Winning Adoption of the 2012 IECC: A 30% Model Energy Code Developed by States/Localities

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Why Building Energy Efficiency Is So Vital to America's Public Policy

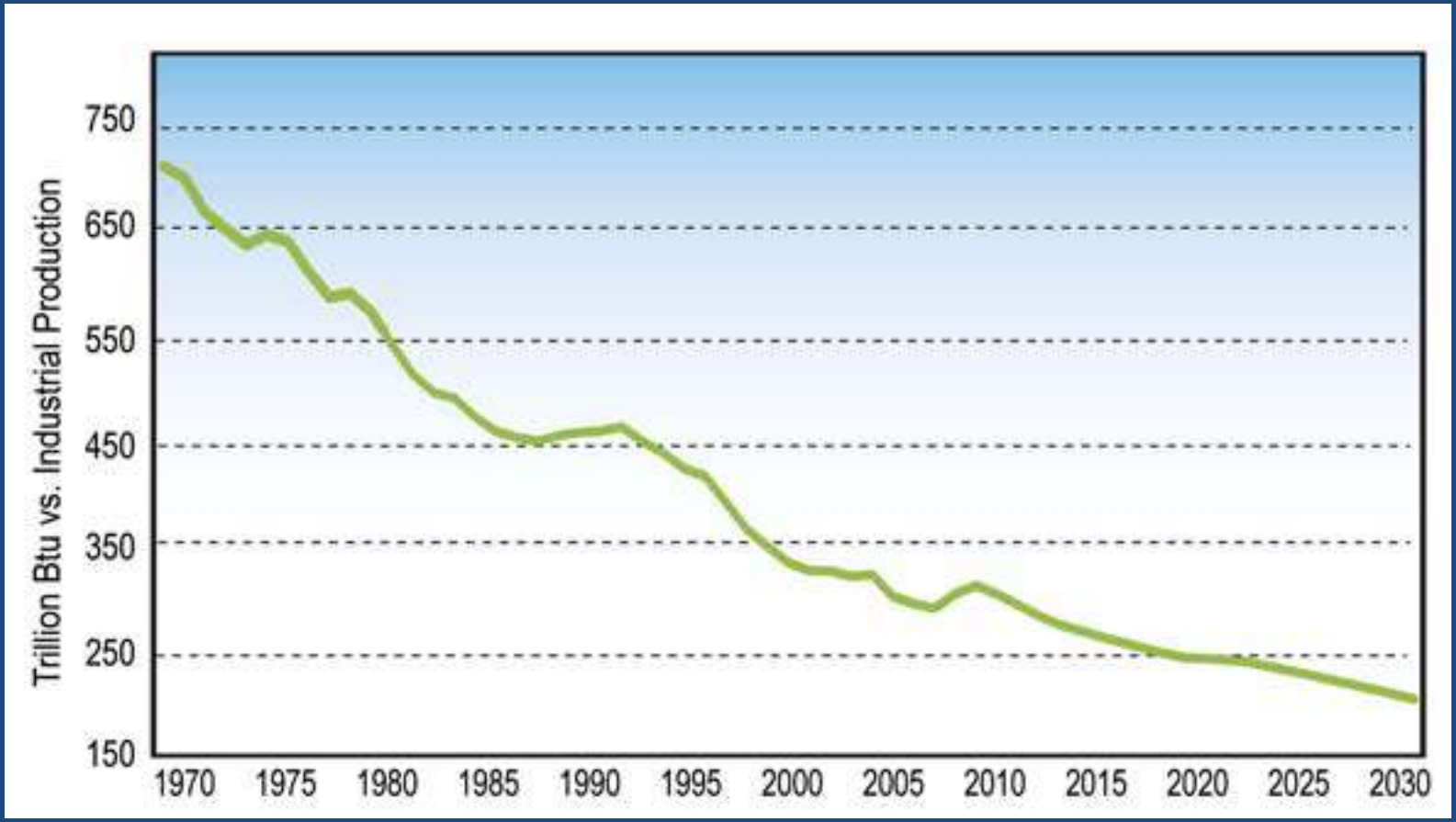
Buildings consume:

- ✓40% of US energy
- ✓54% of Nat Gas
- ✓> 70% of US electricity.

