 AM – 11:00 AM**: Executive Panel: Leadership in Efficiency and Sustainability
- **11:00 AM – 11:30 AM**: Networking Break and Ask-an-Expert*

#### NETWORKING BREAK AND ASK-AN-EXPERT* 
- **12:30 PM – 1:30 PM**: Networking Break and Ask-an-Expert*
- **3:30 PM – 5:00 PM**: Networking Break and Ask-an-Expert*

#### NETWORKING LUNCH**
- **12:30 PM – 1:30 PM**: Networking Lunch**

#### NETWORKING RECEPTION
- **5:00 PM – 7:00 PM**: Networking Reception

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*Ask-an-Expert – See page 8 for details.

**During the Networking Lunch, feel free to join discussions on specific topics including Zero Energy/Solar Decathlon, Building Envelope, Renewables Integration/Demand Flexibility, and Resilience. Look for table signs in the Regency Ballroom.
8:00 AM – 8:30 AM
REGISTRATION OPENS
INDEPENDENCE FOYER

8:30 AM – 9:00 AM
CONCURRENT TRACKS
9:00 AM – 10:30 AM

MANUFACTURING
MULTIFAMILY
EMERGING TECHNOLOGIES
BUILDING RESILIENCE
WORKFORCE DEVELOPMENT

REGENCY BALLROOM

Challenge the Champions: Experienced Energy Managers Tackle Your Biggest Energy Problems
REGENCY BALLROOM A
See page 21

Resilience Applications for Low-income Communities
WASHINGTON A
See page 21

Pushing the Building Envelope: The Impact of Cutting-Edge Technologies
WASHINGTON A
See page 21

Water and Wastewater Energy Security Planning
CONFERENCE THEATER
See page 22

Career Pipelines for Energy Efficiency
POTOMAC I
See page 22

10:30 AM – 11:00 AM
CONCURRENT TRACKS
10:30 AM – 11:30 AM

11:00 AM – 12:30 PM
MANUFACTURING
MULTIFAMILY
EMERGING TECHNOLOGIES
BUILDING RESILIENCE
WORKFORCE DEVELOPMENT

REGENCY BALLROOM

Champions: Experienced Energy Managers Tackle Your Biggest Energy Problems
REGENCY BALLROOM A
See page 21

New Tools for Your Multifamily Retrofit Toolbox
WASHINGTON A
See page 24

Beyond Widgets: Multi-Technology Integration and Connected Systems
WASHINGTON A
See page 24

Buildings of the Future: Commercial Partner Strategies for Building Resilience
CONFERENCE THEATER
See page 25

Cataloging a Diverse Energy Efficiency Workforce
POTOMAC I
See page 25

LUNCH/PLenary
12:30 PM – 2:00 PM

MANUFACTURING
MULTIFAMILY
EMERGING TECHNOLOGIES
BUILDING RESILIENCE
WORKFORCE DEVELOPMENT

REGENCY BALLROOM FOYER

How It’s Your Way: A Sustainability Round-Robin
REGENCY BALLROOM A
See page 24

Have It Your Way: A Sustainability Round-Robin
REGENCY BALLROOM B
See page 24

New Tools for Your Multifamily Retrofit Toolbox
WASHINGTON A
See page 24

Beyond Widgets: Multi-Technology Integration and Connected Systems
WASHINGTON A
See page 24

Networks for Energy Efficiency
POTOMAC I
See page 25

PANEL DISCUSSION, HEARING FROM THE EXPERTS
GOAL ACHIEVER AND PARTNER RECOGNITION
REGENCY BALLROOM

ISO 50001: Energy Management Systems in the Real World
WASHINGTON B
See page 27

Getting to 100%: Overcoming Barriers to Tenant Data Collection
WASHINGTON B
See page 27

Smart Decision-Making: Understanding Value Streams Beyond Efficiency for HVAC Systems
WASHINGTON A
See page 27

Financing for Resilience
CONFERENCE THEATER
See page 28

Building Your Own Skilled Trades Apprenticeship Program
WASHINGTON A
See page 27

FINANCING FOR RESILIENCE

Building Your Own Skilled Trades Apprenticeship Program
WASHINGTON A
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CONFERENCE THEATER
See page 28

Building Your Own Skilled Trades Apprenticeship Program
WASHINGTON A
See page 27

3:30 PM – 4:00 PM
CONCURRENT TRACKS
4:00 PM – 5:30 PM

NETWORKING BREAK AND ASK-AN-EXPERT*
REGENCY BALLROOM FOYER

CONCURRENT TRACKS
2:00 PM – 3:30 PM

4:00 PM – 5:30 PM

WORKFORCE DEVELOPMENT
RENEWABLES & ZERO ENERGY

REGENCY BALLROOM FOYER

Energy EfficientSHE:
Women’s Perspectives in Sustainability
POTOMAC V
See page 30

Beyond Solar: Other Renewable Energy, Thermal, & Energy Storage Strategies
POTOMAC I
See page 20

Beyond the Envelope: Energy Efficiency and the Future of the Building Industry
POTOMAC II
See page 22

Resilience Applications for Low-income Communities
WASHINGTON A
See page 21

Pushing the Building Envelope: The Impact of Cutting-Edge Technologies
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Water and Wastewater Energy Security Planning
CONFERENCE THEATER
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Career Pipelines for Energy Efficiency
POTOMAC I
See page 22

Learn more at betterbuildingsinitiative.energy.gov/summit

*Ask-an-Expert – See page 8 for details.
### KEYNOTES

#### WEDNESDAY, JULY 10

**OPENING PLENARY**

**EFFICIENCY AND SUSTAINABILITY LEADERSHIP AT THE EXECUTIVE LEVEL**

<table>
<thead>
<tr>
<th>Time</th>
<th>Location</th>
<th>Speaker 1</th>
<th>Title</th>
<th>Speaker 2</th>
<th>Title</th>
<th>Speaker 3</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>9:00 AM – 10:30 AM</td>
<td>Regency Ballroom</td>
<td>Danielle Azoulay</td>
<td>L’Oréal USA</td>
<td>Head of CSR and Sustainability</td>
<td>Chris Castro</td>
<td>City of Orlando, FL</td>
<td>Director of Sustainability and Resilience</td>
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<td></td>
<td></td>
<td>Randy Gaines</td>
<td>Hilton</td>
<td>Senior Vice President of Operations and New Project Development</td>
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Ready to be informed? Enlightened? The stage is set for the year’s most engaging conversation on energy and sustainability. The Summit’s opening plenary will feature three of the leading sustainability executives in the US from L’Oréal, Hilton and the City of Orlando, discussing a whole host of subjects including industry trends, the future of energy, resiliency, and how their organizations are able to maintain a strong commitment to energy efficiency.

