



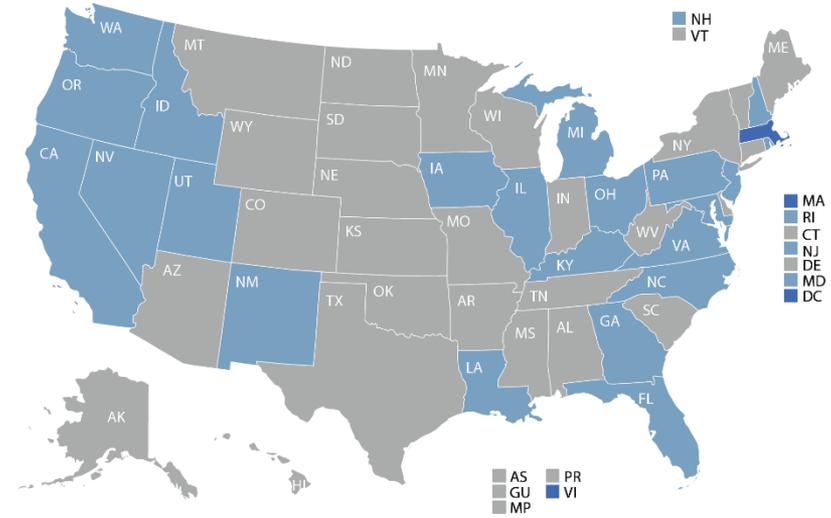
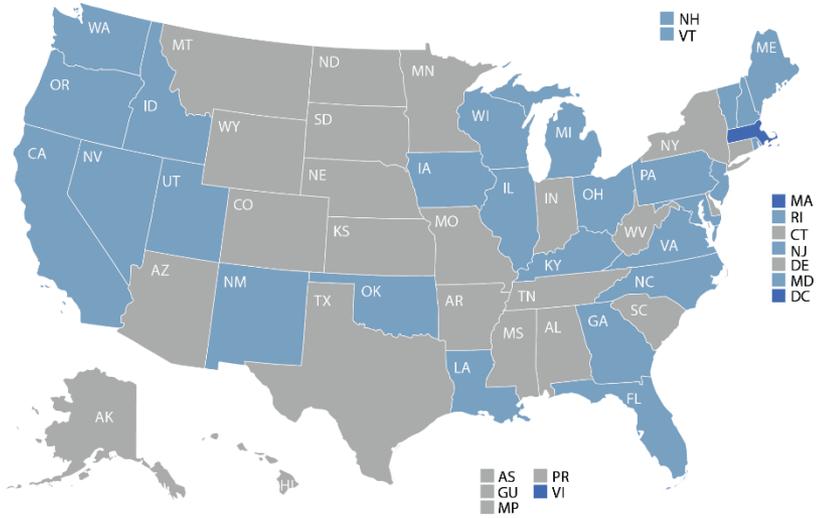
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SOUTHEAST ENERGY EFFICIENCY ALLIANCE

## Energy Codes in the Southeast

What have we learned?

# Energy Code Adoption: January 2009

January 2009



## Commercial State Energy Code Status

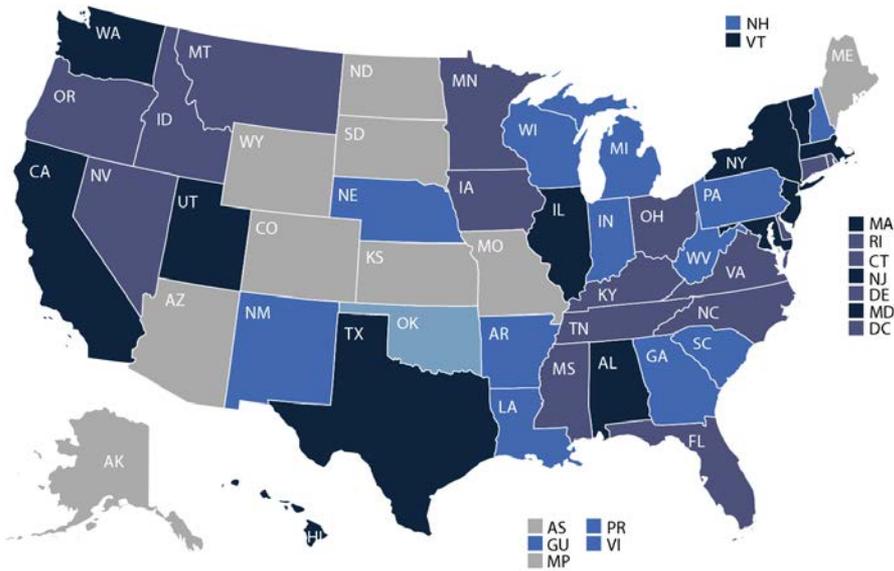
- 0 meets or exceeds ASHRAE Standard 90.1-2013 or equivalent
- 0 meets or exceeds ASHRAE Standard 90.1-2010 or equivalent
- 3 meets or exceeds ASHRAE Standard 90.1-2007 or equivalent
- 26 meets or exceeds ASHRAE Standard 90.1-2004 or equivalent
- 27 no statewide code or precedes ASHRAE Standard 90.1-2004

