

ENERGY CODES

2019

MAY 28–30 | Denver, CO



2019 NATIONAL ENERGY CODES CONFERENCE

Hosted by
U.S. DEPARTMENT
OF ENERGY

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Office of ENERGY EFFICIENCY
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Building Energy Codes

Continuing Education: Continuing education options are provided for members of the American Institute of Architects (AIA) and International Code Council (ICC). The DOE Building Energy Codes Program is an AIA and ICC Continuing Education provider, with credits available for most conference sessions. RESNET CEUs will be offered also. Pick up forms at the conference Registration desk.

ENERGY CODES | 2019



Highlights

THANK YOU FOR ATTENDING

the 2019 National Energy Codes Conference!

We're very glad you could join us for another installment of engaging topics, educational sessions, and solution-oriented dialogue.

The 2019 National Energy Codes Conference

EXTENDS THE DEEPEST THANKS TO OUR ORGANIZERS, SPEAKERS AND ATTENDEES

for making this event possible.

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Building Energy Codes

A Less-Paper Event

In our efforts to conserve resources, we will not provide handouts of individual sessions. All presentations will be available at www.energycodes.gov after the event.

This program is made out of recycled materials.



welcome



REGISTRATION OPENS

7:30 am Wednesday, May 29
8:00 am Thursday, May 30
Registration desk is located
in the Colorado Pre-Function.



Wi Fi

Available in the hotel lobby and
guest rooms



BREAKFAST

Please join us for breakfast in
the Colorado Pre-Function.

Wednesday
7:30am to 8:30am
Thursday
8:00am to 9:00am



VISITORS GUIDE

Denver visitors information will
be located at the Registration desk.
Additional information also available—
[https://www.energycodes.gov/
things-do-denver](https://www.energycodes.gov/things-do-denver)



Welcoming Reception

Tuesday
5:00pm to 6:00pm



HOTEL CONTACT

Hilton Denver City Center
1701 California Street
Denver, CO 80202
303-297-1300

KEYNOTE Speakers

Bill Ritter, Jr., *Center for the New Energy Economy*



Wednesday, May 29, 9:00 - 10:00

Bill Ritter is Director of the Center for the New Energy Economy (CNEE) and served as the 41st Governor of the State of Colorado. During his term as Governor, he enacted an ambitious job-creation and business-development agenda, establishing a new energy economy and positioning Colorado as a leader in national and international clean energy. Mr. Ritter currently leads the CNEE at Colorado State University in Fort Collins, an initiative working with governors, legislators, utilities, and other stakeholders to provide technical and strategic assistance to help decision makers craft policies that facilitate America's transition to a clean energy economy.

Prior to his time as governor, Bill was Denver's district attorney from 1993 to January 2005. From 1987 to 1990, he and his wife, Jeannie Ritter, operated a food distribution and nutrition center in Zambia, Africa.

Bill earned a B.A. in political science from Colorado State University and his law degree from the University of Colorado.

Dr. Martin Keller, *National Renewable Energy Laboratory*



Thursday, May 30, 9:00 - 10:00

The National Renewable Energy Laboratory (NREL) develops creative solutions to today's most significant energy challenges, from breakthroughs in fundamental science to new technologies to integrated energy systems that power our lives and transform the way the world uses energy.

Martin Keller became the National Renewable Energy Laboratory's (NREL) director on November 30, 2015. Martin joined Oak Ridge National Laboratory (ORNL) in July 2006 and was appointed to the role of Associate Laboratory Director in July 2009. In November 2010, he was asked to lead the newly-formed Energy and Environmental Sciences directorate. In this role he was responsible for the energy, biological, and environmental research programs supported by DOE, the Environmental Protection Agency, and the National Institutes of Health. Martin served as the Founding Director of the DOE BioEnergy Science Center and also served as the Director of the Biosciences Division.

Martin held a series of research management positions within Diversa Corporation, a publicly-traded biotechnology company. Martin joined Diversa Corporation in 1994 as a consultant to build and develop their microbiology expertise before joining Diversa Corporation full time in 1996.

Martin received his Ph.D. in Microbiology from the University of Regensburg, Germany.

