



2025 Midwest Energy Solutions Conference

Cracking the Code: Rural Communities, Workforce, and Affordability

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About Northeast Energy Efficiency Partnerships



- Non-partisan, non-profit organization founded in 1996
- One of six Regional Energy Efficiency Organizations
- We drive market transformation regionally by fostering collaboration and innovation, developing research and tools, and disseminating knowledge



Northeast Energy Efficiency Partnerships

- **Vision**
 - We envision the region’s homes, buildings, and communities transformed into efficient, affordable, low-carbon, and resilient places to live, work, and play.
- **Mission**
 - NEEP drives regional collaboration so that the Northeast and Mid-Atlantic can equitably and affordably reduce building sector greenhouse gas emissions through energy efficiency, electrification, and grid integration.
- **Goal**
 - Assist the Northeast and Mid-Atlantic states to equitably and affordably reduce building-sector greenhouse gas emissions in alignment with their goals.
- **Approach**
 - Drive market transformation regionally by fostering collaboration and innovation, developing research and tools, and disseminating knowledge.



Why Energy Codes?

Energy codes are life safety codes!

- **Energy Codes Save Lives and Costs**
 - Reducing energy consumption nationwide by 15% annually would lower power plant pollution – and would save six lives daily, save \$20 billion in avoided health care costs, and prevent 30,000 asthma episodes. (ACEEE and Physicians for Social Responsibility)
- **Resiliency Saves Lives**
 - Improved insulation, reduced thermal bridging, and airtightness can improve a building's resiliency. During major weather events and periods of extreme temperatures, resilient buildings improve passive survivability for occupants by maintaining comfortable indoor temperatures for longer when there is a loss of heating or power.
- **Energy Codes Lower Emissions**
 - Energy efficiency lower a building's energy consumption and GHG emissions over its life cycle.

Why Energy Codes?

Model Codes:

- International Code Council: International Energy Conservation Code (IECC) updated every 3 years, plus **appendices**, both residential and commercial
- American Society of Heating Refrigerating and Air Conditioning Engineers (ASHRAE): 90.1 updated every 3 years, plus appendices, commercial

- Adopted version varies across the country
- Compliance varies across a state

- Stretch codes
- Building Performance Standards

Energy Code Challenges

- **Rural Areas, Affordability, Workforce**
 - NEEP Project: National Rural Codes Collaborative (NRCC)
 - 42% higher energy burden for rural households
- **Affordability**
 - NEEP Resource: Energy Codes and Affordability
 - Conflicting manners of calculating the cost of updating energy codes leads to unclear picture for policy makers and homeowners
- **Workforce**
 - NEEP Resource: Code Enforcement Workforce Gap Analysis
 - NEEP Project: Total Energy Pathways Workforce project and Total Building Performance (TBP) Certificate

National Rural Codes Collaborative (NRCC)

Resilient and Efficient Codes Implementation



Funded by the U.S. Department of Energy: Resilient and Efficient Codes Implementation (BIL)

- Project Timeline: January 2025 – December 2028
- Rural areas are underserved by the code enforcement system because of geographic hurdles, financial barriers and scarcity of qualified energy assessors, contractors, inspectors and code officials. This leaves residents with far higher energy burdens.
- Project aims to understand and address barriers to implementation of building energy codes in rural communities.

National Rural Codes Collaborative (NRCC)