Buildings account for 40% of US manmade GHGs

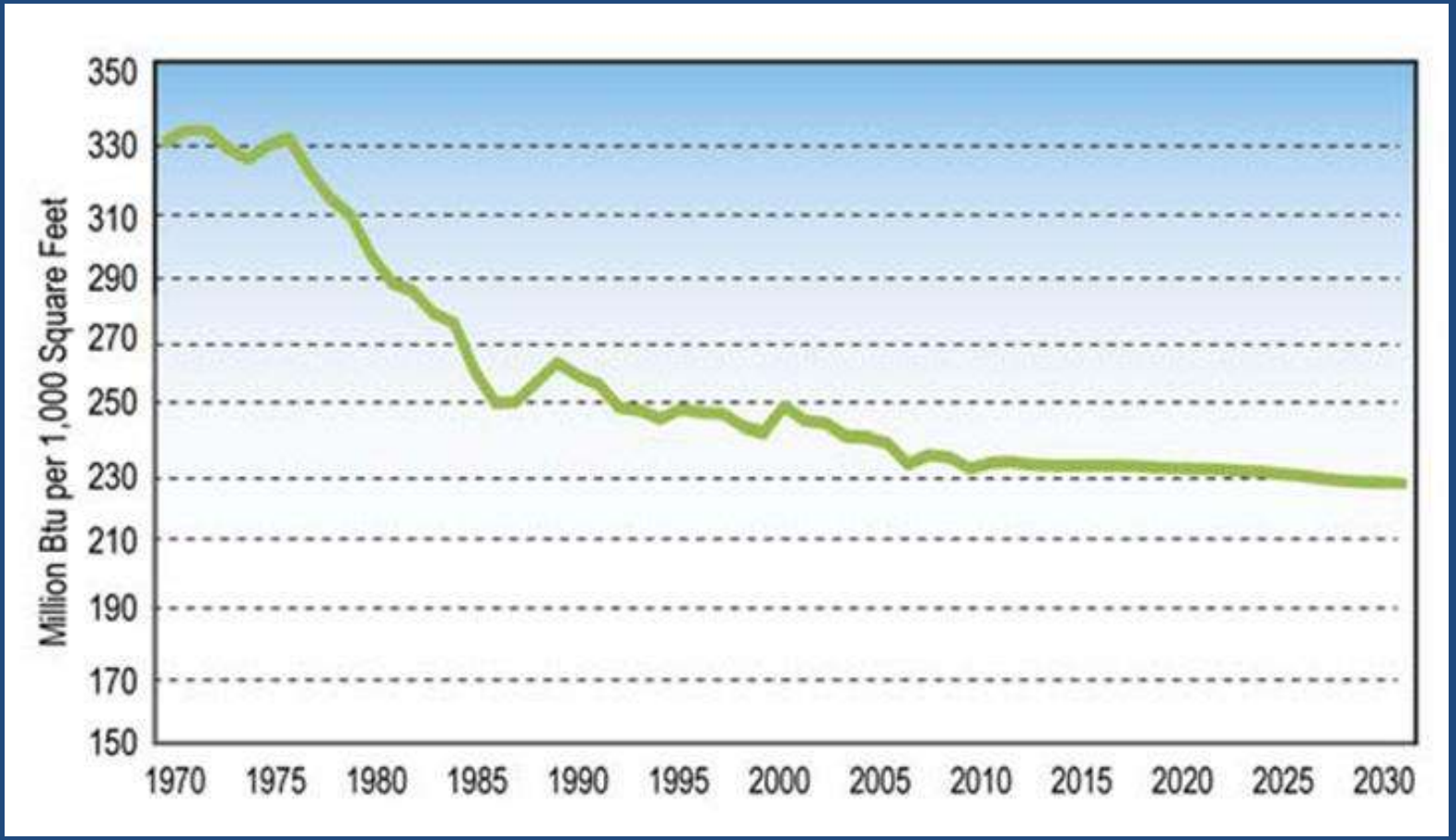
ROI/Bottom Line Has Driven US Manufacturers to Dramatically Boost Energy Efficiency

Industrial Energy Efficiency



ROI/Bottom Line Model Holds for Homes, as Well, But Efficiency Gains Stagnant

Residential Building Energy Efficiency



Imported Energy & National Security

The US Chamber of Commerce quantifies the risk of imported energy dependence to national security:

Our "**Energy Security Risk Index** demonstrates that America's energy security risk is rising *[from]* increasing geopolitical volatility, growing global energy demand, foreign import dependency, aging/overburdened infrastructure, and uncertainty related to environmental regulations. The Index demonstrates that America's energy security risks will increase unless common sense policies are enacted."

