

Reducing Energy Demand in Buildings Through State Energy Codes

- Providing Technical Support and Assistance to States -

Building Codes Assistance Project

Maureen Guttman, AIA
Executive Director, BCAP

Alliance to Save Energy
202-530-2211 mguttman@ase.org

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Problem Statement:

Buildings = ***largest sector of energy consumption in America***

- Energy codes are a ready-made regulatory mechanism
- States need support for implementation

Impact of Project:

This project effectively assists states and jurisdictions in adoption and compliance efforts and serves to develop and work in partnership with organizations that support energy codes.

Project Focus:

Supports DOE's goals:

- 70% adoption of the 2009 IECC and 90.1 – 2007 by 2017
- 90% compliance rate by 2017

BCAP Approach to Energy Code Support

- Collaboration, communication, sustainability
- Maximize results by leveraging DOE funding
- Staying at cutting edge of what states need and want



Compliance Collaborative in Nevada

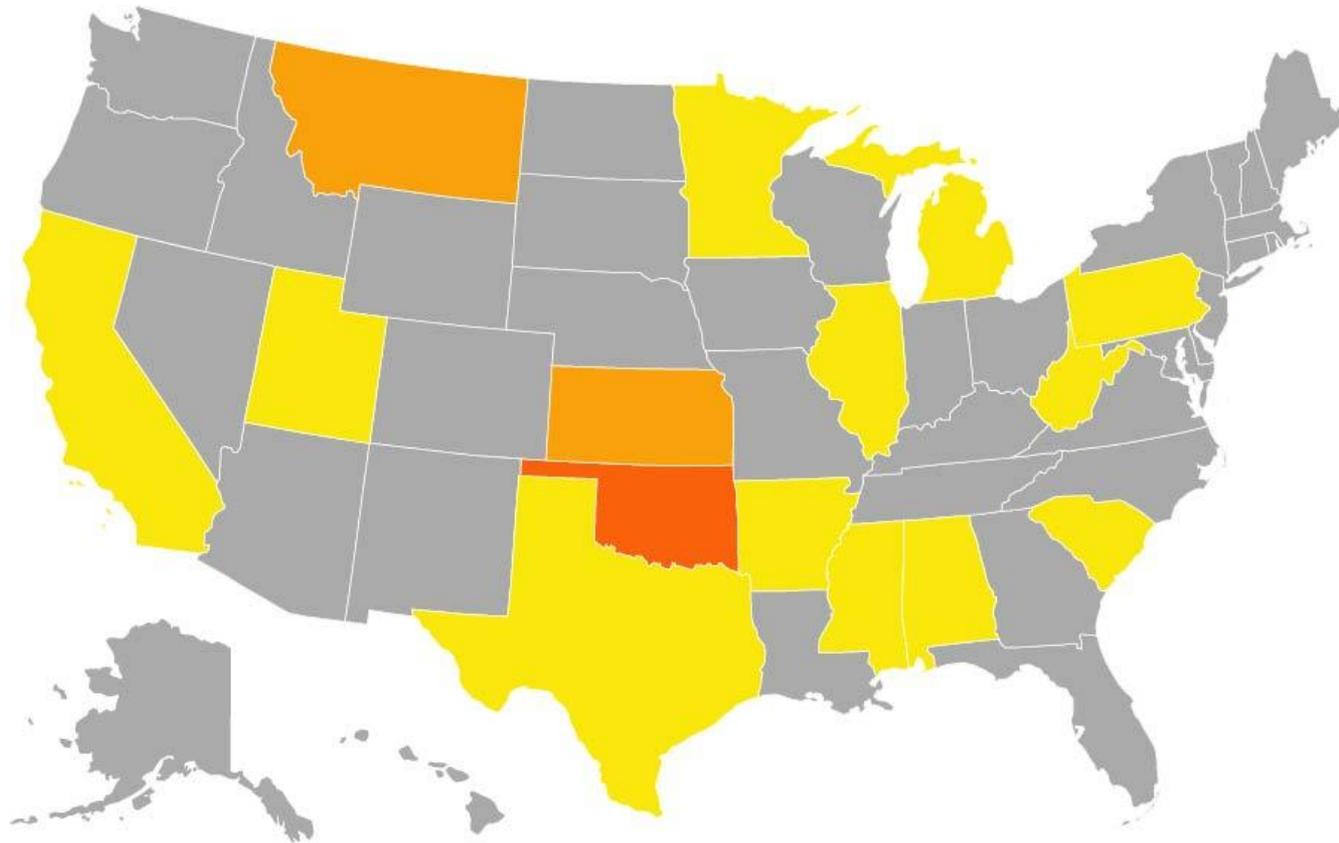


- **Perceptions** of increased cost
- Builder **opposition**
- State agency personnel, local enforcement staff, local elected officials, and construction community **lack knowledge, resources, support**

- **BCAP** is the **catalyst** for developing state-based, long-term solutions:
 - Convene state experts; train Ambassadors; provide ready-made, state-customized resources
- BCAP **shares best practices** among states/territories (national perspective)



2012 ADOPTION ACCOMPLISHMENTS



-  Strategic Adoption Plans
-  Local Support
-  Strategic Adoption Plans & Local Support