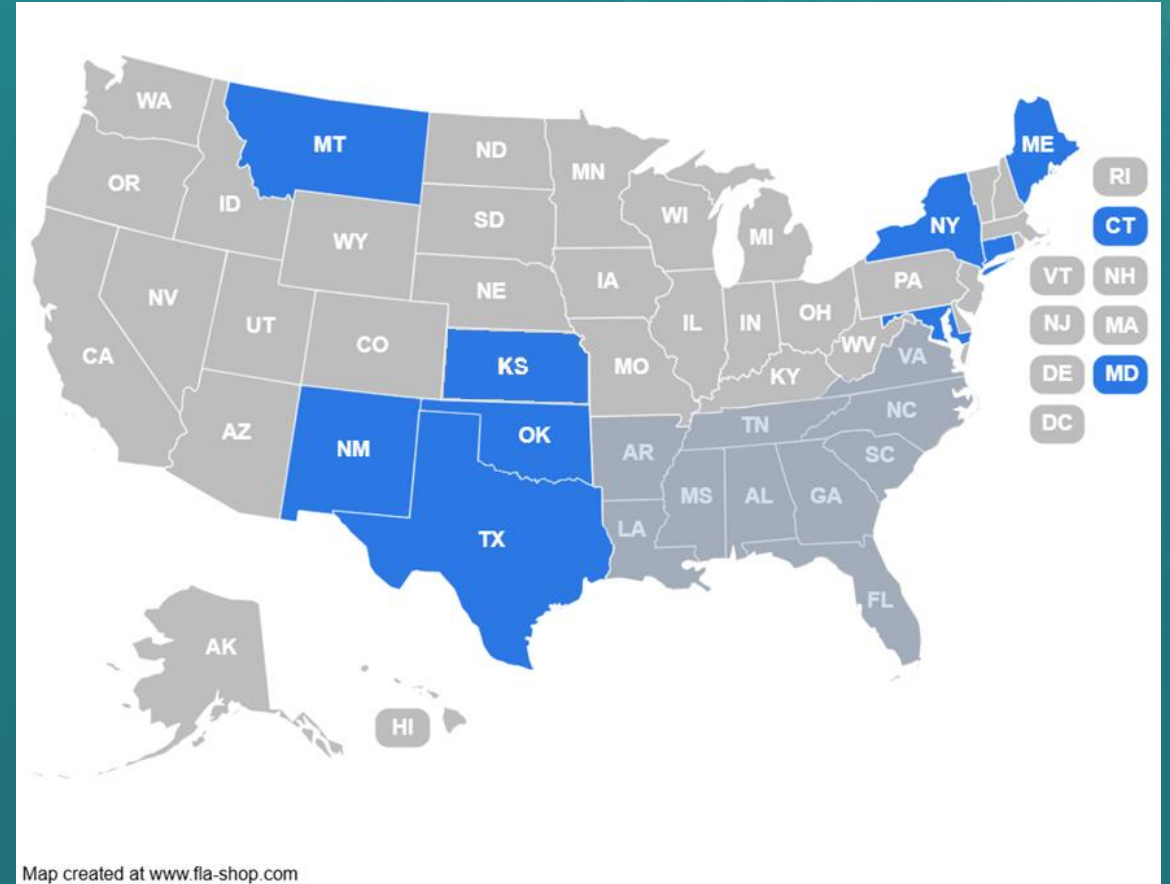
Resilient and Efficient Codes Implementation



REEO Partners: MEEA, NEEA, SEEA,
SPEER, SPEER

State Partners: Connecticut, Kansas,
Maine, Maryland, Montana, New
Mexico, New York, Oklahoma, Texas,
one state in the Southeast, and at least
one Tribal community located in a state
above

International Code Council
Xcel Energy



National Rural Codes Collaborative (NRCC)

Resilient and Efficient Codes Implementation



National Rural Codes Collaborative

- Convene regional and state-level stakeholders to share barriers and possible solutions for rural energy code implementation.

Project Advisory Committee of Community-Based Organizations (CBOs)

- Survey and interview rural communities to identify key issues and actionable recommendations

Technical Advisory Group of Rural Building Professionals and Local Stakeholders

- Define locally-relevant rural code implementation strategies

Work will be compiled into a Rural Energy Initiatives Database and a Rural Barriers and Recommendations Report

National Rural Codes Collaborative (NRCC)

Resilient and Efficient Codes Implementation



Pilot Projects

- Select 10 high priority communities and develop customized implementation plans
- Execute pilot projects aimed at increasing energy code compliance and enforcement.

Rural Codes Roadmap 2030

- Synthesize lessons from pilot projects into roadmap intended to help rural communities nationwide better implement energy codes.

New Resource: Energy Codes and Affordability

Provides framework for policymakers & stakeholders to evaluate the impact of energy codes on housing affordability

- Select appropriate baseline code for comparison
- Use Life Cycle Cost analysis
- Plan for efficiency now to avoid 4x higher retrofit costs later
- Use energy codes to address energy burden
- Explore programs that can offset initial costs
- Consider health and resilience benefits

Bottom line: Energy codes play a key role in balancing upfront costs with long-term savings and broader benefits.

