A large graphic of a yellow sun with a white crescent moon, partially obscured by an orange hard hat. The words "ENERGY CODES" are written in green, arched letters across the top of the hard hat, and "WORK!" is written in large, bold, green letters below it.

ENERGY CODES WORK!

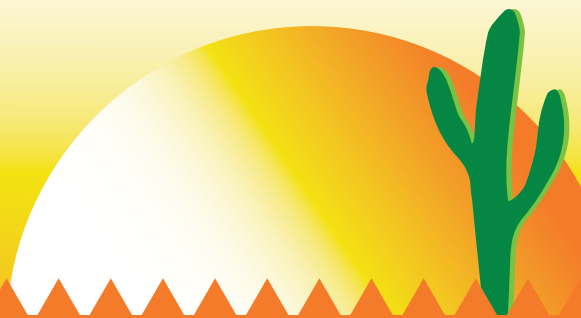
U.S. Department of Energy
**2016 NATIONAL
ENERGY CODES
CONFERENCE**
March 21-24, 2016
Tucson, AZ



Building Energy Codes

U.S. DEPARTMENT OF
ENERGY

Energy Efficiency &
Renewable Energy



Continuing Education: The Conference is a great opportunity to learn about the most relevant topics from the most informed speakers. 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 Continuing Education provider, with learning units available for most conference sessions. ICC educational credits can also be arranged through SPEER. Pick up forms at conference Registration desk.



Highlights

THANK YOU FOR ATTENDING

the National Energy Codes Conference 2016. We're glad you could join us for this exclusive opportunity to participate in a lively, solution-focused forum for all topics related to building energy codes, with a special focus on compliance.

The National Energy Codes Conference 2016

EXTENDS THE DEEPEST THANKS TO OUR ORGANIZERS, SPEAKERS AND ATTENDEES

for making this event possible.

HOSTED BY



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.



REGISTRATION OPENS

8:00 am (except for Monday, March 21 and Tuesday, March 22 at 7:30 am)

Registration desk is located in the Ballroom Foyer



Wi Fi

Wireless internet access is available by selecting "I have a coupon code/promotion" and entering meeting 0316 as the code.



BREAKFAST

Please join us for a breakfast every morning throughout the conference in the Ballroom Foyer. Breakfast time:

Tuesday

7:30am to 8:30am

Wednesday & Thursday

8:00am to 9:00am



VISITORS GUIDE

Tucson visitors information will be located near the Registration desk.



CONTACT

DOUBLE TREE TUCSON-REID PARK
(520) 881-4200
445 S. Alvernon Way
Tucson, AZ 85711



KEYNOTE Speakers

John Tooley | **March 22, 2016**



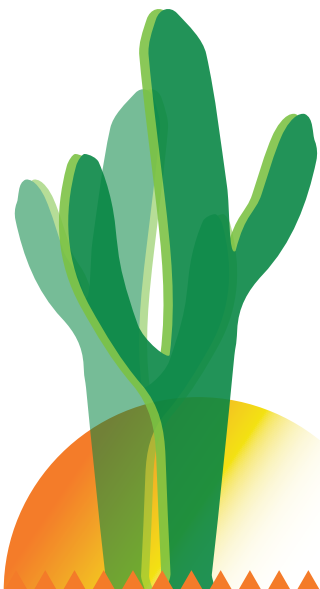
John Tooley is one of the nation's leading building scientists. Hailed as a visionary in energy efficiency, Tooley has diagnosed and repaired more than 5,000 homes and participated in the weatherization of more than 10,000 homes. He is recognized for his contributions to many of the largest utility and building programs in the nation. He has received a National Energy Award from the U.S. Department of Energy, the Florida Governor's Energy Award, the Legacy Award and Joule awards from the Energy and Environmental Building Association and was inducted into the Building Performance Institute Hall of Fame.

