

ENERGY CODES

2024

May 6-8, 2024 | Sacramento, CA



2024 NATIONAL ENERGY CODES CONFERENCE

HOSTED BY THE
U.S. DEPARTMENT
OF ENERGY

U.S. DEPARTMENT OF
ENERGY

Office of ENERGY EFFICIENCY
& RENEWABLE ENERGY





Thank you for attending the 2024 National Energy Codes Conference!

We're excited to host another year of engaging topics, educational sessions, and solution-oriented dialogue.

The 2024 National Energy Codes Conference planning team **extends its deepest thanks to our organizers, speakers, and attendees** for making this event possible.



Hosted by the U.S. Department of Energy

U.S. DEPARTMENT OF **ENERGY** | Office of ENERGY EFFICIENCY & RENEWABLE ENERGY



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

 LOBBY LEVEL SIXTEENTH FLOOR

▶ REGISTRATION OPENS

Tuesday, May 7 | 8:00 am

Wednesday, May 8 | 7:30 am

Registration desk is located in the North Lobby. ■



▶ Wi-Fi

Wi-Fi is available in the meeting space.

Wireless internet name will be:

2024 National Energy Codes Conference

Password: **Energycodes2024**



▶ BREAKFAST

Please join us for breakfast in the North Lobby. ■

Tuesday, May 7 | 8:00–9:00 am

Wednesday, May 8 | 7:30–8:30 am



▶ HOTEL CONTACT

Holiday Inn Sacramento

Downtown – Arena, an IHG Hotel

300 J Street, Sacramento, CA 95814

916-446-0100



▶ WELCOME RECEPTION

Located in the Sierra Ballroom (16th floor). ■

Monday, May 6 | 5:00–6:00 pm



Keynote Speaker



Tuesday, May 7
9:30–10:00 am

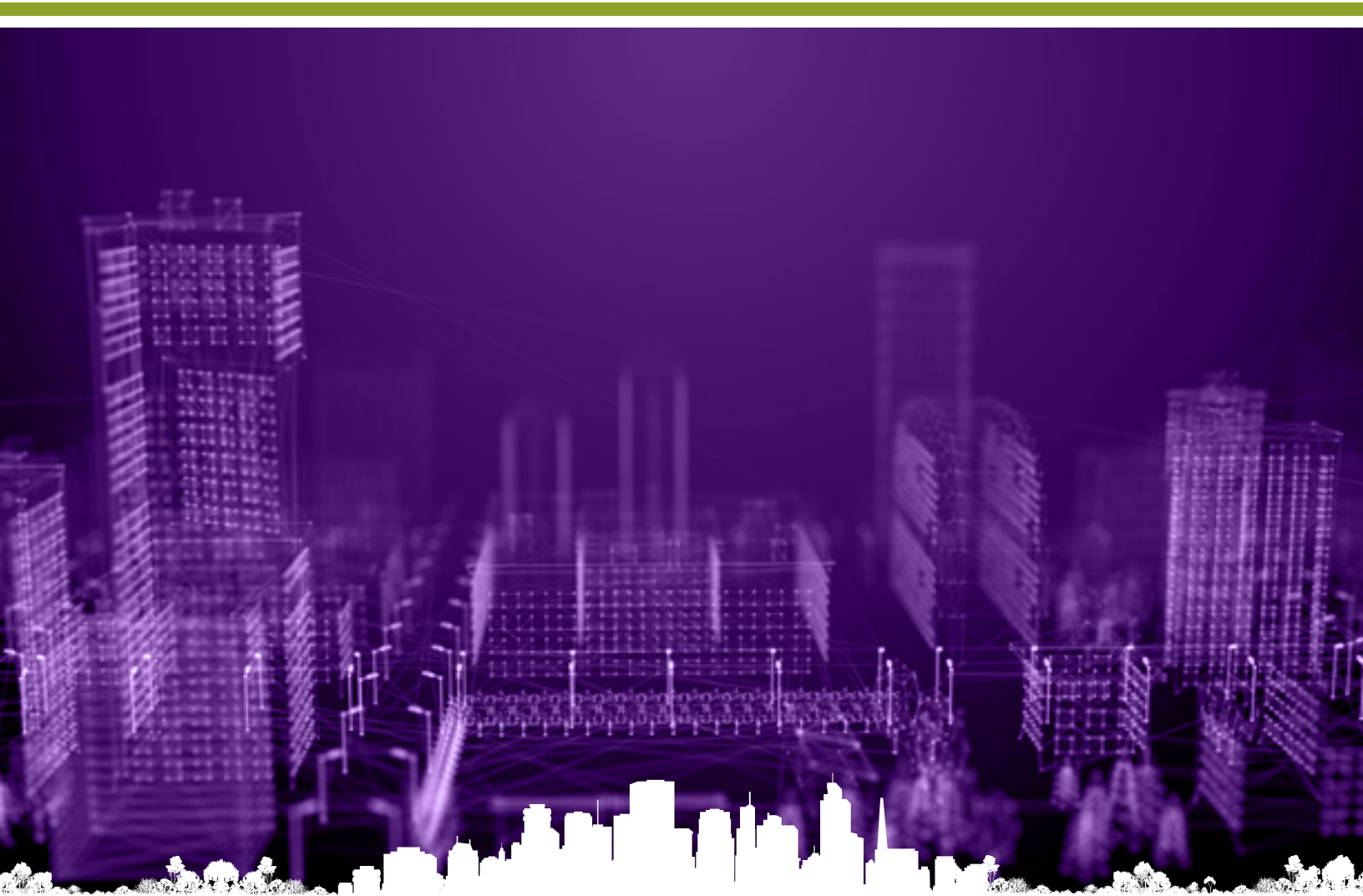
LOBBY LEVEL

CALIFORNIA/BALBOA/CALAVERAS



Andrew McAllister, Ph.D | California Energy Commission

