

# NEW YORK STATE GREEN BUILDING CONFERENCE 2025 AGENDA ARCHIVE

## THURSDAY, MARCH 27

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### **Energy, Health, and Security: The Built Environment's Role in Community Resilience and Well Being**

Brendan Owens

9:00 – 10:00 AM

This talk explores the powerful connections between the built environment, resilience, the clean energy transition, and human health. As communities face increasing energy demands, the transition to clean energy is not only essential for security and resilience but also for fostering a healthier, more sustainable built environment. The discussion will highlight the U.S. Department of Defense's Resilient and Healthy Defense Community strategy as a model for investment in energy efficiency and resource optimization. Additionally, the session will examine how buildings themselves play a critical role in addressing the growing need for electricity generation capacity, offering solutions that contribute to a more stable and efficient energy future.

GBCI Course Number: 0920031806

### **Creating Harmony: Overcoming Challenges in Passive House Multifamily**

Nicole Schuster and Andrew Van Roo

10:30 – 11:30 AM

The Passive House Building is the song, the design team is the band. Cold Spring Apartments, a New York affordable housing project exemplifies this symphony of collaboration. For many team members this is their first passive house project, with individual challenges related to ground source heat pumps, custom climate data, and the dance of peak load balancing. Join to hear more details and bring your own experiences. Whether you're a novice or virtuoso, this session is sure to strike a chord.

AIA Course Number: 2025-NYSGBC-24

GBCI Course Number: 0920031762

### **A Case Study of the First Net Zero Carbon Affordable Multifamily Retrofit in New York State**

Ashley Wisse, Kevin Stack, and Brendan Kelly

10:30 – 11:30 AM

Colonial II was constructed in 1972 as a school/dormitory. In 1984, it was transformed into residential units designated for vulnerable populations. The building is currently owned and operated by the Rome Housing Authority. In March 2020, Beacon Communities, RHA, and NEI launched an effort to retrofit the building. This endeavor targeted submission to NYSERDA's Buildings of Excellence competition with a zero-carbon, affordable multifamily retrofit. The team optimized the design, construction, operations, sustainability, energy efficiency, certifications, and testing & verification. With a ribbon-cutting in March 2024, three team members are ready to share their lessons learned as a Case Study. This presentation will explore 1- constraints of a zero-carbon retrofit, including the addition of: geothermal, on-site PV, community solar, DHW ASHP, ERVs, increased insulation, and EV charging. 2- removal of the façade and replacement with EIFS. 3- changes and adaptations of ASHRAE 90.1 energy modeling results from a predesign model to the design BOE competition submission to the as-built results. 4- setbacks and adjustments to achieve a zero-carbon building. 5-certification challenges for NGBS and Energy Star MFNC: ASHRAE pathway

AIA Course Number: 2025-NYSGBC-06

GBCI Course Number: 0920031744

## **A comparison of Manhattan, New York City, USA, and Shanghai, China, in terms of LEED and Lifecycle Assessment**

Svetlana Pushkar

10:30 – 11:30 AM

We compared different LEED certification strategies in Manhattan, USA, and Shanghai, China, using lifecycle assessment (LCA). Scores for “energy efficiency optimization” from the “energy and atmosphere” category (EAc6) were used to rank projects according to their level of achievement as “high” or “low”. The Wilcoxon–Mann–Whitney and Cliff’s  $\delta$  tests were used to compare the Manhattan and Shanghai groups. To compare environmental damage between these groups, the LCA-ReCiPe2016 method with a two-way ANOVA was used. To compensate for the low EAc6 score, Manhattan scored high in the Materials and Resources (MR) category and Shanghai scored high in the Indoor Environmental Quality (EQ) category. The LCA of “high” EAc6 and “low” MR and vice versa for Manhattan and Shanghai showed that the use of fossil fuels (coal and gas) led to a preference for the high EAc6 strategy (in both locations), whereas non-fossil fuels (solar and wind) led to a preference for the high MR (Manhattan) and EQ (Shanghai) strategy. It was concluded: (i) achieving EAc6 is a determining factor in choosing an LEED strategy and (ii) the choice of LCA-LEED strategy depends on the fuel source used in the country.

