

Where the best energy efficiency experts get even better.

2018 NYSERDA Multifamily Summit Agenda October 21-23, Syracuse, NY



## **Summit Information**

## Welcome to the 2018 Multifamily Summit!

## Syracuse University Building Energy and Environmental System (BEES) Laboratory Tour

NYSERDA will be facilitating a tour of the Building Energy and Environmental System (BEES) Laboratory at 1:00 p.m. on Tuesday, October 23rd. Please meet in front of the registration desk. BEES has state-of-the-art research facilities including capabilities to do both experimental and computer simulation from material-level properties to full-scale system-level behavior and performance studies. Major research subjects are:

- Combined air, heat, moisture, and contaminant transport through building envelopes.
- Interactions between indoor and outdoor environments and HVAC systems/components.
- Room air and contaminant distributions in personal/task, displacement, or mixing ventilations.
- Air and contaminant transports in multi-zone buildings and building dynamics.
- Building envelope systems (walls and window assemblies) performance for thermal and moisture control performance.
- Comprehensive Instrumentation for Material Characterization, including thermal moisture, pollutant transport and storage properties.

## **Continuing Education Credits**

The Summit sessions have been submitted for continuing education credits for BPI and AIA. These sessions are marked with an asterisk on the agenda. Each session will have a BPI and AIA sign-in sheet located at the front of the room. If you wish to receive BPI CEUs or AIA LUs, you must sign-in on the appropriate sheet at the end of the session.

## Wifi

The wifi network is **Guest** and the password is **orange**.

## Parking

Parking in the Sheraton Syracuse University Hotel & Conference Center parking garage is complimentary for Summit attendees. Please tell the parking attendant that you attended the Summit before you exit the garage.

## **Summit Exhibits**

Please make sure to visit our exhibitors during the networking breaks.

Aegis Energy Services	Minotair Ventilation Inc.	
Embertec	Mitsubishi Electric Cooling and Heating	
Entuit, Inc.	Nationwide Energy Partners	
Evolve Technologies, LLC	Quadlogic Controls	
GS Dunham	Tecogen, Inc.	
Heat-Timer Corporation	WexEnergy, LLC	
Longley Jones Energy Management Corp		

# Agenda

Sunday, October 21, 2018				
4:00 p.m.– 6:00 p.m.	Registration			
6:00 p.m.– 7:00 p.m.	Cocktail Reception			

	Monday, October 22, 2018					
	8:00 a.m.– 8:45 a.m.	Continental Breakfast and Registration				
	8:45 a.m.– 9:00 a.m.	Opening Remarks and Welcome				
G1	9:00 a.m.— 10:00 a.m.	Group Presentation: Small Packaged Heat Pumps—Rethinking Everything*				
	10:00 a.m.– 10:15 a.m.	Break				
		Track A	Track B	Track C		
Session 1	10:15 a.m.– 11:15 a.m.	Healthy Design, Healthy Bottom Line: The Business Case for Human Health in High- Performance Buildings*	Integrated, Occupancy-Controlled Lighting in Multifamily Buildings*	Moisture Control in Multifamily Passive Houses*		
	11:15 a.m.– 11:30 a.m.	Break				
G2	11:30 a.m.— 12:15 p.m.	Program Updates: NY-Sun, Real Time Energy Management, RetrofitNY, Building Labeling Initiative, Integrated Physical Needs Assessment				
	12:15 p.m.– 1:15 p.m.	Lunch Keynote Speaker: Mr. Robert M. Haelen, Senior Vice Chancellor for Capital Facilities, State University of New York				
	1:15 p.m.– 1:30 p.m.	Break				
Session 2	1:30 p.m.– 2:30 p.m.	Domestic Hot Water Distribution: Two Approaches*	Real Time Energy Management Case Studies Review*	New Oil Metering Technology*		
	2:30 p.m.– 2:45 p.m.	Break				
Session 3	2:45 p.m.– 3:45 p.m.	Actionable Insight with Reality Capture Scanners and Drones*	The Power of Peers: What We've Learned About Integrating Peer-Based Resident Engagement Into Construction and Retrofit Projects*	NYSERDA LR & MF NCP: How Will They Adapt to Upcoming Changes at RESNET and ENERGY STAR®*		
	3:45 p.m.– 4:00 p.m. Break					
Session 4	4:00 p.m.– 5:00 p.m.	Integrated Physical Needs Assessment in Practice	Solar Air Heating Technology*	NYSERDA's New Construction Challenges and Program Updates in 2019 and Beyond		
	5:00 p.m.– 6:00 p.m.	p.m. Cocktail Hour				
	6:00 p.m.– 8:00 p.m.					

