

2009 International Energy Conservation Code



The Code Value Proposition

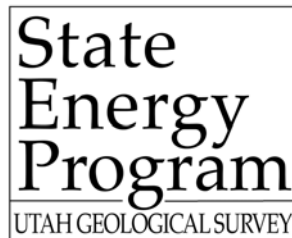
Session 1 – The Code Value Proposition

- ✓ Stringency Changes 2006 to 2009
 - ✓ Building efficiency
 - ✓ Human factors
 - ✓ Value of Energy Codes
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Session Sponsors

Funded Through the Pacific Northwest National Lab
And the U.S. Department of Energy

Program Support and Implementation



Program Partners



Download this Presentation

<http://www.kenergy.us/code.html>

Utah Postings

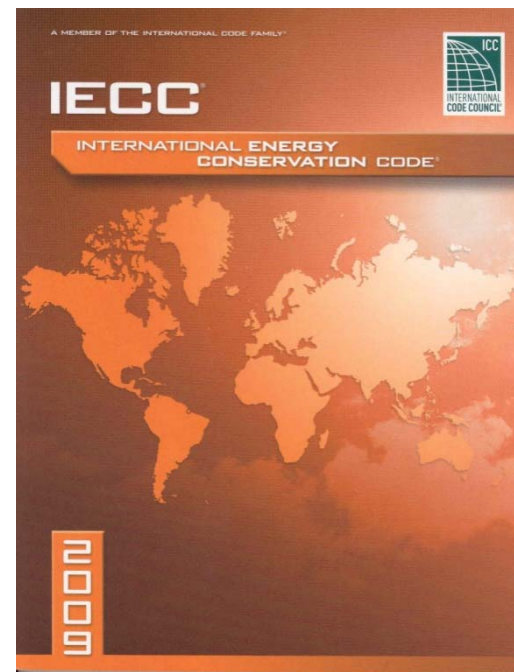


Acknowledgements

The following were either financial or content contributors to this training:

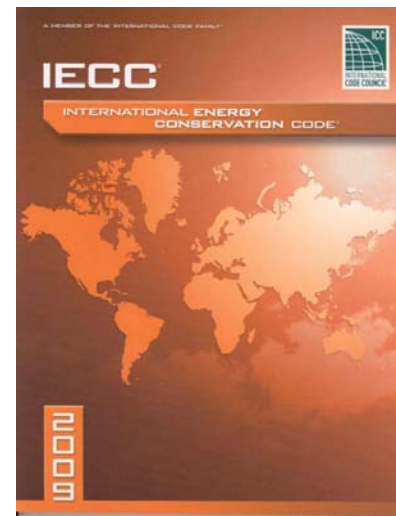
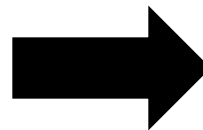
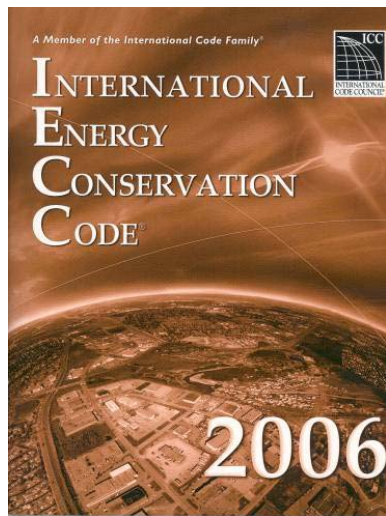
- NV Energy
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 - Eco Edge
-

The Family of I-Codes



Stringency Changes 06 to 09

8 to 15% improvement over the 2006 IECC



Commercial buildings = 71% of U.S. Electrical Use!

