

Multifamily Buildings 2008 Conference: Session Descriptions by Domain

Domain A

Program Design Approaches

A1 Wisconsin Focus on Energy's Apartment and Condo Efficiency Service Program

Workshop

Wisconsin Focus on Energy's Apartment and Condo Efficiency Services Program specializes in energy efficiency for new and existing multifamily buildings. The program's New Construction component facilitates inclusion of energy efficient measures and designs for new multifamily buildings of 4 - 400 units. This program focuses on the owners/developers, architects, engineers, contractors and suppliers. New Construction program staff work with the design team as early as possible to incorporate the largest energy savings. Using standard engineering principles, energy modeling is used to calculate energy savings and incentives per building, with opportunities ranging from building orientation to lighting systems. The Existing Buildings component provides technical information, energy assessments, facilitation, and commissioning of energy efficiency improvements for owners and operators of existing buildings directly or through contractors. Energy assessments result in grant proposals that include energy savings estimates and available rewards to owners/managers based on our calculations/models. The program works with various markets in recruiting and supporting contractors who propose as options and install energy-efficient equipment. The program provides customers "project facilitation" in developing requests for bids and analyzing proposals with their existing contractors. The program provides In-Unit direct installation of energy efficient measures in qualified existing buildings.

Carter Dedolph

Wisconsin Energy Conservation Corporation

Brody Vance

Franklin Energy Services, LLC

Sharon Gould

Franklin Energy Services, LLC

A2 California's Statewide Multifamily Energy Efficiency Rebate Program and National Grid's EnergyWise Multifamily Facilities Program

Panel

This session will report on two specific programs designed to integrate energy efficient equipment into multifamily housing while saving money.

Helen Fiscaro

Pacific Gas and Electric Company

Kathy Van Cott

Southern California Gas

Davi Ibarra

Southern California Edison

Teresa M. Daviés

San Diego Gas & Electric

Robert O'Brien

National Grid

A3 NYSERDA's Multifamily Performance Program: Rounding the First Turn

Workshop

In early 2007, NYSERDA transformed a number of multifamily energy efficiency programs into one program that would effectively address energy efficiency in the multifamily sector. The resulting Multifamily Performance Program, released in May 2007, was met with very positive reactions from multifamily owners and the efficiency market. The Program recently won ACEEE's Exemplary Program award and an Environmental Business Journal Achievement Award in Energy and Infrastructure. This session will highlight the first-year experiences gained from designing and rolling out this unique and comprehensive program. For each of the major design components of the program, the session will describe the issues that arose as the Program hit the street so that the lessons learned can be applied in other similar programs.

Mark Lorentzen

TRC Energy Services

Tom Rooney

TRC Energy Services

Michael Colgrove

New York State Energy Research and Development Authority (NYSERDA)

A4 It's All One Thing: Getting Better Affordable Housing in New York State

Panel

Anyone who has had the pleasure of interfacing with the myriad stakeholders involved in the development of affordable housing knows that getting projects in the ground is a complex process that often requires participation in multiple government financing programs. Add all of the different energy efficiency and green building programs to the mix and things can become confusing and cumbersome for everyone involved - and can potentially have a negative impact on results. This panel discussion will feature members of Enterprise Green Communities, NYS DHCR, NYS HFA, and NYSEERDA discussing the ways in which they have worked together to simplify and streamline the programs, requirements, and process.

Luke Falk

New York State Energy Research and Development Authority (NYSERDA)

Arlo Chase

New York State Housing Finance Agency/SONYMA/AHC

Abby Jo Sigal

Enterprise Community Partners, Inc.

Debra Devine

New York State Division of Housing & Community Renewal (DHCR)

A5 Deep Energy Reductions: Beyond Business as Usual

Forum

It is time to re-examine our assumptions about the levels of energy reductions that are achievable in existing multifamily buildings. What if reductions of 20 to 40 per cent are not enough to resolve the issues of energy cost, availability, and environmental impact? While some experience gained from energy and utility programs supports implementation of the deep energy reduction paradigm, other residential energy-efficiency 'traditions' make it more difficult to obtain deep energy reductions.

Join in a discussion to examine the opportunities, barriers, and strategies to achieve a much higher level of energy performance in existing multifamily buildings over the next twenty years. The workshop will build on the ACI Summit held in July, 2007 in San Francisco "Moving Existing Homes toward Carbon Neutrality," and the resulting white paper (www.affordablecomfort.org).

Linda Wigington

ACI

Elizabeth Chant

Champlain Valley Office of Economic Opportunity

A6 Green Affordable Housing Taking Root: National Examples

Panel

This session will address two programs aimed at improving energy efficiency and affordability in housing: the Enterprise Green Communities Program Criteria and the Passive House Concept. Two housing developers will showcase the Enterprise Green Communities Program Criteria, which develops green affordable multifamily rental projects with advanced energy performance. These developers are using a MassHousing/MTC grant program to include photovoltaic arrays that will offset 40-70% of common area loads. Topics will include an overview of the Green Communities program and Criteria, how the standards and expectations in green building programs influence developer decision-making, and how energy modeling and analysis can help make the case for financing that supports greener building. The second part of the session will put the "passive house concept" into the current world energy use context, introduce the energy and airtightness requirements to meet passive house standards and provide a brief overview of the design basics. Three realized passive houses built in three different US climate zones between 2002 and 2008 will be presented in detail, plus three proposed multi-family projects in the planning phase.

Kim Vermeer

Urban Habitat Initiatives

Madeline Fraser Cook

Local Initiatives Support Corporation (LISC)

Katrin Klingenberg

Passive House Institute US

A7 ESCo or No Go: Choices for Implementing Energy Efficiency in Public Housing Authorities

Panel

Funding from the Department of Housing and Urban Development (HUD) for Energy Performance Contracting (EPC) in Public Housing Authorities (PHAs) has existed for more than 15 years. A great deal of experience has been amassed during that time, and EPC is now much better known among PHAs. Some of them have gained sufficient comfort to develop and implement EPCs without Energy Services Companies (ESCOs), using a combination of in-house staff and consultants. In part to proceduralize this emerging practice, HUD recently recognized in its field office guidance the opportunity for PHAs to implement comprehensive energy efficiency improvements on their own, without a guarantee for an ESCo. Nevertheless, ESCOs remain critical implementers of energy efficiency and have, if anything, increased the volume of their activity among PHAs. This session will explore the costs and benefits of ESCo-led versus Self-Managed approaches to EPC, discuss real world examples, pitfalls and lessons learned, and provide guidance for PHAs in making the choice between these contracting opportunities. The session will consist of a panel of presenters followed by substantial roundtable-style open discussion.

