



Energy Code Enforcement: A U.S. Perspective

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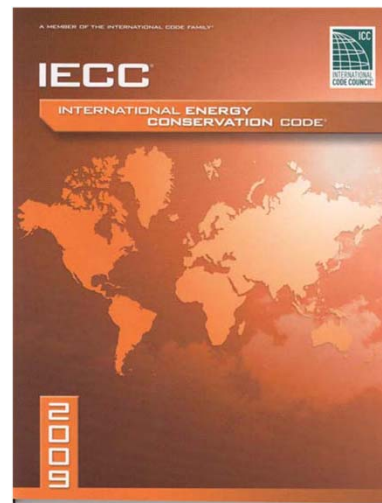
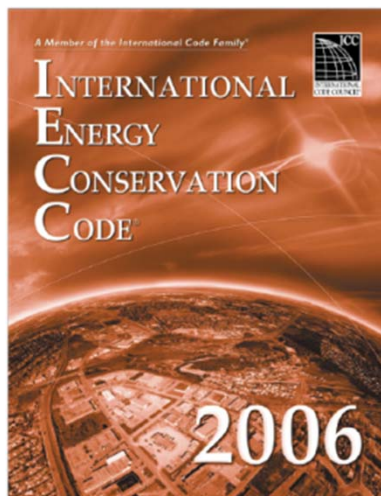
Overview

- 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

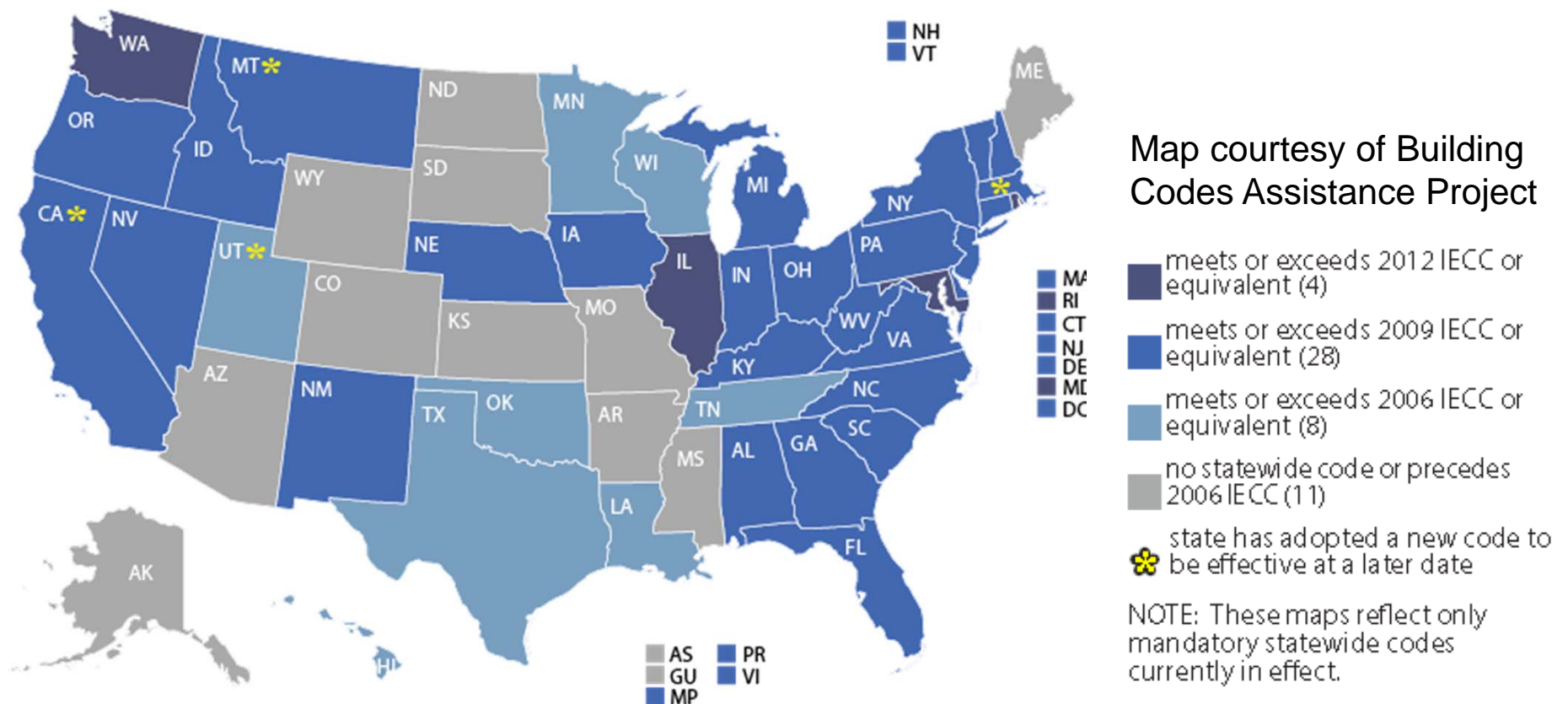
National Model Codes:

- 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.