AIA Course Number: 2025-NYSGBC-03

GBCI Course Number: 0920031741

## **Where Supply and Demand Meet to Reduce Embodied Carbon**

Mikhail Haramati, Mariane Jang, Max Driscoll, and Kate Aglitsky

11:35 AM – 12:35 PM

As the call for embodied carbon reduction intensifies, the intersection between policy development and on-the-ground implementation has become pivotal. This session brings together Building Transparency, New York State OGS and AECOM to discuss actionable strategies for

documenting and reducing embodied carbon in the built environment. Attendees will gain insights into the latest policies designed to drive market demand for sustainable materials alongside a contractor's perspective on the operational challenges and opportunities in sourcing and working with these products. This session will also highlight how New York State and New York City are leveraging the EC3 tool to track embodied carbon and EPDs of materials used across city and state agency projects. Through this dialogue, we'll examine the synergies and tensions that emerge between regulatory ambition and construction realities, shedding light on how close collaboration can lead to practical, scalable solutions for a low-carbon future. The session aims to empower stakeholders across the AEC and policy sectors with knowledge on harmonizing demand-side drivers with supply-side innovation to achieve embodied carbon reduction targets effectively and economically.

AIA Course Number: 2025-NYSGBC-20

GBCI Course Number: 0920031758

### **Electrification + Resilience to Achieve NYS' Zero Emissions Law**

Josh Stack

11:35 AM – 12:35 PM

This presentation introduces the draft NYS Electrification/Zero Emissions Law and provides a resilience science based, integrative design & construction process using building as systems approach to optimize the electrification, resilience and health of buildings and building occupants. Resilient building principles, means and methods, and NYS resources are also discussed, in the context of the NYS Uniform and Energy Code and current market realities facing builders. The presentation also integrates the presenter's experience in discussing the NYS Zero Emissions law to diverse audiences throughout the state on behalf of NYSERDA, as well in drafting all electric more stringent local energy codes.

AIA Course Number: 2025-NYSGBC-12

GBCI Course Number: 0920031750

## **Abandonment to Excellence: Designing high performance masonry retrofits**

John Loercher

11:35 AM – 12:35 PM

This session presents the challenges faced relative to enclosure design and construction during a Passive House (Phius) certified high-performance masonry retrofit. The case study project, North Miller Passive in Newburgh NY, is a NYSERDA Buildings of Excellence recipient and as such is meticulously documented by CPHC, John Loercher of Northeast Projects. It presents various retrofit conditions encountered in the design process along with proposed solutions and discusses general concepts and strategies that are essential for the design of any masonry retrofit project. The presentation is organized by the four primary elevations of the building and the impact of differing constraints on the building enclosure

AIA Course Number: 2025-NYSGBC-25

GBCI Course Number: 0920031763

## **A Net Zero Carbon Case Study**

Jenny Frank

11:35 AM – 12:35 PM

This presentation will examine a net zero carbon case study, which utilized a solar photovoltaic system for electricity generation and consumption, along with a 100% biomass-based heating fuel. This presentation will discuss the significant energy load that is required by air conditioning in the summer while including the solar photovoltaic system results. The results of the study show that during the summer months, there were higher energy production than consumption values. In the fall months, the season yields higher energy production than consumption values. December and January were the only two months producing higher energy consumption values and lower production values. This case study shows the technical and financial feasibility of creating a net zero

home utilizing a 100% biomass-based liquid fuel and a solar PV system within New York State.

AIA Course Number: 2025-NYSGBC-01

GBCI Course Number: 0920031739

### **Here's The Thing!**

Jim D'Aloisio and Jodi Smits Anderson

2:00 – 3:00 PM

Effective, smart action must be taken NOW. In the absence of governmental leadership, we have to step up to be “the adults in the room.” We will connect embodied carbon and materiality to equity, resilience, health, economy, and business success with various construction systems along with focusing on EPDs and how to interpret them.

AIA Course Number: 2025-NYSGBC-23

GBCI Course Number: 0920031761

### **Reactivating a Historic Industrial Site: Challenges and Opportunities on the Way to Net Zero Energy**

Jason Evans, Dominick DeLucia, and Vaibhavi Tambe, Sr.