Sean Patrick Neill

HR&A Advisors

Matt Pesce

Facility Strategies Group

Ken Pushko

City of Rahway Housing Authority

Rick Ansley

City of Rahway Housing Authority

PHA Director/Coordinator

A8 We'll Provide the Product If You'll Provide the Labor

Workshop

Direct Install, when viewed with its costs of product and labor, is usually viewed as a simple but costly way to get energy savings. With product costs of around \$2/compact fluorescent, much of the cost is in the labor and data reporting. We found we get into 40% of units on average when we supply the labor and product in the traditional way. When we offer to provide the product for free (accompanied with on site training), we've found decision makers from private investment property owners and subsidized providers of affordable housing are willing to provide the labor and data reporting that allows us to get into 90%+ of units. This offer has overcome the "split incentive" problem (owner responsible for lighting fixture, tenant gets any savings from lighting retrofits to CFL) in many investment properties. With high savings goals, this is allowing us to get into more units with less overall cost and get more savings in a shorter period of time. As an additional benefit, it seems that the investment property owners and subsidized providers are more willing to work with us on more difficult projects after successful completion of a simple direct install project.

Neil Curtis

Vermont Energy Investment Corporation/Efficiency Vermont

Steve O'Malley

Vermont Energy Investment Corporation/Efficiency Vermont

A9 EPA Forum: Update on High Rise EnergyStar®

Forum

This Forum, led by David Lee of EPA, continues the discussion started at the first such forum at MFB 2003 – and continued at MFB 2006 – addressing the question: High Rise Energy Star Multifamily Buildings: What and When? Representatives active in the Working Group established in 2003, or in the pilot projects and programs subsequently established in three states, will share their experiences to date. Others interested in joining this effort are invited to contribute to the dialogue. The focus to date has been on the label for new construction projects; but a label for existing buildings is also on the table.

David Lee

US Environmental Protection Agency/EnergyStar

A10 NYC Housing Authority/Clinton Climate Initiative Collaborative

Workshop

In December 2007, the New York City Housing Authority (NYCHA) and the Clinton Climate Initiative (CCI) announced a partnership to conduct retrofits across NYCHA's housing stock to reduce NYCHA's greenhouse gas emissions and energy expenses. Through a combination of energy performance contracting, resident engagement, and incorporation of new technologies, NYCHA aims to preserve public housing for the future and make for a more sustainable quality of life for all citizens of New York City.

Lloyd Kass

New York City Housing Authority

Matthew Magenheim

The William J. Clinton Foundation

Jennifer Hatch

Facility Strategies Group

Domain B**Energy Efficiency Implementation Strategies****B1 Standards, Certification, and Accreditation in the Multifamily Building Sector: New Directions**

Workshop

Over the past five years, the national drive to increase certification of the knowledge and essential skills of workers in the home performance industry has expanded to include a similar effort to certify professionals working in the multifamily building sector. Beginning with the Multifamily Building Analyst, and extending to other professional designations of those designing, installing or maintaining equipment in multifamily buildings, market and program demands have led to recognition of the need for more professional multifamily certifications. As in the home performance industry, this has also lead program implementers to call for accreditation of contractors who employ such certified building professionals. This panel will inform participants about existing standards and certifications available for multifamily professionals and introduce several proposed certification designations that are planned for implementation in the next year to 18 months. The issue of how the home performance contractor accreditation model might best be implemented in the multifamily sector will also be addressed. Finally, panelists will solicit interested parties to participate in expert panels or standards scoping sessions that will be convened to support development of standards for additional job designations during the next six months.

Michael Colgrove

New York State Energy Research and Development Authority (NYSERDA)

Mathew Anderson

Building Performance Institute

David Hepinstall

Association for Energy Affordability, Inc.

Larry Zarker

Building Performance Institute

David Lee

US Environmental Protection Agency/EnergyStar

B2 "Bulbs Be Gone" – The Coming Eradication of Incandescents in Multi-Family Housing, and How We'll Get from Here to There

Workshop

This session will review the recent revolutionary regulatory developments that mandate efficient lighting and will essentially eliminate the standard incandescent light bulb in the next decade. Performance standards have been carefully crafted so as to allow and encourage technical efficiency innovation while eliminating loopholes. Efficiency standards are targeted by certain mileposts. Currently-available efficient compact fluorescent lamps will meet many needs, but not all. Panelists will evaluate the products and practices currently on the market, and outline how well they will satisfy the targets. They will review what is in manufacturers' pipelines, and what might be coming after, as well as discuss to what extent the standard medium base may yield to other configurations: GU24 or LED fixtures, etc. The session will explore how this will affect practices within the multifamily energy arena; the topic of mercury, and other environmental considerations; and how new lower-Hg fluorescent products are entering the market and whether these developments -- along with developing hazard-remediation techniques, recycling, and public perception -- could either promote or hold back this next phase of efficiency improvement. Policy makers and program managers should take note, as well as installers and retrofitters.

Jennifer Thorne Amann

American Council for an Energy-Efficient Economy (ACEEE)

Fred Davis

Fred Davis Corporation

B3 **Condos and Coops: New Laws Challenge Board Authority to Regulate Common Elements** Workshop

Homes within common interest communities (CICs), condominiums, cooperatives, and town homes face challenges that make decision making and the installation of solar devices more complex than for single-family homeowners. The multiple-ownership of land and buildings in CICs is significant among these challenges. The owner wishing to install a solar device may not own the land or the portion of the building most suitable for the solar device, and the interests of the other owners must be taken into consideration. Solar devices must pierce the building envelope. In most CICs the building envelope is a common element owned by the association or by all of the association members, and responsibility for the integrity of the building envelope lies with the board of directors, not individual unit owners. Broadly-worded laws would compromise a board's ability to make decisions in the best interest of all unit owners. CICs exist in a wide range of building types including unattached homes, homes connected by one or more walls, and high-rise structures. Laws that make sense for one community may not be appropriate for all common interest communities. Where is the common ground between energy efficiency and board control?

Alice Finley Ebenezer Management Services, Inc.
Andrew S. Fortin Community Associations Institute

B4 **Implementing a Utility Low Income Gas Efficiency Program with WAP** Panel

When a utility has a history of delivering its low-income energy conservation programs in one state through the WAP local network, it may be ready to consider repeating this approach in another state. This panel will explore what led a New England based set of gas utility managers to decide to turn once again to work with weatherization in its gas service territory in NYC and Long Island -- and in so doing to expand its program into a different housing stock, including a types of multifamily buildings not typical in New England. Both utility and weatherization representatives will share their perspectives on the challenges and new opportunities resulting from this collaboration.

David Hepinstall Association for Energy Affordability, Inc.
Laura G. McNaughton National Grid
Elliott Jacobson Action Inc.
Akil Friday National Grid
Pauline Morgan New York State Division of Housing & Community Renewal (DHCR)

B5 **Much Ado About Utility Allowances** Panel

Commonly used Utility Allowances are known to be too high for new construction, especially for projects designed to be more energy efficient than required by current codes. In some areas of the country, tenants in all new housing that qualifies for Low Income Housing Tax Credits will pay substantially less than the applicable utility allowances would indicate. Developers report avoiding some areas with high utility allowances simply because their projects do not pencil out with utility allowances that do not reflect the energy use of an efficient project, or they abandon any attempts to include energy efficiency measures. The U.S. Department of Housing and Urban Development (HUD), the California Energy Commission, and several utilities are working together to address these issues and will present resulting strategies.

