

ENERGY CODE COMPLIANCE ROUNDTABLE

Resource Guide

July 2024

PRESENTED BY



SECO
State Energy
Conservation Office

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Presenters' Bios and Contact Information



Randy Plumlee

Energy Code Program Manager

South Central Partnership for Energy
Efficiency as a Resource

rplumlee@eepartnership.org

(214)-803-2330

Randy Plumlee is an accomplished professional with an impressive array of credentials, including IECC, HERS, RESNET QAD, LEED GR, LEED QAD, and BPI. He currently serves as the Energy Code Program Manager at SPEER. Holding an AAS degree in Residential Building Performance, Randy brings over a decade of experience as a Regional Manager overseeing operations in Dallas/Ft. Worth and Austin. In this role, he led a team of Energy Inspectors/Raters for one of Texas's largest third-party energy verification and inspection companies.

Randy leverages his extensive knowledge and expertise to advance the teaching, education, and advocacy efforts for the adoption and acceleration of the IECC in both Texas and Oklahoma. His successful tenure as an Energy Inspector has taken him around the globe, including a notable career highlight where he played a key role in the first certified LEED project outside the United States, located in Doha, Qatar. Randy spent several weeks on-site inspecting residences for the Msheireb Downtown Doha project, which subsequently achieved the prestigious LEED Gold certification.



Jasmine Cigarroa

Plan Examiner Supervisor

Commercial Building, Commercial Energy

City of San Antonio, Development Services

jasmine.cigarroa@sanantonio.gov

(210)-207-8478

Jasmine has served the City of San Antonio Development Services for 12 years, beginning her tenure as a Residential Combination Inspector then advancing to Plan Review as a Senior Commercial Building Plans Examiner. She has led the Plan Review team for the past five years. Jasmine holds 12 ICC Certifications in multiple disciplines and is an active member of the ICC Alamo Chapter. She participates in the code adoption and amendment process for DSD for each code cycle. Her highest and most rewarding task has been taking on the leadership role for the new Energy Plan Review team.



Jonathan Henderson

Account Manager

McKinstry

jonathanhe@mckinstry.com

(541)-350-7996

Jonathan has been in the HVAC, Building Automation, Digital Buildings industry for 25 years. He has a background and is licensed in Mechanical Engineering, Certified Energy Manager, Electrician, and Steam Engineer. He has spearheaded design for large corporations like Siemens and Trane for building automation design and engineering specific to Data Centers and large governmental facilities. Have worked in 43 states in the US, South America, Canada, and designed projects in Asia, Europe, and the Middle East.



Jason Vandever

Director of Technical Services

North American Insulation Manufacturers Association

jvandever@naima.org

(254)-624-5693

Prior to joining NAIMA, Jason spent 7 years as the Building Code Program Manager for The South-central Partnership for Energy Efficiency as a Resource (SPEER). Before SPEER, Jason served as the Chief Building Official for the City of Granbury, Texas for 4 years. He has over 25 years combined experience in building construction, codes and inspection. He maintains 9 ICC certifications, is a Certified Building Official and a Texas Municipal League Leadership Fellow. Jason has an MBA from Texas Tech University (Go Red Raiders!). When he is not being a code nerd, he enjoys time on the lake wakeboarding with his wife and 2 children. **View Residential Insulation Installation Guide in [Spanish](#) or [English](#).**



Lyle Hufstetler

Natural Resources Project Administrator
Alamo Area Council of Governments

lhufstetler@aacog.com

(210)-376-9901



Mariah Sanchez

Natural Resources Outreach Specialist
Alamo Area Council of Governments

msanchez@aacog.com

(210)-461-8770

Roundtable Takeaways

Benefits of Energy Codes

- Ensure energy efficiency
- Provide cost savings
- Reduces greenhouse gas emissions
- Better insulation, ventilation, and air quality
- Increased extreme weather resilience
- Increased property value

Noncompliance Consequences

- Increased energy costs and usage
- Decreased comfort and health
- Greater greenhouse gas emissions
- More frequent repairs and maintenance costs
- Legal and financial penalties
- Reduced property value

2024 IECC Changes Highlights

- **R103.2.2 – Solar-Ready System:** Construction Documents shall provide details for dedicated roof area, structural design for roof dead and live load, and routing of conduit for pre-wiring from solar-ready zone to electrical service panel
- **R105.2 – Required Inspections:** Now includes framing and air barrier rough-in inspection in addition to the insulation/pre-rock inspection
- **R303.2.2 – Radiant Barriers:** Where installed, shall comply with ASTM C1313/C1313M
- **R401.2.5 – Additional Energy Efficiency Options:** The 5 options have been replaced with a credit system. Minimum of 2 selected that must total 10 points or more
- **R401.3 – Certificate:** Must now include the credit measures taken and any solar-ready zone information
- **R402.2.3 – Attic Kneewalls:** They are now defined and listed the specific requirements of have the same R-value as the exterior walls and MUST include an air barrier on the attic side
- **R402.2.3.1 – Truss framing:** This is now addressed in the code language stating that any truss separating conditioned from

unconditioned spaces MUST have the same R-value insulation requirement as the above-grade walls