66,627 visitors

265,657 page views

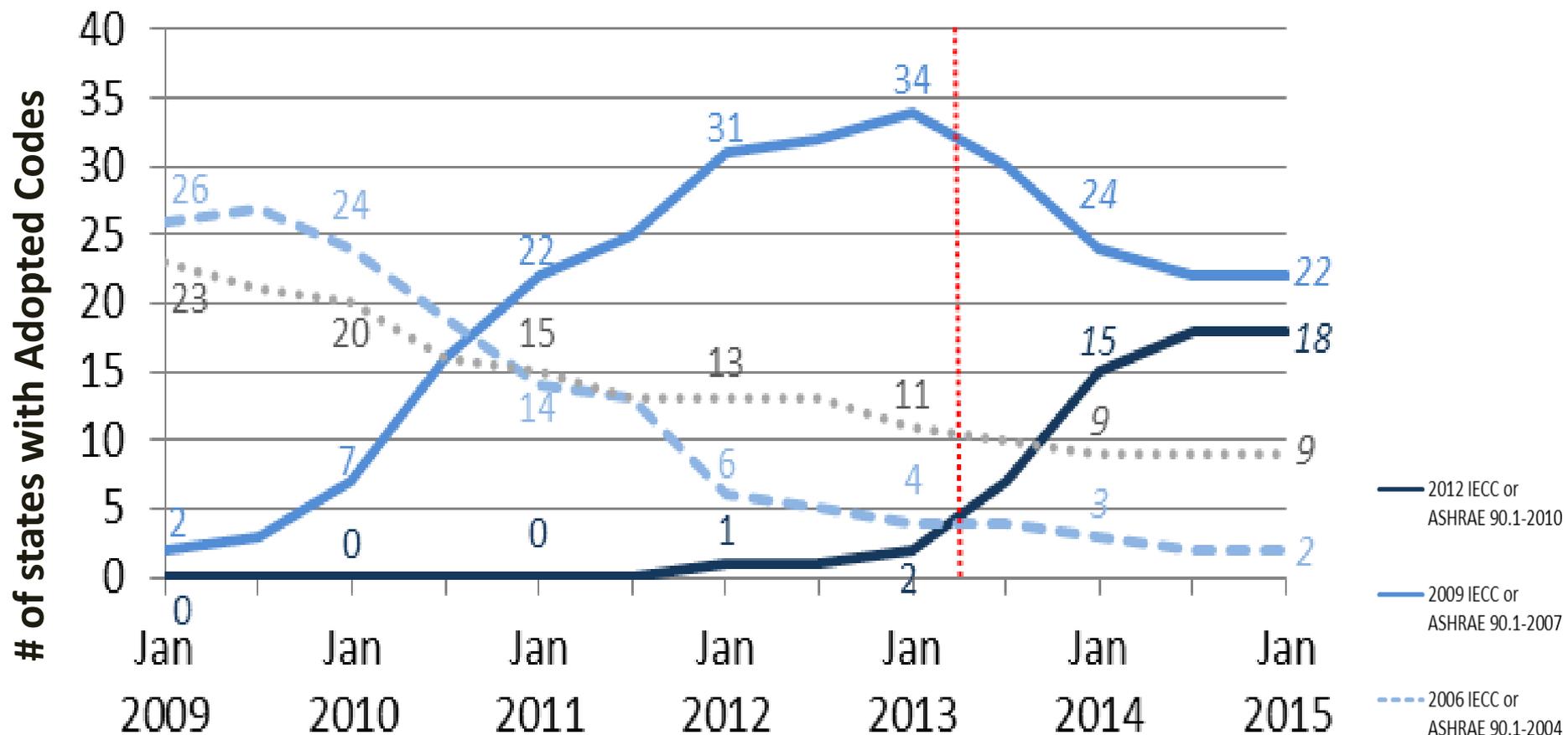
OTHER ACCOMPLISHMENTS

- Led development of National Collaborative
- Weekly Code Alerts
- Held resource meetings (NC, NE, CO, TX, NV: w/REEOs & PNNL)

AWARDS/RECOGNITION:

BCAP recognizes a Code Champion quarterly

BCAP State Commercial Energy Code Adoption History (as of Jan 2013)



Effective Date of Mandatory Statewide Energy Codes

Potential Savings from Energy Code Adoptions in 2012

9 states adopted or updated energy codes in 2012

- **Total potential savings in all 9 states** (w/full compliance in 2014):
 - Annual energy cost savings: \$303 million (in 2015)
 - Cumulative through 2035: over \$51 billion
 - Cumulative through 2035 source energy savings: 4.5 quadrillion Btu
~ 11% of the amount of energy consumed by U.S. building sector in 2012
 - Cumulative through 2035 carbon emissions savings: 240 MMT

Equivalent to one year's emissions from:

- 51 million passenger vehicles
- 12.5 million homes' energy use
- 69 coal-fired power plants

Sources: BCAP Code Calculator and EPA Greenhouse Gas Equivalencies Calculator

Project Plan & Schedule

- Project began Aug 2011 – Last Work Order completed Nov 2012
- All milestones met; deliverables completed

Summary					Legend							
WBS Number or Agreement Number	DE-AC05-76RL01830				Work completed							
Project Number	153742				Active Task							
Agreement Number					Milestones & Deliverables (Original Plan)							
					Milestones & Deliverables (Actual)							
Task / Event	FY2011				FY2012				FY2013			