Julieann Summerford Heschong Mahone Group, Inc.
Nehemiah Stone KEMA Services Inc.
Michael Freedberg US Department of Housing and Urban Development
Carl Hafner New York City Housing Authority

B6 **Affordable Housing: Using Aggregation to Finance and Implement Energy Efficiency** Workshop

This session will present strategies to bring energy efficiency resources to the affordable housing sector, particularly hard-to-reach markets such as smaller housing authorities, non-profit owners, and private landlords. Implementing energy efficiency in affordable housing has unique challenges and it is difficult for owners and managers to staff, research and lead such efforts. With overburdened staff and limited resources for capital improvements, delivery of energy efficiency resources in the affordable housing sector needs to include comprehensive technical assistance and a range of implementation and financing strategies.

Jeffrey Summerville Strategic Energy Innovations
Jennifer Hatch Facility Strategies Group

B7 **Energy Efficiency Financing that Works for Owners and Bankers** Forum

Given our climate crisis, it is critical that we expedite the energy efficiency and alternative energy work done in our existing multifamily housing. To do this we not only need more owners to participate, we need them to do measures that up to now have been rejected as too expensive, e.g. cogeneration, solar, heat recovery. What, if anything, should be different from the way government programs currently work to get greater owner and bank participation? This session's moderator will present an alternative approach as a way to stimulate discussion from a panel of owner representatives and bankers.

Richard Cherry Community Environmental Center Inc.
Leonard Maisel Amalgamated Bank
Michael Weisberg HVB Leasing Corp./Hudson Valley Bank

Peter Hoyle	Related Management LLP
Getz Obstfeld	Community Developers Inc.

B8 **Just Short of Gut Rehab: Comprehensive Efficiency Efforts in High Rise Buildings**

Workshop

This session will address how a specific hi-rise (3+ stories) low-income Wx pilot program in Milwaukee, WI saved with a whole building approach, addressing both owner energy concerns and tenant comfort. The program was comprehensive, scoping and completing measures on the building shell, building HVAC systems, and in-unit appliances and lighting. Building air sealing was a focus of this effort, and many technologies and techniques were used to save energy throughout the properties. Presenters will share information on lessons learned, both good and bad. Actual results on energy savings will be discussed, as well as updates on systems that will have been in place for a year.

Brody Vance	Franklin Energy Services, LLC
Don Hynek	Wisconsin Division of Energy Services

B9 **Why Projects Succeed: Best Practices in Completing Energy Efficiency Projects**

Panel

This session will investigate various options and models for managing energy efficiency projects, specifically focused on the installation, but addressing the entire process - i.e. workscope development, development of construction documents, along with installations. The panel discussion will explore the comparative benefits of various approaches, including a consideration of how the MPP model (or other governmental support) encourages and/or supports any specific approach, and what additional assistance should be considered.

Pat Fitzgerald	New York State Energy Research and Development Authority (NYSERDA)
Ian Shapiro	Taitem Engineering
Bert A. Spaeth	Siemens Building Technologies
Dan Rieber	Northern Manhattan Improvement Corp.

B10 **Multifamily Confessional**

Panel

The building field has made mistakes over the years, and while some readily admit their transgressions, others do not. With a few carefully placed "confessors" in the audience, the presenters will first show some funny, and not so funny, building deficiencies, then ask the audience members to confess to their sins. While the session is based in good science practices, it is also intended to be humorous, so that people can laugh together while learning.

F.L. Andrew Padian	Steven Winter Associates, Inc.
Luke Falk	New York State Energy Research and Development Authority (NYSERDA)
Dan Rieber	Northern Manhattan Improvement Corp.
Tom Sahagian	Power Concepts LLC

Domain C

Benchmarking, Measurement and Evaluation

C1 **Pre- and Post-Construction Energy Consumption Tracking**

Workshop

Today's utility bill tracking software can deliver excellent results for energy managers who want to gain a comprehensive understanding of utility usage and costs in their facilities. All of the major commercially available utility bill tracking software programs are good at what they do, however, they are distinctly different in functionality and capacity. Savvy energy managers have discovered - sometimes the hard way - the importance of selecting the appropriate software package to meet their needs. Before reviewing software packages, it is best to understand the needs of an organization and the resources available, and then to compare each program's capabilities (such as budgeting and forecasting, temperature correction, rate analysis, report generation, etc.) in light of identified needs. This session will help attendees to identify what tasks they want to accomplish with their utility bill tracking software. Specifically, one presenter will discuss the use of whole building energy simulation software to set performance targets for energy improvements, evaluate savings predictions tracking to targets using real post construction weather and utility information, and how to react to post construction conditions that deviate from the planned conditions.

Chris Balbach	Performance Systems Development of NY, LLC
Jeff Perlman	Association for Energy Affordability, Inc./ Bright Power

C2 Measurement and Validation of Achieved Energy Savings through Benchmarking and Traditional Billing Analyses Workshop

It is widely accepted that the analysis of billing data is one of the most effective approaches to targeting buildings for energy efficiency retrofits and validating post-retrofit energy savings. However, such analysis is often done using simplistic methods, and without the proper attention to billing data quality. ASHRAE Guideline 14 provides scientifically sound methodology for measuring energy savings through pre/post billing data comparison, including the detailed description of regression algorithms, discussion of acceptable calculation uncertainty (error), and billing data required for the reliable analysis. The software tool that was funded by ASHRAE to perform Guideline 14 – compliant billing analysis was incorporated into NYSERDA project management and tracking system to support the rapid feedback on post-retrofit energy savings, and to inform the program implementation. The algorithms driving the Benchmarking Tool used in NYSERDA Multifamily Performance Program represent a fundamentally different approach to utilizing billing data, with the goal of comparing the building to its peers. The presentation will include discussion of successes and challenges of both methods. "

Maria Karpman Karpman Consulting
Tom Rooney TRC Energy Services
Terry Sharp Oak Ridge National Laboratory

C3 Benchmarking HUD Public Housing Nationally Workshop

The session will focus on an easy-to-use energy and water consumption benchmarking tools that are applicable for all residential buildings throughout the entire U.S. public housing stock. Energy and water consumption data were voluntarily submitted for over 9,100 buildings by almost 350 PHAs nationwide. Regression analyses were performed on the datasets to see which of over 30 characteristics (e.g., building size, unit size, climate, building age, laundry type, parking, utility prices) were most closely linked to energy and water use. The benchmarking models were then developed by correlating the dominant and most common building characteristics to building energy and water consumption. Both benchmarking tools are still under development and the Department is interested in participates input. The Tools were developed under a partnership with the Environmental Protection Agency and Oakridge National Laboratories and under contract with D&R International, Inc.