# Agenda

	Tuesday, October 23, 2018				
	7:30 a.m.– 8:30 a.m.	Continental Breakfast			
	7:30 a.m.– 9:30 a.m.	Building Owner/Developer Networking Event			
	9:30 a.m.– 9:45 a.m.	Break			
G3	9:45 a.m.– 10:45 a.m.	Group Presentation: Messaging Matters: How to Sell the Value of Energy Efficiency			
	10:45 a.m.– 11:00 a.m.	Break			
Session 5	11:00 a.m.– 12:00 p.m.	Track A Energize NY PACE: Innovative Financing for Deep Energy Improvements	Track B MPP SAV-IT Tool Tutorial	<b>Track C</b> Cost Compression in Multifamily Buildings	
	12:00 p.m.– 1:00 p.m.	Lunch: Summit Wrap-Up and Closing Remarks Tour: Syracuse University Building Energy and Environmental System (BEES) Laboratory			
	1:00 p.m.– 3:00 p.m.				

## Sunday, October 21

4:00 p.m.-6:00 p.m. | Registration

Location: Second Floor Lobby

## 6:00 p.m.-7:00 p.m. | Cocktail Reception

**Location:** Second Floor Lobby Greet old friends and meet new colleagues while enjoying light fare and complimentary wine and cheese. A cash bar will be available for all other refreshments.

## Monday, October 22

# 8:00 a.m.—8:45 a.m. | Continental Breakfast and Registration

Location: Second Floor Lobby

8:45 a.m.—9:00 a.m. | Opening Remarks and Welcome Location: Regency Ballroom

## 9:00 a.m.—10:00 a.m. | Group Presentation Small Packaged Heat Pumps—Rethinking Everything\*

Location: Regency Ballroom

## lan Shapiro, Taitem Engineering, PC; Evan Hallas, Taitem Engineering, PC

Heat pumps are a proven key strategy for eliminating fossil fuel use. Could a small packaged heat pump make an even larger impact? As multifamily per-room heat loss is decreasing, whether through deep energy retrofits or high-performance new construction, a small packaged solution might really be JUST what's needed for widespread adoption. Imagine: no refrigerant piping, no licensed refrigeration tech, no outdoor pad or electrical disconnect, not even an outdoor unit of any sort! How do costs in the \$1,000-\$2,000 range sound? Taitem's recent study of existing and emerging technology reveals that we're not quite there yet. But are we close? What other technology is being developed? Join us for a lively discussion of getting downright small with heat pumps.

## 10:00 a.m.—10:15 a.m. | Break

## **SESSION ONE** | 10:15 a.m.—11:15 a.m.

### Track A | Healthy Design, Healthy Bottom Line: The Business Case for Human Health in High–Performance Buildings\*

Location: Comstock Ballroom A

Lauren Hildebrand, Steven Winter Associates, Inc. The term "high building performance" generally makes people only think about energy consumption. However, there are factors that can impact human health. This session will clarify how to design for and maintain efficient building performance without compromising occupant health and wellbeing. Referencing LEED, EGC, and WELL concepts and supporting case studies (specifically Harvard's School of Public Health's "9 Foundations for a Healthy Building" and World Green Building Council's recently released report in April 2018), you will learn about the most effective ways to address health risks in buildings while saving money through energy efficiency and worker productivity. This session outlines the top health concerns in both commercial and residential buildings, followed by best practices and tools for success. Wherever practical, strategies for better health outcomes should be applied to both existing and new construction projects.

## Track B | Integrated, Occupancy-Controlled Lighting in Multifamily Buildings\*

### Location: Comstock Ballroom B

Daniel Frering, Rensselaer Polytechnic Institute The session will summarize the results of a recently completed, NYSERDA-funded project that the Lighting Research Center (LRC) undertook in partnership with Taitem Engineering. The project studied the energy savings and user acceptance of integrated, occupancy-controlled lighting in common areas of multifamily buildings in New York State. You will review a demonstration of lighting installed in hallways of a high-rise, multifamily building in Albany. Results will include the lighting conditions provided during full output and dimmed levels; occupants' opinions on the lighting for various occupancy sensor delay periods; and the energy savings compared to the lighting previously in place. The session will also review the results of occupancy monitoring in common areas of 15 other high-rise, multifamily buildings across New York State. The results can be used by lighting specifiers and facility managers to better estimate energy savings and return on investment for the installation of occupancy-controlled lighting installation in common areas of each building type.

## Track C | Moisture Control in Multifamily Passive Houses\*

Location: Comstock Ballroom C

Dylan Martello, Steven Winter Associates, Inc.; Josephine Zurica, Dagher Engineering, PLLC Passive Houses are built 8 to 10 times more airtight than a typical code-level building. As a result, significantly less moisture transfer occurs through the exterior wall assembly via façade air leakage. This can lead to high interior relative humidity levels and pose increased risk of condensation on the building structure. In a Passive House building, the primary means of controlling humidity levels is through the ventilation and heating and cooling systems. This session will discuss the process of how this risk was assessed for a multifamily Passive House project currently in design and outline potential strategies to reduce this risk.

### 11:15 a.m.—11:30 a.m. | Break

## 11:30 a.m.—12:15 p.m. | Group Presentation Program Updates: NY-Sun, Real Time Energy Management, RetrofitNY, Building Labeling Initiative, Integrated Physical Needs Assessment, Workforce Development

Location: Regency Ballroom

Join NYSERDA staff members to hear about upcoming NYSERDA-led initiatives for multifamily (affordable and market-rate) and commercial buildings.