PLENARY Speakers

David Kaiserman, *Lennar Corporation*



Wednesday, May 29, 4:00-4:30

David is the founder and Chairman of SunStreet as well as President of Lennar Ventures, which drives Lennar Corporation innovation, government affairs and strategy. With more than 15 years of experience in the homebuilding industry, David is a go-to expert for national media on trends and innovation in homebuilding and residential real estate. He is the past Chairman of RESNET Industry Advisory Committee and is a founding principle liaison of Leading Builders of America. Prior to joining Lennar, David was a member of Saybrook Capital, LLC, where he co-founded the investment firm's merchant banking group and its private equity investments. David is based in Miami at Lennar corporate headquarters and is a graduate of the University of California, Santa Barbara.

Mike Collignon, *Green Builder Coalition*



Wednesday, May 29, 4:30-5:00

Mike Collignon is the Executive Director of the Green Builder® Coalition, an organization he co-founded with Ron Jones in 2010. He engages in national and state-level advocacy and publishes regular content for Green Builder® Media. Mike is the Chair of the WERS Development Group and a Co-Chair of the Next Generation Water Summit. He has presented at the Pacific Coast Builders Conference, EEBA (3x), RESNET (3x), Better Buildings: Better Business (Wisconsin), Home Performance Coalition's Annual Conference (2x) and Regional Conference (Portland, OR), WaterCon, Green Building Focus, StormCon, AWWA's ACE (2x), AWRA's Summer Specialty Conference, WaterSmart Innovations and the Sustainable Disaster Recovery Conference. Finally, he has served as the moderator or host for Green Builder® Media's Impact Series webinars from 2012-present.

ENERGY CODES BOOTCAMP & TOUR

Tuesday, May 28

Denver Ballroom 1—3

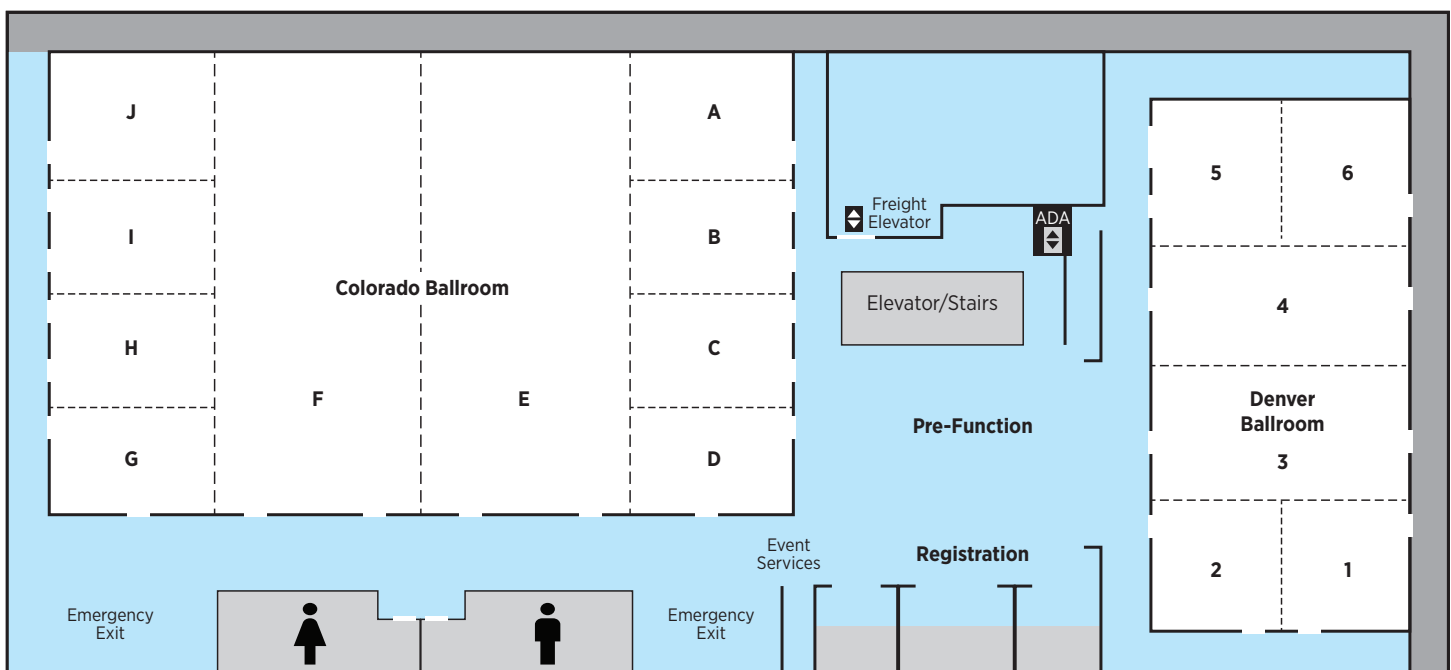
9:00 AM - 12:00 PM	Energy Codes 101 REScheck Basics COMcheck Basics	
12:00 PM - 1:00 PM	Lunch (on your own)	
1:00 PM - 5:00 PM	NREL Tour	2018 IECC Residential Simplified
5:00 PM - 6:00 PM	Welcoming Reception & Poster Session	