#### THURSDAY, JULY 11

**LUNCH PLENARY – PANEL DISCUSSION**

**HEARING FROM THE EXPERTS: EMERGING TECHNOLOGIES & THINGS TO WATCH**

<table>
<thead>
<tr>
<th>Time</th>
<th>Location</th>
<th>Speaker 1</th>
<th>Title</th>
<th>Speaker 2</th>
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<th>Speaker 3</th>
<th>Title</th>
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<tbody>
<tr>
<td>12:30 PM – 2:00 PM</td>
<td>Regency Ballroom</td>
<td>Daniel Simmons</td>
<td>U.S. Department of Energy</td>
<td>Assistant Secretary, Office of Energy Efficiency and Renewable Energy</td>
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<td></td>
<td></td>
<td>Dr. Craig Blue</td>
<td>Oak Ridge National Laboratory</td>
<td>Director of Energy Efficiency and Renewable Energy Programs and Energy and Environmental Sciences Directorate</td>
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<td></td>
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<td>Dr. Martin Keller</td>
<td>National Renewable Energy Laboratory</td>
<td>Director</td>
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<td></td>
<td>Dr. Jud Virden</td>
<td>Pacific Northwest National Laboratory</td>
<td>Associate Laboratory Director, Energy and Environment Directorate</td>
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SPECIAL EVENTS

TUESDAY, JULY 9

SHOWCASE BUILDING TOURS
RESERVATION ONLY
See page 10 for details

SECTOR NETWORKING EVENTS
Commercial Real Estate; Education; Financial Allies; Healthcare;
Hospitality; Local Government, Retail Food Service & Grocery
Contact your sector lead for details

WEDNESDAY, JULY 10

ASK-AN-EXPERT
DURING BREAKS
Regency Ballroom Foyer
See page 8 for details

SPEED DATING WITH FINANCIAL ALLIES
SCHEDULED IN ADVANCE
Tidewater I

NETWORKING RECEPTION
5:00 PM – 7:00 PM
Regency Ballroom Foyer

SECTOR NETWORKING EVENTS
Industrial; Multifamily; State Government
Contact your sector lead for details

THURSDAY, JULY 11

GOAL ACHIEVER AND PARTNER RECOGNITION
12:30 PM – 2:00 PM
Regency Ballroom

ASK-AN-EXPERT
DURING BREAKS
Regency Ballroom Foyer
See page 8 for details

SPEED DATING WITH FINANCIAL ALLIES
SCHEDULED IN ADVANCE
Tidewater I

2019 SUMMIT
MOBILE APP

Use the mobile app to
- Build your personal schedule
- Network with attendees
- Provide feedback on the Summit

Search the App Store or Google Play
for "Better Buildings Summit"

Or visit with your web browser
event.crowdcompass.com/bbsummit19
# Ask-an-Expert

**Regency Ballroom Foyer**

A variety of technical experts from the Department of Energy and the National Laboratories are available at the Better Buildings Summit to answer your questions! Summit attendees are encouraged to stop by during breaks and discuss emerging technologies, new strategies from their respective fields, and ideas to approach projects within their own organizations.

Use the schedule below to see when experts on different topics will be available.

## Wednesday, July 10 — Regency Ballroom Foyer

<table>
<thead>
<tr>
<th>Time</th>
<th>Topic</th>
<th>Expert(s)</th>
</tr>
</thead>
<tbody>
<tr>
<td>3:00–3:30 PM</td>
<td>Building Data Analytics — Eliot Crowe, Lawrence Berkeley National Lab</td>
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<td></td>
<td>Data Centers — Dale Sartor, Lawrence Berkeley National Lab</td>
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<td></td>
<td>Energy Data — Hanaa Rohman, ICF</td>
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<td>Residential Data Tools — Maddy Salzman, DOE</td>
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<td>Smart Labs — Rachel Romero and Otto VanGeet, National Renewable Energy Lab</td>
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<td>Zero Energy — Shanti Pless, National Renewable Energy Lab</td>
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## Thursday, July 11 — Regency Ballroom Foyer

<table>
<thead>
<tr>
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<tbody>
<tr>
<td>10:30–11:00 AM</td>
<td>50001 Ready/ISO 50001 — Peter Therkelsen, Lawrence Berkeley National Lab</td>
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<td></td>
<td>Energy Assessment: Approaches, Equipment, and Software — Thomas Wenning, Oak Ridge National Lab</td>
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<td>Smart Labs — Monica Witt, Los Alamos National Lab</td>
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<td>Utility Incentive Programs — Miles Hayes, National Renewable Energy Lab</td>
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<td>Water Efficiency — Prakash Rao, Lawrence Berkeley National Lab</td>
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<tr>
<td>3:30–4:00 PM</td>
<td>City/Utility-Scale Modeling — Eric Wilson, National Renewable Energy Lab</td>
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<td>Energy Assessment: Approaches, Equipment, and Software — Thomas Wenning, Oak Ridge National Lab</td>
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<td>Industrial Processes Heating and Waste Heat Recovery — Sachin Nimbalker, Oak Ridge National Lab</td>
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<td>Lighting — Michael Myer, Pacific Northwest National Lab</td>
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<tr>
<td></td>
<td>Zero Energy — Paul Torcellini, National Renewable Energy Lab</td>
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</table>
We are always adding new, replicable solutions that can help solve your organization’s energy challenges. Search by topic, building type, size, sector, technology, location, and more. Learn how to finance projects, implement emerging technologies, build internal energy expertise, motivate staff, get management buy-in, and establish community-wide initiatives.

Visit the Better Buildings Solution Center today.

betterbuildingssolutioncenter.energy.gov
Thank you to Better Buildings and Better Plants partners and local properties participating in the Showcase Building Tours for highlighting energy and water efficiency measures that have helped achieve energy reduction goals and save money.

**Arlington Central Library**
*Arlington County, VA*
**PUBLIC SECTOR**
Arlington Central Library recently completed energy efficiency projects ranging from lighting and BAS upgrades to new chillers and boilers; tour attendees will learn how a building that is occupied 80 hours a week can reduce energy use by nearly 30% and receive a demo of the Energy Lending Library.

**AstraZeneca Gaithersburg Campus**
*AstraZeneca*
**INDUSTRIAL SECTOR**
AstraZeneca hosts over 3,000 employees at its Gaithersburg, MD campus, which includes R&D laboratories, pilot-scale manufacturing, and office workspace; this tour will showcase the campus’ new 2.5MW CHP system and other recent energy efficiency accomplishments.

**DaVita Alexandria Dialysis Clinic**
*DaVita*
**COMMERCIAL SECTOR**
DaVita designed its new Alexandria facility with energy and water efficiency features and technologies to promote ongoing resource reduction best practices; attendees will learn how the company applied its energy and water efficiency goals to achieve a 30% reduction in gallons per treatment.

**Channel Square Apartments**
*NHT Communities*
**MULTIFAMILY SECTOR**
NHT Communities achieved 20% energy savings at this apartment community in D.C.’s Southwest Waterfront; attendees will learn about the financial strategy used to fund energy efficiency improvements and tour units, the central plant, and a rooftop solar array.