Building Efficiency is About Competitiveness/Easing Regulatory Burden

Despite 4 decades of steady improvement in energy intensity — energy use per unit of gross domestic product (GDP) — it continues to be significantly higher than other industrialized nations.

As long as energy policy ignores the Elephant in the Room, undue legislative and regulatory burdens will be unduly leveled on the other 60% of energy consumption – manufacturing, autos, utilities.

It's About the Need for New Electricity Generation

- Continued savings of the magnitude of recent efficiency gains in building energy codes and appliance standards "***will completely offset the anticipated growth in demand in the residential, commercial, and industrial sectors combined, eliminating the need for additional power plants to serve these sectors through 2025.***"

  Institute for Electric Efficiency White Paper May 2011

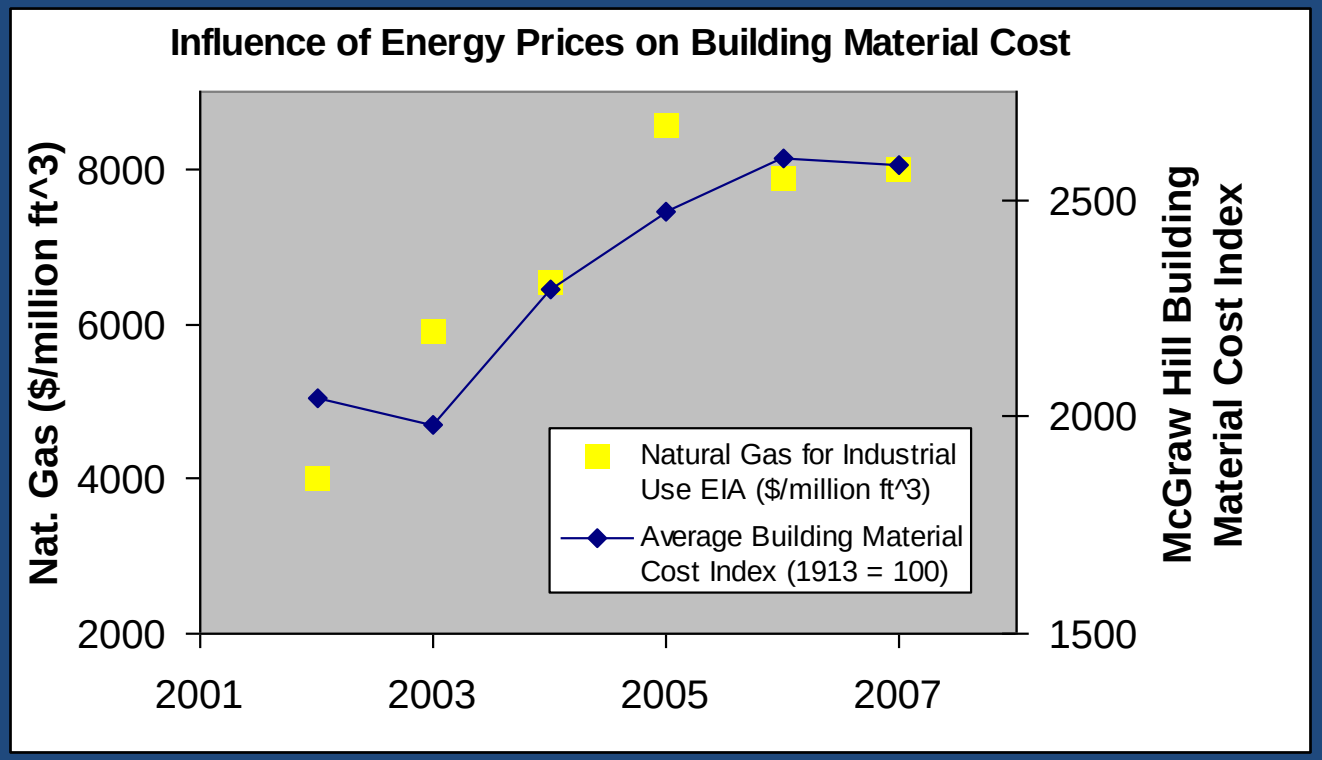
- "The one thing all coops agree on is their desire to avoid building new power generating facilities"