ENERGY CODES BOOTCAMP

A crash course in energy codes designed for attendees who are new to the world of building energy codes. This workshop will cover a sampling of energy code basics, including a primer on the model codes, the International Energy Conservation Code (IECC) and ANSI/ASHRAE/IES Standard 90.1. In addition, an introductory lesson on the REScheck and COMcheck software.

CONFERENCE Floor Plan

Lower Level 2



DAY 1 Wednesday, May 29

7:30 AM – 8:30 AM	Registration and Breakfast (Colorado Pre-Function)		
8:30 AM – 9:00 AM	Welcome and Opening Remarks (Colorado E) Jeremy Williams, DOE Building Energy Codes Program David Nemptow, DOE Building Technologies Office		
9:00 AM – 10:00 AM	Keynote Speaker: Bill Ritter, Jr. , <i>Center for the New Energy Economy</i> (Colorado E)		
10:00 AM – 10:30 AM	Break		
10:30 AM – 12:00 PM	Model Codes: What's New for the 2021 IECC and Standard 90.1-2019? (Denver 1-3)	(Multi) Family Matters: Current Issues Impacting the Multifamily Buildings Sector (Denver 4-6)	(Discussion) Billion Dollar Baby: Leveraging New Energy Technologies and Policies to Enable Greater Resilience and Efficiency (Colorado A-D)
12:00 PM – 1:00 PM	Networking Lunch (Colorado E)		
1:00 PM – 2:00 PM	Jolt Session (Colorado E)		
2:00 PM – 2:30 PM	Break		
2:30 PM – 3:30 PM	Water: Why it Matters and What Can We Do? (Denver 1-3)	Energy & Durability & Building Codes: There's No Such Thing as a Free Thermodynamic Lunch (Denver 4-6)	(Discussion) The Future of Codes and Standards for Zero Energy and Grid-enabled Buildings (Colorado A-D)
3:30 PM – 4:00 PM	Poster Break		
4:00 PM – 4:30 PM	Plenary (Colorado E) Disruption: Embrace It or Hide From It David Kaiserman, Lennar Corporation		
4:30 PM – 5:00 PM	Plenary (Colorado E) Water: The Overlooked Resource Mike Collignon, Green Builder Coalition		

Model Codes: What's New for the 2021 IECC and Standard 90.1-2019?

Over 560 code change proposals were submitted for the 2021 International Energy Conservation Code for residential and commercial buildings. Several key changes are also in the works for ASHRAE 90.1-2019 which will be referenced in the 2021 IECC. This session will highlight proposal themes, such as provisions for renewable energy, electric vehicles (EVs), and performance-based options. We'll also provide a first

glimpse of the results of the IECC Residential and Commercial Code Development hearing focusing on the major changes. In addition, we'll take a look at the mechanics of key proposals being considered for the model codes.