2:00 – 3:00 PM

Representatives of the Owner (Syracuse Bread Factory, LLC), Architect (Ashley McGraw Architects), and sustainability consultant and design engineer (Taitem Engineering) present the Syracuse Bread Factory, a reactivation of a unique historic building into a carbon-neutral neighborhood anchor. The Bread Factory is participating in NYSERDA's Building of Excellence Early Design Support program. This project is a complete remediation and redevelopment of a historically significant and long-vacant building. By exploring and sharing lessons learned during pre-design and design, the presenters hope to push the market forward while exploring the potential for a lower-carbon future inherent in reusing our beautiful older buildings. As a listed building with historic architectural

value, the team faced and overcame challenges relating to maintaining its historic façade and other architectural features while creating an attractive mixed-use building that aims for net-zero or near-net-zero performance.

AIA Course Number: 2025-NYSGBC-18

GBCI Course Number: 0920031756

### **New Elementary School Achieves WELL Certification**

Ken Osmun

2:00 – 3:00 PM

This new community beacon is a direct fusion of the 21st-century learning goals outlined by Durham Public Schools and the uniquely wooded and hilly site. The interwoven relationship between the natural and built environment permeates the project. The school is organized around a central courtyard to maintain a compact footprint, take advantage of the site's natural topography, and foster a sense of community among students, teachers, and parents. Upon entering the main lobby, students have a direct view into the courtyard and the woods beyond. The compact layout ensures the scale of the 800-student building is tailored to the young students, reduces the length of overwhelmingly long hallways, and ensures students maintain a connection to the outdoors. Each turn of the building becomes a visually open learning commons that allows learning to spill beyond the walls of the classroom. A bridge housing the school's shared programs-media center, art, and music spaces-spans over the east edge of the courtyard and creates the sense of learning in the middle of the woods.

AIA Course Number: 2025-NYSGBC-07

GBCI Course Number: 0920031745

### **Decarbonization through Bioplastic Wall Systems: Life Cycle and Energy Analysis in Residential Buildings in New York State**

Seyedehniloufar Mousavi

2:00 – 3:00 PM

This presentation explores the role of bioplastics in decarbonizing the construction industry, focusing on their use as sustainable alternatives to fossil fuel-based materials. Bioplastics, such as Polyethylene Furanoate (PEF), Polylactic Acid (PLA), and Polypropylene (PP), offer significant potential as carbon sinks, contributing to net-zero energy building designs. The presentation examines their application in wall cladding and insulation, comparing their performance to conventional materials. Using numerical simulations conducted with EnergyPlus, we evaluate the energy reductions achieved by bioplastics in New York State buildings. Additionally, Life Cycle Analysis (LCA) using the Ecoinvent 3.2 database assesses the 100-year global warming potentials of these materials. Results indicate bioplastics can reduce total energy demand by 5-38%, with bio-PEF and PLA reducing emissions by 1.0 and 1.7 kg CO<sub>2</sub>e, respectively, compared to 31.5 kg CO<sub>2</sub>e from traditional polystyrene insulation. This research highlights bioplastics' capacity to support sustainable construction practices and mitigate climate change through long-term carbon storage.

AIA Course Number: 2025-NYSGBC-04

GBCI Course Number: 0920031742

### **Materials Impact Through the Lens of Lifecycle and Health**

Baani Singh and Dante Garcia

3:05 – 4:05 PM

This presentation focuses on the impact of embodied carbon, indoor environmental quality and health emphasizing how material selection plays a significant role in mitigating climate crisis and improving occupant health. With numerous sustainability rating systems and sustainability pedagogy available to built environment professionals, it can be perplexing to choose the best for your project. Let's simplify one thing- the impact of material selection on climate change and enhancing the indoor air quality and how to approach it. Learn about materials' impact in relationship with rating systems like Net-zero Energy/zero Carbon, LEED, WELL, LBC, and more. Presenters will analyze tools such as Tally,

Athena, EC3 and more, to explain and apply strategies for material selection to promote low carbon design and construction, support sustainable development and occupant wellness. Above all this session demonstrates how designers and facilities managers can lead efforts to lower the carbon footprint of buildings by prioritizing healthy material choices.