  NRECA

- A growing number of state policies provide opportunities for utilities to incorporate codes & standards into their efficiency portfolios. A doubling of utility-funded efficiency programs from 2007-2010 has incentivized market transformation & educated consumers on economic/environmental benefits of energy efficiency/management.

  Institute for Electric Efficiency White Paper August 2011

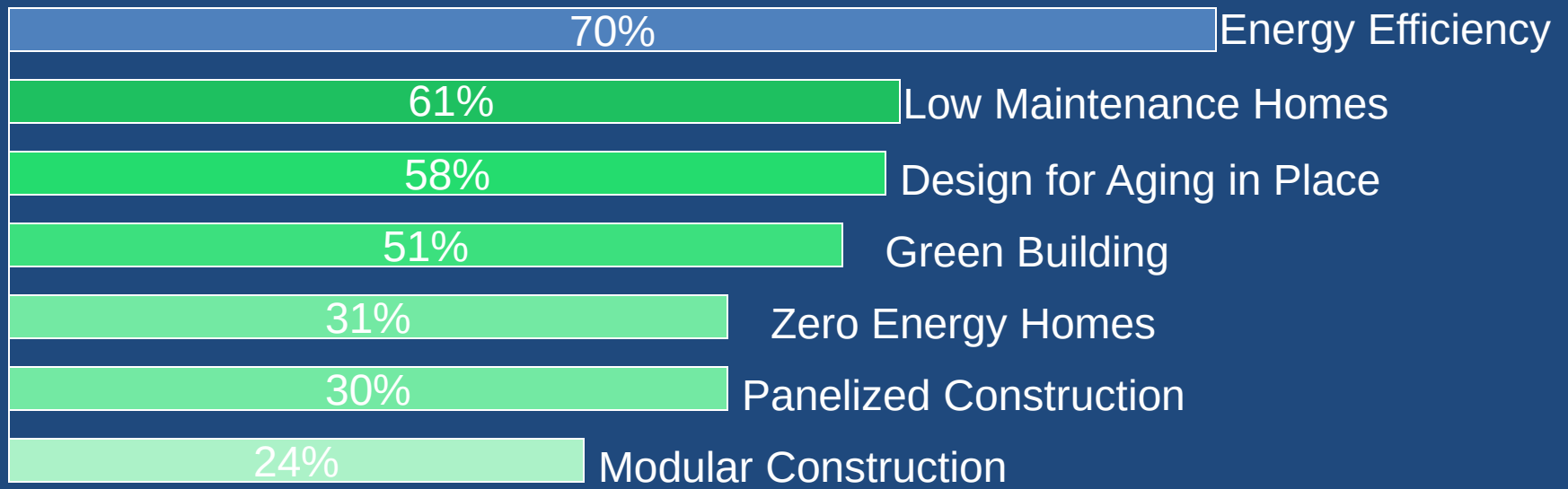
It's About the Cost of Building Materials



Energy Efficiency (Demand Reduction) is one of the fastest ways to mitigate rising raw material costs of buildings

It's About Trends: NAHB Survey of Top Builders and the Implications to Building Product Suppliers

Survey of Top Builders ranking **"Trends Becoming More Important to Builders":**



"Energy Efficiency is a trend with increasing importance among builders and their Customers, the benefit accrues directly to the homebuyer in their first energy bill"

Much Ado About Building Energy Efficiency The Benefits of Reducing Energy Demand

- *Reduces* dependence on America's energy imports – retains capital otherwise spent on energy here in US
- *Delays* need for new electricity generation by *reducing* overall demand on electricity grids
- *Helps* stabilize homeowner, business, manufacturers (particularly those reliant on gas as feedstock) cost
- *Improves* building quality = better occupant comfort
- *Generates* immediate positive cash flow to owners/occupants
- Long building life means long lasting benefits
- *Employs* the most *cost-effective* means of GHG reductions

The US Department of Energy[i] Analysis

Energy Efficiency Pays Dividends to Homeowners!!