**Consolidated Forensic Laboratory**
*District of Columbia*
**PUBLIC SECTOR**
The Consolidated Forensics Lab is a cutting-edge, award-winning science facility designed to provide the District of Columbia with critical public safety and health science infrastructure while also incorporating energy efficiency and sustainability features into the HVAC systems, building envelope, and more.

**D.C. Solar for All**
*District of Columbia*
**PUBLIC SECTOR**
Tour D.C.’s first community solar project, a rooftop solar facility in the heart of the city, and learn about the Solar for All Program: a comprehensive, city-wide effort to provide benefits of solar to 100,000 low-income households and cut their energy bills in half.

Learn more at betterbuildingsinitiative.energy.gov/summit
National Landing
JBG Smith
COMMERCIAL SECTOR
Tour attendees will be among the first to get an up-close look at Amazon’s HQ2 site in Northern Virginia; take a walking tour of National Landing and learn about the various sustainability, health and wellness, and energy efficiency features that are planned and underway for this massive development.

Discovery Elementary
Arlington County, VA
PUBLIC SECTOR
Tour one of the first Zero Energy schools on the east coast – Discovery Elementary features energy and water efficiency features like solar thermal water heating, 100% LED lighting, 1,700 rooftop solar panels, a geothermal well field, and a dynamic energy dashboard.

District Center
MetLife
COMMERCIAL SECTOR
District Center is a 907,540-square-foot commercial office building in the epicenter of D.C.’s east end. Tour attendees will learn how the building’s systems were designed to maximize efficiency and enable next-generation workplace solutions, as well as MetLife’s plans for the LEED Gold EB property.

Manassas and Ashburn Data Centers
Iron Mountain Data Centers & Digital Realty, Inc.
DATA CENTERS SECTOR
Attendees will spend a full day touring data centers belonging to two different Better Buildings partners, Iron Mountain Data Centers and Digital Realty, Inc., learning how each partner is implementing energy efficiency solutions.

MGM National Harbor
MGM Resorts International
COMMERCIAL SECTOR
MGM National Harbor is a LEED Gold-certified waterfront resort destination that incorporates a variety of environmentally-minded practices and sustainability elements like energy-efficient systems, occupany comfort and wellness-minded material selection, and emphasis on water management.

The Pearl
The Tower Companies
MULTIFAMILY SECTOR
The Tower Companies built the Pearl – the first Fitwel-certified multifamily building in the world – with an emphasis on sustainability; the tour will highlight various energy- and water-saving features such as the solar array, the vegetated green roof, efficient lighting and appliances, and more.

U.S. Capitol
Architect of the Capitol
PUBLIC SECTOR
This tour will focus on the Architect of the Capitol’s Energy and Sustainability program and the U.S. Capitol Building, where attendees will learn how the agency addresses the integration of modern technologies in historic buildings to save energy.

The Unisphere
United Therapeutics
COMMERCIAL SECTOR
Attendees will get a behind-the-scenes look at the largest commercial zero-energy building in the United States, including advanced building technologies and features like a high-performance envelope and geothermal wells.

Volvo Group Engine/Transmission Plant
Volvo Group North America
INDUSTRIAL SECTOR
This tour will explore the production areas of Volvo’s Truck Engine and Transmission Plant in Hagerstown with an emphasis on the crankshaft grinders in the machining and finishing operation; the plant produces heavy-duty diesel engines, transmissions, and axles.
WEDNESDAY: 10:30 AM – 12:30 PM

MANUFACTURING

Best of the Betters—2019 Better Project and Better Practice Presentations

Regency Ballroom A
The Better Practice and Better Project Awards were created to recognize outstanding accomplishments in implementing and promoting industrial energy efficiency projects and programs. Come learn more from several exceptional 2019 applicants and award winners.

Conference Theater
Better Buildings Commercial Real Estate partners, Affiliates, and other stakeholders will share updates on exciting new energy efficiency and renewable energy projects, discuss industry trends and priorities, and learn new ways for organizations to work with DOE to achieve their goals. Discussion topics include health and wellness, social impact, resilience, and new research around the financial value of high-performing buildings.

MODERATOR
Tim Kolp, RJI Associates

MODERATORS
Deb Cloutier, RE Tech Advisors
Holt Mountcastle, RE Tech Advisors
Cindy Zhu, DOE

COMMERCIAL REAL ESTATE MEET-UPS

COMMERCIAL REAL ESTATE

Potomac I
Join Better Buildings Data Center Challenge and Accelerator partners and subject matter experts from DOE and Lawrence Berkeley National Laboratory for a facilitated discussion and peer exchange. Partners will share updates on their work as well as the barriers and successes they are experiencing with their data centers. Discussion topics will include industry trends, liquid cooling, IT consolidation, and more!

MODERATOR
Dale Sartor, Lawrence Berkeley National Laboratory

Washington A
This session is open to all higher education and K-12 facilities professionals as well as supporting administrators, architects, engineers, and other building professionals. This forum is designed to help participants address the challenges of operating aging education facilities and leveraging best practices to transform them into modern, resilient campuses. A panel presentation will highlight the latest lighting resources, energy master planning tools, zero energy school models, and workforce development efforts. It will be followed by targeted roundtable discussions on key barriers and lessons learned from new resources and emerging technologies.

MODERATOR
Brooke Holleman, DOE
This session is reserved for financing companies that are either current or prospective Financial Allies.

Tidewater I – Second Floor

Healthcare Meet-Up

Healthcare sector partners at this meet-up will discuss sector priorities, review progress so far, and workshop new ideas for the 2019-2020 year.

MODERATOR
Nathaniel Allen, DOE

Potomac IV

Local Government Meet-Up

Engage with leaders from the Local Government sector!

This interactive meet-up will be an opportunity for Local Government attendees to connect and exchange best practices with peers, share accomplishments and challenges in a candid format, and learn about innovations happening at the local level.

MODERATOR
Adam Guzzo, DOE

Potomac II

Meet with fellow Better Buildings Hospitality partners, Affiliates, and other stakeholders and take advantage of the opportunity to connect with peers facing similar industry barriers, share innovative solutions, and learn about new ways for organizations to work with DOE to achieve their goals. This session will include a discussion around the latest energy efficiency trends in the hospitality sector.

MODERATOR
Holt Mountcastle, RE Tech Advisors

Hospitality Meet-Up

Hospitality sector partners at this meet-up will discuss sector priorities, review progress so far, and workshop new ideas for the 2019-2020 year.

FINANCIAL SERVICES

HEALTHCARE

HOSPITALITY

LOCAL GOVERNMENT

SPEAKERS

Monika Henn, Urban Land Institute

Dan Ruben, Boston Green Tourism

Moderator
Cindy Zhu, DOE
**WEDNESDAY: 10:30 AM – 12:30 PM**

### SECTOR MEET-UPS

<table>
<thead>
<tr>
<th>Multifamily Meet-Up</th>
<th>Retail, Food Service, and Grocery Meet-Up</th>
<th>Smart Labs Meet-Up</th>
<th>State Government Meet-Up</th>
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#### Washington B
Join fellow Better Buildings Challenge Multifamily partners, affiliates, and other stakeholders to celebrate the past year’s accomplishments and share strategies for multifamily housing providers to save more energy and water and preserve affordable housing. Discussion topics include resiliency tools for affordable housing, stormwater management using green infrastructure, leadership case studies, and HUD’s vision for the year ahead in sector.