Moderator: Eric Makela

Speakers: Eric Makela, Jim Meyers, Duane Jonlin



DAY 1 Wednesday, May 29 *(Continued)*

(Multi) Family Matters: Current Issues Impacting the Multifamily Buildings Sector

This panel will consider the range of code adoption and compliance issues that impact the multifamily sector. Expert panelists will review the current code landscape for multifamily buildings, discuss the relationship between air tightness and ventilation in new buildings, and explain how codes can be leveraged to create healthier and more efficient multifamily buildings. **Moderator:** Maggie Kelley
Speakers: Henry Odum, Shilpa Surana, Jonathan Wilson

(Discussion) Billion Dollar Baby: Leveraging New Energy Technologies and Policies to Enable Greater Resilience and Efficiency

Join this policy discussion session encompassing many new and exciting opportunities to achieve efficiency goals by leveraging new funding sources, technologies, and research and development. Be prepared to discuss opportunities created by the Disaster Recovery and Reform Act (DRRA), developments from new R&D activities that can lead to increased confidence in energy labeling and scoring through harmonized energy modeling, and to discuss how new technologies such as ground- and air-source heat pumps are being used by states to achieve energy and environmental goals. **Moderators:** Ed Carley & Kai Palmer Dunning

Water: Why it Matters and What Can We Do?

Although 70 percent of our planet is covered with water, less than one percent is drinkable. This session will provide an overview of two new standards addressing the importance of water. Come hear about the partnership between RESNET and ICC to develop a national consensus standard for a HERS water efficiency rating index and ICC's partnership with CSA Group on the recently released Rainwater Harvesting System Standard. **Moderator:** Michelle Britt
Speakers: David Walls, Michelle Britt

Energy & Durability & Building Codes: There's No Such Thing as a Free Thermodynamic Lunch

Mandated energy efficiency is running up against the laws of physics resulting in building durability issues and indoor air quality issues. Adding alternative materials to the mix adds a whole new dimension

of complexity. It is not easy just to add insulation and increase airtightness. Increasing insulation reduces energy flow and drying potential. Increasing ventilation is not the solution as it results in part load humidity problems, comfort issues and increased energy consumption. Using alternative materials often exacerbates the problems. Life was pretty easy when we built out of thousand year old trees and rocks. Engineered wood and recycled materials are not as durable as thousand year old trees and rocks. After a half century of energy codes what do we have to show for things? Stucco rot, moldy closets, condensation on ductwork, wet basements, smelly crawlspaces, spillage and backdrafting of combustion appliances...the list goes on. Can the building code keep us out of trouble? Yes. But it is ironic that it also got us into trouble.

Moderator & Speaker: Joe Lstiburek

(Discussion) The Future of Codes and Standards for Zero Energy and Grid-enabled Buildings

Shifts to zero energy, new energy saving technologies, and the future of the electric grid are propelling many states and municipalities to assess how they view the performance of existing and new buildings. This discussion session will explore emerging policies, strategies, and codes; how states, municipalities and code and standards organizations are moving toward a low to no carbon future. **Moderator:** Darren Port

(Plenary) Disruption: Embrace It or Hide From It

After changing everything from the way we communicate to the cars we drive, technology disruption is coming home. How the homebuilding industry and regulators adapt to this disruption can either enhance or stifle the American dream of homeownership. David Kaiserman, President of Lennar Ventures, part of the nation's largest new home builder, discusses different paths to achieve energy goals—and the benefits and consequences of each.

(Plenary) Water: The Overlooked Resource

Water we talking about water for? Dad jokes aside, water is vital to our existence. And it's inextricably linked to our overall energy usage. So let's get more familiar with the water industry, from its recent past to its current state to its potential future.

DAY 2 Thursday, May 30

8:00 AM – 9:00 AM	Registration and Breakfast (Colorado Pre-Function)		
9:00 AM – 10:00 AM	Keynote Speaker: Martin Keller , <i>National Renewable Energy Laboratory</i> (Colorado E)		
10:00 AM – 10:30 AM	Break		
10:30 AM – 12:00 PM	Unboxing Compliance: What We've Learned from Three Years of Field Study Data (Denver 1-3)	Building Resilience: A Community Perspective on Energy Codes (Denver 4-6)	(Discussion) Unlocking the IECC Existing Buildings Chapters (Colorado A-D)
12:00 PM – 1:30 PM	Lunch and Jeffrey A. Johnson Award (Colorado E)		
1:30 PM – 3:00 PM	Getting to Zero Energy: New Challenges and Opportunities for Programs and Policies (Denver 1-3)	Energy Codes in a Rapidly Evolving Building Industry (Denver 4-6)	(Discussion) Are We There Yet? New Advancements in Performance-based Code Compliance (Colorado A-D)
3:00 PM – 3:30 PM	Break		
3:30 PM – 5:00 PM	Achieving Energy Savings through Code Tools, Data and Programs (Denver 1-3)	Staying out of the Dark: Lighting Updates and Perspectives (Denver 4-6)	(Discussion) DOE Research Update and Feedback Session (Colorado A-D)

