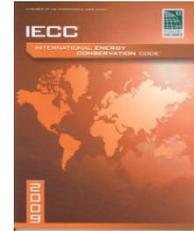


Iowa Residential Energy Code Compliance Pilot Study

- ▶ State of Iowa

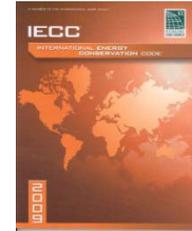


Iowa Residential Energy Code Compliance Pilot Study

- ▶ 50 new single family residential homes
- ▶ Samples taken in two of Iowa's climate zones
- ▶ Hybrid home rule state – Statewide Energy code



Iowa Residential Energy Code Compliance Pilot Study



► Methodology

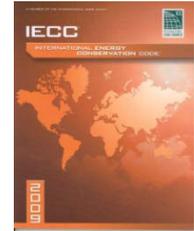
- Plan Review & Inspection – Third Party
- DOE–BECP Residential Data Collection Checklists
- Random Sample Generator
- Store and Score Online Data Entry
- Final Report & Data Analysis

The screenshot shows the 'State Sample Generator' web application for Iowa. The interface includes a header with the application name and a navigation link. Below the header, there are input fields for 'IOWA', 'Construction Category' (set to 'All Categories'), and 'Time Period' (set to 'Average of 3 Most Recently Available Years'). A 'Generate Samples' button is present. To the right, there is a map of Iowa with a legend for 'Climate Zone Color' showing Climate Zone 5 in light blue and Climate Zone 6 in dark blue. Below the map, there are two tables: 'Commercial New Construction' and 'Commercial Renovations', both showing construction starts by state and climate zone.

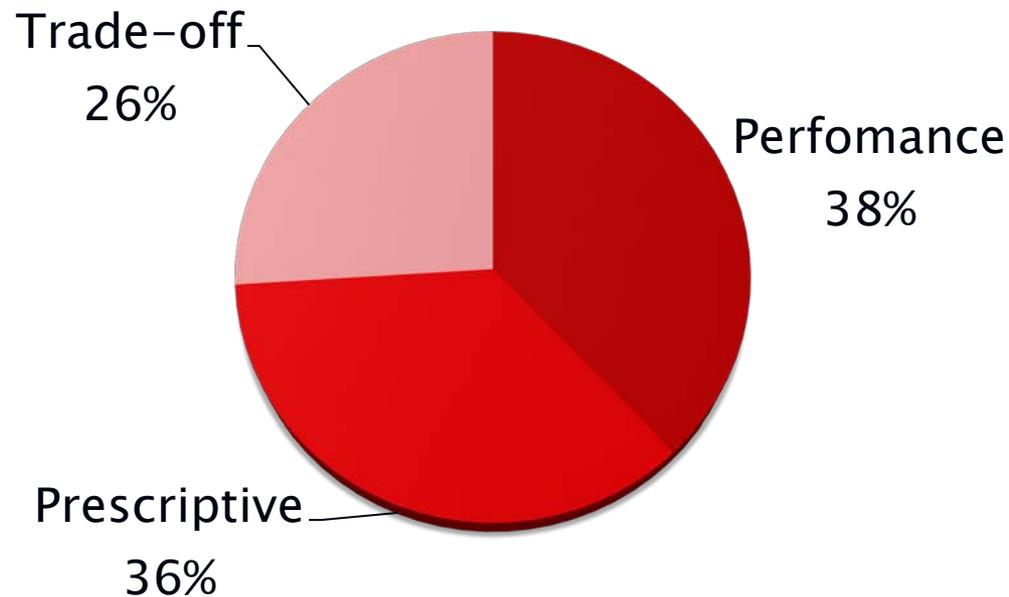
Location	Construction Starts
State Total	341
Climate Zone 5 Total	293
Climate Zone 6 Total	48

Location	Construction Starts
State Total	654
Climate Zone 5 Total	571
Climate Zone 6 Total	83

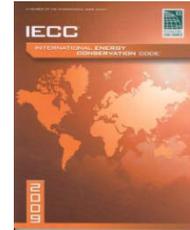
Iowa Residential Energy Code Compliance Pilot Study