Commissioner Andrew McAllister is serving his third term on the California Energy Commission. At the Energy Commission, he leads the policy area of energy efficiency, including the Building Energy Efficiency Standards, appliance efficiency, and load management and flexibility. More broadly, he is focused on enabling modern, data-rich analytical tools to support strong clean energy policy development and program implementation.



Plenary Speakers

LOBBY LEVEL

Day 1 | Tuesday, May 7 10:30–11:30 am (California/Balboa/Calaveras) ■

Federal Funding and Assistance Opportunities for Building Energy Codes



Bing Liu
Pacific Northwest
National Laboratory



Jeremy Williams
U.S. Department
of Energy



Ashley Armstrong
U.S. Department
of Energy

Day 2 | Wednesday, May 8 8:30–9:30 am (California/Balboa/Calaveras) ■

Federal Roundtable: Decarbonization, Affordability, and Everything in Between



Mandy Mahoney
U.S. Department
of Energy



Carolyn Snyder
U.S. Department
of Energy



Alexis Pelosi
U.S. Department of
Housing and Urban
Development



Jean Lupinacci
U.S. Environmental
Protection Agency



Heather Clark
White House Climate
Policy Office



Energy Codes Bootcamp & Tour

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 and ANSI/ASHRAE/IES Standard 90.1), building performance standards, and an introductory lesson on the REScheck and COMcheck software.

Monday, May 6



 LOBBY LEVEL

 SIXTEENTH FLOOR

TIME	TOPIC
12:15–3:00 pm	Tour (for those who are confirmed): SMUD East Campus Operations Center
12:30–5:00 pm	Energy Codes 101 BPS 101 REScheck Basics COMcheck Basics FRESNO/EL DORADO 
5:00–6:00 pm	Welcome Reception SIERRA BALLROOM 



Awards

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 U.S. states and territories 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.