	New Home Construction % Beyond 2003 IECC[ii]	
	30%	40%
Estimated Incremental First Cost Relative to Standard Practice	$ 4,000	$ 7,000
Annual Amortized Cost 7%, 30 Year mortgage[iii]	$ 211	$ 411
Estimated Annual Utility Bill Savings	$ 723	$ 919
Net Annual Savings (Extra money in the homeowner's wallet)	$ 512	$ 508

[i] Data developed by DOE's National Renewable Energy Laboratory (NREL) in a representative home in Greensburg, KS.
[ii] 2000 ft2, 2-story, 16% window to floor ratio, unconditioned basement.
[iii] Assumes 28% marginal tax bracket and includes present value of future replacements of equipment over 30 yr life of mortgage.

What Are Building Energy Codes?

Colloquially: "The Most Energy *INEFFICIENT* Building One Can Legally Build"

The Five Elements of Codes, each currently under a brighter spotlight:

- Model Code Development – every 3 years
- Model Codes Guide State & Local Adoption
- State and Local Codes Administration
- Compliance
- Enforcement by Local Officials

Why Is the International Energy Conservation Code® *(IECC)* So Important?

- National Model Energy Code of Choice

  - 40 States and D.C.

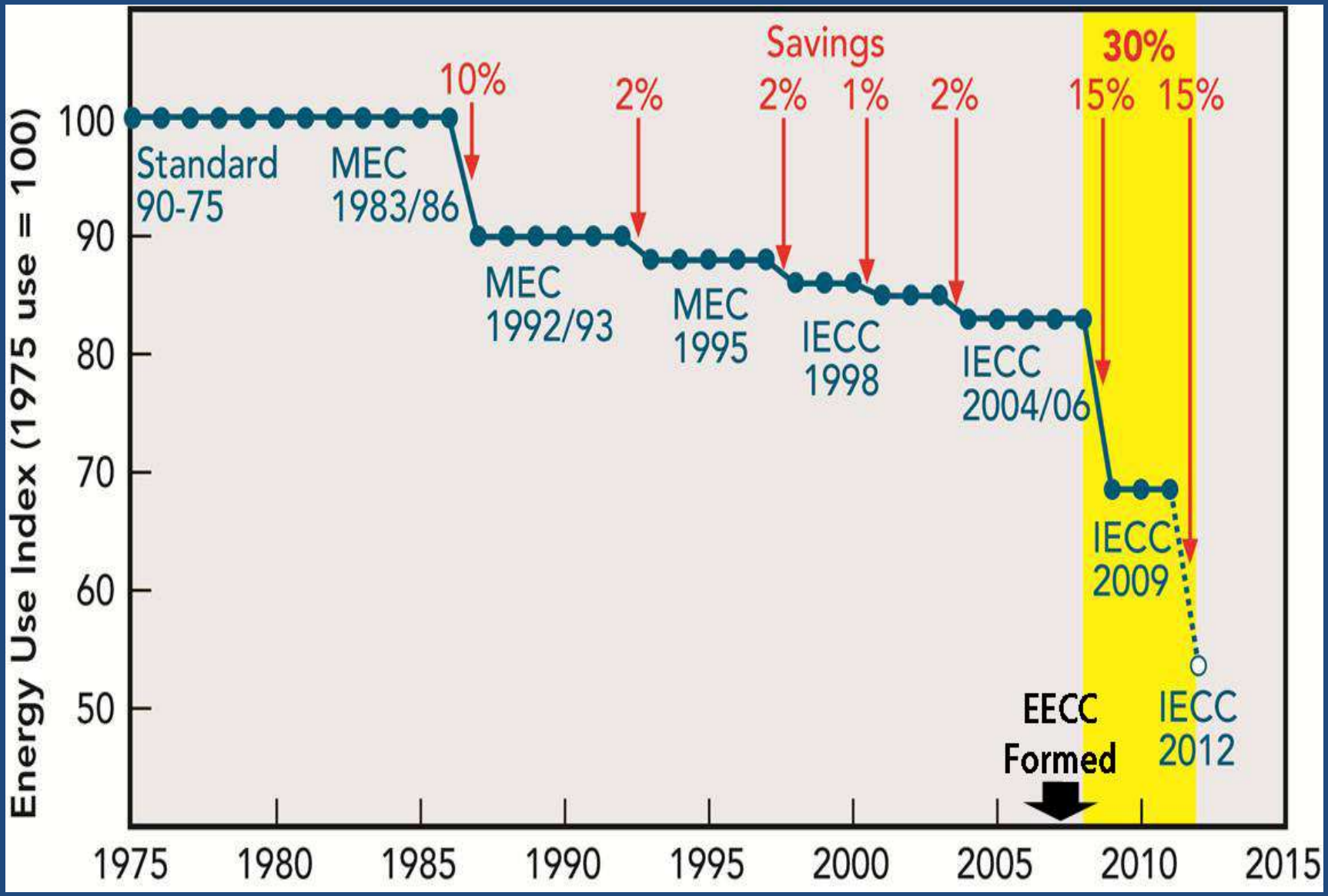
- Cited throughout federal law for:
  - National private and Federal housing initiatives
  - Energy Independence & Security Act of 2007 (EISA)
  - Energy Conservation & Production Act, as amended
    - National benchmark for single family homes, townhomes, low-rise condominiums & apartments
  - Manufactured Housing (HUD 24 CFR 3280)
  - Energy Efficient Mortgage Programs (FHA, VA, Fannie & Freddie)