#### 12:15 p.m.—1:15 p.m. | Lunch Keynote Speaker: Mr. Robert M. Haelen, Senior Vice Chancellor for Capital Facilities, State University of

New York Location: Regency Ballroom

1:15 p.m.-1:30 p.m. | Break

### SESSION TWO | 1:30 p.m.-2:30 p.m.

### Track A | Domestic Hot Water Distribution: Two Approaches\*

Location: Comstock Ballroom A

### Karla Butterfield, Steven Winter Associates, Inc.; Ian Shapiro, Taitem Engineering, PC

Upgrading domestic hot water equipment to more efficient technology can be challenging and leads to confusion in the market. Two DHW experts will explore different approaches to solving the problem. Karla Butterfield from Steven Winter Associates, Inc. will address revisions to the hot water distribution requirements for central distribution systems in multifamily projects with PHIUS+ certification and the energy benefits associated with a high-efficiency central plant. She will demonstrate the hot water pipe lineal feet and testing 10°F  $\Delta$ T requirements and review demand circulation technology. Karla will share challenges and solutions, modeling tools, and examples of verified water and energy savings

while investigating the real cost of water. In contrast, Ian Shapiro from Taitem Engineering will discuss air source heat pump hot water heaters and their benefits such as energy savings, carbon emissions reduction and eliminating fossil fuels. In multifamily buildings, domestic hot water can represent an increasing percent of the fossil fuel load. Standalone heat pump water heaters are affordable, but they must draw their heat from somewhere. Ian will answer several questions regarding how the units can be used, where the heat comes from, and whether they can operate efficiently if installed in closets.

## Track B | Real Time Energy Management Case Studies Review\*

## Location: Comstock Ballroom B

Jeff Hendler, Logical Buildings; David Klatt, Logical Buildings; Samantha Pearce, Bright Power

A Real Time Energy Management (RTEM) system is a cutting-edge technology that transforms the way building owners manage, consume, and buy energy. RTEM systems continuously collect live and historical performance data through a cloud-based or on-site system. That data can be analyzed to uncover optimization opportunities for the site's energy usage along with a host of other benefits. A cloud-based RTEM system continually monitors a building's systems by using advanced capabilities such as fault detection and diagnostics, predictive analytics, and performance optimization to ensure that energy is used more intelligently throughout a building. This session will highlight several projects in the RTEM pipeline and preview real-world system installation results.

### Track C | New Oil Metering Technology\*

Location: Comstock Ballroom C

Tim Allen, Taitem Engineering, PC

Ultrasonic tank level meters are promising to revolutionize the metering of oil in multifamily buildings. NYSERDA is in the middle of a five-year pilot program to test the accuracy and usefulness of these new meters. This presentation will include a description of how the meters work and how they compare to in-line flow meters, a discussion of preliminary results of the pilot program, and a review of the lessons learned on how to use ultrasonic meters for best results.

### 2:30 p.m.-2:45 p.m. | Break

## SESSION THREE | 2:45 p.m.-3:45 p.m.

## Track A | Actionable Insight with Reality Capture Scanners and Drones\*

**Location:** Comstock Ballroom A Greg Hale, Hale Technology in Practice; Samantha Houk, Hale Technology in Practice

Several "reality capture methods"—including 360 photos, drones, and 3D laser scanning—that have emerged in recent years are changing the way that design teams are approaching a variety of building projects. These tools provide some allure to attract clients, but how often do these technologies result in quick, actionable insights? This presentation will discuss how these emerging tools can be used to provide new perspectives on as-built conditions and save time and energy, including façade analysis, floor analysis, and thermal scanning. In addition, virtual reality can be used in combination with reality capture to precisely compare design intent to as-built construction. Case studies will be highlighted to show how these technologies improve quality, mitigate risk, and build confidence within your project teams.

## Track B | The Power of Peers: What We've Learned About Integrating Peer-Based Resident Engagement Into Construction and Retrofit Projects\*

Location: Comstock Ballroom B

Todd Rogers, Energy Training Solutions

Increasingly, resident engagement is becoming an integral part of retrofit and new construction projects. The human component of a project is crucial for success. The long-term effectiveness of installed ECMs and the ease of installation is affected by how well building residents are integrated into the project. One innovative model involves utilizing residents of the complex to assist with work postings for the subcontractors, perform home visits, and deliver follow-up workshops. There is a long history of employing residents of affordable housing developments to provide energy education for their peers. By hiring educators from within the peer group, it is more likely that residents will accept proposed behavior changes, as relationships based on trust and open communication are more easily developed. Over the years, we have learned many things about successfully integrating these programs with project teams. You will learn about best practices for including peer-based energy engagement in your projects and see examples from several different programs and organizations.