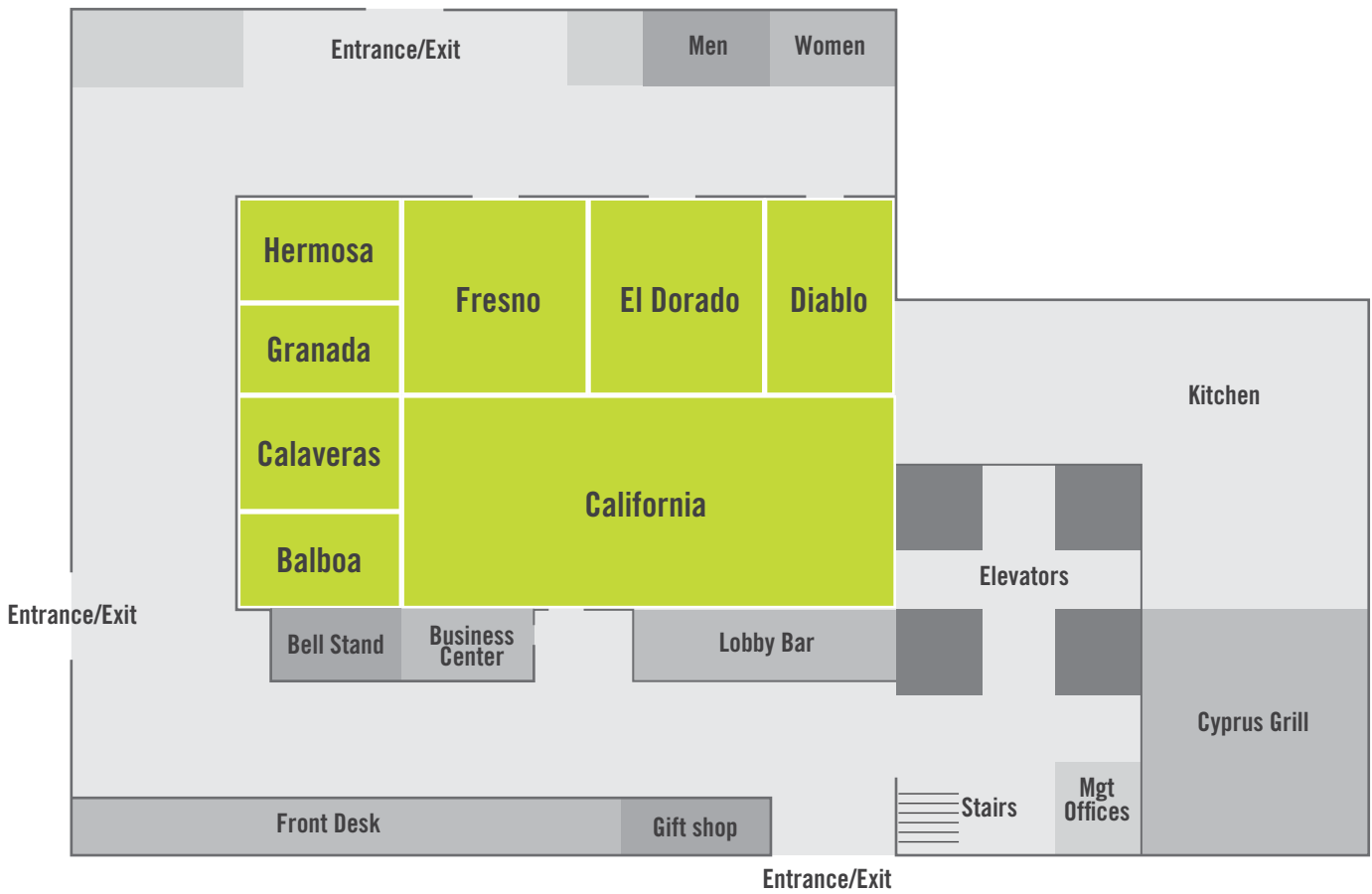
BECP Early Career Award

The **Early Career Award for Excellence in the Advancement of Building Energy Codes** recognizes early career professionals with outstanding pursuits surrounding building energy codes and encourages continued growth in the field. DOE is introducing this award at the 2024 National Energy Codes Conference and plans to award it annually moving forward.

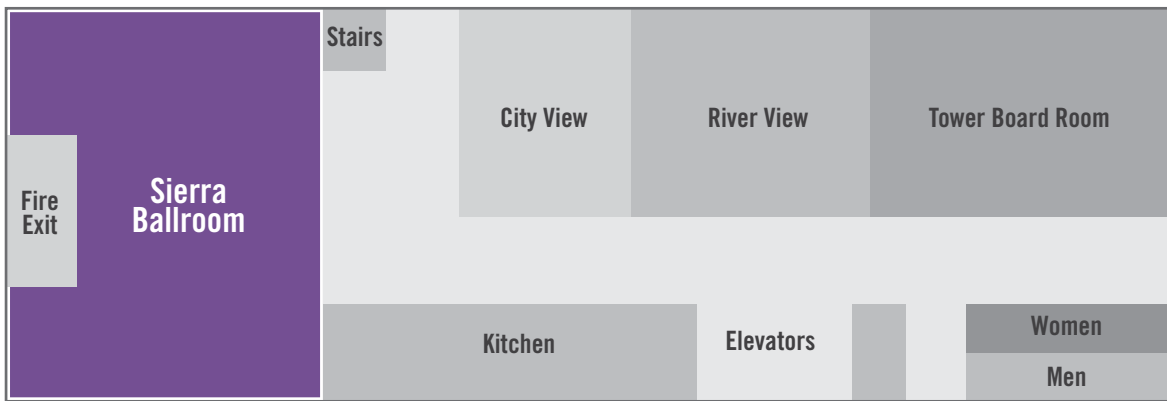
Join us at lunch on Tuesday as we announce the 2024 winners.