The codes' focus is on energy reduction in four areas:

1. The building envelope
 - Insulation and air leakage
 2. Mechanical system design and selection
 - Limited reheat/recool and controls
 3. Service water heating
 - Installation efficiency piping insulation and controls
 4. Electrical power and lighting
 - Interior and exterior lighting power densities and controls
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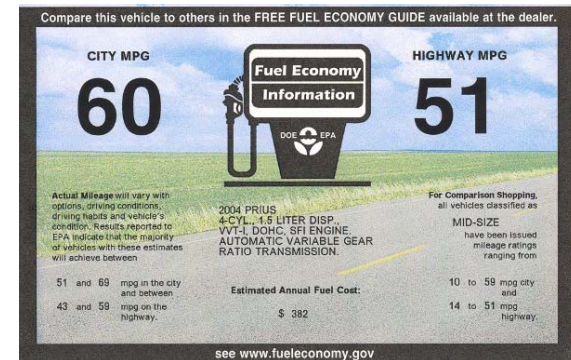
Residential buildings = 20% of U.S. Total Energy Use!

The codes' focus is on energy reduction in four areas:

1. The building envelope
 - Insulation and air leakage
 2. Mechanical system design and selection, duct tightness and insulation
 3. Service water heating
 - Installation efficiency piping insulation and controls
 4. Electrical power and lighting
 - 50% of sockets are high efficacy
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Understanding Energy Use Metrics

Is 25 MPG high or low?



Understanding Energy Use Metrics

Is 80 kBtu per year high or low?



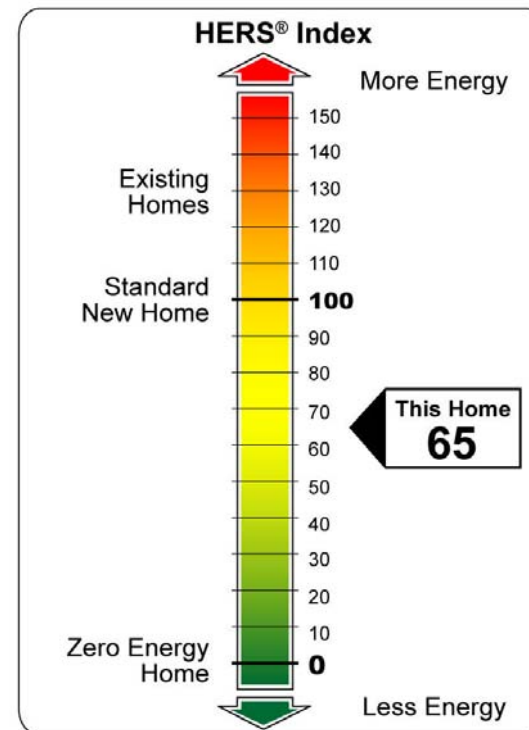
Understanding Energy Use Metrics

Is 70 kBtu per year high or low?



Understanding Energy Use Metrics

By intent, energy codes are the minimum standards for buildings.



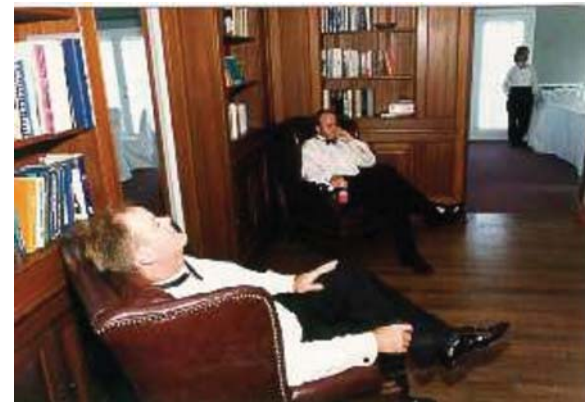
Human Factors

How much time do we spend in buildings?

1950's



1990's



Human Factors

Buildings don't care if they are too hot or too cold.