C.R. Herro | **March 23, 2016**



C.R. Herro is Vice President of Environmental Affairs for Meritage Homes, a large-volume national home builder. CR leads their Energy and

Innovation Program, which combines design, energy efficiency, water management, sustainability, and new technologies to establish a new standard in home building that provides better comfort and healthier air as well as less cost to own and operate. In the last three years, Meritage has received numerous awards, including the EnergyValue Housing Award, Best Green Building Program Award, NAHB Builder of the Year and the four time U.S. EPA's ENERGY STAR Partner of the Year Award, recognizing ongoing industry leadership. CR serves as President of the Board of Directors for the Energy & Environmental Building Alliance, the RESNet Standards Development Committee, the Board of Directors for the Green Chamber of Commerce, the Technical Committee for the Leading Builders of America, and the Ibacos Best Practice Research Alliance.



PRE-CONFERENCE Monday, March 21

7:30 AM – 8:00 AM	Registration (Ballroom Foyer)	
8:00 AM – 9:00 AM	Energy Codes 101	
9:00 AM – 12:00 PM	COMcheck Basics	
12:00 PM – 1:00 PM	Lunch (on your own)	
1:00 PM – 3:00 PM	REScheck Basics	ENR2 Tour at University of AZ (1:00 – 4:00 pm)
3:00 PM – 3:15 PM	Break	
3:15 PM – 4:30 PM	What's New in the Codes?	
5:30 PM – 6:30 PM	Welcoming Reception	

Workshop: (Salon E)

Energy Codes 101

Get a basic introduction to the varied and complex issues associated with building energy codes.

COMcheck Basics

Come learn the basics of using/reviewing COMcheck, including the latest and greatest features.

REScheck Basics

Come learn the basics of using/reviewing REScheck, including the latest and greatest features.

What's New in the Code?

Hear about the latest requirements and latest news of IECC and 90.1.

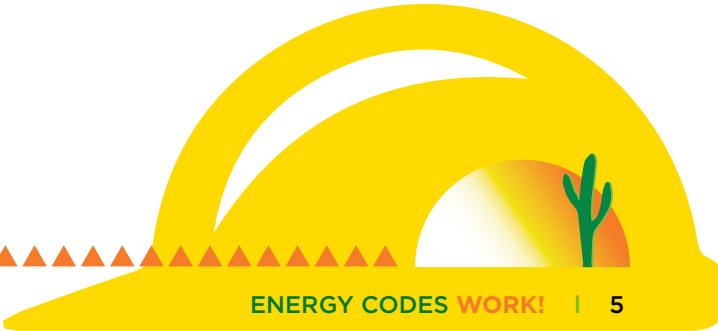
**Please bring your own laptop with the latest versions of COMcheck Desktop and REScheck Desktop installed. Available for download at: www.energycodes.gov/software-and-web-tools*

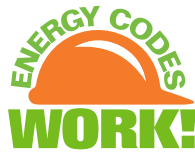
On-Site Building Tour

Join us for a short bus ride to explore the University of Arizona's Environmental and Natural Resources 2 (ENR2) building that was completed in summer 2015. The design of this 150,000 sf facility is inspired by the slot canyons of the Southwest and incorporates energy-efficient heating and cooling systems, rainwater harvesting and low-flow faucets, and other innovative solutions in a desert landscape. The bus will begin loading at 1:00pm at the DoubleTree and will return to the DoubleTree at 4:00pm. Wear casual business attire and comfortable walking shoes. For further details on the building, visit <http://www.environment.arizona.edu/enr2>. *(Advanced registration is required)*

Welcoming Reception (Bonsai/Boojum)

Come meet and mingle with fellow conference attendees and join us for light refreshments.