New Resource: Code Enforcement Workforce Gap Analysis

New England and Mid-Atlantic Region



- Void: Last comprehensive code official workforce survey was in 2014 by ICC and the National Institute of Building Sciences (NIBS).
- New England and Mid-Atlantic surveyed: 490 responses from 12 states
- Major Findings:
 - 39% of code officials expected to retire between 2024 and 2029
 - 18% expected to retire between 2030 and 2034
 - Additional staffing shortages due to unfilled positions
 - Limited career awareness

New Resource: Code Enforcement Workforce Gap Analysis

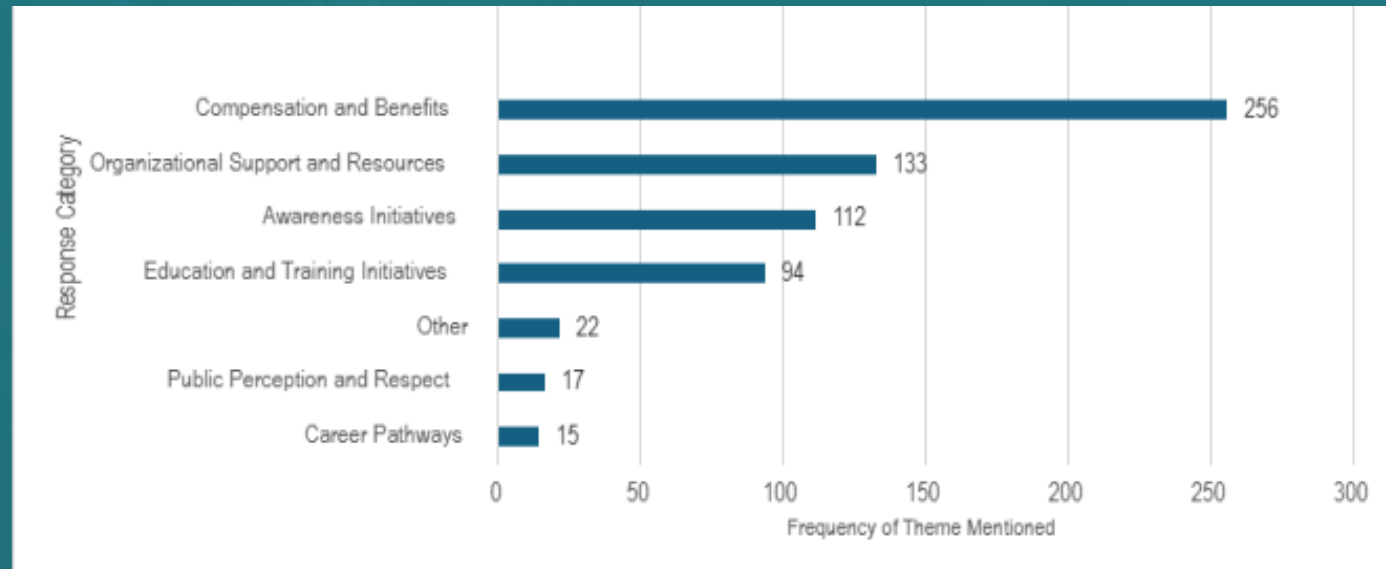
New England and Mid-Atlantic Region



Solutions:

- Compensation and Benefits: Competitive salaries, full-time positions
- Recruitment Initiatives: Increase awareness and educational pathways for high school/vocational school students
- Training Opportunities: Focus on advanced energy codes and energy efficiency training, enhanced certification support

Answer to Survey Question 2 - How can the code enforcement community address the issue of an aging workforce and ensure a new generation of professionals?



Total Energy Pathways (TEP) Workforce Project & Total Building Performance (TBP) Certificate



- Goal of TEP is to increase knowledge of whole home retrofit process among contractors.
- TBP Certificate created by NEEP, Building Performance Institute Inc., Energy Futures Group, and Building Performance Association with funding from the Department of Energy.
- Training consists of 8 **free** modules and an exam (fee) that teaches contractors to bundle 1) Energy efficiency, 2) All-electric systems, and 3) Solar PV.
- Benefits
 - To the Contractor: Bigger projects, Sets their company apart
 - To the Customer: Reduced confusion, bundled discounts, efficient homes

Next Steps



- Participate in the National Rural Codes Collaborative
- Use/share Energy Codes and Affordability resource:
https://neep.org/sites/default/files/media-files/neep_energy_codes_and_affordability_final.pdf
- Take/share the Total Building Performance free Training Modules and take the exam for the Certificate
<https://neep.org/tep/tep-workforce-online-resource-center>

Contact Us



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