### **Mass Timber Feasibility for NYC Schools**

Michael Balagur and Arnie Mok

3:05 – 4:05 PM

The New York City School Construction Authority opened 24 new schools or school additions in 2024. These buildings are subject to stringent programmatic and performance requirements and constrained by tight budgets, tighter sites, and accelerated schedules. As local policy goals transition from operational to embodied carbon targets, what are the prospects for introducing mass timber into these projects? This presentation provides a detailed feasibility, constructability, and whole building lifecycle analysis of two test cases for the NYC SCA, a new elementary school and a new standalone gym building.

AIA Course Number: 2025-NYSGBC-13

GBCI Course Number: 0920031751

### **Contactless Multi-Modal Sensing Approach to Assessing Material Value in Existing Buildings for Enhanced Recovery, Circularity, and Reuse**

Sophia Cabral and Fope Bademosi

Reusing materials from existing buildings offers a sustainable alternative to raw resources in the face of material scarcity. This study uses advanced sensing technologies, like thermal imaging and computer vision, to improve the assessment and reuse of materials in existing buildings. It focuses on non-contact methods for detecting studs within drywall assemblies and evaluating material conditions using red, green, and blue (RGB), depth, and thermal imaging data. Case studies and experiments were conducted to evaluate the feasibility of these technologies, revealing

their potential and limitations. Thermal imaging, combined with object detection algorithms, locates studs and assesses drywall conditions, while RGB imaging captures surface details for further analysis. Integrating these sensing methods creates a comprehensive material evaluation process that informs reuse decisions. Industry insights highlight current demolition practices and the challenges of material reuse, emphasizing the need for enhanced detection, such as hyperspectral imaging, to identify hazards like asbestos. While findings show promise, further advancements in imaging and data processing are essential to improve accuracy and streamline reuse workflows.

AIA Course Number: 2025-NYSGBC-14

GBCI Course Number: 0920031752

# FRIDAY, MARCH 28

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## **Aligning Priorities for a Positive Future - Introduction by Erik Backus**

Daniel Huard

8:30 – 9:30 AM

We all desire to live a significant life; however, as Professionals we as well strive to be current with our skillsets to see positive contributions for our Projects, Clients and our Careers. The chaos of life often frustrates and derails our plans to make a difference at work and in life. How do we align for a Positive Future? In this Keynote, I unpack principles to help identify and prioritize those elements key to significance in what we do. How we prioritize what we do and importantly for Professionals engaged in Green Building and Positive Impact Development the aligning of, who we are, what is expected of us, what can we do. Often our work will grow to fill the container it's been given with resource optimization and environmental responsibility the nexus we face. This keynote will share principles and practices to help inspire the audience to professionally Align Priorities such that they may implement a Green, Restorative and Regenerative pathway to redefine their purpose and gain the courage to contribute to a

Positive Future as a daily response. Although universally applicable, this Keynote will more intently focus within the fields and disciplines of, Sustainability & Green Building, Carbon & Resource Impacts, and Governance & Policy Optimization.

## **Demystifying Decarbonization: Three Tools by USGBC, ASHRAE and NYSERDA**

Monique Owens, Laurie Kerr, and Michael Schmidt

10:00 – 11:05 AM

To stabilize the Earth's climate, the building sector needs to achieve near zero carbon emissions by mid-century. Consequently, everyone wants to decarbonize their existing buildings, but almost nobody knows how to do it. Building professionals are very familiar with energy audits which lay out how buildings can save money by saving energy, but they typically are not familiar with retrofitting buildings to achieve low carbon outcomes, or "decarbonizing". And achieving low carbon outcomes affordably is not easy. It requires the development of a long-term plan that takes advantage of key events in the life of a building, such as equipment replacement or refinancing, in order to keep costs down. Every building will need a decarbonization plan. Because decarbonization planning is a new process, USGBC, in partnership with ASHRAE and NYSERDA, has developed three essential planning tools for the industry: a guide, a workbook, and a LEED credit. All three tools will be released this spring.