## Track C | Upcoming Changes at RESNET and ENERGY STAR<sup>®</sup> and How NYSERDA's Residential New Construction Programs Will Adapt

Location: Comstock Ballroom C

Pat Fitzgerald, NYSERDA; Gayathri Vijayakumar, Steven Winter Associates, Inc.; Zachary Zill, NYSERDA NYSERDA's Low-Rise Residential and Multifamily New Construction programs leverage third-party performance standards and protocols published by RESNET and the U.S. EPA's ENERGY STAR Programs. As those third-party standards evolve, NYSERDA's programs are updated. In this session, hear from NYSERDA about where the programs are currently and how they might adapt based on key developments and updates to the RESNET and ENERGY STAR standards planned for 2019. Stay on after the break to hear similar developments in the Passive House requirements, the challenges associated with reaching the Tier 3 performance threshold, potential solutions, and learn other ways in which the New Construction programs may be changing in 2019.

## 3:45 p.m.-4:00 p.m. | Break

## SESSION FOUR | 4:00 p.m.-5:00 p.m.

## Track A | Integrated Physical Needs Assessment in Practice

Location: Comstock Ballroom A

Susan Dee, Susan Dee Associates; TBD It's common knowledge that recapitalization or acquisition is an ideal time to incorporate efficiency measures into affordable housing; but until now, it has been very challenging to shoehorn an energy audit and improvement plan into the already complicated process of retrofit and refinance. This year, New York State's and New York City's housing agencies have begun implementing the Integrated Physical Needs Assessment (IPNA) as a requirement for all preservation projects. The IPNA is a unique tool that wraps several disparate assessments into a single, powerful bundle. By combining a traditional physical needs assessment with an energy and water efficiency audit, health assessment, and evaluation of solar potential, the IPNA provides owners and lenders alike with the information they need to make informed decisions about the best way to upgrade their properties.

## **Presentation and Session Details**

## Track B | Solar Air Heating Technology\*

#### Location: Comstock Ballroom B Todd Marron, Conserval Systems

Space heating is the largest energy consumer in multifamily buildings. Solar air heating is designed specifically to address this demand, offsetting up to 30% of the building's energy demand. This presentation will provide an overview of solar air heating technology and focus on a case study of the 2008 Almus Olver towers project, located in downtown Syracuse. A 2009 NYSERDA feasibility study concluded that solar air heating systems could be installed on more than 90% of Upstate multifamily buildings, but less than 20% of New York City buildings. This presentation will also outline the successful adoption of solar air heating technology in multifamily buildings in the last decade—with emphasis on Ontario multifamily projects that have a lifetime carbon offset of more than 60,000 tons. There is a tremendous opportunity in Upstate New York for solar air heating technology to save energy and money for building operators, as well as positively impact NYSERDA's carbon reduction goals.

## Track C | Passive House Updates and NYSERDA's New Construction Program in 2019 and Beyond

### Location: Comstock Ballroom C

Dylan Martello, Steven Winter Associates, Inc.; Zachary Zill, NYSERDA

The session will begin with an overview of both Passive House standards and how they are leveraged by NYSERDA's New Construction programs. Next, hear about key developments and updates to the Passive House Institute (PHI) and Passive House Institute U.S. (PHIUS) standards planned for 2019. Panelists will discuss how these standards changes may impact NYSERDA's New Construction programs. Dylan will also discuss common challenges project teams face trying to achieve the Tier 3 thresholds promoted by the Multifamily New Construction Program (MF NCP), and some of the solutions they have discovered.

Finally, learn how NYSERDA may streamline its New Construction offerings, while rolling out innovative new programs and adding targeted support for specific technologies and activities.

## 5:00 p.m.-6:00 p.m. | Cocktail Hour

**Location:** Second Floor Lobby Continue networking while enjoying light fare and an open bar.

## 6:00 p.m.-8:00 p.m. | Dinner

Location: Regency Ballroom

## Tuesday, October 23

#### 7:30 a.m.—8:30 a.m. | Continental Breakfast Location: Second Floor Lobby

7:30 a.m.—9:30 a.m. | Building Owner/Developer

## **Networking Event**

#### Location: Regency Ballroom

Building owners and developers from Central New York will be invited to join summit attendees for breakfast and networking to learn more about participating in the Multifamily Performance Program. This session will begin with a short presentation about the Multifamily Performance Program and its benefits for building owners/developers, followed by a networking session.

## 9:30 a.m.-9:45 a.m. | Break

### 9:45 a.m.—10:45 a.m. | Group Presentation Messaging Matters: How to Sell the Value of Energy Efficiency

Location: Regency Ballroom

Ashley Nicholls, KSV; Harrison Grubbs, KSV KSV and NYSERDA will share new findings and industry best practices for affordable multifamily stakeholders. The presentation will highlight strategies for communicating the benefits of integrating energy efficiency into building upgrades to potential clients based on insights from multifamily building decision-makers and industry trends. There will be resources and tools that audience members can use in their own businesses.

## 10:45 a.m.—11:00 a.m. | Break

## SESSION FIVE | 11:00 A.M.-12:00 P.M.

## Track A | Energize NY PACE: Innovative Financing for Deep Energy Improvements

**Location:** Comstock Ballroom A *Robert Fischman, Energize NY* 

As New York State's provider of Property Assessed Clean Energy (PACE) financing, Energize NY PACE works well with multifamily properties as they benefit from using PACE to finance multifamily partner-based comprehensive system upgrades. With competitive interest rates and terms up to 20 years, building owners can afford deep energy efficiency improvements, and because the financing is transferred to the next owner, the community will continue to benefit from improved building stock. Energize NY terms motivate building owners to look at the bigger picture and their longterm investment.