Dick Santangelo US Department of Housing and Urban Development
Glen Salas D & R International, Ltd.
Terry Sharp Oak Ridge National Laboratory

C4 Infiltration Testing and Air Sealing in Multifamily Buildings Workshop

The presenters have performed blower door tests on several dozen multifamily buildings, and completed before- and after-tests on three buildings that received comprehensive weatherization work (shell, building systems, and in-unit energy use were all addressed.) They will describe multiple systems for performing the tests, and discuss pros and cons of each. Their work identified infiltration locations typical in midwest MFBs. Once identified, the infiltration paths were then treated. Post-treatment blower door tests indicate that improvements of 10 to 20 percent were achieved. Utility bill analysis is underway now to identify the impacts of the work performed, and a preliminary look at that analysis will be presented.

Don Hynek Wisconsin Division of Energy Services
Torrance Kramer Franklin Energy Services, LLC

C5 Developing an Energy Master Plan Program: Best Practices Panel

"Property Management Challenges & Opportunities The Energy Master Planning process calls for a long-term perspective that is more than simply cutting last year's energy use. Rather than seeing energy as a line item expense in the budget, it makes energy awareness part of the everyday operation and ""mindset"" of the organization. This approach can be equally valuable, both to large, multi-facility organizations, as well as to small, single-owner operations with just a few employees. The effort and level of detail will vary respectively, but the approach is basically the same. This panel will discuss the importance of a properly designed and managed company or site energy management program. Come learn what constitutes a comprehensive Energy Master Plan, and be stepped through the development process and hear about the positive impact it can make on a building's bottom line by a review of some successful programs. (Note this session was VERY well attended and received in 2006, even though it was one of the last sessions on the 3rd day.) "

Fredric Goldner Energy Management & Research Associates

C6 Calculating "Carbon Footprint" for Large Buildings Workshop

The author has completed extensive research and completed carbon analysis at the program and building level for a statewide energy efficiency program.

Brody Vance Franklin Energy Services, LLC
Don Hynek Wisconsin Division of Energy Services

C7 Multifamily Updates: Benchmarking, Retrofits, Rehab, and New Construction

Panel

Multifamily buildings, despite many reports to the contrary, are extremely inefficient in their use of all resources. As early as 1996, groups of similar buildings were found to have energy usage adjusted for weather and building size vary by as much as 7:1. As more buildings have been viewed over the years, this tendency has been repeated, and has also been seen in usage of ware, pesticides, paint, outdoor maintenance, and many other multifamily building supplies. This session will discuss grave areas of this oftentimes catastrophic waste and ways to curb it.

F.L. Andrew Padian
Keiryn Ross
Ben Kornfeind

Steven Winter Associates, Inc.
Steven Winter Associates, Inc.
Dunn Development

C8 Windows in Multifamily Buildings: Replace or Repair?

Workshop

Why break the budget installing new windows when you can upgrade to good-as-new performance for less than a tenth of the cost? Consider the financial choice, a new window at thousands of dollars or a new lease on life, increased occupant comfort and lower energy bills for a hundred dollars. Multiply this by several hundred windows and the choice will become clear. This panel will explore these and other similar questions involving windows in MFBs.

Steve Tratt
Tony Woods

Zerodraft
Canam Building Envelope Specialists Inc.

C9 Cap & Trade and the Regional Greenhouse Gas Initiative: Implications for Energy Efficiency

Workshop

Based on the fact that buildings are responsible for almost half (48%) of all US greenhouse gas emissions annually, there is a lot of potential for pollution reduction in multifamily residential units. This workshop will address various greenhouse gas programs and markets with the aim of stimulating emission reduction efforts. The Regional Greenhouse Gas Initiative (RGGI), which is a generator based cap, will be specifically discussed, encompassing key issues such as leakage and implementation.

Steve Cowell

Conservation Services Group (CSG)

Domain D**Advanced Technology and Renewable Energy****D1 Combustion Control Systems: Maximizing Energy Efficiency**

Workshop

This session will focus on the use of advanced combustion management systems to improve burner performance and efficiency. The speakers will focus on linkageless modulation systems, oxygen trim, draft control, blower motor management with the use of variable frequency drives, flue gas recirculation and more. There have been very few major advances in burner design over the last 50 years. These control systems represent a quantum leap in an industry in which changes traditionally are infrequent and small.

Peter Knauf
Andre Lotz
Grant F. Bowman

Preferred Utilities Mfg. Corp.
Thermal Energy Conservation
Analytical & Combustion Systems

D2 Advanced Heating Controls and Remote Monitoring Technologies

Workshop

There have been many new advances in advanced heating control and remote monitoring technology over the past few years. Historically, the most common heating control in multifamily housing has been the outdoor reset. Why it has been so widely and long used? What is the time/temperature control logic behind it? What are its operational consequences? This session will provide an overview of the technology developments that are changing control possibilities, such as the lower cost of digital data acquisition, data processing, and data storage devices; wireless communication; and internet data-basing. Some of the newest technologies will be discussed and demonstrated.

Jim Leonard
David Unger
Vincent Clerico
Lloyd Kass

Intech 21, Inc.
US Energy Group
Heat-Timer Corporation
New York City Housing Authority

D3 Principles of Efficient Hydronic Heating Systems for Multi-Family Buildings

Workshop

This session will start with the basics of hydronic heating systems including basic piping details, pump sizing and the importance of expansion capacity and air elimination. It will continue on to include more advanced topics such as primary-secondary piping, combined heating/DHW systems, thermal mass-flywheel effect and mixing strategies for outdoor reset control. It will conclude with a discussion of the importance of system balancing and currently available equipment.

Jeff Eichenwald

Housing Conservation Coordinators

D4 CHP Technologies & Applications in Multifamily Buildings

Workshop

Determine the merits of introducing CHP/cogeneration into your facilities. Packaged CHP systems, properly sized, installed, adequately maintained and supervised, can result in substantial savings in operating costs for MFBs by reducing purchases of electricity and fuel. This session will familiarize you with the technical and economic potential of packaged CHP systems.

James Armstrong

DSM Engineering Associates, PC

Stephen Stone

DSM Engineering Associates, PC

Thomas Bourgeois

Pace Energy and Climate Center

D5 Cost Effective Solar Heat & Hot Water: Design Principles and a High Rise Case Study

Workshop

Solar heat and hot water technologies cost 1/4 the price of solar electricity and are used throughout the world to reduce the burning of oil and natural gas for heat and hot water. This session will highlight particular solar heating systems that are being easily integrated into multi-family retrofits and new construction. Attendees will find out about system designs, sizing, and installation considerations, and will learn about the typical costs and economics of solar thermal systems. In addition, this session will examine the case study of Via Verde, focusing on principles of solar design, adaptation of principles to this project, and project and finance related challenges.