- *The Guide for Strategic Decarbonization Planning*, by USGBC, ASHRAE, and NYSERDA, is the first time that the process of strategic decarbonization planning has been comprehensively explained. The guide will lay out a step-by-step process for creating a good decarbonization plan, while explaining which strategies can be effective and which might be pitfalls to avoid.
- The USGBC Decarbonization Workbook standardizes the information to be collected during the development of a plan and

provides graphs to help project teams visualize their proposed progress.

- The LEED v5 O+M credit rewards projects that create decarbonization plans which significantly reduce emissions from fuel burned onsite and energy use.

The session will introduce the audience to the strategic decarbonization planning process, present the three tools, and provide examples of good strategic decarbonization plans that have been developed in New York State.

GBCI Course Number: 0920031764

### **Early Design Support towards Phius CORE Certification: 1818 5th Avenue Project**

Samantha Maimone and Shawn Corp

11:05 AM – 12:05 PM

This presentation will highlight the design of 1818 5th Avenue, a multifamily new construction residential project located in Troy, NY. This project, by the Rosenblum Companies, is a NYSERDA Building of Excellence (BoE) competition award recipient. 1818 5th Ave exemplifies decarbonization and energy efficiency. In this presentation, the architect and energy efficiency consultant will discuss how this project's design has evolved and how the NYSERDA Early Stage Design (ESD) support enabled the integration of advanced sustainability measures towards Passive House design certification. NYSERDA's BoE is a two-part, Demonstration and Early Design Support, RFP supporting the creation of replicable, clean and resilient, and carbon neutral multifamily buildings prioritizing occupant health and safety at predictable costs. The EDS program advances case study investigations and knowledge sharing to establish "business as usual" holistic carbon reduction frameworks for progressive design, construction, and industry practices. The program has undertaken in-depth investigations through modeling, guideline feasibility, building component evaluation, construction method innovations, and emerging marketplace and economic opportunities.

AIA Course Number: 2025-NYSGBC-15

GBCI Course Number: 0920031753

### **Building the Future: Key Changes in LEED V5**

Rachel Nicely, Mike Babcock, and Adam Ugliuzza

11:05 AM – 12:05 PM

The draft of LEED v5 is here—how will it drive market transformation, and what does it mean for your projects and the broader industry? Join us for an in-depth exploration of the next iteration of the LEED Green Building Rating System, which places renewed emphasis on Decarbonization, Quality of Life, and Ecological Conservation and Restoration. Our expert presenters will break down the most significant updates and provide insights into navigating this complex, game-changing version of LEED. With Decarbonization at the forefront, we'll explore the changes in the energy category, offering a "choose your own adventure" approach for project teams. Discover how to address electrification, thermal performance, and energy efficiency, and embodied carbon to meet the new performance standards. This session will help you grasp design and construction approaches that go beyond the present and prepare you for the future impact of these changes. Don't miss the opportunity to understand the big shifts and essential considerations that will shape the future of green building.

### **Transforming Healthcare Through Biophilic and Sustainable Design: A Case Study of Penn Medicine Radnor**

Jason Cole and Radhna Saxena

11:05 AM – 12:05 PM

The Penn Medicine Radnor building exemplifies a forward-thinking approach to healthcare design, transforming an outdated suburban office park into a regenerative, biophilic, and sustainable ambulatory care campus. Designed by Ballinger, this 250,000SF award winning facility integrates architecture and nature. The design blends interior and exterior spaces, connecting patients to natural light and panoramic views. With

native meadows, rain gardens and bird safe glass, the project embodies a holistic commitment to environmental stewardship. The case study invites attendees to delve into the collaborative design process, highlighting how user engagement and biophilic design informed each phase. Participants will learn how evidence-based design principles were applied to optimize staff workflows, minimize travel distances, and enhance wayfinding. They will see how immersive VR/AR tools allowed healthcare providers to engage with the design early on, ensuring functionality and comfort. It will highlight sustainable design strategies that contributed to the LEED Gold certification. Overall, attendees will gain insight into the benefits of a nature-centric approach to healthcare environments.