Conference Floor Plans

Lobby



Sixteenth Floor



Day 1 Tuesday, May 7



■ LOBBY LEVEL
■ SIXTEENTH FLOOR

TIME	TOPIC		
8:00–9:00 am	Registration & Breakfast NORTH LOBBY ■		
9:00–9:30 am	Welcome & Opening Remarks CALIFORNIA/BALBOA/CALAVERAS ■		
9:30–10:00 am	Keynote: Andrew McAllister, California Energy Commission CALIFORNIA/BALBOA/CALAVERAS ■		
10:00–10:30 am	Break		
10:30–11:30 am	Federal Funding and Assistance Opportunities for Building Energy Codes CALIFORNIA/BALBOA/CALAVERAS ■		
11:30– 1:00 pm	Networking Lunch and Awards CALIFORNIA/BALBOA/CALAVERAS ■		
1:00–2:30 pm	Grid Edge Modernization and the Energy Code: How Codes Can Support a Transition to a Clean and Resilient Grid HERMOSA/GRANADA/FRESNO ■	Inclusive Energy Codes: Bridging the Gap to Achieve Equity and Environmental Justice DIABLO/EL DORADO ■	Efficiency Policy for Existing Buildings: Driving Market Transformation (Discussion) SIERRA BALLROOM ■
	Break		
	Lightning Round CALIFORNIA/BALBOA/CALAVERAS ■		
3:30–5:00 pm	Building a Green Workforce: Training for Tomorrow’s Energy Code Compliance HERMOSA/GRANADA/FRESNO ■	Using Tools and Data Analysis to Inform Building Policy Adoption and Implementation DIABLO/EL DORADO ■	Reaching for the Sun: Lessons Learned from California (Discussion) SIERRA BALLROOM ■



Day 1 continued

Featured Speakers

CALIFORNIA/BALBOA/CALAVERAS ■

Federal Funding and Assistance Opportunities for Building Energy Codes

With DOE's over \$1.2 billion in funding between the Bipartisan Infrastructure Law (BIL) and Inflation Reduction Act (IRA) to support energy codes, there is an unprecedented opportunity to invest in our nation's buildings. Join us for the one-year update since the 2023 National Energy Codes Conference to learn about the projects that have already been awarded and the funding that will soon be awarded, and how the funding fits within DOE's broader vision to help states, jurisdictions, and Tribal nations update to modern energy codes and advance workforce training, compliance, environmental justice, and other critical supporting energy code activities.

Moderator: Bing Liu

Speakers: Ashley Armstrong and Jeremy Williams

HERMOSA/GRANADA/FRESNO ■

Grid Edge Modernization and the Energy Code: How Codes Can Support a Transition to a Clean and Resilient Grid

As we transition to an electricity grid powered mostly by renewables and all-electric buildings become more prevalent, it will be increasingly important for buildings to be capable of shifting when electricity is being drawn from the grid. During this session, speakers will provide context on what is needed to achieve grid modernization (the grid perspective) and how codes can help with the transition. We will discuss attributes of a grid-integrated buildings (e.g., solar, storage, load management, EV infrastructure) and the logistics of establishing effective codes to ensure buildings have these attributes. Topics of discussion will include differences in grid needs and the related need for grid integrated buildings in different parts of the country, how building performance standards or energy codes can impact the utility grid, different calculation methodologies to demonstrate energy value and cost effectiveness, where code requirements should reside (energy code v. another code) and the interplay between appliance standards and building codes.

Moderator: Ram Narayanamurthy

Speakers: Scott Blunk, Randall Higa, Michael Tillou, Tomi Vest, and Heidi Werner



Day 1 Tuesday, May 7 (Continued)

DIABLO/EL DORADO ■

Inclusive Energy Codes: Bridging the Gap to Achieve Equity and Environmental Justice

Dive into the intersection of energy codes, equity, and environmental justice in this engaging session. Experts from across the country will share insights on crafting energy codes that not only meet technical standards, but also address the needs of underserved communities, empower the workforce, and ensure Justice40 goals are being met. Learn about strategies that provide accessible and inclusive benefits throughout the entire lifecycle of energy codes—from development to enforcement and evaluation. This is a crucial conversation for those interested in how building energy policy can be a tool for positive change.