Unboxing Compliance: What We've Learned from Three Years of Field Study Data

A few years back, DOE kicked off a series of research projects studying the impact of code compliance and how successfully key efficiency measures were being implemented in the field. The initiative began with a series of pilot studies focused on single-family residential buildings, and was then expanded to include the low-rise multifamily and commercial sectors. The single-family project is complete, and has since been emulated by many additional states using their own funds. Today we'll take a look at what we've learned, and, for the first time, answer the question whether targeted education and training programs are able to provoke a reduction in statewide energy use—the original goal of the study. In addition, we'll look at what we're seeing in multifamily and commercial buildings to date, including preliminary findings, challenges faced by the project teams, and insight for others considering a field study of their own.

Moderator: Jeremy Williams

Speakers: Jeremy Williams, Kim Cheslak, Russ Landry

Building Resilience: A Community Perspective on Energy Codes

Resiliency, safety, and savings—these terms appeal to community leaders and are important co-benefits of advanced energy codes. But how do communities realize these benefits? Policies, resources, and innovative strategies have been developed to harmonize energy efficiency and resiliency to make for a more well-equipped community building stock in the face of both man-made and natural disasters. Join this session to better understand how energy codes are life safety codes, and why communities are choosing building codes as their go-to strategy for a resilient built environment.

Moderator: John Balfe

Speakers: Cammy Peterson, Amy Schmidt, Brad Smith, Justin Koscher



DAY 2 Thursday, May 30 *(Continued)*

(Discussion) Unlocking the IECC Existing Buildings Chapters

The existing buildings chapters of the IECC are among the least understood and most difficult to enforce of the provisions of the energy code. Yet, many agree that existing buildings represent largely untapped potential, and are critical to achieving widespread efficiency in buildings. This session will identify and discuss some of the more difficult sections to interpret and enforce, and discuss local programs that have been successful in facilitating compliance.

Moderator: Jason Vandever

Getting to Zero Energy: New Challenges and Opportunities for Programs and Policies

An increasing number of programs and policies are targeting zero and near-zero levels of performance to achieve ambitious energy savings and environmental goals. This session will describe various metrics being used to define zero energy and zero carbon buildings, and the links between the two. Presenters will discuss how these goals relate to traditional energy metrics, including cost-effectiveness, and will address emerging issues such as storage, grid impacts, and onsite vs procured renewable generation.

Moderator: Jim Edelson

Speakers: Blake Shelide, Scott Prisco, David Epley

Energy Codes in a Rapidly Evolving Building Industry

Advanced building construction has given rise to a plethora of new technologies and construction practices. From smart devices, to renewables and EV charging, to grid-integrated buildings, and prefabricated construction practices, the traditional building is changing. In this session, experts will explore new trends and identify ways by which building energy codes are evolving to keep pace with these advanced methods.

Moderator: Ian Blanding

Speakers: Zach Owens, Alexi Miller

(Discussion) Are We There Yet? New Advancements in Performance-based Code Compliance

Energy code performance paths require energy modeling and historically a minority of projects in the United States comply choosing this path. However, performance-based compliance is increasing in popularity, and a growing number of projects are pursuing performance options. This shift amplifies a variety of implementation issues, in that performance paths can be technically complex and often have no standardized compliance forms. Most jurisdictions do not have budget, qualified staff or training to review performance submittals. Other key stakeholders are also affected, including design professionals, builders and software providers. This session will feature an interactive discussion of the current trends in performance-based compliance, including challenges, typical practices, solutions, and opportunities to streamline compliance processes.