#### Potomac III
This session is an opportunity for Better Buildings Retail, Food Service, and Grocery (RFSG) partners and Affiliates to connect with their peers, share accomplishments and challenges, and hear success stories from throughout the RFSG sector. This session is for Better Buildings partners and Affiliates only.

#### Potomac VI
Engage with fellow Smart Labs Accelerator partners and subject matter experts from DOE and National Renewable Energy Laboratory for a facilitated discussion and peer exchange. During this time, partners will share how the Accelerator is progressing, as well as the successes and barriers they have experienced. There will also be a review of DOE’s draft Smart Labs toolkit.

#### Potomac V
Join this great opportunity to network with state colleagues from across the nation! State representatives are invited to an annual peer forum that can provide new ideas to take back to the office. This year fellow states and experts will be discussing effective frameworks for making energy efficiency "business as usual." Attendees will break into small groups to discuss specific suggestions on how to support those frameworks via policy and action. 

*This session is for state participants only.*

### SPEAKERS

- **Robert Iber**, HUD
- **Tina Miller**, Cambridge, MA, Housing Authority
- **Neeharika Naik-Dhungel**, EPA
- **Delma Palma**, New York City Housing Authority
- **Laurie Schoeman**, Enterprise Community Partners
- **Magdalena Szymanska**, Tenderloin Neighborhood Development Corporation

### MODERATORS

- **Cedar Blazek**, DOE
- **Cecilia Govrik**, ICF
- **Otto VanGeet**, National Renewable Energy Laboratory
- **Alice Dasek**, DOE

### MODERATORS

- **Michael Freedberg**, HUD
- **Josh Geyer**, HUD
- **Leslie Zarker**, ICF

Learn more at [betterbuildingsinitiative.energy.gov/summit](http://betterbuildingsinitiative.energy.gov/summit)
Regency Ballroom A
Better Plants partners and interested stakeholders can take this opportunity to network, hear updates from program manager Eli Levine, participate in small-group breakout sessions, and celebrate partner achievements. Advanced Manufacturing Office Director Valri Lightner will also participate in a fireside chat with the National Association of Manufacturers about the state of industrial sustainability.

Washington B
Measurement and Verification (M&V) in multifamily properties is highly complicated, giving energy services companies (ESCOs) and other providers an informational advantage over property owners. Even so, studies have shown that consumption models used by ESCOs often substantially over-estimate post-retrofit savings more than half the time, representing a baseline level of risk for every project and the industry as a whole. Join this discussion to learn how property owners can be informed energy services consumers and ensure that M&V for their retrofit projects is as accurate as possible.

Washington A
This session will cover how grid-interactive efficient buildings can provide financial and other benefits to both building owners and the grid. With appropriate controls and communications equipment, buildings can change the electrical load under their control to align with grid needs and provide a new value stream to owners. This session explores how different building sectors are considering how to optimize and integrate traditional demand assets, like lighting and HVAC, with new on-site demand energy response assets, like PV and batteries, to meet varying objectives including comfort, increased resiliency, sustainability, and energy savings goals.
States, cities, utilities, and portfolio building owners are identifying ways to incorporate energy storage technology into their systems and couple energy storage with renewables and efficiency technologies like CHP. Hear from public and private sector partners who are becoming more energy-resilient to outages through these technologies. Explore the interconnection between energy efficiency, energy storage with renewables, and resiliency to extreme weather events. In addition, learn about various strategies that public and private building owners have developed to identify which energy efficiency practices might be most effective to build energy resiliency. This session is part 1 of 2 in a series around public and private sectors working together to meet resilience needs.

SPEAKERS
Eric Coffman, Montgomery County, MD
Dennis Gonzalez, Puerto Rico Public Housing Administration
Anne Hampson, ICF

Moderator
Krystal Laymon, DOE

COMMUNICATIONS & ENGAGEMENT
How Low Can You Go: Using Challenge Programs to Engage the Private Sector and Drive Energy Efficiency and Renewable Energy in Your Community

SPEAKERS
Amy Jewel, Chicago, IL
Erick Shambarger, Milwaukee, WI
Stephanie Stuckey, Southface Institute

Potomac V
Leading cities share how they have successfully established challenge programs to engage local building owners to reduce their energy and water consumption and accelerate the installation of renewable energy. A representative from each local government will be joined by a building owner from their jurisdiction to share lessons learned and best practices so you can replicate something similar in your city or county in order to meet your energy and environmental goals.

COMMERCIAL REAL ESTATE    HEALTHCARE
HOSPITALITY    HIGHER EDUCATION
LOCAL GOVERNMENT    MULTIFAMILY
RETAIL, FOOD SERVICE, & GROCERY

SPEAKERS
Daniel Hill, Environmental Defense Fund
Ryan Freed, Institute for Market Transformation

Making the Business Case for Data-Driven Energy Management

Lord Kelvin is often quoted having said “if you can’t measure it, you can’t improve it.” The same principles apply to energy management—without measuring and tracking energy consumption and performance, reducing that consumption and improving that performance is exceedingly difficult. Leaders across multiple market segments will share and discuss the business case for data-driven energy management. From establishing a data collection protocol, to managing data and change over time, to engaging the C-Suite, we are going to dig into the value proposition that data brings to your energy management programs.

COMMERCIAL REAL ESTATE    HIGHER EDUCATION
HOSPITALITY    K-12 SCHOOLS
LOCAL GOVERNMENT    STATE GOVERNMENT
RETAIL, FOOD SERVICE, & GROCERY

SPEAKERS
Moderator
Adam Guzzo, DOE
Moderator
Harry Bergmann, DOE
From affordable student housing to high-infill offices, a rapidly accelerating building trend is the proliferation of zero energy buildings. Embracing "deep" energy efficiency, these projects prioritize efficiency and add on-site renewable generation to achieve net zero energy use over the year. Come hear about the financial, technological, and design process innovations that make these projects a reality today.

Does your community have small buildings that need upgrades or small retrofit projects that need to get done? Chances are you do, as the Commercial Buildings Energy Consumption Survey (CBECS) reports that 84% of all state and local government-owned buildings qualify as "small." We often hear small projects are not good candidates for using Energy Savings Performance Contracting (ESPC), but the good news is they can be. Come learn about a suite of strategies small communities and small projects can use to develop projects eligible for ESPC.

Schools districts are often tasked with teaching 21st-Century students from within 19th-Century buildings. Through the experiences of K-12 partners in the Better Buildings Challenge, this session will explore how energy efficiency fits into the modernization of public school facilities and improves the learning environment for students. Speakers include representatives from leading school districts that have implemented district-wide energy efficiency strategies to reduce energy consumption and free up critical funds that can be reinvested into other district priorities.