DAY 1 Tuesday, March 22

7:30 AM – 8:30 AM	Registration and Breakfast (Ballroom Foyer)		
8:30 AM – 9:00 AM	Welcome and Opening Remarks (Salon A-D)		
9:00 AM – 9:45 AM	Keynote Speaker - John Tooley (Salon A-D)		
9:45 AM – 10:15 AM	Break (Ballroom Foyer)		
10:15 AM – 11:45 AM	The Devil in the Details of Sustainable Homes (Salon F/G)	What Resources Are Available to Meet the Code? (Salon E)	Innovative Insulation Strategies (Boojum)
11:45 AM – 1:00 PM	Networking Lunch and Residential Field Studies Presentation (Salon A-D)		
1:00 PM – 1:30 PM	Break (Ballroom Foyer)		
1:30 PM – 3:00 PM	On-Site Generation and Residential Energy Codes (Salon E)	Ventilation and the Residential Energy Code (Boojum)	
3:00 PM – 3:30 PM	Break (Ballroom Foyer)		
3:30 PM – 5:00 PM	Multifamily (Boojum)	Compliance – Taking it from the Book to the Building (Salon E)	

The Devil in the Details of Sustainable Homes.

This course will set the stage for an audience discussion about the challenges and opportunities in single-family residential projects by reviewing current market conditions, existing best practices and a collection of issues that the construction industry must address. We'll conclude with a review of opportunities for leadership from industry leadership and use the remaining time for comments and discussion from the audience.

What Resources Are Available to Meet the Code?

What does it take to meet the residential energy code requirements? What construction method and materials work best to meet either the prescriptive or performance path? This panel session will break down the “what” and the “how” of effectively meeting the residential energy code. This panel will provide information and tips for builders and code officials from experienced industry professionals as well as documented real world scenarios.

Innovative Insulation Strategies. Insulation typically takes the form of either batts, cellulose or spray foam in wall cavities, or to a lesser extent rigid insulation on the exterior of walls. There are, however, other types of insulation that are entering the market. This session will highlight both non-standard insulation strategies as well as modifications to existing technologies.

On-site Generation and Residential Energy Codes.

A discussion about what is in the 2015 IECC regarding on-site generation and the relationship with ERI. How solar is integrated by builders to add value to homebuyers, with consideration of the utility benefits. Plus a look forward at how it may be included or added in the 2018 IECC

code development and addressing some of the changes to enforcement practices. Leaving time for audience discussion and input.

Ventilation and the Residential Energy Code: As energy codes (and general building practice) continue to reduce air leakage in buildings, proper ventilation takes on a more prominent role. This panel session will review the latest code requirements with respect to ventilation and the energy code; discuss the various ways the requirements are met in the field; and go over research that discusses how well ventilation systems deliver fresh air.

Multifamily. Multifamily buildings constitute between 40 and 50% of new residential construction across the United States, depending on the state. Research suggests continued high construction levels. This session will highlight building code and construction trends that impact the multifamily market, and the challenges for the industry as codes focus more directly on energy savings measures specific to multifamily construction. This session will provide the audience with a good understanding of the energy saving opportunities in multifamily.

Compliance—Taking it From the Book to the Building.

Adopting a new code is only the first step in changing design and construction practices. Ensuring that new requirements actually get incorporated into buildings takes a concerted effort to educate building officials, designers and contractors about the code and following up with technical support and good processes to help everyone involved understand the requirements and documentation that will be expected. This session will feature examples of best practices in supporting compliance with new codes.



DAY 2 Wednesday, March 23

8:00 AM – 9:00 AM	Registration and Breakfast (Ballroom Foyer)		
9:00 AM – 10:00 AM	Keynote Speaker - C.R. Herro (Salon A-D)		
10:00 AM – 10:30 AM	Break (Ballroom Foyer)		
10:30 AM – 12:00 PM	2015 IECC and the ERI (Salon E)	Existing Buildings (Boojum)	
12:00 PM – 1:30 PM	Networking Lunch and Jeffrey A. Johnson Award (Salon A-D)		
1:30 PM – 3:00 PM	Jolt Session (Salon A-D)		
3:00 PM – 3:30 PM	Break (Ballroom Foyer)		
3:30 PM – 5:00 PM	2018 IECC: Proposals and Themes (Boojum)	How Much Energy Do Codes Really Save? (Salon E)	Energy Code Adoption Trends and Strategies (Salon F/G)

2015 IECC and the ERI. The Energy Rating Index (ERI) is new to the 2015 IECC. As more jurisdictions and states adopt the 2015 IECC, many wonder how to best implement this alternative pathway. Luckily, this session will help you understand what to consider when adopting, enforcing and implementing the ERI. The panelists will share best practices, successes and challenges.