Ron Kamen

Earthkind Energy

Robert Garneau

Grimshaw Architects PC

D6 Central Domestic Hot Water Systems in Multifamily Buildings: Research Results and Field Experience

Workshop

One of the most relied-on means of obtaining gas savings (in therms) in existing MF buildings is to improve DHW systems. For buildings with CDHW systems, that usually means installing controls that modulate hot water supply temperatures based on fluctuations in demand. Nehemiah Stone will discuss KEMA's work following up on a review of installations under a California statewide program (PY2004-05), which indicated that only about 12% of the expected savings were being realized. Sempra contracted with KEMA Services Inc. to take another look at the measure and attempt to either verify the earlier analysis or refine it. By reviewing existing properties, installation practices, and pre- and post-installation billing data, KEMA determined that (a) the savings are actually about 25% of what was expected, and (b) there are several program improvements that could increase the savings significantly. Part of this session will describe the study, the results, and the recommendations of KEMA, whose study showed that savings are a function of (a) control type installed, (b) practices of the installer, and (c) existing system faults that often go unrepaired. In addition, the session will highlight the ASHRAE/ASPE guidelines on DHW system sizing, and results of a series of real-time/monitored data studies on domestic hot water (DHW) consumption and system sizing and selection criteria, as well as recirculation system control strategies.

Fredric Goldner's presentation will demonstrate the economic benefits of applying various equipment and systems to a range of building sizes in such a way as to allow attendees to apply the findings to their own sites. Results of a series of real-time/monitored data studies on domestic hot water (DHW) consumption and system sizing and selection criteria, as well as recirculation system control strategies. The session will briefly highlight the ASHRAE/ASPE guidelines on DHW system sizing. The economic benefits of applying various equipment and systems to a range of building sizes shall be demonstrated in such a way as to allow attendees to apply the findings to their own sites.

Nehemiah Stone

KEMA Services Inc.

Fredric Goldner

Energy Management & Research Associates

D7 Strategies for Transforming Classic Brick Row Houses

Roundtable

Eastern US cities have millions of masonry row houses built between 1800 and 1930. With small footprints, high density, common walls, and access to mass transportation, they offer high value to our need for sustainable housing. This session will provide insight from the European experience with passive house concepts applied during renovation to achieve 80% to 90% reductions of heating energy. Participate in developing recommendations for action to address both technical issues and community solutions.

Linda Wigington

ACI

Elizabeth Chant

Champlain Valley Office of Economic Opportunity

Burkhard Schulze Darup

Architekturbüro Schulze Darup & Partner

D8 Integration of Advanced Metering Technology, TOU Rates and Demand Response in Multifamily Buildings

Panel

"While advanced metering technologies, including submetering, have become somewhat standard for master-metered multifamily buildings, newer technologies, assisted by NYSERDA R&D and incentives, developed over the past few years are providing improved capabilities for integration of submetering with TOU rates, critical peak pricing, demand response and load control. Using case studies from 5-10 buildings participating in NYSERDA programs over the past 5 years, the panelists will present several aspects of their implementations that address various options for integration of advanced technologies that address the need for reduced energy waste, price signals for more efficient societal impacts due to when energy is used, monitoring and notification technologies built into advanced metering systems that can capture and integrate temperature readings, and signal residents as to TOU periods. In addition, the two-way data communications capability also provides options for load control of appliances and lighting. The results is a menu of options for multifamily buildings – especially master-metered sites, that can provide price signals to benefit residents, building owners and society, load relief to utilities and participation in Independent system operator (ISO) incentive programs. "

Joseph Lopes	Applied Energy Group, Inc.
Peter Douglas	New York State Energy Research and Development Authority (NYSERDA)
Herbert E. Hirschfeld	Herbert E. Hirschfeld, P.E.

D10 Condensing Boilers and MicroCHP applications for Multifamily Buildings

Workshop

Heating is the largest energy expense in most multifamily buildings in colder climate zones. Reducing heating energy use through the replacement of old, inefficient, atmospheric boiler systems with new, condensing boiler systems with much higher efficiency can result in large energy and cost savings. Jerry Katz will describe how high efficiency condensing boilers are saving energy in the multi-family market by applying multiple, high efficiency, sealed combustion, modulating boilers for space heating and water heating. He will discuss the features and design of condensing boilers, the types of applications, and the advantages of condensing, modulating boilers in both existing buildings and new construction, and compare energy use before and after the replacement of old, inefficient, atmospheric boilers. He will also discuss ways to introduce this new condensing boiler technology to contractors/engineers and owners/managers/operators. Replacement of old, inefficient, atmospheric boilers.

Micro-CHP is defined as a Combined Heat and Power technology that can generate up to 15 kW of distributed electricity while recovering thermal energy for heating, cooling or domestic hot water use. Steven Winter Associates (SWA), under contract with NYSERDA, is currently evaluating the performance of a 4.7 kW microCHP system in a New York City multifamily building. Dominique Lempereur will discuss the development of markets in Europe and Japan and identify potential applications in the US. SWA will also demonstrate the appropriateness of this technology in multifamily buildings that are not candidates for the installation of conventional CHP systems because of size or metering configuration. The focus of the presentation will be on new construction and existing multifamily buildings configured with direct electric metering.

Jerry Katz	Wallace Eannace Associates, Inc.
Dominique Lempereur	Steven Winter Associates, Inc.

Domain E

Green Collar Jobs and Workforce Development

E1 Energy Savings: When Maintenance/ Management Becomes the Best Energy Component in the Building

Panel

While maintenance and management staffs of buildings are often seen as mere facilitators of the owners' whims, some are good enough to teach the owners how to better run a building: Peter Cooper Village and Stuyvesant Town, the largest multifamily property in Manhattan, recently underwent an extensive energy audit, and although the buildings were found to be very efficient, significant potential savings were found. The fact is, however, that the management and maintenance of the building began to do the energy efficiency work as the energy audit was being performed. See a well-oiled machine's processes and successes in action.

F.L. Andrew Padian	Steven Winter Associates, Inc.
Ryan Merkin	Steven Winter Associates, Inc.
Erica Brabon	Steven Winter Associates, Inc.
Leia Sims	Steven Winter Associates, Inc.

E2 "Commissioning" the Building Management Team

Workshop

Commissioning is a systematic process of ensuring that all building systems perform interactively according to the contract documents, the design intent, and the owner's operational needs. In existing buildings, commissioning usually focuses on energy-using mechanical equipment, lighting, and related controls with the goal of reduction in energy waste, and obtaining cost savings for the owner. In recent California focus group studies, building owners and their representatives repeatedly stressed that the lack of communication between the design team and construction team may mean that the original design intent of a project is not carried through to project completion. In the building management side, poor communication between the management staff and the maintenance staff and within each group may result in energy waste, shorter equipment life, occupant discomfort, and nothing but grief.