How Buildings of All Shapes and Sizes are Achieving Zero Energy

**Potomac VI**

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**Potomac III**

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**Potomac II**

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**SPEAKERS**

**Good Things Come in Small Packages: Strategies for Applying ESPC in Small Projects**

Ira Birnbaum, DOE

Reid Conway, State of North Carolina

Philip Quebe, The Cadmus Group

**Schools of the Future: Creating Better Learning Environments with Efficiency**

Nikolai Kaestner, San Francisco Unified School District

Zach Lammers, Anne Arundel County Public Schools, MD

Cathy Lin, Arlington Public Schools, VA

**Moderator**

Alice Dasek, DOE

**SPEAKERS**

Rachel Bannon-Godfrey, Stantec

Greg Farley, Washington College

Thomas Kaufman, United Therapeutics

**Moderator**

Brooke Holleman, DOE

**Moderator**

Sarah Zaleski, DOE
WEDNESDAY: 3:30 PM – 5:00 PM

**MANUFACTURING**

**Grand Energy Challenges for Industry**

**WASHINGTON B**

What are the health benefits of energy efficiency upgrades? How can these be quantified? How can additional healthy housing measures supplement already-healthy energy efficiency measures? This session will provide hard evidence as well as real-world examples of the non-energy benefits that can be realized when taking a comprehensive approach to energy efficient, healthy housing.

**SPEAKERS**

Joe Crezko, DOE
Valri Lightner, DOE
Clay Nesler, Johnson Controls

Moderator
Sachin Nimbalkar, Oak Ridge National Laboratory

**WASHINGTON A**

Join this discussion about the quest to encourage development of new, innovative lighting products that are highly energy-efficient, controllable, easily upgradeable for more advanced controls/IoT, and are "plug-and-play" at a competitive price. Researchers from Pacific Northwest National Laboratory, commercial building industry partners, and industry representatives are invited to share their thoughts on performance criteria for “future-proofing” new lighting troffers that manufacturers will be "challenged" to produce.

**SPEAKERS**

Marian Goebes, TRC
Nicole Rosenberg, NMR Group
Rebecca Schaaf, Stewards of Affordable Housing for the Future
Bruce Tonn, Three3
William Weber, Healthy Building Network

Moderator
Michael Freedberg, HUD

Moderator
Cedar Blazek, DOE

**MULTIFAMILY**

**Healthy Housing: Quantifying the Non-Energy Benefits of Energy Efficiency Upgrades**

**Regency Ballroom A**

This session is designed to help you think BIG. What are your biggest challenges? What are your big ideas for what a manufacturing plant looks like in 2050? Hear the perspectives on grand energy challenges and opportunities for industry and share your own for an audience of DOE, industry, and national lab leaders.

**SPEAKERS**

Joe Crezko, DOE
Valri Lightner, DOE
Clay Nesler, Johnson Controls

Moderator
Sachin Nimbalkar, Oak Ridge National Laboratory

**EMERGING TECHNOLOGIES**

**The IoT-Enabled Lighting Challenge: Help Catalyze Advanced Lighting/IoT-Compatible Systems!**

**LOW AND MODERATE INCOME**

**SINGLE-FAMILY RESIDENTIAL**

**ALL SECTORS**

**SPEAKERS**

Hakon Mattson, Anthem, Inc.
Michael Myer, Pacific Northwest National Laboratory

Moderator
Cedar Blazek, DOE
Resilience Roundtable Part 2: Public Sector Meets Commercial Real Estate

Learn how local governments can work with private building owners to ensure the resilience of their building stock. Commercial real estate fund and asset managers will share how investment decision-making around resilience is informing investments in commercial developments. Local government representatives will share their organizational strategies to enhance community resilience. Enjoy a lively facilitated discussion between private and public Better Buildings Challenge partners! This session is part 2 of 2 in a series around public and private sectors working together to meet resilience needs.

**SPEAKERS**
- Chris Castro, Orlando, FL
- Eric Friedman, Commonwealth of Massachusetts
- Marta Schantz, Urban Land Institute
- Brenna Walraven, Corporate Sustainability Strategies
- Cindy Zhu, DOE

### Potomac IV
DOE’s State Energy Program Competitive Awards have produced an array of innovative planning tools to help state and local governments achieve their energy goals. This session showcases 3 of them: the Home Energy Labeling Information Exchange (HELIX); the Hawaii Advanced Environment Visualization Nexus (HAVEN); and the Local Government Project for Energy Planning (LoGoPEP). The session will also feature DOE’s Low-income Energy Affordability Data Tool (LEAD), which provides interactive state, county, and city-level data to support energy planning in the low- and moderate-income sector. All these tools are easily accessible and adaptable for use by Public Sector partners!

**SPEAKERS**
- Lindsay Anderson, State of Minnesota
- Liz Doris, National Renewable Energy Laboratory
- Julia Dumaine, Connecticut (DEEP)

### Potomac VI
While the U.S. is experiencing an era of exciting growth in energy finance, many building owners still struggle to find the capital they need and financial products that work for their specific situation and location. This session will provide a deep dive into the state of the energy financing market, emerging energy financing solutions, and resources to help building owners demystify and access financing.

**SPEAKERS**
- Tammy Agard, EUtility
- Ian Fischer, Urban Ingenuity
- Bob Hinkle, Metrus Energy

**Moderator**
- Greg Dierkers, DOE

**Moderator**
- Holt Mountcastle, RE Tech Advisors
There is compelling evidence that the building sector is marching to zero. The number of zero energy and zero energy ready certified homes doubled from 2015 to 2017, and the number of DOE's Zero Energy Ready Home certifications has doubled each year for the past three! More states are enacting or plan to enact zero energy building codes. There are huge opportunities for states, local governments, utilities, and NGOs to ensure their housing infrastructure is ready for the future. This session will explore ways to leverage these benefits with both new and existing homes, including the Zero Energy Ready Home program and new research exploring how to scale zero energy retrofits through advanced offsite production and aggregated demand.

**Potomac III**

I need a plan! An energy emergency plan! Threats to the grid can be mitigated through energy emergency and resiliency planning. State and local representatives will discuss lessons learned, best practices, and new ideas in energy emergency planning, energy assurance, and cybersecurity including everything from first steps to tabletop exercises and plan enactment.

**Potomac V**

This session will explore common challenges, innovative approaches, and best practices in schools, health facilities, and manufactured housing in rural areas. Speakers from the American Society for Healthcare Engineering will describe energy projects in rural hospitals and healthcare clinics nationally and attendees will learn from a successful rural school district in Kentucky.

**Potomac II**

There is compelling evidence that the building sector is marching to zero. The number of zero energy and zero energy ready certified homes doubled from 2015 to 2017, and the number of DOE's Zero Energy Ready Home certifications has doubled each year for the past three! More states are enacting or plan to enact zero energy building codes. There are huge opportunities for states, local governments, utilities, and NGOs to ensure their housing infrastructure is ready for the future. This session will explore ways to leverage these benefits with both new and existing homes, including the Zero Energy Ready Home program and new research exploring how to scale zero energy retrofits through advanced offsite production and aggregated demand.