Existing Buildings. Existing building energy use is the leading consumer of energy; 40 percent of U.S. electricity. Reduction retrofits are crucial; and represent an investor opportunity exceeding \$280 billion that could account for over \$1 trillion in energy savings within a decade. The 2015 IEBC and ASHRAE Standard 100-2015, are codes for existing buildings; the 2015 IECC and IGCC include existing buildings chapters. What role do codes play in building retrofit and what are the challenges and opportunities?

2018 IECC: Proposals and Themes. Proposals for the 2018 International Energy Conservation Code (IECC) were due in January and have now been published by the International Codes Council (ICC). In every code development cycle, certain themes emerge from the proposals that were submitted. This session will look at the broad themes as well as discuss individual proposals with the potential to significantly change the energy code.

How Much Energy Do Codes Really Save? Energy code savings are usually estimated prospectively based on simulations or engineering analyses. But questions have been raised about how much energy codes actually save in real buildings. Reliable savings estimates are becoming more important as utilities and planners try to account for the impact of codes on loads, and code adoption and compliance programs gain recognition as ways to reduce energy use and greenhouse gases. The three presentations in this session present results from recent studies using energy consumption data in different analytic frameworks to determine actual energy use impacts.

Energy Code Adoption Trends and Strategies. The policy landscape for building codes is one of the most complex and diverse in the country. This session will break down the different adoption schemes across the country, the unique challenges faced in each, and strategies and resources to address them.

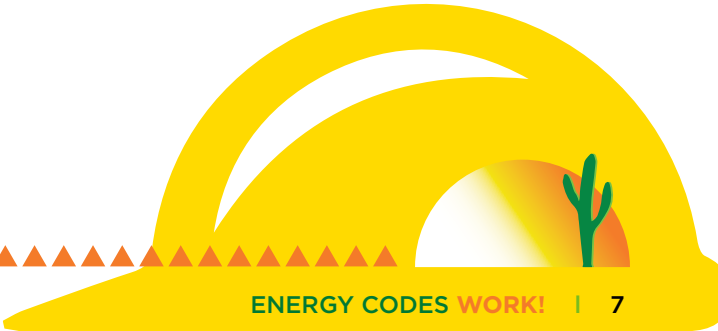


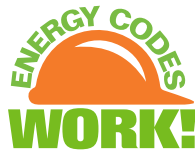
Jeffrey A. Johnson Award



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 Wednesday as we announce the 2016 winner.





DAY 3 Thursday, March 24

8:00 AM – 9:00 AM	Registration and Breakfast (Ballroom Foyer)		
9:00 AM – 10:15 AM	National Appliance Standards and Interactions with Codes (Salon F/G)	Energy Codes and Federal Policy (Salon E)	Code-Required Commissioning (Boojum)
10:15 AM – 10:30 AM	Break (Ballroom Foyer)		
10:30 AM – 11:45 AM	Commercial Compliance (Salon E)	Best Practices for Code Enforcement (Boojum)	
11:45 AM – 12:30 PM	Box Lunch (Salon A-D)		

National Appliance Standards and Interactions with Codes.

The Department of Energy is required to consider and/or set standards of efficiency for most of the equipment and appliances that we use in residential and commercial buildings. Once a standard is enacted, they set the minimum level of efficiency for manufacturing and the maximum level that can be required by code. Thus, these federal standards preempt the ability of a state or local body to set or require higher appliance efficiency levels. However, for a certain subset of commercial equipment, ASHRAE 90.1 may adopt standards that are higher than Federal. States may adopt these ASHRAE provisions in their building codes without violating preemption. This session presents the standards process, savings potential, and strategies for working within existing laws regarding preemption.