At the 2017 Multifamily Summit in Tarrytown, Energize NY introduced changes (PACE 2.0) now underway to make PACE more effective and accessible to commercial property owners across the State. The rollout of the expanded PACE program is almost complete and additional Energize NY PACE products are attracting large-scale developers. Energize NY will present project ideas and concepts and demonstrate how this innovative financing tool can drive demand for clean energy improvements in the multifamily sector. In addition, Energize NY will review how NYSERDA's newly updated Guidance Document expands the opportunities for PACE clean energy project financing in New York State by streamlining the process for certifying professionals to conduct energy audits and qualifying eligible measures.

## Track B | MPP SAV-IT Workbook Tutorial

Location: Comstock Ballroom B Jackie Albanese, TRC Energy Services Join the MPP Pipeline Manager to review how to complete a MPP SAV-IT workbook and to review example SAV-ITs for affordable multifamily existing building projects.

## Track C | Cost Compression for Pre-fab Solutions in Multifamily Buildings

### Location: Comstock Ballroom C

Justin Palmer, Synapse Development Group The dynamics of building high performance housing are rapidly changing and new demands are emerging. A reduced carbon footprint from the built environment, developers that build with energy efficiency at their core, expediency in construction and scalable solutions for both market-rate and affordable housing are high on the list. The opportunity for a new brand of buildings to enter the market is just around the corner.

Projects using modular and prefabricated solutions can achieve superior quality control, rapid onsite installation, and streamline energy performance. Building envelope panelization and a bundled HVAC approach are two emerging techniques used in high performance retrofits and new construction. These pre-fab and modular construction technologies promise reduced costs, increased speed to market, and superior energy performance. But what will it take to get these technologies to scale? Attend this session to discuss strategies for achieving these project goals and to learn from a developer who is applying a new approach to apartment design that minimizes the cost per resident, while maximizing yield at projects.

#### 1:00 p.m.—3:00 p.m. | Lab Tour Syracuse University Building Energy and Environmental System (BEES)

NYSERDA will be facilitating a tour of the Building Energy and Environmental System (BEES) Laboratory at 1:00 p.m. on Tuesday, October 23rd. Please meet in front of the registration desk. BEES includes capabilities to do both experimental and computer simulation from material-level properties to full-scale system-level behavior and performance studies. Major research subjects are:

- Indoor pollutant sources and sinks such as building materials and furnishings, office machines, and consumer products.
- Combined air, heat, moisture and contaminant transport through building envelopes. Interactions between indoor and outdoor environments and HVAC systems/components.
- Room air and contaminant distributions in personal/task, displacement, or mixing ventilations.
- Air and contaminant transports in multi-zone buildings and building dynamics.
- Air filtration/purification technologies for gas and particulate contaminants, including stand-alone room air cleaners and those installed in HVAC ducts.
- Building envelope systems (walls and window assemblies) performance for thermal and moisture control performance.
- Comprehensive Instrumentation for Material Characterization, including thermal moisture, pollutant transport, and storage properties.
- Sensitivity, accuracy and reliability of environmental sensors and control systems.
- Ambient air samplers, industrial hygiene monitors, indoor air quality monitors and sensors, thermal comfort monitors and occupational protective equipment and materials.

## Jackie Albanese

Project Manager, TRC Energy Services

Jackie is a consultant with seven years of experience in managing and implementing energy efficiency and sustainability programs. For the last three years, she has served as Pipeline Manager for NYSERDA's Multifamily Performance Program (MPP) Existing Building component. Prior to this, Ms. Albanese served as MPP's Pipeline Support Manager. Jackie has experience in energy-efficiency program process improvement, evaluation, customer service, and research analysis.

## Tim Allen, CMVP

## Senior Energy Analyst, Taitem Engineering, PC

Tim has more than 15 years of experience performing energy audits on commercial, institutional, and multifamily buildings. He developed and implements the Energy Use Snapshot for NYSERDA's Multifamily Performance Program as well as helped to establish simulation guidelines and M&V procedures for various NYSERDA incentive programs.

## Lee Butler

#### Project Manager, NYSERDA

Lee Butler has worked as a project manager at NYSERDA since 2002. Lee's current responsibilities focus on multifamily energy efficiency programs, the Emerging Technology and Accelerated Commercialization Program for Multifamily, and development of the Clean Energy Fund Multifamily Provider Network. Lee has also worked extensively on building technician workforce development for energy efficiency and renewable technologies. Additionally, Lee has experience with NYSERDA's Home Performance program. Prior experience includes performance contracting; sale of temperature control and HVAC service agreements, energy management systems, and comprehensive energy conservation projects for a major controls manufacturer; small business energy audits for the NYS Energy Office; and design and sales of home heating/air conditioning systems.