AIA Course Number: 2025-NYSGBC-16

GBCI Course Number: 0920031754

### **Executing a High -Performance Panelized Enclosure**

Bryan Bleier and Corey Murphy

12:10 – 1:10 PM

This presentation explores how off-site panelization of high performance enclosures provides valuable opportunities to promote efficiency, durability, comfort and health using sustainable materials. We will explore how materials and execution through offsite manufacturing can promote resilience and overcome challenges presented by Climate Change. As a result of this manufacturing context, we are able to execute complex details within a controlled environment, and implement strategies that increase the resilience of the material's used within, thereby promoting long term durability.

AIA Course Number: 2025-NYSGBC-10

GBCI Course Number: 0920031748

### **Factory to Field: Designing, Building and Verifying Modular Passive Houses**

John Loercher

12:10 – 1:10 PM

LaMora Senior Living in Westchester NY is the first completely modular Phius certified multifamily building in the world. This session presents the challenges faces relative to enclosure design, construction and verification of this project which does not follow the traditional site-built process. It includes specifics about the approach of designing a large multifamily building (trash, ventilation, out-of-boundary programs) as well as the difficulties of verifying a project in factory and field.

### **Planting the Seed for Synergy: Regenerative Farming and Sustainable Buildings**

Adam Ugliuzza and Jacob Deva Racusin

12:10 – 1:10 PM

The focus of this presentation is to discuss the potential for a mutually beneficial partnership between two of the biggest industries, agriculture and building construction. Regenerative farming sequesters more carbon than it releases into the environment by restoring soil and ecosystem health. A shift toward regenerative farming practices would restore biodiversity and soil fertility, both of which enable carbon sequestration and improve water retention. Regenerative farming is also critical for our resilience to combat natural disasters, reducing the impact of floods, wind damage and more. Meeting ambitious carbon reduction targets and net-zero construction is a lofty undertaking, but regenerative farming can provide the feedstocks for many bio-based building materials. Currently, structural, insulation, enclosure, finishes, and other products are all being made from bio-based materials that can be sourced from regenerative agricultural enterprises. Regenerative farming has the potential to trade carbon offsets for funding from new construction projects. Not only does regenerative farming provide a more sustainable and resilient solution to modern agricultural practices, it can also benefit the sustainable building industry.

AIA Course Code: 2025-NYSGBC-22

GBCI Course Code: 920031760

## **Savings Now or Savings Later? Resolving the Conflict Between Operational and Embodied Carbon**

Zachary Vergata

2:30 – 3:30 PM

As the U.S. grapples with the effects of climate change, new research has shown the significant contributions of embodied carbon in total GHG emissions. This presentation demonstrates how 4 real-world residential projects (2 single family, 2 multifamily) have applied new data and tools to evaluate their embodied carbon impacts, from the perspective of a sustainability consultant and energy rater tasked with helping projects achieve their performance goals. Difficulties that the projects experienced in pursuing low operational and embodied energy will be highlighted and their causes discussed. The presentation will provide attendees with insights into how building design and construction decisions helped or hindered operational and embodied carbon - and sometimes both, in these case studies. Attendees will be introduced to a useful tool to calculate the embodied carbon of residential projects and learn the tool's benefits and limitations.

AIA Course Number: 2025-NYSGBC-08

GBCI Course Number: 0920031746

## **Designing to a HERS 45: Identifying tools and trends in multifamily buildings**

Shari Rauls

2:30 – 3:30 PM

Energy modeling for residential projects using the HERS score has been widely adopted in the US. It is used in energy code compliance, ENERGY STAR compliance using the ERI pathway, and is connected to 45L tax credits and often to state incentives in the Northeast. Using energy modeling to inform design decisions can be a powerful tool. This session will discuss how a multifamily project used HERS modeling in the schematic design phase to determine energy efficiency measures to meet Massachusetts Stretch Code compliance requirements of HERS 45.

General challenges and takeaways will be discussed to achieve a low HERS score for multifamily buildings. The weight of individual energy efficiency measures will be shown to best optimize a project for low energy use. A tool used by Steven Winter Associates to track different energy efficiency pathways to meet the same HERS score outcome will also be shared. This session will show you how using energy modeling as an iterative process involving the entire design team can streamline a project to success.