The Situation in January, 2008

Before EECC . . .

- Nearly 2 Decade of *Modest* Efficiency Gains
- No Congressional Interest/Legislative Push
- Mayors Unaware of Their Potential Role
- Cost Issue Ruled/Defined by NAHB
- "Insulated Process"
  - ICC/NAHB Relationship
  - ICC Silent on Energy

DOE Analysis Tells the Story *SINCE Jan, 2008*



Support for Better Energy Codes Heavily Outweighs Opposition

Opponents

- NAHB/State HBAs
- Some Product Manufacturers

Proponents

Govt : NASEO, NGA, US Conf of Mayors
Utilities: IOUs, Coops, Public
Business Ldrs: BRT, NAM; US Chamber & Labor
Manufacturers & Environmental Grps
Low Income Housing Advocates
National & Regional Efficiency Groups
Consumer Groups
Academia/Think Tanks

With NASEO's Help, We've Changed the Debate *in just 2 years*

- Mayors/NASEO Endorses, "The 30% Solution"
- *Others (including NAHB) – Offer Comprehensive Packages*
- Historic, Unprecedented 2012 IECC Gains of 30% for 2012 IECC *Residential & Commercial*
- Congress Links Stimulus $ to 2009 IECC Adoption/Compliance
- Redefine Efficiency Benefits/Positive Cash Flow
- Building Homebuilders Relations

Energy Efficient
Codes Coalition

The Gains

Dynamic set of improvements for 2012 IECC 30% more efficient than 2006 IECC.