Energy Codes and Federal Policy. Federal policies and programs beyond existing DOE building code office activities can influence the development and implementation of codes. This session will include a view from Capitol Hill with an energy codes lens, discussion of codes implementation for federally-supported construction, and the quite different perspective of air quality regulation and the potential role that building energy codes can play as a state compliance option under EPA's Clean Power Plan regulation.

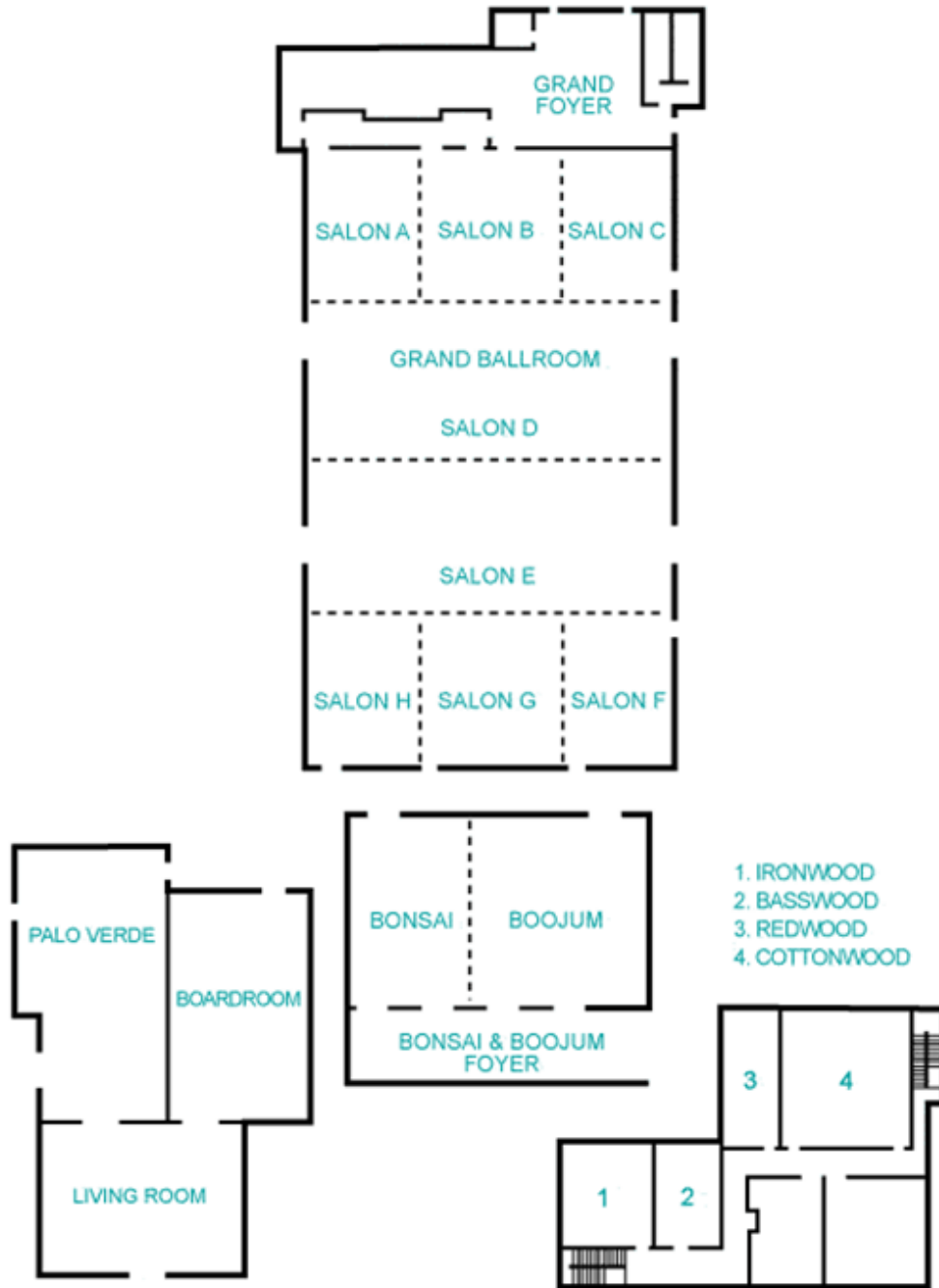
Code-Required Commissioning. Commissioning (Cx) of building systems is becoming a fundamental component of the design, construction and code compliance for all new buildings, not just those considered "high-performance." Panelists with expertise in providing and enforcing Cx services, will provide a clear framework for why Cx is so important to a building owner, what Cx providers actually do, and the best practices jurisdictions are using to enforce Cx code requirements.