**Speakers**

**Potomac III**

Ben Bolton, State of Tennessee
Megan Levy, State of Wisconsin
Alex Morese, Michigan Agency for Energy

**Potomac V**

Kara Brooks, American Society for Healthcare Engineering
Alison Donovan, Vermont Energy Investment Corporation
Kimberly Joseph, Bullitt County Public Schools, KY

**Potomac II**

Martha Campbell, Rocky Mountain Institute
Jamie Lyons, Newport Partners

**Moderators**

Shannon Young, DOE
Pam Mendelson, DOE
Eric Werling, DOE
Challenge the Champions: Experienced Energy Managers Tackle Your Biggest Energy Problems

Regency Ballroom A

Energy managers from several Better Plants partners will draw on decades of collective experience to address audience members’ toughest energy efficiency obstacles via questions submitted in advance and in real-time.

Washington B

Low-income communities are often the hardest hit by extreme weather events. While some property owners can afford to modify their homes to withstand projected flooding, hotter and cooler days, or other risks, some cannot. Hear from states and cities how, despite limited resources, they created programs to build resilience for low-income communities.

Washington A

Advanced building envelope materials can reduce building energy use and costs by lowering heating and cooling loads, which account for roughly 40% in commercial buildings and 50% of energy consumed by a typical U.S. home. Learn how building owners are implementing cutting-edge envelope improvements, from pilots to portfolio rollouts, and get a view into what’s coming next.

SPEAKERS

Walt Brockway, Oak Ridge National Laboratory
Lawrence Fabina, ArcelorMittal
Bert Hill, Volvo Group North America
Sharon Nolen, Eastman Chemical Company

Moderator
Thomas Wenning, Oak Ridge National Laboratory

SPEAKERS

Jeni Hall, Energy Trust of Oregon
Laurie Schoeman, Enterprise Community Partners
Michael Walton, Green Spaces

Moderator
Krystal Laymon, DOE

SPEAKERS

Jessica Abralind, Arlington County, VA
Mahabir Bhandari, Oak Ridge National Laboratory
Wendell Brase, University of California, Irvine

Moderator
Cedar Blazek, DOE
Energy security is becoming an issue in all sectors. Water and wastewater facilities are integral to State and City functions and can leverage efficiency and renewable energy technologies to enhance energy security on a continuous basis. This session will address how states, cities, and facilities have tackled the energy security issue and discuss lessons learned for best practices in the field.

Conference Theater

Potomac I

Learn about professional training resources and programs for success in careers in energy efficiency. The session will cover new education modules for understanding zero energy building design and operation, the DOE Building Technologies Office’s JUMP into STEM university student competition, Better Buildings Workforce Guidelines, public sector partnerships between municipalities and universities to train interns, and career training programs for students to become champions in energy efficiency.

SPEAKERS

Ben Bolton, State of Tennessee
Megan Levy, State of Wisconsin
Doug Oscarson, Des Moines Water Works

Moderators

Bruce Lung, DOE
Ben Nathan, DOE

Potomac II

Expanded renewable energy policy goals are on the rise across the country. This session will provide an overview of challenges and opportunities associated with the integration of energy efficiency and renewables into the residential and commercial building sectors. It will also explore how individual jurisdictions, states, and utilities are addressing the effects. Finally, speakers will address future expectations on utility pricing and ways buildings can coordinate and respond to grid demands.

SPEAKER

Michael Turner, State of Colorado
Through the Smart Energy Analytics Campaign, which serves almost 0.5 billion square feet of commercial and public buildings, much has been learned about how Energy Management and Information Systems (EMIS) tools and technology are used in real-world commercial buildings. Participants from the healthcare, public, and commercial real estate sectors will sit down for a wide-ranging discussion on how to navigate the path from getting analytics up and running to achieving deeper savings. The session will recognize Spring awardees and highlight new data on costs, energy savings, and other benefits associated with EMIS.

**COMMERCIAL REAL ESTATE** | **DATA CENTERS** | **FINANCIAL SERVICES** | **HEALTHCARE** | **HIGHER EDUCATION** | **HOSPITALITY** | **MANUFACTURING** | **K-12 SCHOOLS** | **LABORATORIES** | **LOCAL GOVERNMENT** | **LOW AND MODERATE INCOME** | **MULTIFAMILY** | **RETAIL, FOOD SERVICE, & GROCERY** | **STATE GOVERNMENT** | **ALL SECTORS**

**SPEAKERS**

**Robert Armstrong**, University of Utah Health Care

**Andrew Carter**, Commonwealth of Kentucky

**Ryan Tinus**, Tishman Speyer

Moderator

Eliot Crowe, Lawrence Berkeley National Laboratory

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**Potomac IV**

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**Ryan Tinus**, Tishman Speyer

Moderator

Eliot Crowe, Lawrence Berkeley National Laboratory

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**Potomac VI**

Do high-performing buildings perform better financially than their less-efficient counterparts? Are energy-efficient buildings priced adequately in the market? Research has shown connections between green building certifications and rent premiums; what about other factors such as tenant vacancy, mortgage default risk, or building value? Real estate academics will share findings from recent research that focuses on the connection between energy, buildings, and financial performance, with takeaways that are useful for building operators and energy policymakers.

**COMMERCIAL REAL ESTATE** | **DATA CENTERS** | **FINANCIAL SERVICES** | **HEALTHCARE** | **HIGHER EDUCATION** | **HOSPITALITY** | **MANUFACTURING** | **K-12 SCHOOLS** | **LABORATORIES** | **LOCAL GOVERNMENT** | **LOW AND MODERATE INCOME** | **MULTIFAMILY** | **RETAIL, FOOD SERVICE, & GROCERY** | **STATE GOVERNMENT** | **ALL SECTORS**

**SPEAKERS**

**Sofia Dermisi**, University of Washington

**Avis Devine**, York University

**Rogier Holtermans**, University of Guelph

Moderator

Cindy Zhu, DOE

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**Potomac III**

This session will explore the planning approaches and strategies that jurisdictions, utilities, businesses, and other organizations are pursuing to meet high renewable energy goals. The discussion will cover topics such as the utilization of localized data for energy planning and the important role of energy efficiency in cost-effective strategies.

