Impact of Energy Codes in Idaho

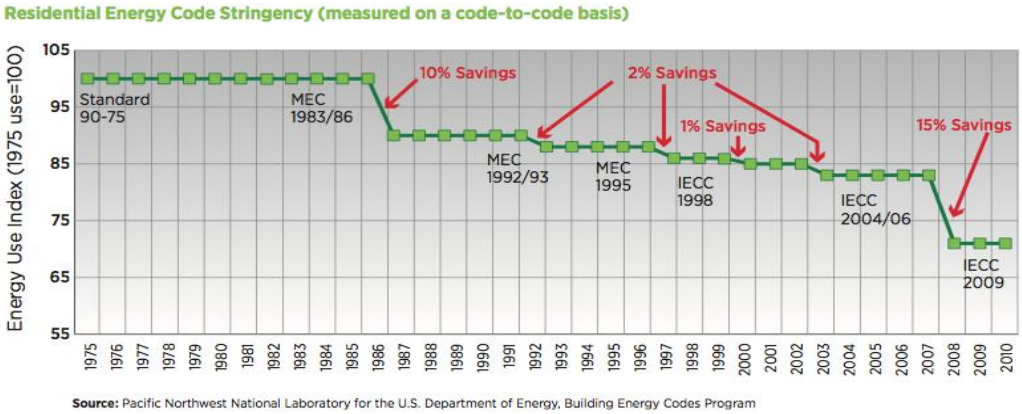
Brought to you by the Idaho Energy Code Collaborative, March 2013

About Energy Codes

Building codes set minimum legal standards for buildings. Energy codes are part of a family of codes, which includes the International Building Code (IBC), International Residential Code (IRC), International Mechanical Code (IMC) and others.

90% of building officials **Believe it is moderately or highly important that Idaho codes are consistent with a national standard**[1]

Stringency of the International Energy Conservation Code (IECC) has increased 32% from 1975 to 2009 (see chart below). Idaho first adopted the 2000 IECC in 2002, and has since adopted the 2003, 2006 and 2009.



Purpose of Energy Codes

Building energy codes increase energy efficiency in buildings, resulting in significant cost savings in both the private and public sectors of the U.S. economy.

Benefits of Energy Codes

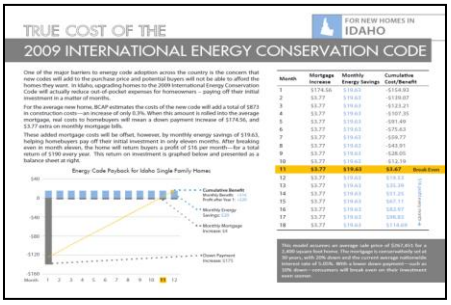
- ✓ If not built right from the start, **homeowners** can be stuck with costly repairs and higher energy bills for the life of the home. Utility bills are one of the greatest costs of homeownership and a leading cause of foreclosure.
- ✓ The more consistent and predictable codes are, the better for **industry** professionals who often work in multiple jurisdictions and states. Stronger energy codes reduce callbacks and increase product options in the market.
- ✓ The more energy a building consumes, the more power that needs to be generated resulting in demand for increased production and transmission, which is expensive and affects air quality. Energy codes reduce power demand, create green jobs and provide **all Idahoans** equal opportunity to buy energy-efficient homes.

According to a study by the National Association of Homebuilders, what homebuyers really want is *"First and foremost, energy efficiency."*[2]

Cost / Benefit Analysis of Energy Codes

In the past 34 years, energy codes have increased in stringency by 32%. A case study of a 2,218 sq ft home in Coeur d'Alene projected an increase of $499 per year in energy costs if energy use were 32% higher than the 2009 IECC.[3]

Going from the 2006 to 2009 IECC in Idaho has a 3.7 year simple payback (cost / energy savings).[4]



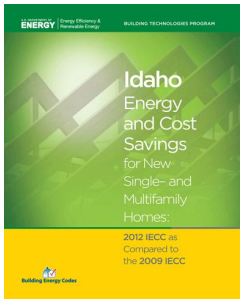
2006 IECC → 2009 IECC

Average Cost $873

Annual Energy Cost Savings $236

Simple Payback 3.7 years

Going from the 2009 to 2012 IECC is estimated to have a 5 to 7 year simple payback depending on the climate zone.[5]



2009 IECC → 2012 IECC

Average Cost $1,523

Annual Energy Cost Savings $305

Simple Payback 5 to 7 years

And, results of a homeowner survey conducted in Idaho show that they are willing to pay for this.

79% of homeowners **Are willing to finance $1,000 - $2,500 or $2,500 - $5,000 for a home that will save 15% on energy bills**[1]

Status of 2012 IECC

The State of Idaho adopted the 2009 IECC on January 1, 2009. The 2012 IECC was approved nationally in November of 2009. The Idaho Building Code Board considered the 2012 IECC in the summer of 2012, and tasked a group of stakeholders to meet quarterly to evaluate the 2012 IECC and make recommendations.

- They have recommended adoption of the 2012 IECC for *commercial* buildings, and, as a legislator, you can expect to consider this during the 2013 legislative session for adoption as of January 1, 2014.
- Decisions on the 2012 IECC for *residential* buildings were delayed a year while a study of compliance with the 2009 IECC was being conducted. The study of 62 homes in 11 Idaho counties showed weighted average compliance rates of 83% – 109%[6], which compares favorably to the American Recovery and Reinvestment Act requirement for 90% compliance by 2017. Stakeholders have recommended a significantly amended version of the 2012 IECC in which residential envelope, air leakage and lighting match the 2009 IECC, while duct tightness advances to the 2012 IECC. This recommendation is estimated to be presented at the 2014 legislative session.

[1] *Energy Code Market Assessment for Idaho* by Bonneville Power Administration, published November 19, 2012, www.idahoenergycode.com
[2] *What Home Buyers Really Want* by NAHB Economics and Housing Policy Group, published February 19, 2013, www.nahb.org
[3] *Incremental Cost Analysis of 3 Coeur d'Alene Homes for 2009 vs 2012 IECC*, www.idahoenergycode.com
[4] *True Cost of the 2009 International Energy Conservation Code for New Homes in Idaho* by BCAP, www.bcap-ocean.org
[5] *Idaho Energy and Cost Savings for New Single- and Multifamily Homes: 2012 IECC as Compared to the 2009 IECC* by DOE/PNNL www.energycodes.gov/development/residential
[6] *Idaho Residential Energy Code Compliance* by Cadmus Group, Inc., published February 21, 2013, www.neea.org