	Q1 (Octt-Dec)	Q2 (Jan-Mar)	Q3 (Apr-Jun)	Q4 (Jul-Sep)	Q1 (Octt-Dec)	Q2 (Jan-Mar)	Q3 (Apr-Jun)	Q4 (Jul-Sep)	Q1 (Octt-Dec)	Q2 (Jan-Mar)	Q3 (Apr-Jun)	Q4 (Jul-Sep)
Project Name: Building Codes Assistance Project												
Work Order 1												
Work Order 2												
Work Order 3												
Work Order 4												
Work Order 5												

Project Budget: Not to exceed \$1,000,000

Period of Performance: August 2011 – November 2013

Cost to Date: \$753,290 (value of Work Orders 1-5)

Additional Funding: \$1,313,930 over 16 months

Based on \$1,550,000 annual operating budget

Budget History

FY2011 (Aug11 – Sep11)		FY2012 (Oct11 – Sep12)		FY2013 (Oct12 – Nov12)	
DOE	Additional Funding	DOE	Additional Funding	DOE	Additional Funding
\$58,867	± \$200,000	\$602,075	± \$947,930	\$92,348	± \$166,000

Partners, Subcontractors, and Collaborators:

- PNNL, REEOs, NASEO, IMT, RECA, EECC
- State stakeholders
- Hosted annual meeting with over 50 stakeholders

Technology Transfer, Deployment, Market Impact:

BCAP provides technical services, energy code support, and opportunities for collaboration and communication.

Communications:

- Presentation at ACEEE summer study
- Gap Analysis, Strategic Compliance Plan
- Newsletters and Code Alerts
- OCEAN as resource and online collaborative forum

Next Steps and Future Plans:

Building on compliance efforts

- Expand ECAP
- Expand Collaboratives
- Expand CPA

Expand communications, collaborations

- Improvements to OCEAN
- Enhanced newsletter capabilities

New tools and resources for improved metrics

- CMA
- State tracking tool