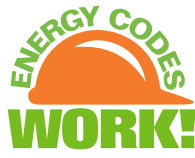
Commercial Compliance. Are commercial energy codes actually delivering the savings we assume based on the written code? Commercial buildings vary widely in size, function, complexity and systems. Developing a methodology that accurately measures what is occurring in the field is difficult and may be too expensive for most states. This session will present the state of the art in this area as well as articulate the many remaining hurdles that need to be overcome to create a usable, practical methodology.

Best Practices for Enforcement. Local enforcement plays a critical role in making energy codes work. Attendees at this session will hear from local code officials about the best practices being used in their jurisdictions to enforce the energy code, educate industry stakeholders and evaluate compliance. Presentations will include strategies that can be implemented by building departments in small, medium and large jurisdictions, followed by an interactive Q & A discussion.



CONFERENCE Floor Plan





THANK YOU to our moderators and speakers!

The Devil in the Details of Sustainable Homes	What Resources Are Available to Meet the Code?
Moderator: Maureen Guttman Speaker: Ryan Taylor	Moderator: Amy Dzura Speakers: Larry Mahaffey, Shaun Hassel, Ricky Sandlin
Innovative Insulation Strategies	On-Site Generation and Residential Energy Codes
Moderator: Isaac Elnecave Speakers: Jarret Davis, Doug Smith, Howard Wiig	Moderator: Chris Herbert Speakers: Charlie Haack, CR Herro, Harry Misuriello
Ventilation and the Residential Energy Code	Multifamily
Moderator: Isaac Elnecave Speakers: Mike Moore, Tim Manz, Gary Nordeen	Moderator: Jim Meyers Speakers: Daran Wastchak, Mike Mancini, Hope Medina
Compliance-Taking it From the Book to the Building	2015 IECC and the ERI
Moderator: Richard Morgan Speakers: Gary Nordeen, Anthony Floyd, Jeff Domanski	Moderator: Lauren Westmoreland Speakers: Richard Morgan, Chris Anderson, Mike Browne, Sharon Grant Patterson
Existing Buildings	2018 IECC: Proposals and Themes
Moderator: Darren Port Speakers: Jennifer Senick, Brian McCowan, David Freelove	Moderator: Jeremy Williams Speakers: Eric Makela, Jim Edelson
How Much Energy Do Codes Really Save?	Energy Code Adoption Trends and Strategies
Moderator: Allen Lee Speakers: Chuck Withers, Allen Lee, Nick Taylor	Moderator: Sharon Bonesteel Speakers: Sharon Grant Patterson, Dave Nichols, Zach Owens
National Appliance Standards and Interactions with Codes	Energy Codes and Federal Policy
Moderator: Ken Baker Speakers: Joanna Mauer, Mary Anderson, Jim Edelson	Moderator: Bill Fay Speakers: Rodney Sobin, Mark Ames, Eric Lacey
Code-Required Commissioning	Commercial Compliance
Moderator: Maureen Guttman Speakers: Duane Jonlin, Zach Tripoli, Greg Kinkel	Moderator: David Cohan Speakers: Ken Baker, Michael Rosenberg, Eric Beaton, Ari Michelson
	Best Practices for Enforcement
	Moderator: Ryan Meres Speakers: Dave Kaiser, Keith Winston, Jeanne Fricot, Rich Franz-Under





Thank you for attending the

2016 NATIONAL ENERGY CODES CONFERENCE

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For more information

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