**COMMERCIAL REAL ESTATE** | **DATA CENTERS** | **FINANCIAL SERVICES** | **HEALTHCARE** | **HIGHER EDUCATION** | **HOSPITALITY** | **MANUFACTURING** | **K-12 SCHOOLS** | **LABORATORIES** | **LOCAL GOVERNMENT** | **LOW AND MODERATE INCOME** | **MULTIFAMILY** | **RETAIL, FOOD SERVICE, & GROCERY** | **STATE GOVERNMENT** | **ALL SECTORS**

**SPEAKER**

**Liz Doris**, National Renewable Energy Laboratory

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**SPEAKER**

**Moderator**

Eliot Crowe, Lawrence Berkeley National Laboratory

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**Moderator**

Cindy Zhu, DOE

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**Moderator**

Jenah Zweig, DOE
THURSDAY: 11:00 AM – 12:30 PM

MANUFACTURING

Regency Ballroom A

Have It Your Way: A Sustainability Round-Robin

Washington B

New Tools for Your Multifamily Retrofit Toolbox

Washington A

Beyond Widgets: Multi-Technology Integration and Connected Systems

REGIONS

MANUFACTURING

LOCAL GOVERNMENT

MULTIFAMILY

EMERGING TECHNOLOGIES

MODERATOR

Eli Levine, DOE

SPEAKERS

Sadie McKeown, Community Preservation and Development Corporation

Ellen Sargent, Chicago Housing Authority

Joe Winslow, Southface Energy Institute

Eliot Crowe, Lawrence Berkeley National Laboratory

Scott Schuetter, Slipstream

Chris Wolgamott, Northwest Energy Efficiency Alliance

Moderator

Josh Geyer, HUD

Moderator

Cedar Blazek, DOE

In this round-robin workshop, attendees will join small breakouts based on sustainability topics of interest -- including energy, water, waste, and science-based targets -- and report their discussion outcomes to the group as a whole.

In many multifamily buildings, planning energy retrofits and forecasting savings can be daunting due to the sheer number of units, meters, the complexity of each property, and the unique interaction between major systems. In this session, we will introduce several promising new tools to help multifamily owners and managers conceptualize and plan potential retrofits, including: BIT Building, a building performance improvement and recognition program that facilitates incremental upgrades portfolio-wide; and CPC VeriFi, a new online app that allows property owners to calculate estimated cost savings for energy and water efficiency upgrades.

To improve whole building performance and optimize system controls, efficiencies can be found in coordinating controls for different building end uses. This session highlights innovative approaches to controlling plug loads with other systems such as lighting and HVAC, including highlights from a field evaluation of LED systems equipped with advanced lighting controls that interface with the HVAC systems and plug loads.
Conference Theater

Building owners and operators across the country are preparing for a range of natural disasters and extreme weather events. Buildings designed to be energy-efficient and resilient can offer greater protection to the people and operations they house. Energy efficiency and renewable energy technologies play an integral role in increasing building passive survivability. In this session, Better Buildings partners across the commercial sector share proven technologies and strategies being used for building resilience.

Potomac I

Explore the different ways organizations have been able to catalyze and propel careers in energy efficiency among underrepresented groups. Learn about activities and programs developed and implemented by the American Association of Blacks in Energy and National Grid to improve underrepresented group engagement with and employment in the energy efficiency industry.

SPEAKERS

Zachary Brown, CBRE
Aaron Daly, Whole Foods Market
Jim Freihaut, Mid-Atlantic CHP TAP
Rielle Green, CBRE

Moderator
Sarah Zaleski, DOE

Potomac V

Buildings that have efficient equipment, smart controllers, and robust building management systems are great. However, to achieve significant progress towards your energy and sustainability goals, you need your entire workforce on board. In this session, you will hear from organizations that have engaged with their entire staff to achieve success. Participants will learn about drivers and incentives for their workforce at all levels and how they worked as a team towards a common goal.

SPEAKERS

Renee McClure, National Grid
Shelly Pottorf, Prairie View A&M University
Tracey Woods, American Association of Blacks in Energy

Moderator
Nathaniel Allen, DOE

Moderator
Otto VanGeet, National Renewable Energy Laboratory
Learn about important new initiatives that help building owners and managers better understand their water consumption. Speakers will provide updates on an industry-wide effort to support commercial real estate practitioners measuring water and waste consumption, and share their experiences benchmarking water consumption in multifamily buildings.

Potomac IV
Learn about important new initiatives that help building owners and managers better understand their water consumption. Speakers will provide updates on an industry-wide effort to support commercial real estate practitioners measuring water and waste consumption, and share their experiences benchmarking water consumption in multifamily buildings.

Potomac VI
Investing in energy projects in low-income communities can address multiple public policy goals such as reducing energy burden, addressing aging public-housing building stock, meeting energy efficiency goals, and providing clean energy benefits equitably among constituencies. This session will address best practices to overcome perceived risks from issues such as: consumer protections regarding the size of financing payments relative to overall household budget; the ability to fund the cost of necessary structural and health & safety improvements; and the split incentive for a landlord to pay for a retrofit that only benefits the tenant.

Potomac III
Come hear perspectives on the value of Measurement & Verification (M&V) in energy efficiency upgrades. Is M&V worth it? How can customers and Program Administrators make sure they see measurable results from energy efficiency projects? Learn how you can use M&V data to share your milestones throughout the life of a project and how keeping success stories top-of-mind can build support for future energy efficiency projects.

COMMERCIAL REAL ESTATE HEALTHCARE
HIGHER EDUCATION HOSPITALITY
MANUFACTURING LABORATORIES
MULTIFAMILY
RETAIL, FOOD SERVICE, & GROCERY

SPEAKERS
Scott Percival, King County Housing Authority
Ken Rosenfeld, Building Owners and Managers Association International

SPEAKERS
Tammy Agard, EEutility
Ruth Ann Norton, Green and Healthy Homes Initiative
Kerry O’Neill, Inclusive Property Capital

SPEAKERS
Reid Conway, State of North Carolina
Nam Nguyen, Commonwealth of Virginia

Moderator
Andre de Fontaine, DOE
Moderator
Pam Mendelson, DOE
Moderator
John Agan, DOE
Embedding an energy management culture is the next step for organizations to take to ensure that the progress made from their energy improvement projects will be sustainable. DOE has a variety of free recognition and technical assistance programs to help guide that next step, centered around the use of the ISO 50001 global energy management system standard. Hear the experiences of leading organizations who have done this at multiple facilities and learn how DOE’s 50001 Ready and Superior Energy Performance 50001 programs can help you achieve your long-term energy management goals.

As multifamily housing providers work to rehabilitate properties, benchmarking their portfolio’s energy consumption is critical for making investment decisions and verifying promised savings. As the saying goes, you can’t manage what you don’t measure, yet unique barriers to benchmarking persist in the multifamily housing sector. In this session, multifamily partners will present innovative, outside-the-box strategies for collecting tenant energy consumption data, ranging from how to obtain tenant consent for sharing data to embarking on a portfolio-wide campaign to collect 100% whole property data.

How do you plan and make decisions about HVAC equipment upgrades and incorporation of new technologies? Come hear how one company is implementing a strategy to make the most valuable HVAC retrofit and replacement decisions, and how to include new technologies provided by our Space Conditioning Research Team and the National Renewable Energy Laboratory. Learn how to apply useful strategies for upgrading your HVAC systems, and be prepared to discuss with your peers some of the approaches you employ within your organization.