Asit Patel	Association for Energy Affordability, Inc.
------------	--

E3 High Growth Job Training for Construction and Skilled Trades in the Energy Industry: National and Regional Perspectives Panel

One of the key barriers limiting the installation of energy efficient and renewable technologies in residential buildings is a shortage of a trained, skilled workforce to assess buildings' energy components and install needed improvements. This session will explore national and regional responses to develop ways to overcome this barrier.

TBA

E4 NYC Green Jobs Roundtable: Progress Report Panel

On June 24th of this year nearly 150 stakeholders of New York City gathered to discuss the development of a coordinated effort for a city-wide strategy to address the workforce needs for our pressing environmental problems and solutions. There is growing recognition that greening New York City can be an engine for economic growth, community reinvestment, and job creation. It remains an open question however, whether the City's environmental policies will lead to quality jobs. For that reason, Urban Agenda has launched a nine month process to create a coordinated, citywide workforce development plan to prepare New Yorkers for green collar jobs. By the spring of 2009 we intend to establish a plan through this roundtable process that includes input from labor unions, community groups, workforce development practitioners, business, environmental advocates and policy makers. Its ultimate success will be measured in the creation of thousands of green collar jobs. At this workshop we intend to share the initial findings to-date and to facilitate a discussion of how coordinated workforce development strategies are being developed in cities and counties throughout the nation.

Joanne Derwin	Urban Agenda
Rebecca Lurie	Consortium for Worker Education
Elizabeth Weiner	Conservation Services Group (CSG)

E5 NYS Governor's Renewable Energy Task Force Recommendations Panel

The New York State Governor's Renewable Energy Task Force has made a series of recommendations designed to assist in creating and sustaining an abundant supply of highly skilled, well-trained workers – a green collar workforce -- to design, install and maintain renewable energy and energy efficiency systems in New York. This session will delineate the primary recommendations of the Task Force and report on the steps already being taken to inventory existing workforce training programs, as well as plans to implement these recommendations. The panel includes both the Chair of the Task Force and a member, as well as the Workforce Manager for the NYS Department of Labor.

Echo Cartwright	Office of the Governor, State of New York
Anthony Joseph	New York State Department of Labor
David Hepinstall	Association for Energy Affordability, Inc.

E6 Critical Role of Managers, Maintenance Personnel, and Residents in Fighting Climate Change Forum

Fighting the climate crisis is going to require a shift in attitude, behavior, and habit of everyone. Energy can not be taken for granted, and wasting energy should not be an option. We have a chance to shrink the massive carbon footprint of MFBs if we can get all associated with MFBs to regard a lamp on in an unoccupied space as the moral equivalent by Jews and Muslims of eating pork!

Dick Koral	Apartment House Institute, NYC College of Technology
Mary Ann Rothman	Council of New York Cooperatives and Condominiums
Marjorie Russell	New York Association of Realty Managers (NYARM)

E7 Impact of Building Operator Training: Property Managers Roundtable Round Table

This Roundtable discussion will center on the benefits for owners and top management of having their building management and maintenance staff undergo energy efficiency training. Participants will discuss the ways in which such training has made a difference in their buildings, particularly in managing their energy use and lowering operating costs. Panelists represent property managers who have participated directly or sent their building superintendents to the Energy Efficient Building Operations Specialist training which prepares participants for BPI certification.

Charles Fritsch	Association for Energy Affordability, Inc.
Dan Drosin	West Side Federation for Senior & Supportive Housing
Catherine Brady	Fordham Bedford Housing Corporation
Gwen Horner	
Jacqueline C. Aleman	Phipps Houses

E8 NYSERDA's Green Workforce Development Initiatives Workshop

This session will provide an overview of workforce development needs and opportunities related to NYSERDA's programs, and how these opportunities support economic development in New York State. Describe NYSERDA's energy efficiency and clean energy training and certification programs.

Karen E. Villeneuve	New York State Energy Research and Development Authority (NYSERDA)
---------------------	--

E9 Skill Sets and Business Opportunities: Multifamily Air Sealing Mid - High Rise Multifamily Buildings Workshop

Air sealing can be a cost-effective measure to improve comfort and reduce energy consumption in existing multifamily building envelopes. Based upon considerable Canadian and US experience, it has been proven that air leakage can be reduced by thirty percent. Find out where to seal, calculation methods, and what materials to use. Explore the motivations and marketing tools for penetrating this virtually untapped market.

Tony Woods
Steve Tratt

Canam Building Envelope Specialists Inc.
Zerodraft

E10 NYCHA and NYC HPD Green Education and Training Initiatives Panel

The New York City Housing Authority and the New York City Department of Housing Preservation and Development have long-standing housing education programs that support the missions of these two housing agencies. Key staff from these two programs report on new initiatives developed during the past year to ensure that the critical importance of energy efficiency, advanced technologies and other aspects of "green" buildings are adequately addressed by their curricula for owners and workers in multifamily buildings.

Paul Lepre
Karen Booker

New York City Housing Authority
New York City Department of Housing Preservation & Development

Domain F

EnergyStar® & LEED New Construction and Gut Rehab

F1 Green Building Certification for Multifamily Housing Workshop

This session will present a summary of current green building activity in the multifamily and mixed use market sectors. A discussion of available rating systems will include an overview of the U.S. Green Building Council's Leadership in Energy and Environmental Design (LEED(TM)) rating systems for New Construction and Homes, as well as the Environmental Protection Agency's new ENERGY STAR(TM) Multifamily Standards. The presentation will cover trends, incentives, challenges, and benefits, all illustrated with real-life examples from early adoptors of green building strategies. Specific case-studies will be presented on affordable multifamily projects in New York City pursuing Energy Star labels and green building certification through LEED-NC and LEED for Homes, as well as two market-rate projects in Washington, DC and Baltimore, MD, that are also pursuing green building certification through LEED for Homes.

Steven Winter
Luke Falk
Maureen Mahle

Steven Winter Associates, Inc.
New York State Energy Research and Development Authority (NYSERDA)
Steven Winter Associates, Inc.

F2 Achieving the Most Energy Efficient Apartment Buildings in New York City with No Extra Costs or Funding Workshop

Find out how multifamily buildings can perform far better than the average building, while costing zero extra to build or renovate. This session will explain design priorities, cost offsets, and surprising science about what factors are more important in multifamily buildings than in other building types. Come and learn from the people who are doing it, and see actual energy bills.

Henry Gifford
Chris Benedict

Chris Benedict, R.A.
Chris Benedict, R.A.

F3 Building Green Affordable Housing - Developer, Engineer, & Program Manager Viewpoints Panel

The New Construction component of NYSERDA's Multifamily Performance Program is part of an EPA pilot to develop an ENERGY STAR labeling protocol for high-rise multifamily buildings. This pilot tests the ability of using energy modeling, per ASHRAE 90.1-2004 Appendix G, to develop energy-efficient buildings. In tandem, the Green Affordable Housing component provides additional assistance to green, affordable projects pursuing both this Program and LEED Silver certification or higher, using either LEED for Homes or LEED-NC. It will address the needs of these projects to improve energy-efficiency, health, safety and security as they are planned, designed, and constructed. A few sample projects within these programs will be highlighted and used to demonstrate what it takes to be an Energy Star, and how developers are integrating green principles into these projects.