## Karla Butterfield

### Sustainability Director, Steven Winter Associates, Inc.

Karla's expertise is in sustainable consulting services, program certification support, and implementation of highperformance building technologies. With architects, developers, builders, and homeowners, she develops specific sustainability strategies for both new construction and renovations. Karla is an integral part of the initial strategic planning sessions and stakeholder workshops based on program criteria; she verifies LEED® for Homes, Passive House, ENERGY STAR®, Zero Energy Ready Homes, Indoor airPLUS, WaterSense, and National Green Building Standard programs.

#### **Brian Cabezas**

Senior Project Manager, NYSERDA

Brian oversees the Multifamily Performance Program at NYSERDA. Prior to this position, Brian was a Program Manager at New York City's Department of Citywide Administrative Services, Division of Energy Management and oversaw the Accelerated Conservation and Efficiency (ACE) Program, which provided funding for energy efficiency upgrades in the City's municipal operations. Before working for the City and State of New York, Brian worked at the clean energy start-up GridMarket (formerly known as AGRION) managing cleantech and distributed energy resource market development with a focus on the U.S. Northeast region.

## Loic Chappoz

### Multifamily Team Lead, NYSERDA

Loic leads the Multifamily team for NYSERDA. Prior to his work with NYSERDA, Loic worked as an independent consultant on energy efficiency policies in France, as a fuel efficiency specialist in the airline industry, and as a commercial pilot for 10 years.

## Susan Dee

### President, Susan Dee Associates

Susan, former regional manager of Wendel Architects and Engineers, has been assisting owners and managers in making properties more manageable by reducing fixed costs for more than 30 years. During that time, she developed and managed multimillion dollar energy programs for New York State government agencies, public and private institutions, multifamily housing projects, and residential properties. She focused on performing comprehensive needs assessments and developed strategic plans for low-income public housing projects and institutional buildings throughout the United States to determine long-term capital and maintenance needs. In partnership with L&S Energy Services, she recently completed more than 100 IPNAs for submission to NYC's Department of Housing and Preservation Development for three managing firms.

### **Robert Fischman**

### Managing Director, Commercial Programs & Sustainability, Energize NY PACE

Robert leads outreach and support for the Energize NY PACE finance program, providing guidance to project developers, engineers, contractors, and property owners in identifying and implementing sustainable clean energy solutions for building upgrades. Prior to joining Energize NY, he directed more than \$500 million in building construction projects in the private and public sectors.

## **Patrick Fitzgerald**

Senior Project Manager, NYSERDA

Patrick joined NYSERDA in 2002. As a member of the New Construction Team, Pat continues to support program development and project management of NYSERDA's Low-rise Residential and Multifamily New Construction Programs, as well as new initiatives such as the Buildings of Excellence design competition. These programs and initiatives offer technical support and financial incentives intended to encourage the new construction or gut rehabilitation of single-family and multifamily housing designed to achieve exceptionally high energy and building performance that result in low carbon buildings. Previous responsibilities have included the early development and project management of NYSERDA's Multifamily Building Performance Program (MPP), inclusive of the associated Quality Assurance and workforce development efforts.

## **Dan Frering**

## Manager of Education, Lighting Research Center (LRC), Rensselaer Polytechnic Institute

Dan is the director of educational programs and grants development at the LRC, where he directs the outreach and graduate education programs. His current research includes lighting in multifamily residential buildings, occupancy-controlled outdoor lighting, and energy-efficient lighting systems.

He is currently developing educational programs on roadway lighting and commercial lighting retrofit and redesign. Dan is a council member of the National Council on Qualifications for the Lighting Professions.

## Harrison Grubbs, CEM

### Director of Strategic Partnerships, KSV

Have a question about the future of energy? Harrison has the answer. Harrison has more than a decade of experience leading design thinking, implementation, energy efficiency management, demand response, and sustainability programs in the Eastern U.S. on behalf of multiple utility, municipal, and private clients. As Director of Strategic Partnerships, Harrison focuses on ensuring KSV isn't just an ad agency, but a strategic partner working on solving complex business problems for today, while setting up solutions for tomorrow. Energy-related clients prior to KSV include Eversource, Liberty Utilities, Tennessee Valley Authority (TVA), Efficiency Maine, and numerous low-income weatherization agencies.

### Robert M. Haelen

Senior Vice Chancellor for Capital Facilities, and General Manager of the Construction Fund, The State University of New York

As Senior Vice Chancellor for Capital Facilities, Mr. Haelen oversees the Office of Capital Facilities, which includes capital planning, environmental health and safety, energy management and residence halls, and hospital and community college capital programs. Mr. Haelen has been a Construction Fund employee since 1989. He started as an accountant and subsequently became Assistant Manager of Fiscal Affairs. In 1997, he became Director of Capital Program Management and in 1999 was appointed Treasurer and an Officer of the Construction Fund. In March of 2003, he was appointed Acting Assistant General Manager of Program and Finance. Two years later, he was officially appointed Assistant General Manager of Program and Finance. Finally, Mr. Haelen was appointed Deputy General Manager of the Construction Fund in March 2009. In his role as General Manager of the Construction Fund, Mr. Haelen is responsible for the Board of Trustees policy implementation, capital budget development and implementation, and leading Construction Fund professionals in the planning, design, construction, and funding of SUNY's capital projects.

