Energy Code Enforcement:
A U.S. Perspective

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February 10, 2014
Overview

• Development of Energy Codes in the U.S.
• Adoption of Energy Codes in the U.S.
• Enforcement of Energy Codes in the U.S.
• Barriers to Achieving High Compliance
• Solution: Conducting an Assessment
• Solution: Developing a Plan
Development of U.S. Energy Codes

National Model Codes:
• Consensus-based process
• Run by two non-gov’t organizations:
  • ASHRAE (Standard 90.1)
  • ICC (Int’l Energy Conservation Code)
• 3-year development cycle
Adoption of Energy Codes in the U.S.

- State-level activity (w/ few exceptions)
- Most state codes based on Nat’l Model Codes:
  - Often make state amendments

More info at: [http://energycodesocean.org/code-status](http://energycodesocean.org/code-status)
Enforcement of Energy Codes in the U.S.

- Enforcement is a local (city/county) level responsibility
- Compliance with energy code is verified by review of construction documents and on-site inspections.

62 Counties in New York State

44 Cities/towns in Orange County
$37.1B USD lifetime savings for just 5 years of new construction into full compliance

View the full report: http://www.imt.org/codes/code-compliance/map
Common barriers to achieving full compliance:

- Lack of knowledge of the code/inadequate training
- Constrained resources/inadequate funding
- Lack of political will
- Various paths for compliance
  - *Prescriptive*- R-value and U-value options
  - *Performance*- requires some knowledge of energy modeling
  - *Outcome-based* - (proposed, but not yet in the model codes)
- NOT KNOWING WHAT COMPLIANCE ISSUES EXIST!
Solution: Conduct an Assessment

Determine what’s broke so it can be fixed
• Two elements of a good assessment:
  • Quantitative and Qualitative

Quantitative:
Answers WHAT the compliance rate is.

Qualitative:
Uncovers WHY.
For example: lack of documentation, lack of knowledge, poor processes or political priorities.
Solution: Develop a Plan

• Use the results of the assessments
• Address areas of non-compliance (from quantitative)
• Address qualitative areas needing improvement
• Draw from established best practices
Best Practice: Performance Testing

Jurisdiction Example: State of Georgia

• State level energy code requirement
• All residential (up to 3 stories) req’d to be tested
• Duct and envelope leakage testing
• Testing must be done by a certified individual
• Does not have to be a “third-party”
• Builder must be certified or contract with certified individual
• Relieves local code officials of testing responsibilities
Thank You

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