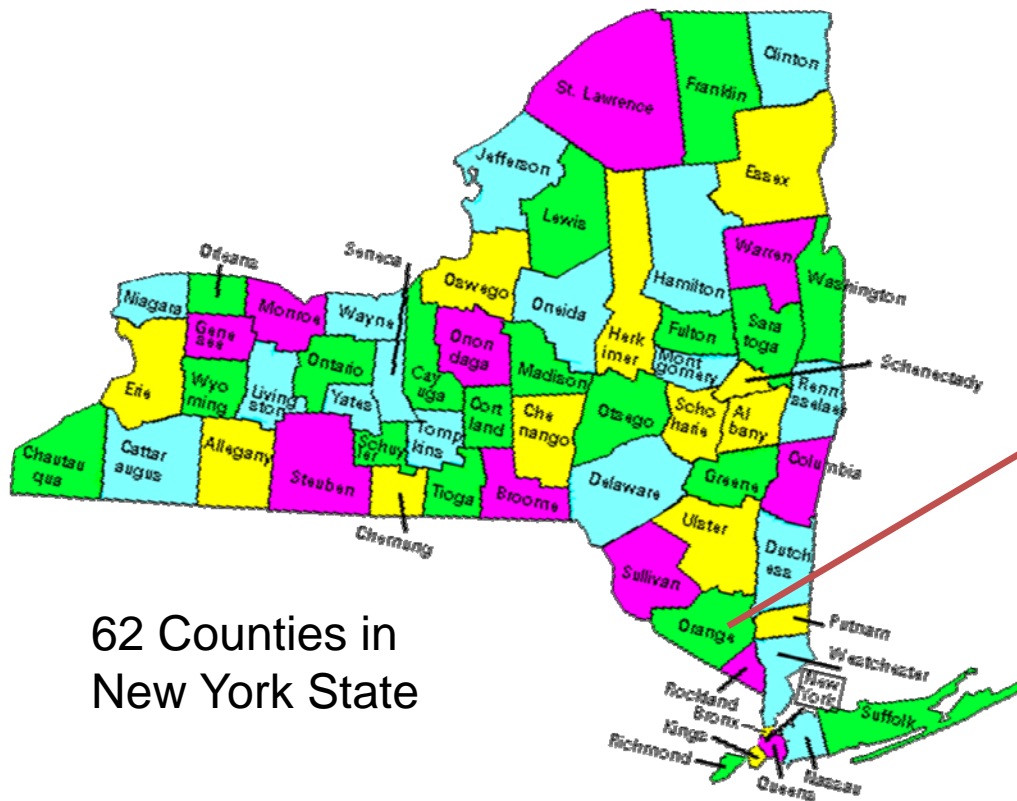
- State-level activity (w/ few exceptions)
- Most state codes based on Nat'l Model Codes:
 - Often make state amendments



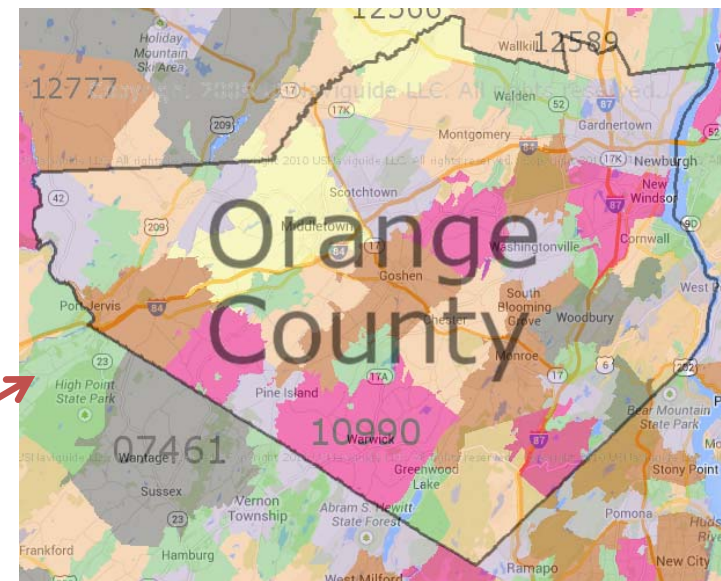
More info at: <http://energycodesocean.org/code-status>

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.