Moderators: Bing Liu, Maria Karpman

Achieving Energy Savings through Code Tools, Data and Programs

Successful implementation of codes is critical to achieving their intended benefits, and to help states and cities achieve their energy goals. With multiple code compliance options, an emergence of third-party providers, and new state and utility programs, what are the best ways to achieve high levels of energy savings? This session highlights successful efforts to improve efficiency, and then explores the supporting tools, data and resources that many rely upon to achieve their energy goals, with an emphasis on practices that can be replicated by others implementing their own efficiency programs.

Moderator: Christine Brinker

Speakers: Shaunna Mozingo, Ian Blanding, Mike Turns

DAY 2 Thursday, May 30 *(Continued)*

Staying Out of the Dark: Lighting Updates and Perspectives

Shed some light on bright spots in the illumination industry! This session will provide perspectives, progress, and untapped potential in residential, commercial, and horticulture applications and standards. Presentations will focus on lighting upgrades in ASHRAE 90.1, ASHRAE 189.1 and California Title 24. We'll also tackle new strategies and insights in the growing field of horticulture lighting, and introduce the intersection and impacts of energy policy (EISA) national lighting standards, utility programs, and energy codes.

Moderator: Chris Burgess

Speakers: Duane Jonlin, Jamie Fiske, Damon Bosetti

(Discussion) DOE Research Update and Feedback Session

This discussion session will feature a review of current DOE research projects related to building energy codes. Participants will learn about barriers being addressed by the projects, ask questions of the research teams, and provide feedback on overall direction. We'll also discuss remaining challenges impeding successful energy code implementation, and identify needs for future research. Please join us for an engaging discussion, and opportunity to weigh in on where we've come and where we're headed!

Moderator: Jeremy Williams

Speakers: Kim Cheslak, Russ Landry, Michelle Britt, Vladimir Kochkin, Ed Carley, Richard Morgan



Jeffrey A. Johnson Award



The Jeffrey A. Johnson award recognizes outstanding accomplishments surrounding building energy codes, and is presented annually at the National Energy Codes Conference.

The award recognizes a leader or a team in the United States (U.S. territories included) for sustained service of the highest caliber in the pursuit of energy-efficiency goals. The award recipient exemplifies Jeff's enthusiasm, his motivation and drive for innovation, and his can-do, no-fear attitude for making a difference. **Join us at lunch on Thursday as we announce the 2019 winner.**





POSTERS

Posters will be displayed Tuesday, May 28, 5:00-6:00pm during the reception and Wednesday, May 29, 3:30-4:00pm during the Poster Break.

Title: Benefits of Total System Performance Ratio—An HVAC System Level Metric

Authors: Michael Rosenberg, Supriya Goel, Pacific Northwest National Laboratory

Abstract: Energy codes include prescriptive requirements for individual components and building level metrics for overall building performance, however, there are no metrics or methodologies for evaluating systems as a whole. The total system performance ratio (TSPR) provides an approach for evaluating HVAC systems. TSPR compares the annual space heating and cooling load of a building to the annual energy consumed by the building's HVAC system to provide a ratio which represents the overall system performance. It rewards integrated and efficient system design, while enabling more design flexibility. It has been implemented into DOE's Building Energy Asset Score Tool and incorporated into the 2019 Washington State Energy Code.

Title: Building a Successful Energy Code Training and Support Program: Lessons Learned

Author: Sumi Han, Smart Energy Design Assistance Center (SEDAC), University of Illinois

Abstract: How do you build a successful Energy Code Training Program? The Smart Energy Design Assistance Center (SEDAC), in partnership with the Illinois EPA Office of Energy, has provided Illinois Energy Conservation Code training and support to hundreds of community code officials, design and construction professionals, and students in Illinois. Since 2018, SEDAC has delivered 17 workshops and webinars to over 800 participants, 4 online courses to over 200 students, and energy code technical support to over 220 individuals. SEDAC's goal is to increase awareness of the Code and improve code compliance of new construction and renovation. This poster will discuss lessons learned from our

program, with a focus on developing engaging content, providing multiple training options for busy professionals, and attracting participants, especially in hard-to-reach areas.