## Residential State Energy Code Status

- 0 meets or exceeds the 2015 IECC or equivalent
- 0 meets or exceeds the 2012 IECC or equivalent
- 3 meets or exceeds the 2009 IECC or equivalent
- 22 meets or exceeds the 2006 IECC or equivalent
- 31 no statewide code or precedes the 2006 IECC

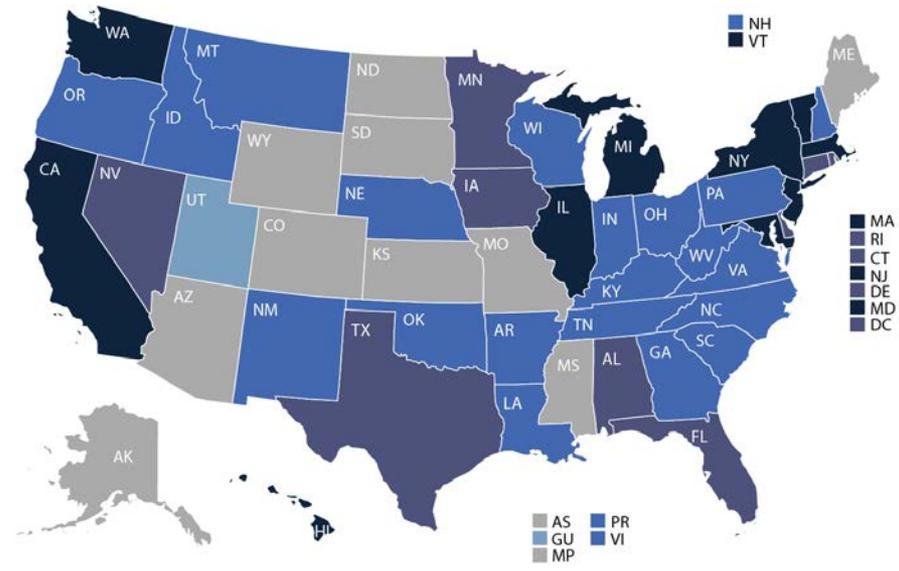


# Energy Code Adoption: July 2017



## Commercial State Energy Code Status

- 11 meets or exceeds ASHRAE Standard 90.1-2013 or equivalent
- 16 meets or exceeds ASHRAE Standard 90.1-2010 or equivalent
- 17 meets or exceeds ASHRAE Standard 90.1-2007 or equivalent
- 1 meets or exceeds ASHRAE Standard 90.1-2004 or equivalent
- 11 no statewide code or precedes ASHRAE Standard 90.1-2004