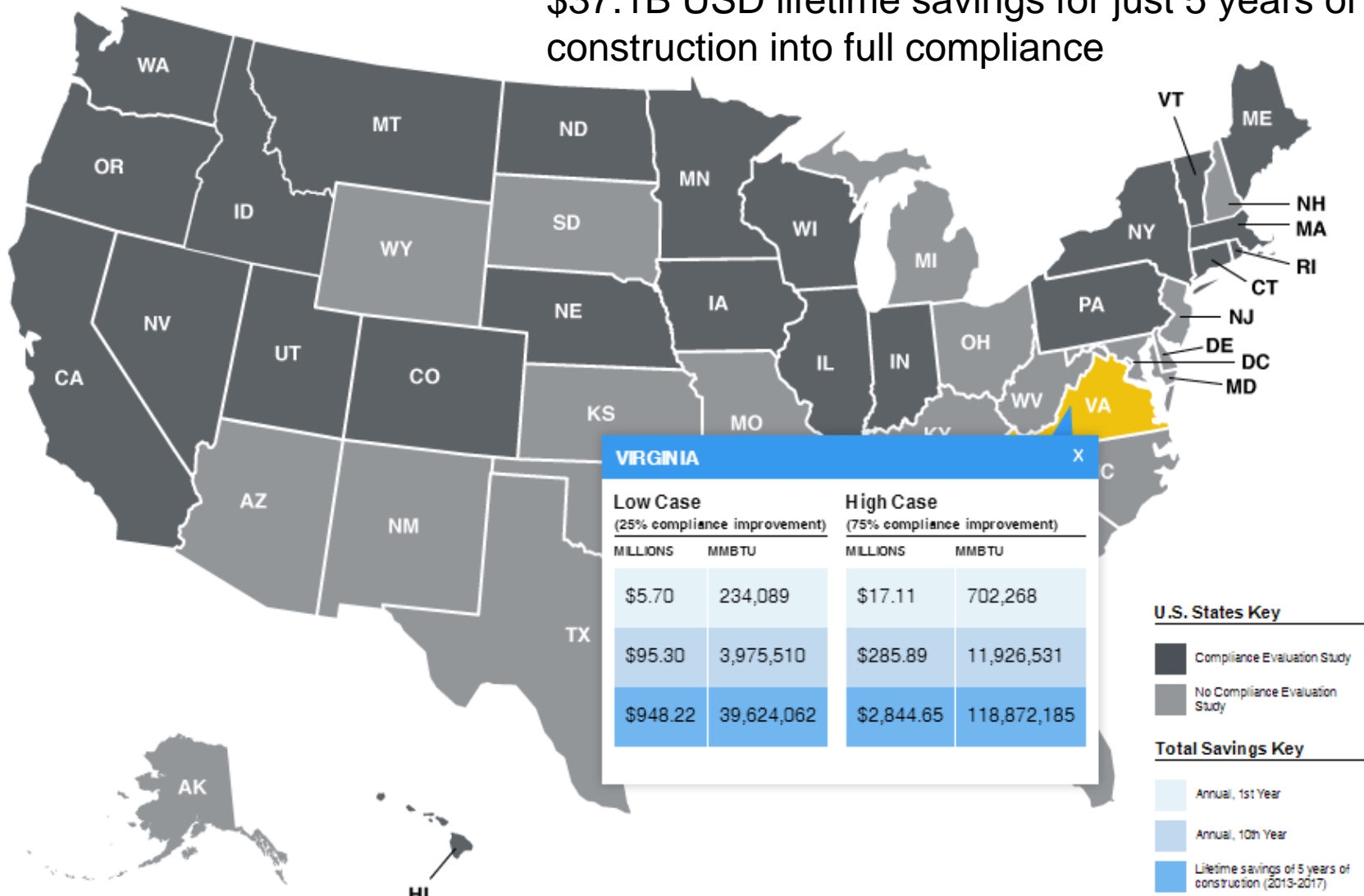
62 Counties in
New York State



44 Cities/towns in
Orange County

Energy Savings Potential

\$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>

Barriers

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.

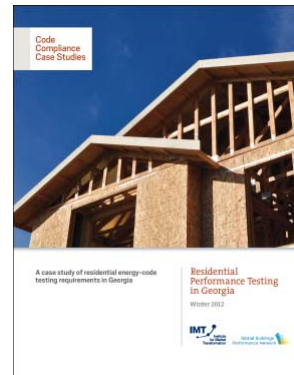
Qualitative:

Uncovers WHY.

For example: lack of documentation, lack of knowledge, poor processes or political priorities.

Solution: Develop a Plan

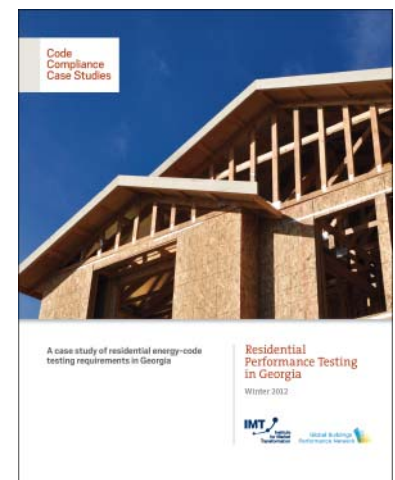
- Use the results of the assessments
- Address areas of non-compliance (from quantitative)
- Address qualitative areas needing improvement
- Draw from established best practices



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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