Title: Certified Sustainability Professional

Author: Stephen Kanipe, City of Aspen

Abstract: The Professional Development Council approved this new combination designation to provide opportunities for licensed architects, professional engineers and code officials to become more involved with the International Green Construction Code (IgCC), the International Energy Conservation Code (IECC), and the National Green Building Standard (ICC/ASHRAE 700-2015).

Title: Commercial Energy Code Compliance Support Pilot with Plan Review Services

Author: Russ Landry, Center for Energy and Environment

Abstract: Funded by the Minnesota Department of Commerce, innovative aspects of this pilot program included project-specific assistance, plan reviews for all participating projects, quick-reference guides, and focus on a limited number of key energy code requirements. The program served a total of 30 commercial buildings averaging 71,000 square feet through either direct assistance to the design team or assistance to city staff conducting project reviews. Reviews of 24 projects that did not participate or had plans reviewed prior to participation found compliance issues for roughly half of the instances of the energy code line items targeted by the program. The identified savings potential for bringing all clearly noncompliant instances up to code averaged 0.4 kWh and 0.006 therms per square foot. Program interventions in the participating buildings realized more than three-fourths of this potential savings, with full-scale program delivery costs estimated around \$4,400 per building.



POSTERS

(Continued)

Title: Commercial Energy Code Field Study

Author: Kimberly Cheslak, Institute for Market Transformation

Abstract: The Commercial Energy Code Field Study objective is to measure the impact of energy codes on commercial buildings and identify opportunities for savings through increased compliance. The project is entering its final year and is halfway through data collection. This poster will share the project progress to date including information on development and refinement of the data collection protocol and methodology, sampling plan, time spent by project teams on different tasks (recruitment, data collection primarily), and a qualitative snap shot of data collection and issues being seen in the field.

Title: Energy Use Calculator for Simple Buildings

Authors: Reid Hart, Michael Rosenberg, Pacific Northwest National Laboratory

Abstract: A performance based approach for simple buildings is limited by the high relative cost of custom simulation. Developing a simple building savings calculator for several building types including, small-to-medium office, stand-alone retail, primary school, and mid-rise apartment buildings fills this gap. Based on multiple simulation runs of prototype buildings, such a calculator will support impactful parameters such as lighting power, average envelope U-factor, and daylit area, and HVAC equipment efficiency. Each parameter's range would cover max-tech to a Standard 90.1-2004 baseline. Useful project output would range from tables of saving results to a building calculator. The calculator can either determine one building improvement case or generate multiple tabular results for different combinations of improvement.

Title: Going Beyond Code in Schools

Author: John Balfe, Northeast Energy Efficiency Partnerships (NEEP)

Abstract: The journey to achieving wide-scale development of zero energy (ZE) buildings starts with our community's school buildings. School projects that utilize a high performance or ZE standard have enormous potential to provide deep impacts to the entire community by delivering educational benefits, resiliency improvements, and energy savings. This informational poster will highlight the benefits of ZE Schools, pathways to achieve ZE performance, and an exemplar for future projects to utilize.

Title: Low-Rise Multifamily Energy Code Study

Author: Russ Landry, Center for Energy and Environment

Abstract: The goals of this DOE-funded project are to adapt the PNNL single-family code evaluation protocol to low-rise multifamily buildings and advance the knowledge of energy issues in this market. The project's centerpiece is the collection of building design and construction data for 100 new buildings across four states. Ecotope is the project lead guiding this effort across all four states while also collecting data in Washington and Oregon. Project partners Center for Energy and Environment (CEE) and Slipstream are collecting data in Minnesota and Illinois, respectively. A second aspect of this project is significant research into air-tightness testing, led by CEE with support from The Energy Conservatory. Market research led by Slipstream will round out the project's efforts to better understand low-rise multifamily new construction issues. The poster highlights insightful preliminary results from air-tightness testing.