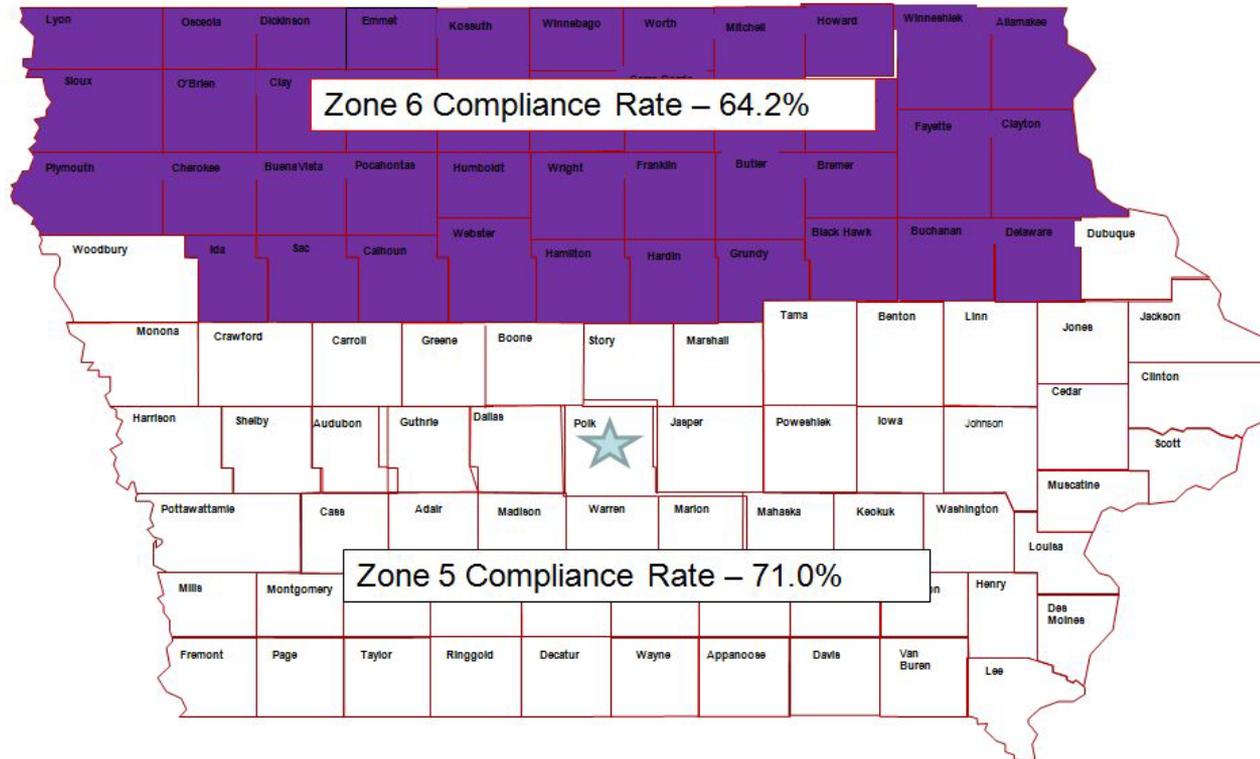
Compliance Approach Breakdown



Iowa Residential Energy Code Compliance Pilot Study



IOWA ENERGY CODE COMPLIANCE RATES PER CLIMATE ZONE

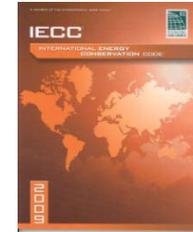


Overall Compliance Rate – 70.1%

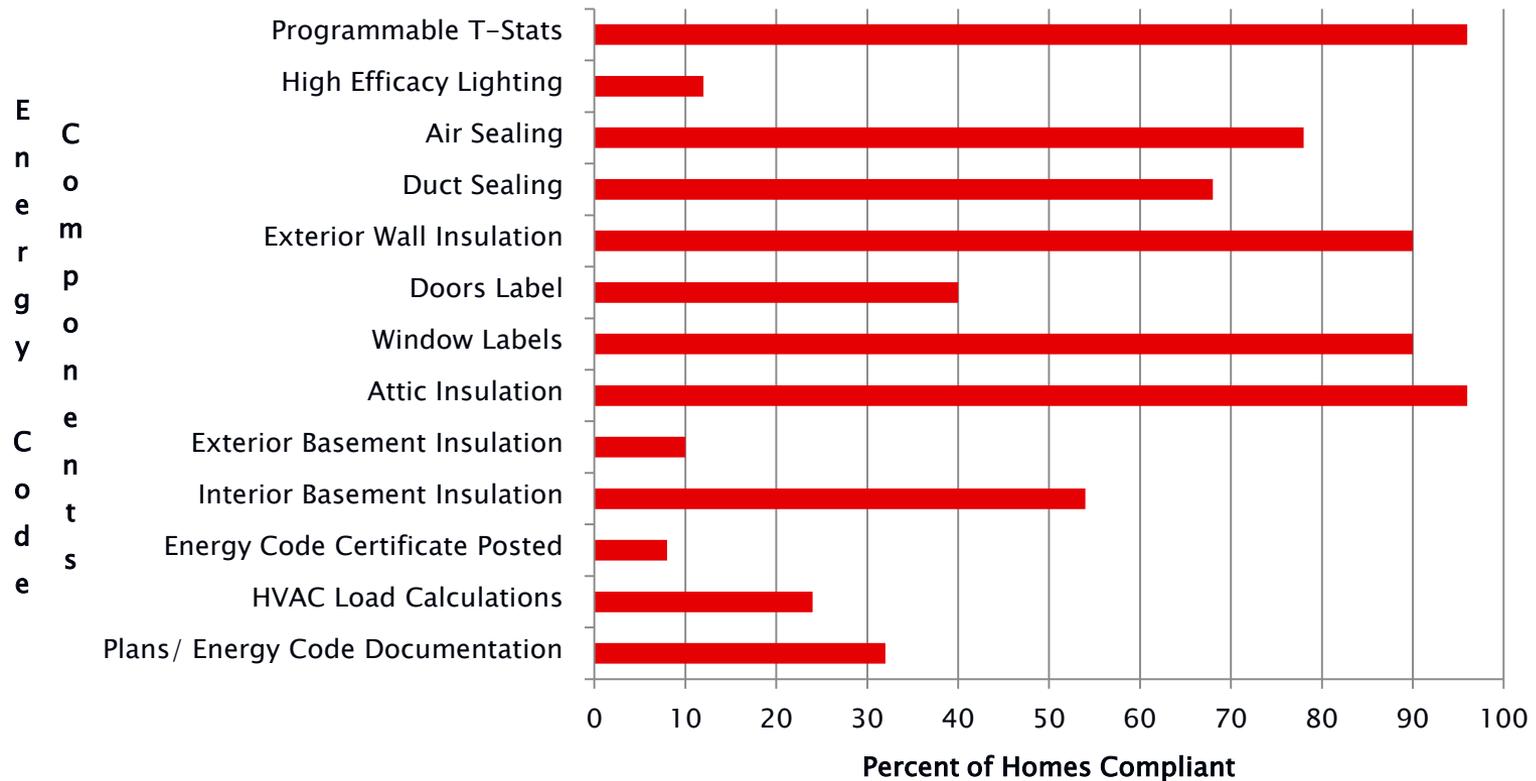
Iowa Residential Energy Code Compliance Pilot Study

▶ Compliance Rates

- 70.1 Overall
- Confirmation of many preconceived notions
- Higher compliance in metro areas/ lower in rural
- Many of the same deficient items found in 2003 study still existed



Iowa Residential Energy Code Compliance Pilot Study



Iowa Residential Energy Code Compliance Pilot Study

▶ Top Deficiencies

- Documentation – Plans & Specifications
- HVAC Load Calculations – ACCA Manuals
- High Efficacy Lighting
- Posted Energy Code Certificate



Iowa Residential Energy Code Compliance Pilot Study

- ▶ Barriers of the Study
 - Jurisdictional Cooperation
 - Timeline
 - Random Sample Generator
 - Quality Assurance of Checklists



Iowa Residential Energy Code Compliance Pilot Study

- ▶ Steps to 90% Compliance
 - Many Cities will continue to use HERS raters to bridge gap in funding
 - Education of Code Officials and Home Builders still needed
 - Utility rebate programs for above code upgrades



Iowa Residential Energy Code Compliance Pilot Study

- ▶ Steps to Compliance already in action
 - Larger cities requiring the submittal of design documents and ACCA Manuals J and D
 - Committee of Building Officials, Energy Raters, and others discussing energy efficiency plans with the Iowa Utilities Board/ Office of Consumer Advocate
 - Investor Owned Utility providing homebuilder training specifically on energy code and energy efficiency
 - State Building Code Bureau providing greater outreach to local building departments regarding energy code support
 - State Energy Code Inspections in Rural Areas

Thank You

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