## Greg A.M. Hale, PE

### CTO & Disruptor, Hale Technology in Practice

Greg has been disrupting the AECO industry for the last 19 years with a background in construction management, structural engineering, BIM management and technology consulting. Hale Technology in Practice (Hale TiP) was founded in 2014 and now manages seven technology professionals. He specializes in Autodesk Revit and Navisworks, laser scanning, photogrammetry and mobile technology and provides training, strategic planning, 3D building documentation services and best practice solutions.

## Evan Hallas

### Senior Energy Analyst, Taitem Engineering, PC

With 10 years of experience in building science and energy efficiency, Evan has a deep understanding of building systems, strong communication skills, and a commitment to quality. Evan emphasizes the importance of getting the details right first hand by splitting his time between the office and being out in the field.

## Jeff Hendler

Chief Executive Officer, Logical Buildings

Jeff serves as Co-founder, President, and CEO of Logical Buildings. Logical Buildings is a smart building technology software developer, IoT and DER systems integrator, behavior management, and smart building services provider: integration of our products and services in large multifamily and commercial properties materially reduces operating expenses, generates revenue from existing mechanical equipment, enables Wi-Fi connectivity, and improves building operations/fault detection/resiliency.

### Lauren Hildebrand

Senior Sustainability Principal, Steven Winter Associates, Inc.

Lauren is a certified LEED AP with more than 10 years of experience in both residential and commercial green building technologies, specializing in LEED, ENERGY STAR®, and Enterprise Green Communities certification. She also provides expertise in performance testing, contractor training, healthy building materials, energy code compliance, and incentive opportunities.

## Samantha Houk, CM-BIM

HDLS Manager, Hale Technology in Practice

Samantha started her professional life as a Bridge Engineer, but has since worked in the BIM/VDC industry for almost 5 years, first as BIM Manager at a construction company and now as the HDLS Manager at Hale TiP. Samantha currently holds a CM-BIM certification, her FAA Remote Pilot Certificate, is a Trusted Pro for Google Street View on Google Maps, and is a proud member of the National Association of Women in Construction.

### **David Klatt**

#### VP of Operations/Analytics, Logical Buildings

David is a 40 under 40 recipient for innovation in energy efficiency technology and is passionate about advancing New York's energy efficiency goals. David is responsible for analyzing and optimizing building energy performance through implementation of software and cleantech capital projects. Prior to joining Logical Buildings, David was an associate at Castleton Commodities International where he focused on derivatives trading and asset acquisition opportunities across the commodity landscape, including the \$1.5 billion acquisition of Morgan Stanley's physical oil trading business in 2015.

#### Simmone Li

Senior Project Manager, NYSERDA

Simmone is a former chemist-turned-policy-wonk and senior project manager on NYSERDA's Multifamily team. Her current areas of focus include figuring out how to leverage nonenergy benefits to improve the value proposition of deep energy retrofits, how to drive real estate investments in energy improvements through building energy labels, and how to help housing finance agencies and lenders underwrite to energy savings.

### **Todd Marron**

Director of Market Development, Conserval Engineering, Inc.

Todd's body of work is among the world leaders of building-integrated solar thermal installations, overseeing hundreds of clean heating projects across North America and abroad. He has also championed or assisted in the introduction and modification of clean heating governmental programs in multiple jurisdictions across the globe.

### **Dylan Martello**

Senior Building Systems Consultant, Steven Winter Associates, Inc.

Dylan is a certified Passive House designer and specializes in Passive House consulting and energy modeling. On a day-to-day basis, Dylan works with project architects and engineers to assist in the design of extremely energy-efficient buildings—focusing on thermal bridge mitigation, internal loads reductions, and optimized HVAC design, and Passive House certification support. He currently is working on a range of project types from large multifamily buildings such as 425 Grand Concourse in the Bronx, Sendero Verde in East Harlem, a high-rise office in Boston, and a manufacturing facility in Sri Lanka.

### **Ashley Nicholls**

### Executive Director of Marketing Innovation, Principal, KSV

Ashley thinks differently and will turn everything upside down to get to innovative solutions. With more than a decade in marketing—mostly focused on sustainable energy and energy efficiency marketing—Ashley brings a depth of experience and expertise to KSV's energy practice. As one of the strategic leads, Ashley inspires teams of creative, media, and management professionals to develop breakthrough marketing programs and platforms for the target audience to generate real business results. Ashley's energy experience spans many clients, including Nest, GE, National Grid, NYSERDA, Eversource, Navigant Healthcare, Verizon, Sustain Natural, and Seventh Generation.