POSTERS

(Continued)

Title: Requirements Marketing the Statewide Energy Code: Building Relationships with Homebuyers, Real Estate Professionals, and Home lenders

Author: Paul Tschida, Montana Department of Environmental Quality

Abstract: The Montana Department of Environmental Quality (DEQ) has developed programs to inform homebuyers about the statewide energy code. In Montana about two thirds of new homes do not receive an energy code inspection, yet a 2018 DOE energy code survey reported 95% energy code compliance. Real Estate/Home Loan Professional Training Sessions—DEQ provides a 2-credit session titled “Marketing Home Energy Features and the Montana Energy Code”. Approximately 400 real estate professionals have attended the training. DEQ staff have conducted over 150 in person meetings with home lending staff informing them about the energy code and advantages of exceeding code, one being a \$1,000 Montana tax credit. Energy Code Surveys—DEQ has been conducting new homeowners’ energy code awareness surveys, offering a free radon test kit for participation in the survey. When completing a survey, homebuyers become aware of the statewide energy code requirements.

Title: Residential Field Study Analysis and Findings

Authors: Rosemarie Bartlett, Mark Halverson, YuLong Xie, Pacific Northwest National Laboratory

Abstract: As part of the U.S. Department of Energy’s recent Residential Energy Code Field Study, PNNL developed a methodology to assist states in measuring compliance with their energy codes for single-family residential buildings. The methodology is based on field data collection and validation, which helps states understand how successfully their codes are being implemented, document the market impact of key measures with the greatest impact on energy consumption, and identify target measures for improvement. PNNL is currently wrapping up its efforts with a group of seven pilot states that tested whether energy code education and training can produce a significant and measurable change in the marketplace. PNNL provided technical support and analysis to answer the question: “Does targeted education, training, and outreach on identified energy code compliance issues result in statistically significant improvements in EUI?” This poster will present the research study, the underlying methodology, and results from the seven pilot states.

Title: Utilizing a Phased Implementation Plan for Energy Code Compliance

Author: Hope Medina, Colorado Code Consulting

Abstract: If you have adopted an energy code for the first time or updating to a more recent code, or would like to start a process for energy code compliance, this stepped approach has been used successfully by many jurisdictions.

THANK YOU to our moderators and speakers!

(Bios are available at <https://www.energycodes.gov/2019-national-energy-codes-conference>)

TOPIC	MODERATOR	SPEAKERS
Model Codes: What's New for the 2021 IECC and Standard 90.1-2019?	Eric Makela	Eric Makela, Jim Meyers, Duane Jonlin
(Multi) Family Matters: Current Issues Impacting the Multifamily Buildings Sector	Maggie Kelley	Henry Odum, Shilpa Surana, Jonathan Wilson
(Discussion) Billion Dollar Baby: Leveraging New Energy Technologies and Policies to Enable Greater Resilience and Efficiency	Ed Carley / Kai Palmer Dunning	Discussion Session
Water: Why it Matters and What Can We Do?	Michelle Britt	David Walls, Michelle Britt
Energy & Durability & Building Codes: There's No Such Thing as a Free Thermodynamic Lunch	Joe Lstiburek	Joe Lstiburek
(Discussion) The Future of Codes and Standards for Zero Energy and Grid-enabled Buildings	Darren Port	Discussion Session
Unboxing Compliance: What We've Learned from Three Years of Field Study Data	Jeremy Williams	Jeremy Williams, Kim Cheslak, Russ Landry
Building Resilience: A Community Perspective on Energy Codes	John Balfe	Cammy Peterson, Amy Schmidt, Brad Smith, Justin Koscher
(Discussion) Unlocking the IECC Existing Buildings Chapters	Jason Vandever	Discussion Session
Getting to Zero Energy: New Challenges and Opportunities for Programs and Policies	Jim Edelson	Blake Shelide, Scott Prisco, David Epley
Energy Codes in a Rapidly Evolving Building Industry	Ian Blanding	Zach Owens, Alexi Miller
(Discussion) Are We There Yet? New Advancements in Performance-based Code Compliance	Bing Liu/Maria Karpman	Discussion Session
Achieving Energy Savings through Code Tools, Data and Programs	Christine Brinker	Shaunna Mazingo, Ian Blanding, Mike Turns
Staying Out of the Dark: Lighting Updates and Perspectives	Chris Burgess	Duane Jonlin, Jamie Fiske, Damon Bosetti
(Discussion) DOE Research Update and Feedback Session	Jeremy Williams	Kim Cheslak, Russ Landry, Michelle Britt, Vladimir Kochkin, Ed Carley, Richard Morgan

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Building Energy Codes