- **R402.2.13 – Heated Garages:** Has been added to the Sunroom section for specific insulation requirements. Not required IF thermally isolated from the conditioned space
- **R402.5.1.1 – Air Barrier, Air Sealing and Insulation Table:** Lots of changes were made. Now includes specific requirements for Common and Double Walls
- **R402.5.1.2 – Testing:** Blower Door testing limits reduced to 4 ACH or 0.27 cfm/sq ft from 5 ACH or 0.30 cfm/sq ft.
- **R402.5.1.4 – Sampling:** A sampling protocol was established for multi-family buildings. Includes blower door, duct testing and mechanical ventilation testing. Must include testing from each type, (top floor, ground floor, middle floor)
- **Water Usage:** Determine nominal size of piping, piping material, water distribution in piping (ounces of water per foot)
- **Mechanical Ventilation:** Must test function, must meet CFM requirement
- **Changes to Chapter 5 for Alterations, Additions, and Remodels**
 - Includes HVAC sizing requirements, including Manual J & S and Duct Design, and Controls
- Additions must comply to the Additional Efficiency Packages from the 2021 IECC

San Antonio Development Services (2021 IECC)

- The Energy Code Team performs all-inclusive technical energy review for commercial projects
- COSA hosts several [San Antonio Building Codes Academy](#) (SABCA) sessions a year where ICC instructors train code officials, design teams, builders, contractors and managers on building related codes
- [DSD Academy](#): virtual/in person sessions that help residents understand the various aspects of development, including zoning, planning, permits, inspections, code enforcement and graffiti.
 - Access training videos [here](#)

- [Contractor Connect](#): search engine on city website for finding registered contractors. Contractors are rated differently depending upon how much city training/certifications they have received
- [IB 221](#): a helpful resource created to guide customers through the application process regarding compliance with the International Energy Conservation Code
- Energy code team actively participates in ICC Committee Action Hearings sending staff to comment on amendments every code cycle
- Staff offers preliminary plan reviews for commercial new construction prior to submitting approval
- Requests energy summary sheet to make plan review less extensive

Third Party Audits

- **What is an audit?**
 - Verification of energy usage for existing facilities, modeling for new & existing buildings. Verifying accurate scope and specs followed.
- **What is commissioning?**
 - Submittal review, verifying correct equipment installed, and functional performance testing is accurate, and all data recorded for customer.
- **Audits and commissioning**
 - Holds developers, contractors and subcontractors to the project requirements. (Plans & COMcheck).
 - Gather as much info as possible (Drawings, schematics, as-builts, O&M Manuals, pics)
 - Align expectations with building owners, reps and subs
 - Help gain understanding of their site to minimize risk

Resources

SPEER

- Webinars
 - SPEER maintains a free [Youtube](#) channel of webinars by industry experts on energy code topics
- Education and Training
 - SPEER provides free in person education and trainings to building code officials, builders, and contractors upon request
- Peer Support and Technical Assistance
 - SPEER offers peer support and technical assistance to building code officials, builders, and contractors regarding ASHRAE 90.1 and residential and commercial IECC requirements through a call or email
- [Compliance Guides and Toolkits](#)
 - SPEER has created a 2015 IECC compliance guide for homes in Texas
 - SPEER has developed a toolkit to provide resources to local governments and the building industry to help them adopt new energy codes.

Department of Energy

- [REScheck](#)— Free Energy Code Compliance Software Tool
 - Simplifies residential building energy code compliance
 - Offers a flexible computer-based alternative to manual calculations
- [COMcheck](#)— Free Energy Code Compliance Software Tool
 - Simplifies commercial building energy code compliance
 - Automates trade-off calculations
- [BECP Resource Hub](#)
 - The Building Energy Codes Program (BECP) offers a free collection of information, resources, and training webinars in relation to energy codes

- [State Energy Code Portal](#)
 - Look up details of each states building energy codes and their process for adoption, enforcement, and compliance
- [BECP Help Desk](#)
 - Submit technical questions about building energy codes, REScheck or COMcheck projects, or BECP website content at no cost
- [Energy Code YouTube Channel](#)
 - The DOE publishes a series of videos on energy codes including training videos, expert discussions, and other educational content

International Code Council

- [Public Access to Codes](#)
 - View and read ICC codes and standards online for free
- [International Code Council Paid Membership](#)
 - Scholarship opportunities and discounts for certifications/credentials
 - Library of resources, guides, and helpful documents
 - Online and in-person trainings
 - Career center and networking opportunities
 - Access to expert code opinions and code commentaries
- [Certifications](#)
 - ICC provides certifications to industry professionals for construction codes and standards
- [Plan Reviews](#)
 - ICC provides comprehensive plan reviews at a cost. Includes a plan review worksheet and a comprehensive report that outlines any code deficiencies in the proposed building plan
- [Technical Consulting](#)
 - ICC offers guidance on the technical aspects of the IECC codes at a cost