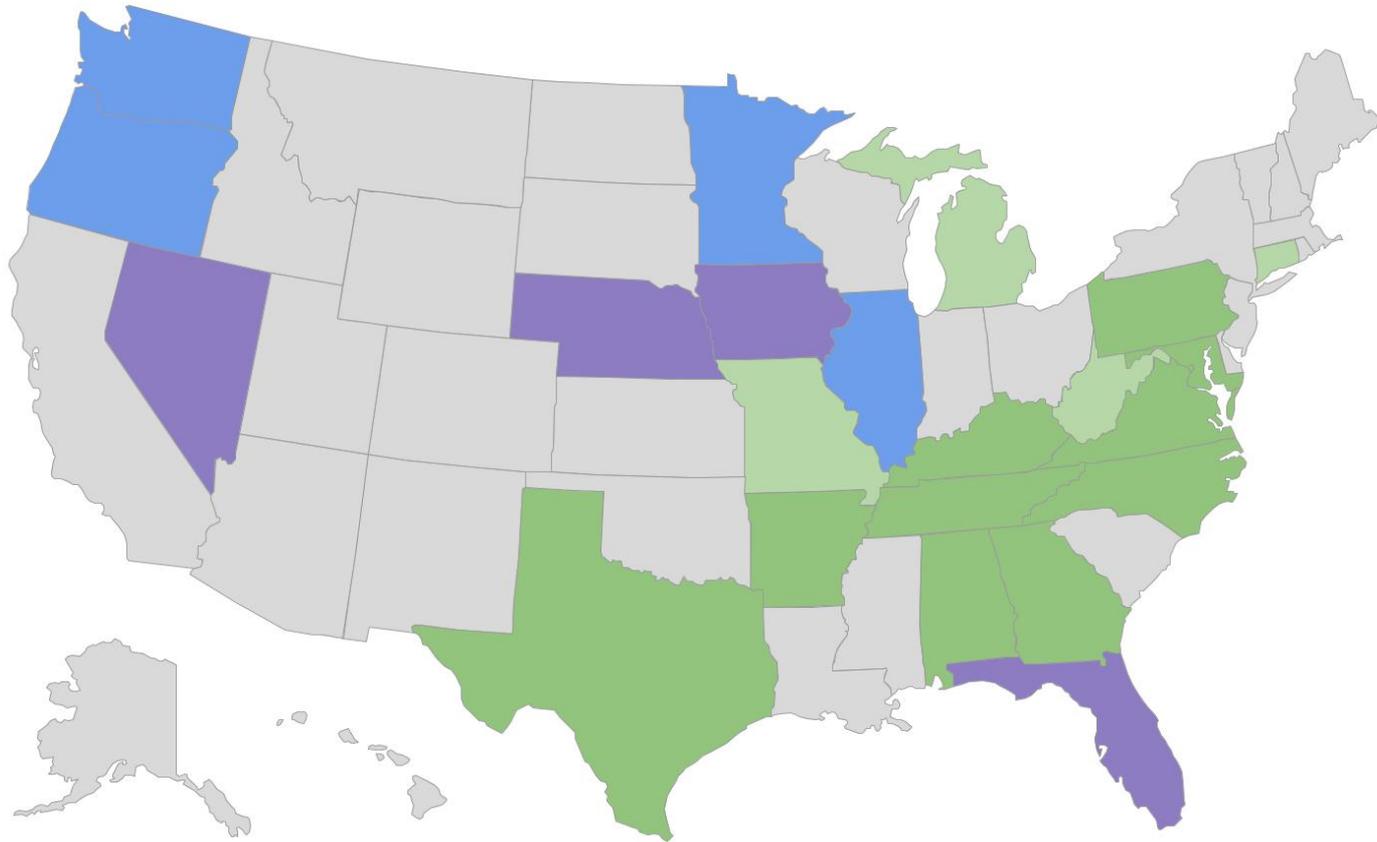


## Residential State Energy Code Status

- 9 meets or exceeds the 2015 IECC or equivalent
- 11 meets or exceeds the 2012 IECC or equivalent
- 21 meets or exceeds the 2009 IECC or equivalent
- 3 meets or exceeds the 2006 IECC or equivalent
- 12 no statewide code or precedes the 2006 IECC