Moderator: Erin Beddingfield

Speakers: Maggie Kelley Riggins, Bahareh van Boekhold, and Jasmine Xie

SIERRA BALLROOM ■

Efficiency Policy for Existing Buildings: Driving Market Transformation (*Discussion*)

Approximately 80% of the 2024 U.S. building stock will remain in 2050, making improving the energy efficiency of existing buildings a crucial part of achieving 2050 energy efficiency and climate goals. If the energy efficiency, affordability, and climate goals of federal, state, and local governments are to be met, existing buildings must achieve additional energy efficiency. This discussion session will explore how policy and programs can drive market transformation in existing buildings, with a focus on small commercial buildings and residences. Come prepared to discuss and explore innovative policies and programs for existing commercial and residential buildings.

Moderator: Billierae Engelman and Madeline Salzman

Speakers: Discussion Session

DIABLO/EL DORADO ■

Using Tools and Data Analysis to Inform Building Policy Adoption and Implementation

As building codes and building performance standards become more advanced, new tools and insights are critical to help inform their adoption and implementation across the United States. In this session, we will explore various data-based solutions at the national, state, and local level helping jurisdictions realize savings and achieve their goals.

Moderator: Anna Stern

Speakers: Eric Engelman, Duncan Prael, and Rob Salcido



Day 1 Tuesday, May 7 (Continued)

HERMOSA/GRANADA/FRESNO ■

Building a Green Workforce: Training for Tomorrow's Energy Code Compliance

Energy savings, carbon reduction, improved resilience - the full measure of energy code compliance benefits don't happen if the workforce is not properly trained to construct energy efficient buildings. This session will highlight different approaches to workforce training, industry recognized certificate training, and direct stakeholder outreach and training.

Moderator: Ian Blanding

Speakers: Omar Al-Hassawi, Erica DiLello, and Randy Plumlee

SIERRA BALLROOM ■

Reaching for the Sun: Lessons Learned from California (Discussion)

For nearly fifty years, The Golden State has benefited from robust statewide energy efficiency authority. During this time, the state has successfully standardized highly insulated walls, windows, attics, and roofs for the majority of new homes and businesses. Recent initiatives have further standardized highly efficient heat pumps and required solar photovoltaic systems and battery storage for most building types. This session invites you to engage with representative state regulators, pioneering local governments, forward-thinking utilities, and innovative regional energy networks, all collaborating to distribute the benefits of energy codes throughout the nation's most populous state.

Moderator: Will Vicent

Speakers: Discussion Session



Day 2 Wednesday, May 8



LOBBY LEVEL

SIXTEENTH FLOOR

TIME	TOPIC		
7:30–8:30 am	Registration & Breakfast NORTH LOBBY ■		
8:30–9:30 am	Federal Roundtable: Decarbonization, Affordability, and Everything in Between CALIFORNIA/BALBOA/CALAVERAS ■		
9:30–10:00 am	Break		
10:00–11:30 am	Acceleration Station: Boosting Building Performance Standards through Federally Funded Projects HERMOSA/GRANADA/FRESNO ■	Diversifying Your (EE) Portfolio: Utility Code Support Programs DIABLO/EL DORADO ■	Are We There Yet: Defining a Model Energy Code Endpoint (Discussion) SIERRA BALLROOM ■
	11:30–12:30 pm Networking Lunch CALIFORNIA/BALBOA/CALAVERAS ■		
	12:30–2:00 pm	Driving Change: Electric Vehicle Charging Infrastructure in the Energy Codes HERMOSA/GRANADA/FRESNO ■	Third Parties and Residential Energy Code Compliance DIABLO/EL DORADO ■
2:00–2:30 pm Break			
2:30–4:00 pm	Approaching Zero: Integrating Renewable Energy in Building Codes HERMOSA/GRANADA/FRESNO ■	Working Collaboratively: Building Relationships and Sharing Resources to Achieve Common Goals DIABLO/EL DORADO ■	



Day 2 Wednesday, May 8 (Continued)

Featured Speakers

CALIFORNIA/BALBOA/CALAVERAS ■

Federal Roundtable: Decarbonization, Affordability, and Everything in Between

Federal agencies are working hard to support the Biden-Harris Administration's goals to decarbonize buildings and catalyze America's clean energy economy, while ensuring that their work helps advance equity and environmental justice. This roundtable discussion will feature speakers from the White House, Department of Energy, Environmental Protection Agency, and Department of Housing and Urban Development who will cover some of the key federal programs and initiatives to help drive decarbonization, while addressing the key equity considerations that are being made to help ensure Americans can live in affordable and secure homes.