## **Presenter Biographies**

## **Justin Palmer**

### Founder & CEO, Synapse Development Group

Justin directs the continued growth and vision of Synapse, while overseeing all aspects of the company's real estate investments in the New York and San Francisco markets. Prior to founding Synapse, Justin served as Assistant Vice President at Lehman Brothers, where he oversaw the work-out and repositioning of a 1,300-unit multi-family portfolio in New York City, as well as the foreclosure and restructuring of a large mixed-use development portfolio totaling 1.4 million square feet of development rights located in New York and Washington, D.C. At Lehman, Justin completed more than \$75 million in construction projects, primarily in New York City.

## Samantha Pearce

#### Director of Energy Management Services, Bright Power

Samantha helps building owners, managers, and operators reduce utility and operations costs through a targeted approach using remote monitoring, training, and technical support to strengthen each organization's capacity to make critical planning and repair decisions. Formerly serving as the Director of Housing Development and Sustainability at Selfhelp, Samantha managed facilities operations and energy performance for the Selfhelp portfolio and provided technical coordination for new development and construction projects.

### **Caroline Reuss**

### Project Manager, NYSERDA

Caroline is a project manager for NYSERDA's Multifamily team supporting the design and implementation of a building label. Additionally, Caroline supports regulatory affairs and policy development for the multifamily and New York City markets for NYSERDA.

### **Chris Rogers**

Project Manager, NY-SUN

Chris works on the NY-Sun team where his focus is on the low- to moderate-income portfolio. This includes the Affordable Solar Predevelopment Technical Assistance program and the newly launched Solar For All program. Prior to joining NYSERDA, Chris was at the National Association of Regulatory Utility Commissioners where his work concentrated on electricity regulatory issues and international development.

#### Todd Rogers, CEM

President, Energy Training Solutions

For more than 20 years, Todd has been designing innovative energy education and behavior-based energy management programs. His program design services are utilized by K-12 schools, energy service companies (ESCOs), public housing authorities, utilities, and government agencies. His work includes development of building operator training programs and the design and management of behavioral energy management (BEM) programming at more than 30 public housing authorities, nationwide. More recently, he led the development of a student-driven BEM program for K-12 schools. The KiloWatch program is a way for school districts to reduce energy costs while incorporating hands-on, STEM-based learning experiences for students.

### lan Shapiro, PE

Senior Engineer, Taitem Engineering, PC

lan M. Shapiro founded Taitem Engineering, Ithaca, NY. He is the author of two books in the energy field, and his current focus of work is heat pumps.

#### Gayathri Vijayakumar

Principal Mechanical Engineer, Steven Winter Associates, Inc.

Gayathri provides technical support to the EPA's ENERGY STAR® Multifamily program, is a member of the ASHRAE 62.2 Multifamily working group, and Chair of RESNET's Standards Development Committee, SDC300.

### Zach Zill

#### Project Manager, NYSERDA

Zach Zill is a project manager on NYSERDA's New Construction team, working across NYSERDA's Multifamily and Commercial incentive programs. Zach has more than a decade of experience in building design, construction, permitting, and code compliance.

### Josephine Zurica, P.E, LEED AP, CPHC

Principal, Dagher Engineering PLLC

Josephine is one of Dagher Engineering's primary sustainable design specialists. As a certified Passive House consultant, Josephine is well-versed in energy conservation strategies that promote efficiency while meeting budgetary requirements.

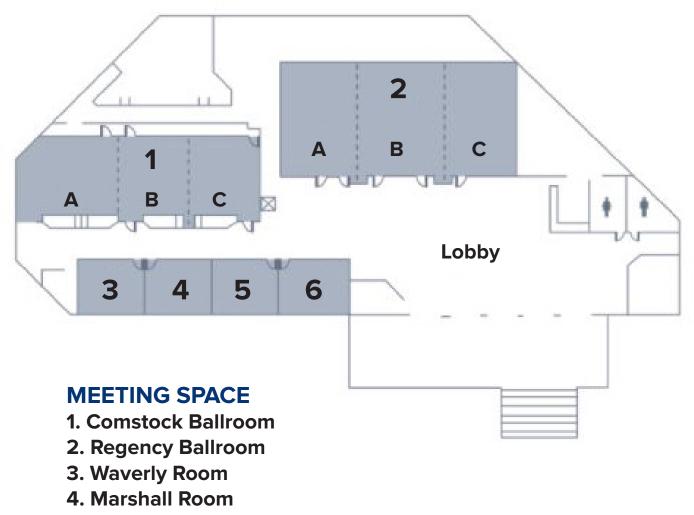
## **Exhibitors**

## Thank you to the 2018 Exhibitors

Please make sure to visit our exhibitors during the networking breaks.

Aegis Energy Services Embertec Entuit, Inc. Evolve Technologies, LLC GS Dunham Heat-Timer Corporation Heat-Timer Corporation Longley Jones Energy Management Corp Minotair Ventilation, Inc. Mitsubishi Electric Cooling and Heating Nationwide Energy Partners Quadlogic Controls Tecogen, Inc. WexEnergy, LLC

## Summit Map



- 5. Harrison Room
- 6. Adams Room

NYSERDA, a public benefit corporation, offers objective information and analysis, innovative programs, technical expertise, and support to help New Yorkers increase energy efficiency, save money, use renewable energy, and reduce reliance on fossil fuels.