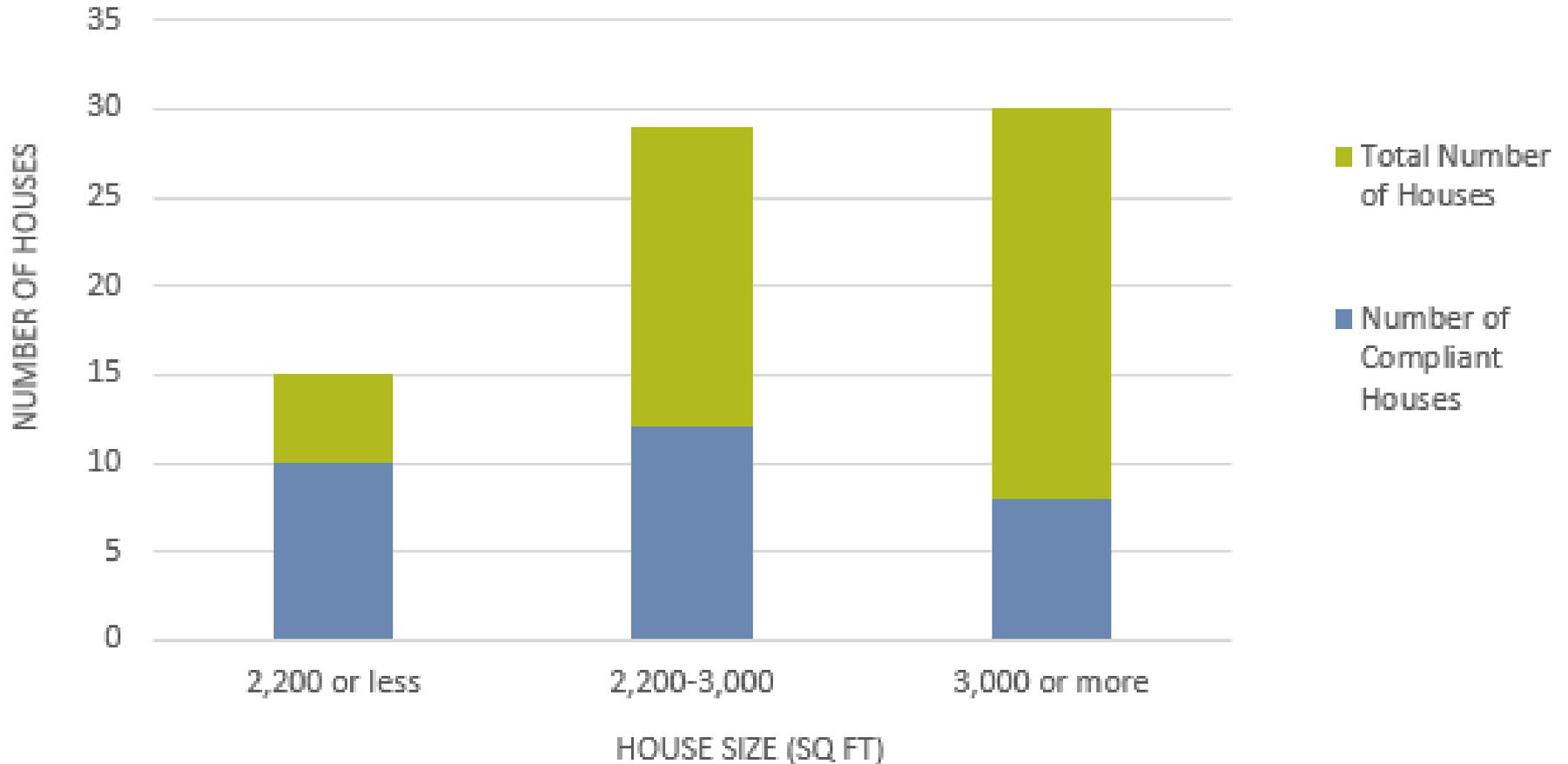
# DOE Energy Code Field Study States



# DOE Energy Code Field Study

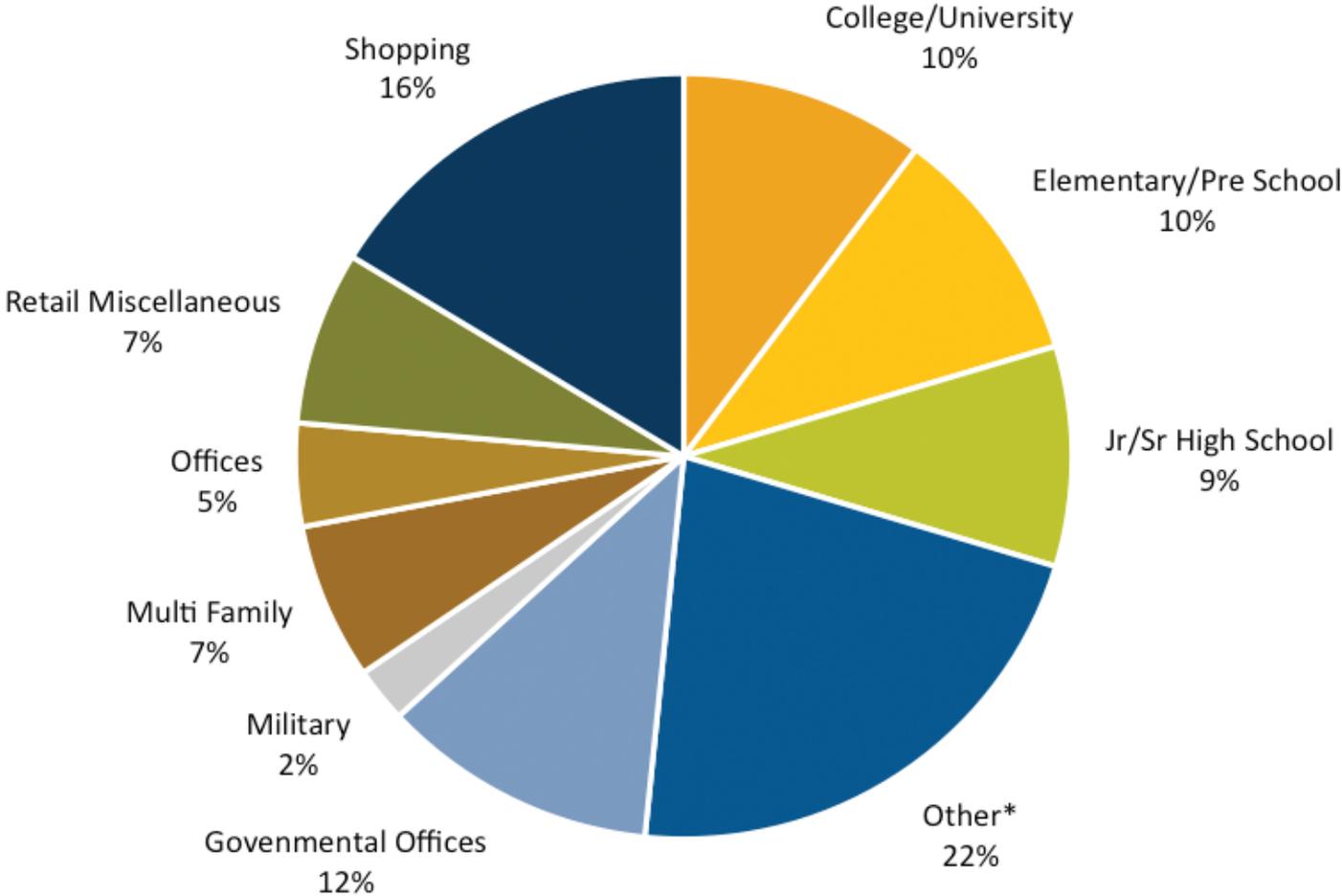
- Single-family Residential
  - First round of data collection complete and available
  - Overall, compliance higher than expected
  - Savings still available. Issues identified in majority of states:
    - Lighting
    - Duct leakage/air leakage
    - Quality of insulation install
- Multifamily and commercial kicking off
- Goal: enable utility energy code programs, where interested

# Georgia Lighting: Compliance by House Size



# Southeast Commercial Construction: Project Starts

**Number of Commercial Permits by Type (2005-2013)**



# Southeast Commercial Construction: Square Footage

**Table 3. Top 5 Building Types with Highest Total Project Area (2005-2015)**

<b>Building Types</b>	<b>New Construction Total Project Area (millions sq. ft.)</b>	<b>Renovation Total Project Area (millions sq. ft.)</b>	<b>Total Project Area (millions sq. ft.)</b>
<b>Multi-Family</b>	818.71	10.81	829.52
<b>Shopping</b>	482.91	17.01	499.92
<b>Manufacturing</b>	254.52	5.40	259.92
<b>Offices</b>	254.42	8.71	263.13
<b>Warehouses</b>	232.15	10.38	242.53