Moderator: Mandy Mahoney

Speakers: Heather Clark, Jean Lupinacci, Alexis Pelosi, and Carolyn Snyder

HERMOSA/GRANADA/FRESNO ■

Acceleration Station: Boosting Building Performance Standards through Federally Funded Projects

Building Performance Standards (BPS) are rapidly transforming the landscape of existing building decarbonization across America. States and local governments are leading the way in establishing innovative and equitable BPS to meet emissions reduction goals by midcentury. Organizations are teaming up alongside these governments to support realistic and achievable policy outcomes through thought leadership, technical analysis, tool development, and creative complementary activities. The US Department of Energy recently awarded 27 of these teams under the Bipartisan Infrastructure Law's Resilient and Efficient Codes Implementation funding opportunity. Hear from DOE and four awardees on how they're working with states and local governments on BPS to transform our built environment for communities everywhere.

Moderator: Billierae Engelman

Speakers: Amy Boyce, Carolyn Sarno Goldthwaite, Maggie Kelley Riggins, and Amanda Webb



Day 2 Wednesday, May 8 (Continued)

DIABLO/EL DORADO ■

Diversifying Your (EE) Portfolio: Utility Code Support Programs

As energy codes continue to evolve, utility incentive programs are faced with the need to adapt while meeting cost-effectiveness requirements. Learn from presenters about opportunities and challenges in planning and implementing above-code and energy code support programs. Speakers will include utilities and utility program implementers from across the country who offer varying types of energy code-related programs.

Moderator: Kevin Rose

Speakers: Kelly Cunningham, Greg Lasher, and Nick Minderman

SIERRA BALLROOM ■

Are We There Yet: Defining a Model Energy Code Endpoint (Discussion)

Where are we ultimately going with our energy code development work? Zero energy? Zero emissions? Some other standard? How much of that progress should be efficiency, vs. renewables, and is cost-effectiveness the only factor? These questions and more will help pin down our ultimate code target.

Moderator: Duane Jonlin

Speakers: Discussion Session

HERMOSA/GRANADA/FRESNO ■

Driving Change: Electric Vehicle Charging Infrastructure in the Energy Codes

This session will address electric vehicle charging service equipment (EVSE) elements of the 2024 International Energy Conservation Code appendices, efforts by states to incorporate EVSE into state building codes, and industry perspectives on how EV owners charge at home and on the go.

Moderator: Miracle Wilson

Speakers: Linda Khamoushian and Michael Tillou

DIABLO/EL DORADO ■

Third Parties and Residential Energy Code Compliance

This session will explore the effective use of residential third-party professionals in the design, construction, and enforcement processes to achieve compliance with modern energy codes (e.g., 2021 International Energy Conservation Code). Attendees will explore the role of third parties and the benefits of using these professionals in the code compliance process, discuss the concerns, challenges, and successes of third parties from the Code Official's perspective, and explore how HERS Raters are used to verify code compliance while meeting the needs of the jurisdictions they serve. This discussion session will offer insights on best practices and lessons learned with the goal of enhancing the relationship and communication between third parties and Code Officials.

Moderator: Jerica Stacey

Speakers: Sandy Gallo, Shaunna Mozingo, and Rich Truitt



Day 2 Wednesday, May 8 (Continued)

CALIFORNIA/BALBOA/CALAVERAS ■

One Size Doesn't Fit All: Shaping Technical Assistance to Support Energy Codes (Discussion)

The U.S. Department of Energy Technical Assistance (TA) Program - complete with a National TA Network and a robust collection of tools, training, resources and 1:1 support- is freely available to help all states, territories, localities, and tribes save energy and improve buildings in their jurisdictions. In this discussion session, participants will learn about these resources, and provide feedback on ways to expand this program to better meet their unique needs. Whether it's a compliance tool, training program, or analysis to support energy code adoption, we want to hear what's on your wish list to better support energy codes in your community. Come ready to share your insights around five breakout topic areas (Adoption, Compliance & Enforcement, Workforce Development, Messaging & Stakeholder Engagement, Stretch Codes & Advanced Measures).