Shelley Allen
Liliya Miller
Paul Freitag
Maureen Mahle
Katherine Hanner

TRC Energy Services
Association for Energy Affordability, Inc.
Jonathan Rose Companies, LLC
Steven Winter Associates, Inc.
Bronx Pro Real Estate Management Inc.

F4 Energy Modeling for EnergyStar® Multi-family – Report from the Field

Workshop

The energy simulation protocol of ASHRAE 90.1 Appendix G adopted by LEED and EnergyStar® Multi-family program is rapidly gaining recognition in the modeling community. The main outcome of the protocol is the Performance Rating, which is calculated as the percent difference between the projected annual energy cost of the building being rated compared to its minimally Code-compliant version. Using the protocol in the framework of high-paced incentive program makes it apparent that many of its aspects require clarification and interpretation in order to ensure the consistent application between the modelers and to fill in the gaps that are left to the discretion of rating authority.

Maria Karpman	Karpman Consulting
Michael Colgrove	New York State Energy Research and Development Authority (NYSERDA)
Diane Ferington	Energy Trust of Oregon

F5 Moving from the Definition of "Green" to How it Got Done!

Workshop

The development team from the New San Marco Apartments, a permanent supportive housing facility for 70 chronic alcoholics and chronic homeless individuals in Duluth, MN, discusses the steps they took to ensure that sustainable design was not just something that got talked about but was implemented. Presenters will share the hiccups and how issues were resolved in this innovative Green Communities Demonstration project, including how they managed to keep the green features in the affordable apartments when bids came in \$1 million over budget. Presenters will share first costs of the building, how they ensured construction quality, and how building performance during the first heating season has compared with expectations.

Maureen Ness	LHB
David Eijadi	The Weidt Group
David Carlson	Watson-Forsberg
Rick Klun	Center City Housing Corporation

F6 Real World Completed Examples: Green, LEED, and High Performance Affordable Housing: Design, Costs, and Results

Debate

Now the buzzword in most of the affordable housing industry, "green" primarily means good design decisions that don't cost a lot, and very few "bells and whistles" that do cost a lot. Learn from experienced practitioners in the field about the nuts and bolts design differences, the real costs of those designs, and the results (in energy and water saving\$) of real buildings that have been occupied: LEED, Energy Star, and other high performance technologies will be highlighted.

F.L. Andrew Padian	Steven Winter Associates, Inc.
Luke Falk	New York State Energy Research and Development Authority (NYSERDA)
Martin Dunn	Dunn Development
Les Bluestone	Bluestone Seavey Development

F7 Aiming for Multiple Targets: Affordable High Performance Design for LEED and Energy Star®

Panel

The energy simulation protocol of ASHRAE 90.1 Appendix G adopted by LEED and EnergyStar® Multi-family program is rapidly gaining recognition in the modeling community. The main outcome of the protocol is the Performance Rating, which is calculated as the percent difference between the projected annual energy cost of the building being rated compared to its minimally Code-compliant version. Using the protocol in the framework of high-paced incentive program makes it apparent that many of its aspects require clarification and interpretation in order to ensure the consistent application between the modelers and to fill in the gaps that are left to the discretion of rating authority. The Simulation Guidelines developed by NYSERDA serve this purpose for projects participating in EnergyStar® multi-family program. The Guidelines are continuously updated to follow the changes to ASHRAE 90.1, Appendix G and LEED, to include clarifications of ambiguous areas in response to questions from the modelers, as well as to ensure that the performance rating is sensitive to measures that are known to produce measurable energy savings in buildings. Achieving 20% performance target required for EnergyStar® level calls for the comprehensive, whole-building approach. Incremental hard costs of achieving EnergyStar® goal, cost of design assistance and energy modeling, and model quality assurance practices utilized by NYSERDA MPP will be discussed.

Luke Falk	New York State Energy Research and Development Authority (NYSERDA)
Ryan Merkin	Steven Winter Associates, Inc.
Gina Buffone	New York City Habitat for Humanity
William Stein	Dattner Architects

F8 How Energy Star® Led New York State to LEED

Workshop

NYSERDA has been deploying energy efficiency programs in New York State for a number of years. During that time it worked with the US EPA to cultivate a national pilot program through which an ENERGY STAR label for residential mid- and high-rise buildings was developed. With a recent infusion of funding from the New York State Office of the attorney general, NYSERDA has been able to offer additional incentives to affordable housing developments seeking LEED certification at the silver level. This session will offer case studies of the first ENERGY STAR labeled mid-rise buildings in the country, pilot and program metrics to date from the Multifamily Performance Program, and a case study of New York City's only city-funded LEED Certified Affordable housing project.

Luke Falk

New York State Energy Research and Development Authority (NYSERDA)

Michael Colgrove

New York State Energy Research and Development Authority (NYSERDA)

F9 NYCHA/NYPA Instantaneous Hot Water Program

Workshop

In July 2005, the New York City Housing Authority and the New York Power Authority entered into an intergovernmental agreement launching an Instantaneous Hot Water Heater Program, aimed at replacing aging domestic hot water tanks with energy-efficient instantaneous-steam hot water heater devices at various developments throughout the City. The hot water heater unit, developed with manufacturers and field tested by NYCHA, significantly reduces heating fuel consumption, simplifies maintenance, and provides safer and more reliable hot water service to residents. To date, the new hot water heaters have been installed in 401 buildings at 44 NYCHA developments. This session will seek to address the successes and challenges of implementing such a large-scale program.

Frank Romano

New York City Housing Authority

Eric Alemany

New York Power Authority

F10 Sustainability Planning for Affordable Housing

Workshop

Affordable housing owners and developers have large asset portfolios of aging properties built with tax credits, bonds, and similar grant and assistance program funds. These properties benefit from a comprehensive review of sustainability options, including energy efficiency, green technology, and renewable energy solutions – but require studies to be translated into decision information and business processes for operations, maintenance, modernization, procurement, and property revitalization/acquisition. This session will discuss the needs and opportunities for bringing sustainability into affordable housing asset management programs and provide examples of the types of improvements available and the management and business process changes that are required.

Matt Pesce

Facility Strategies Group

Jeffrey Summerville

Strategic Energy Innovations

Domain G Requisites for Action: Health, Safety, and Technical Considerations

G1 The Lowly, Lonely Fan Coil - Its Role in the Unintended Consequences When Improving the Efficiency of HVAC Systems in Multifamily Buildings

Workshop

The lowly, lonely fan coil -- working quietly at the apartment-end of the central air conditioning system; found in thousands of multifamily buildings; so common, yet so not understood. At the other end of the central air-conditioning systems are the big chillers and cooling towers -- they get all the attention! However, changes to the chiller and cooling tower can cause unintended consequences down the line to the fan coils if air conditioning is not viewed as complete system throughout the building. Fan coil maintenance is too often ignored due to complacency and inaccessibility. Their deterioration often leads to moisture, mold, indoor air quality problems and issues with HVAC system efficiency. Conversion from apartment to condo may ignore the fan coil in favor of other amenities such as granite counter tops and stainless steel appliances. But there is hope. A holistic approach to the building air conditioning system will allow a better understanding of all the components within the system. This case study will show you that with a little knowledge and respect, the lowly fan coil should and can command respect in the decision-making for energy saving initiatives.