*Source: Construction Market Data Group LLC*

# DOE Impacts of Energy Codes 2010-2040

**Table ES.1. Summary of Impact of Energy Codes**

Sector	Site Energy Savings (Quads)	Primary Energy Savings (Quads)	Full-Fuel-Cycle Savings (Quads)	Energy Cost Savings (2016 \$ billion)	CO <sub>2</sub> Reduction (MMT)
<b>Commercial</b>					
Annual 2030	0.10	0.26	0.28	2.24	17.57
Annual 2040	0.13	0.32	0.34	2.54	21.48
Cumulative 2010-2030	1.18	3.14	3.30	27.53	208.78
Cumulative 2010-2040	2.34	6.10	6.41	51.59	405.51
<b>Residential</b>					
Annual 2030	0.15	0.28	0.30	3.14	18.38
Annual 2040	0.17	0.33	0.35	3.45	21.46
Cumulative 2010-2030	1.87	3.62	3.86	41.19	234.52
Cumulative 2010-2040	3.48	6.72	7.17	74.34	435.43
<b>Total</b>					
Annual 2030	0.25	0.55	0.58	5.37	35.96
Annual 2040	0.30	0.66	0.69	5.98	42.93
Cumulative 2010-2030	3.06	6.76	7.16	68.72	443.30
Cumulative 2010-2040	5.82	12.82	13.58	125.93	840.94

Note: The following states are excluded from the analysis: AK, CA, HI, KS, MO, MS (residential only), ND, OR, SD, and WA. See section 2.1.3 for details.



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Thank you!

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