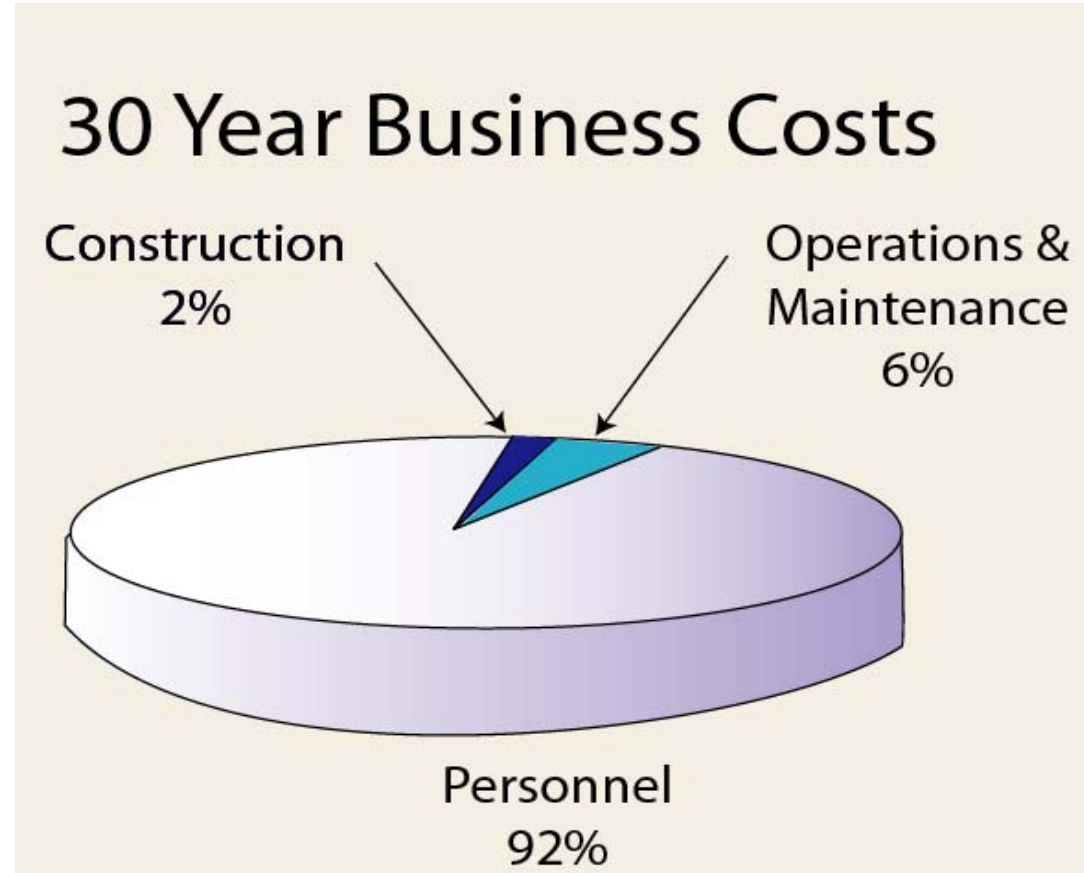


Human Factors

Without people, buildings don't matter.
People care about **COMFORT**.



Cost of Business Ownership (30 years)



Source: Center for Building Performance at Carnegie Mellon University

Code Benefits

Reduced energy consumption by approximately 0.5-quadrillion Btu per year by 2015, and 3.5-quadrillion Btu per year by 2030.

Reduced CO₂ emissions by roughly 3 percent in terms of the projected national CO₂ emissions in 2030.

Savings

Consumption

Emissions

Rising cost savings more than \$4 billion per year back in homeowners' pockets by 2015, a figure that could rise to over \$30 billion per year by 2030

\$1 spent in compliance and enforcement work saves \$6 over life of a building^a

Value of Energy Codes

Value to homeowners

Value to designers and builders

Value to the community

Value of Energy Codes

Value to homeowners

- ✓ Comfort
- ✓ Safety
- ✓ Durability
- ✓ Energy Savings



Value of Energy Codes

Value to designers and builders

- ✓ Happy clients and fewer callbacks
- ✓ Higher profit potential
- ✓ Safer and healthier buildings



Value of Energy Codes

Value to the community

- ✓ Increased dollar flow into the community
(Local economic development)
- ✓ Better housing stock
- ✓ Lower greenhouse gas emissions
- ✓ Perception
- ✓ Ability to provide electric load for new business





Questions & Answers

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