AIA Course Number: 2025-NYSGBC-11

GBCI Course Number: 0920031749

### **The Optimum Decarbonization Path for Existing Buildings**

Matt Bowers and Jonathan Finewood

2:30 – 3:30 PM

Every existing building has an Optimum Decarbonization Potential. To build an investible Decarbonization Plan delivering environmental, social, and economic benefits, building science and data science tools are essential for your decarbonization toolbox. This solutions lab will load your toolbox with the tools necessary to decarbonize existing buildings the right way.

AIA Course Number: 2025-NYSGBC-02

GBCI Course Number: 0920031740

### **Challenges and opportunities with municipal high performance building design and construction**

Rick Alfandre

3:35 – 4:35 PM

Local & county government projects provide a unique opportunity to construct high performance & healthy buildings that will serve their communities for generations. The realization of these buildings requires that local leaders, and community members, understand the benefits that high performance buildings provide and are committed to their

construction. We will look at two projects to illustrate the benefits, as well as the challenges, in designing and building these facilities. The New Paltz Fire Station, completed in October of 2022, is all-electric and will be net-zero-energy, once the planned solar array is complete in 2025. The Ulster County Government Operations and 911 Call Center will begin construction in the spring of 2025. This highly resilient, secure, and all electric facility reflects the myriads of issues, and interrelationships of those issues, that must be navigated. In addition to energy efficiency, particular attention was paid to creating healthy indoor environments for both buildings. We will discuss the genesis of these projects and the many “twists and turns” they have taken, while creating an inspiring conversation, rather than a “how to” technical lecture, though details will be illustrated.

AIA Course Number: 2025-NYSGBC-09

GBCI Course Number: 0920031747

### **Multifamily ASHP Conversions and the Law of Unintended Consequences**

Daniel Robb and Gregory Sine

3:35 – 4:35 PM

In a recent 2022 demonstration project in central MA, two identical income-eligible multifamily buildings received weatherization and HVAC upgrades. One building received conventional natural gas condensing furnaces, replacing the existing end-of-life standard efficiency furnaces, and retained conventional through-the-wall PTAC units for cooling. The second building removed the conventional gas furnace system, eliminated the through-the-wall PTAC, and installed a combination of ducted and ductless Fujitsu cold-climate ASHP units. Performance data was captured on both configurations, and an analysis of the data showed large discrepancies between the realized COP<sub>h</sub> and the range of COPs presented in the manufacturer data. Both heat pump sizing and user operation influenced the overall efficiency downward. presentation provides an overall summary of the project with a deep dive into how

human influenced choices in both equipment selection and operation drove the ultimate performance, impacting space conditions, energy consumption, demand increases, and emissions reductions. Success and acceptance of tomorrow's electrification world starts with understanding the impacts of sizing and equipment selection today.

AIA Course Number: 2025-NYSGBC-19

GBCI Course Number: 0920031757

### **Listening to the Public: What CNY Needs and Wants for Energy Efficiency Retrofits**

Lindsay Speer and Lacey Scofield

3:35 – 4:35 PM

How does the average Central New Yorker perceive energy efficiency programs? What barriers prevent them from utilizing the programs, and what are the opportunities to overcome some of those barriers? The Central New York Regional Development and Planning Board, Alliance for a Green Economy, and Greater Syracuse Works conducted a regional assessment and barriers analysis starting in 2022, to guide the development of their combined EnergySmart CNY program. They used a variety of quantitative and qualitative methods to gain insight into CNY's access to clean energy and energy efficiency improvements, including one-to-one conversations with local organizations, community-based conversations with residents, surveys, stakeholder meetings, and roundtables. In all, the engagement activities gathered feedback by reaching well over 1,100 Central New York residents, the majority of whom live in disadvantaged communities (DACs) as defined by New York's Climate Justice Working Group. This presentation explores the findings of the Regional Assessment and Barriers Analysis as well as opportunities to overcome those barriers.

AIA Course Number: 2025-NYSGBC-17

GBCI Course Number: 920031755