Alice Finley

Ebenezer Management Services, Inc.

Mark Opdahl

Center for Energy and Environment

G2 Ventilation in Existing Multifamily Buildings

Workshop

Codes allow operable windows for ventilation in multifamily buildings. Existing fans are seldom designed for more than intermittent operation. Problems can develop that put both the building and the occupants at risk. Tightening or high occupancy can tip the balance. Cooking and tobacco odor transfer between units and in corridors are common complaints. Efficient fans and controls are available plus constant air regulators (CAR) for balancing. Aeroseal duct sealing works on previously inaccessible shafts giving performance and savings. Effective ventilation in each unit allows the benefits of compartmenting and tightening to be realized. Corridor supply flows and costs can be reduced. High performance shell and mechanical measures can go forward and do no harm. This session will address subjects such as these that pertain to ventilation in existing multifamily buildings.

Jim Fitzgerald

Conservation Services Group (CSG)

Keirnyn Ross

Steven Winter Associates, Inc.

G3 Air Sealing Fire Separation Assemblies: Codes and Conflicts

Panel

ASTM E-119 Tests for fire separation assemblies, particularly party walls, do not address the wide variety of real world construction configurations that result in uncontrolled air leakage in multifamily buildings. Effective air sealing strategies are possible in these assemblies, however codes are somewhat ambiguous on the properties and types of acceptable systems and products that can be used, leading to inconstant enforcement. The Canadian Building Code has addressed this issue. A review of current status of air sealing fire separation assemblies within the I-Codes and test methods will also be discussed.

Duncan Prael

IBACOS, Inc.

Jim Fitzgerald

Conservation Services Group (CSG)

Tony Woods

Canam Building Envelope Specialists Inc.

G4 Insulating Masonry: How, What, Why and Where

Workshop

Can existing masonry buildings be successfully insulated? How is building durability affected by insulation and other factors? What types of insulation should be chosen, and which have the best payback? Come get real-world answers to these and many more questions from an architect who has implemented successful insulation strategies for over 50 existing multifamily masonry structures.

Chris Benedict

Chris Benedict, R.A.

G5 Air Sealing for Multifamily

Workshop

Wisconsin Focus on Energy will facilitate a roundtable discussion on air sealing in multi-family buildings. Few programs across the United States provide incentives for air sealing in multi-family buildings. Apartment and condominium buildings pose special problems for air sealing compared with single family residential buildings. Typical apartment buildings contain separate living units, multiple floors, and common areas that make blower door tests more difficult than single family buildings. Additionally, the cooperation of the tenants, building maintenance staff, and contractors make scheduling pre and post blower door tests difficult. Owners of multi-family buildings are also reluctant to pay for pre and post blower door testing. Wisconsin Focus on Energy's Apartment and Condo Efficiency Services Program is in the process of developing an air sealing incentive and protocol. The need for an air sealing incentive is the result of customer requests, a record setting winter, and increase program savings goals. Presenters will lead a discussion exploring air sealing approaches, verification process, successes, and failures of other multi-family energy efficiency programs. With relatively few programs offering air sealing, there is a need to share and discuss the information with other programs to learn from one another.

Carter Dedolph

Wisconsin Energy Conservation Corporation

G6 Air Barriers In Buildings: Research Update

Workshop

Air barriers are just starting to become commonplace in some states. Design professionals are incorporating air barrier in buildings to save energy and to reduce problems caused by water vapour condensation in building envelopes. This presentation outlines what has been done for air barrier research in commercial buildings and outlines a public/private consortium research project which has been designed to determine what works and what does not work. Material characteristics, sub-assembly site installation defects and wall assemblies are undergoing testing which will lead to new and better air barrier materials and designs.

Laverne Dalglish

Air Barrier Association of America

G7 Water Conservation Initiatives In Multifamily Buildings

Workshop

This session will examine critical issues involved in water conservation in multifamily buildings and will explore questions such as: Why conserve water? How do we monitor water use? Where is water used and how can we use less? Can we reuse water? What about submetering? Specific examples will be used, including a consideration of transboundary conflict and drought in the United States, various water metering technology options, and water efficient appliances: single flush versus dual flush toilets, washing machines, and shower heads.

Warren Liebold

New York City Department of Environmental Protection

G8 Integrated Pest Management in Multifamily Buildings and Urban Neighborhoods

Workshop

Residents and workers in multifamily buildings are continuously exposed to rats, mice, cockroaches, bed bugs, and the associated pesticides used to remove these pests. Exposure to pests and pesticides affects resident health, building value, and community pride. Traditionally, property managers respond to pest infestations by regular extermination sessions and tenants respond by using highly toxic and typically ineffective pesticides. The purpose of this workshop is to delineate causes of interior and exterior pest infestations and provide practical, inexpensive, and effective tips for reducing infestations through the use of integrated pest management (IPM). Two experienced practitioners of IPM will describe how to: (1) reduce pest access to building interiors through air sealing, (2) improve air quality through elimination of pest habitats, (3) safely apply pesticides, only when necessary, to minimize adverse human health effects, (4) implement a six-step plan for correcting rat infestations on building exteriors, and (5) manage pest control professionals to ensure regular inspections and appropriate pesticide application. Session participants will leave with an understanding of how to begin a pest management program in and around their building and inform their tenants about the benefits of IPM.

Caroline Bragdon

New York City Department of Health and Mental Hygiene

Lynn Braband

Cornell University Cooperative Extension/Monroe

G9 Insuring a Complete Energy Audit

Workshop

This session shall delineate and discuss the components that make up a complete and proper energy audit. There are many 'products' being marketed as "Energy Audits," but is the building getting the type of service and analysis that truly helps it select the most effective set of measures/improvements? What needs to be covered? How best is the analysis conducted? What is the most effective way of communicating the recommendations? Also, do all MFBs require the same level of sophistication in an audit to be properly served?

Fredric Goldner

Energy Management & Research Associates

Asit Patel

Association for Energy Affordability, Inc.

G10 Understanding Rates & Properly Employing them in Analyses

Workshop

Rates are probably the most complex thing the energy professional has to deal with. Attendees will learn to understand the components that make up electric and natural gas rate structures, and gain a working knowledge of both how the various components can effect a facility's energy costs and effect savings.

James Armstrong

DSM Engineering Associates, PC

Natale DiDonato

Luthin Associates