**Regency Ballroom A**

ISO 50001: Energy Management Systems in the Real World

**Washington B**

Getting to 100%: Overcoming Barriers to Tenant Data Collection

**Washington A**

Smart Decision-Making: Understanding Value Streams Beyond Efficiency for HVAC Systems

**SPEAKERS**

Paul Hartmeister, General Motors

James Henry, Iron Mountain Data Centers

Claire McLeish, WegoWise, Inc.

Ilene Mason, Rethinking Power Management

Caitlin Rood, Mercy Housing, Inc.

Monica Watkins, Housing Authority of Baltimore City

Moderator

Pete Langlois, DOE

Josh Geyer, HUD

Cedar Blazek, DOE
Building owners are placing a greater emphasis on implementing resilience improvements that make buildings more resistant to natural disasters and other threats. This session will focus on how to pay for these types of projects with case study examples from Better Buildings Financial Allies.

**Potomac I**
Examine in-house apprenticeship programs that hire, train, and place inexperienced workers in positions supporting energy efficiency goals, particularly as technicians and operating engineers. The discussion will focus on elements that lead to a successful apprenticeship program based on different real-world examples. Attendees will leave with the tools to develop an apprenticeship program at their institution.

**Potomac V**
Achieving energy efficiency across large building portfolios can be more challenging when multiple stakeholders and decision-makers are involved. This session will feature strategies for aligning goals and activities to enable action around energy efficiency among multiple actors, including property management teams with their real estate clients and landlords with their commercial and federal tenants.
Explore the potential of “digital twins” - or the mirrored representation of real building systems in a computerized environment, - to enhance your energy program decision-making. Grid-interactive, efficient buildings (GEBs) optimize performance, efficiency, and provide flexibility to the grid through a complex balancing of priorities across building systems. Digital twins as real-time, high resolution models of a building, portfolio, or city can help guide the deployment of technologies which make GEBs possible. Hear partners discuss cutting-edge innovation in software and modeling and how it is already being applied to drive the future of understanding energy in our buildings.

**Potomac IV**
Explore the potential of “digital twins” - or the mirrored representation of real building systems in a computerized environment, - to enhance your energy program decision-making. Grid-interactive, efficient buildings (GEBs) optimize performance, efficiency, and provide flexibility to the grid through a complex balancing of priorities across building systems. Digital twins as real-time, high resolution models of a building, portfolio, or city can help guide the deployment of technologies which make GEBs possible. Hear partners discuss cutting-edge innovation in software and modeling and how it is already being applied to drive the future of understanding energy in our buildings.

**Potomac II**
The Sustainable Wastewater Infrastructure of the Future Accelerator (SWIft) worked with more than 70 wastewater treatment facilities to plan and implement infrastructure improvements. Over three years, the facilities worked to integrate energy efficiency into their operations, including tracking energy performance, implementing energy conservation measures, and planning measures and financing for a comprehensive infrastructure improvement project. Hear from DOE and its partners about the tools they developed along the way to help others follow the same path to infrastructure improvement.

**Potomac III**
Residential buildings make up 21% of energy use throughout the U.S. and disproportionately impact electricity peak demand. Though many Americans face undue energy burdens in their homes and apartments, commercial buildings have outpaced the residential sector in implementing energy upgrades and retrofits. Public sector partners can help residents in their jurisdictions access energy information, efficiency upgrade financing, and the benefits of energy efficiency through DOE’s building energy modeling tools. Additionally, by engaging with these tools directly, public sector partners can benefit by aggregating data to gain better insights on how to maximize impact with incentives, financing, and other programs.

**SPEAKERS**
- William Copeland, Electric Power Board of Chattanooga Tennessee
- Matthew Vogel, Microsoft
- Denis Cuevas, Waterford, CT
- Jason Grant, Miami-Dade County, FL
- Sharon Nall, State of New Hampshire
- Ben Nathan, DOE
- Deborah Philbrick, Elevate Energy
- Eric Wilson, National Renewable Energy Laboratory

**Moderator**
- Harry Bergmann, DOE
- Andre de Fontaine, DOE
- Madeline Salzman, DOE
THURSDAY: 4:00 PM – 5:30 PM

WORKFORCE DEVELOPMENT

Energy EfficienSHE: Women’s Perspectives in Sustainability

Potomac IV

Back by popular demand! Women leaders in the energy and sustainability industries share their perspectives on workplace diversity, mentorship, and the challenges and opportunities in being a woman in the buildings space. You won’t want to miss this top-rated session of the 2016 and 2017 Better Buildings Summits!

SPEAKERS

Rose Buckley, US Inspect
Altramese Roberts-Tompkins, Toyota Motor Engineering & Manufacturing North America, Inc
Monica Witt, Los Alamos National Laboratory

Moderator
Maria Vargas, DOE

RENEWABLES & ZERO ENERGY

Beyond Solar: Other Renewable Energy, Thermal, & Energy Storage Strategies

Potomac II

Renewable energy conversations often revolve around solar, wind, and on-site batteries; however, success has been found leveraging other renewable energy resources and energy storage techniques. These include small-scale hydroelectricity and various forms of thermal and electric energy storage. This session will showcase examples from higher education institutions that highlight cost-competitive and carbon-free strategies beyond the typical renewables dialogue.

SPEAKERS

Rick Burgess, Cornell University
Joel Herm, Current Hydro
Dan Smith, Bard College

Moderator
Paul Torcellini, National Renewable Energy Laboratory
THURSDAY: 4:00 PM – 5:30 PM

STRATEGIES FOR SUCCESS

COMMUNICATIONS & ENGAGEMENT

How (and Where) to Tell Your Energy Efficiency Story

FINANCING

Building From the Ground Up: Lessons in Commercial PACE Leadership

PLANNING, PROJECTS & PROGRAMS

Soaking Up Energy Savings from Water Projects

Potomac V

You’ve finished a great energy efficiency project with big outcomes, now what? Communications experts will lead you through how to best promote your work and which channels to use. This panel will ask for audience participation and may be turned into a webinar for future sharing. Experts will also cover how to market the non-energy benefits of energy efficiency.

Potomac VI

Learn how commercial PACE (C-PACE) programs have gone from conception to launch to actively financing energy efficiency and renewable energy projects. The session will highlight the public value proposition for C-PACE programs, the role of third-party partners and program design, and a case study showcasing how a property benefited from C-PACE financing.

Potomac III

Energy and water systems are interconnected. These interconnections can be complex and have many challenges and opportunities. This session highlights projects that have been able to achieve significant energy and water savings through technologies and innovative strategies.

SPEAKERS

Katie Breene, Starbucks Coffee Company
Bruce Condit, Connex
Lauren Paige, L’Oréal

SPEAKERS

Jessa Coleman, PACE Financial Servicing
Keith Derrington, Recurrent, LLC
Rich Dooley, Arlington County, VA

SPEAKERS

Mark Campbell, MGM Resorts International
Jodenne Scott, Shari’s Cafe & Pies
Otto VanGeet, National Renewable Energy Laboratory

Moderator
Bryan Cohen, C+C
Moderator
Sean Williamson, DOE
Moderator
Ryan Livingston, Allegheny Science & Technology

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