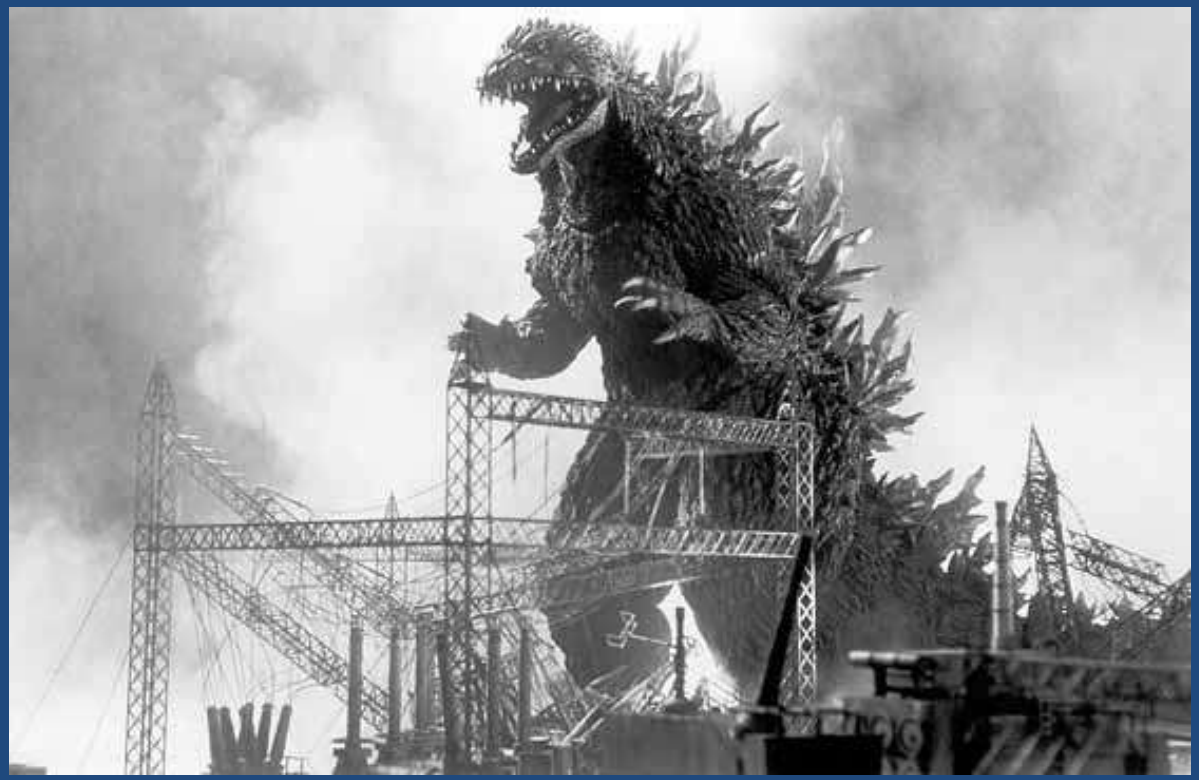
- IECC Becomes ICC's *only* model energy code
- A combination of DOE's comprehensive proposal and 9 individual proposals boosts efficiency over 2006 IECC by 30%.
- 2012 IECC employs readily available technologies; same framework as 2009

2012 IECC addresses virtually every part of new home energy efficiency subject to code requirements – space heating and cooling, thermal envelope, duct sealing, air sealing, hot water heating and lighting.

The Outcome: The 2012 IECC is Focused on:

- Efficiency. Achieves more efficiency than any other proposals before ICC*; Puts the 2012 IECC well on the path to achieve Congress' looming 50% energy efficiency target.*
- Simplicity. One model code clearly written to facilitate energy code administration and enforcement.
- Longevity/Ease of Replacement . . . Recognizing Improvements that Last for Generations. *All efficiency isn't created equal. For example, there's often only one shot to get envelope improvements right, but their energy savings last for decades.*
- A Complete Solution. Integrating all elements of energy efficiency. *EECC believes that energy efficiency should NOT be approached in silos.*

Our Success Has Awakened the Monster



Our Immediate Challenges

- Most *STATES* aren't ready for the 2012 IECC. Barely ½ of states have adopted the 2009 IECC – many are fatigued, fresh off the adoption battlefield.
- Significant energy will be simultaneously devoted to pushing 2009 in the remaining states AND repelling efforts to roll back or weaken codes already in place.
- Not far on the horizon looms the 2015 Code Development cycle.

Opponents Can't Win on the Merits of the Debate . . .

. . . So they play to their strengths:

- Misstate, exaggerate, scare
- Threaten to "go elsewhere," weaken ASHRAE 90.2
- Appeal 2012 IECC, then discredit process is "tainted"
- Make 2015 IECC efficiency gains harder by leveraging ICC-NAHB MOU
- Flex political muscle; Attack "weak link in the code adoption chain" – their superior relationship with legislators

What You Can Do . . .

- Ensure Utilities Get Credit for Advocacy to Advance Building Energy Codes
- Support SAVE Act to Ensure that Value of Efficiency is Incorporated in Home Appraisals
- Work with Your Legislatures/Cities to Help Us Win Adoption of 2012 IECC

Thank You!

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