Moderator: Erin Beddingfield
and Ian Blanding

Speakers: Discussion Session

DIABLO/EL DORADO ■

Working Collaboratively: Building Relationships and Sharing Resources to Achieve Common Goals

To achieve ambitious climate goals and drive sustained improvements, strategic partnerships are key. State and local jurisdictions have sought out such partnerships with each other, as well as with other organizations,

including builders, architects, engineers, academia, advocates, and other stakeholders who play an important role supporting the successful implementation of building codes. Join this session to hear about best practices and challenges in working collaboratively, as well as reflect on opportunities to expand partnerships to include those who have been historically left out of the climate and codes space.

Moderator: Kim Cheslak

Speakers: Kevin Barry, Mary English,
Virginia Rutter, and Mike Waite

HERMOSA/GRANADA/FRESNO ■

Approaching Zero: Integrating Renewable Energy in Building Codes

This session explores innovative strategies and best practices that are driving progress towards renewable energy in building codes, toward zero-energy buildings in some regions. Learn how these initiatives can be universally applied to promote energy efficiency and sustainability in the built environment. This session offers valuable takeaways for those interested in shaping the future of building codes and achieving ambitious energy goals, regardless of whether you're located on the East Coast, West Coast, or anywhere in between.

Moderator: Patricia Chawla

Speakers: Adam Berry, Bob Raymer,
and Mark Rodriguez



THANK YOU to our 2024 moderators and speakers!

Bios are available at <https://www.energycodes.gov/2024-national-energy-codes-conference>

TOPIC	MODERATOR	SPEAKERS
Federal Funding and Assistance Opportunities for Building Energy Codes	Bing Liu	Ashley Armstrong; Jeremy Williams
Grid Edge Modernization and the Energy Code: How Codes Can Support a Transition to a Clean and Resilient Grid	Ram Narayanamurthy	Scott Blunk; Randall Higa; Tomi Vest; Heidi Werner; Michael Tillou
Inclusive Energy Codes: Bridging the Gap to Achieve Equity and Environmental Justice	Erin Beddingfield	Maggie Kelley Riggins; Bahareh van Boekhold; Jasmine Xie
Efficiency Policy for Existing Buildings: Driving Market Transformation (Discussion)	Billierae Engelman and Madeline Salzman	Discussion Session
Using Tools and Data Analysis to Inform Building Policy Adoption and Implementation	Anna Stern	Eric Engelman; Duncan Prah; Rob Salcido
Building a Green Workforce: Training for Tomorrow's Energy Code Compliance	Ian Blanding	Omar Al-Hassawi; Erica DiLello; Randy Plumlee
Reaching for the Sun: Lessons Learned from California (Discussion)	Will Vicent	Discussion Session
Federal Roundtable: Decarbonization, Affordability, and Everything in Between	Mandy Mahoney	Heather Clark; Jean Lupinacci; Alexis Pelosi; Carolyn Snyder
Acceleration Station: Boosting Building Performance Standards through Federally Funded Projects	Billierae Engelman	Amy Boyce; Carolyn Sarno Goldthwaite; Maggie Kelley Riggins; Amanda Webb
Diversifying Your (EE) Portfolio: Utility Code Support Programs	Kevin Rose	Kelly Cunningham; Greg Lasher; Nick Minderman
Are We There Yet: Defining a Model Energy Code Endpoint (Discussion)	Duane Jonlin	Discussion Session
Driving Change: Electric Vehicle Charging Infrastructure in the Energy Codes	Miracle Wilson	Linda Khamoushian; Michael Tillou
Third Parties and Residential Energy Code Compliance	Jerica Stacey	Sandy Gallo; Shaunna Mozingo; Rich Truitt
One Size Doesn't Fit All: Shaping Technical Assistance to Support Energy Codes (Discussion)	Ian Blanding and Erin Beddingfield	Discussion Session
Working Collaboratively: Building Relationships and Sharing Resources to Achieve Common Goals	Kim Cheslak	Kevin Barry; Mary English; Virginia Rutter; Mike Waite
Approaching Zero: Integrating Renewable Energy in Building Codes	Patricia Chawla	Adam Berry; Bob Raymer; Mark Rodriguez

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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.



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