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“This educational offering is recognized by the Minnesota Department of Labor and Industry as satisfying **1.5 hours** of credit toward **Building Officials and Residential Contractors code/energy** continuing education requirements.”

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Residential Energy Codes – Nationwide and State Adoption and Compliance

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February 23, 2016



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Why Energy Codes?

Why Energy Codes?



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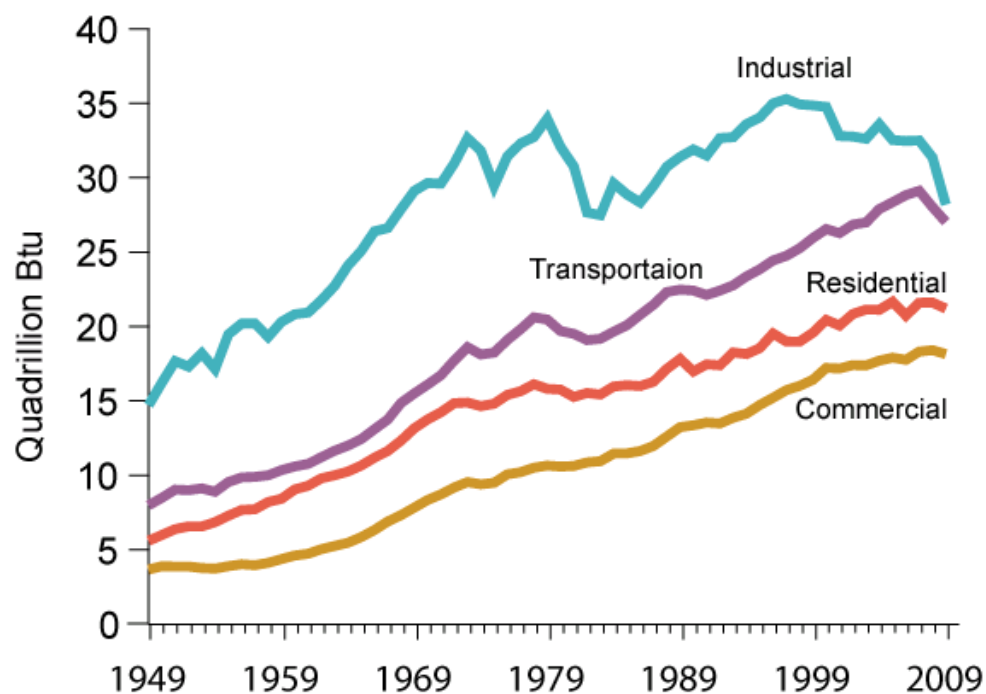
- Buildings consume 40% of the world's raw materials and energy
- Advances in technology
- Today's buildings may be around for 75 years

U.S. Energy Consumption Over Time



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Energy Consumption by Sector, 1949-2009



Source: U.S. Energy Information Administration, *Annual Energy Review 2009*, Table 2.1a.

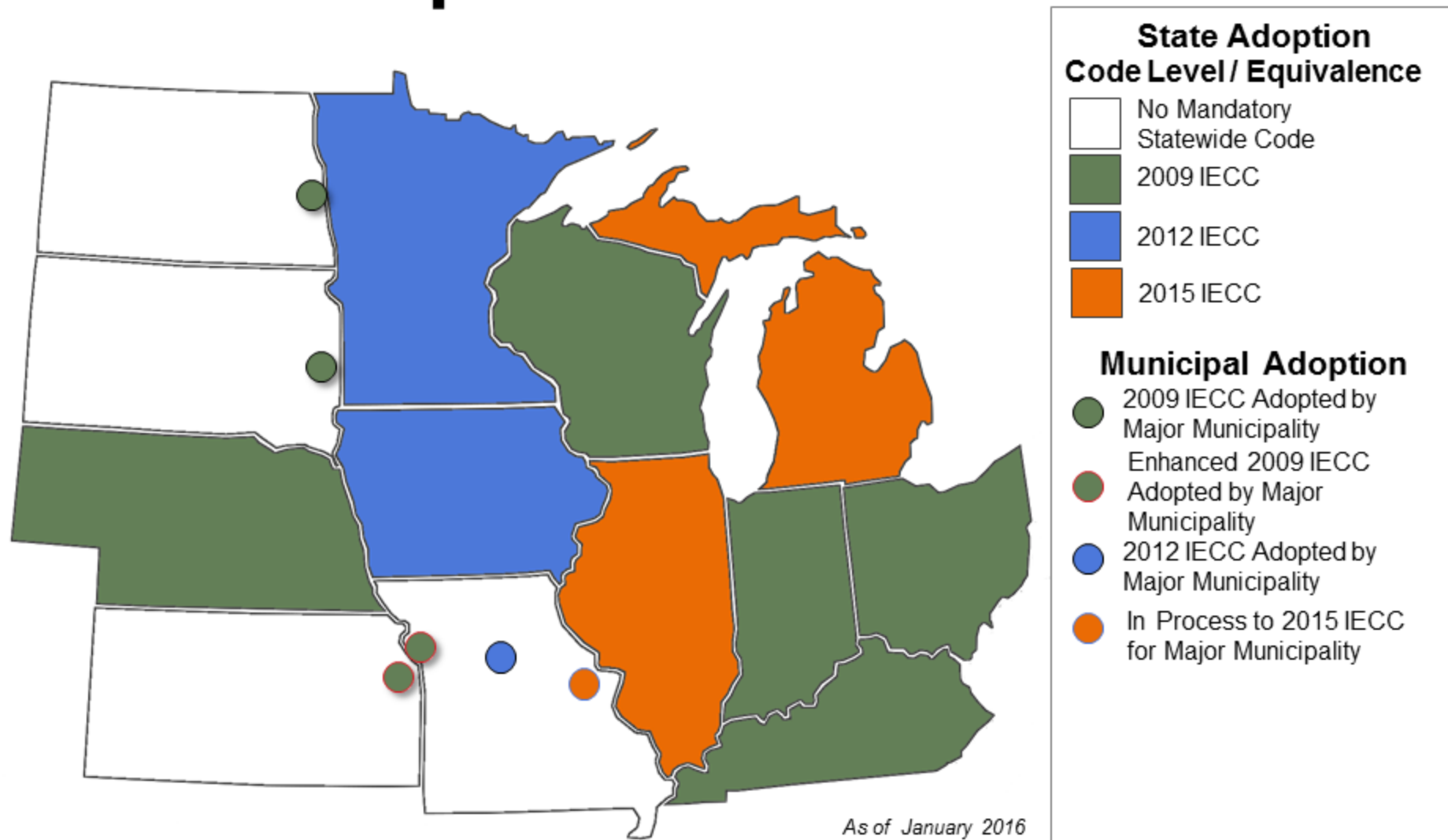
Policies for energy efficient buildings



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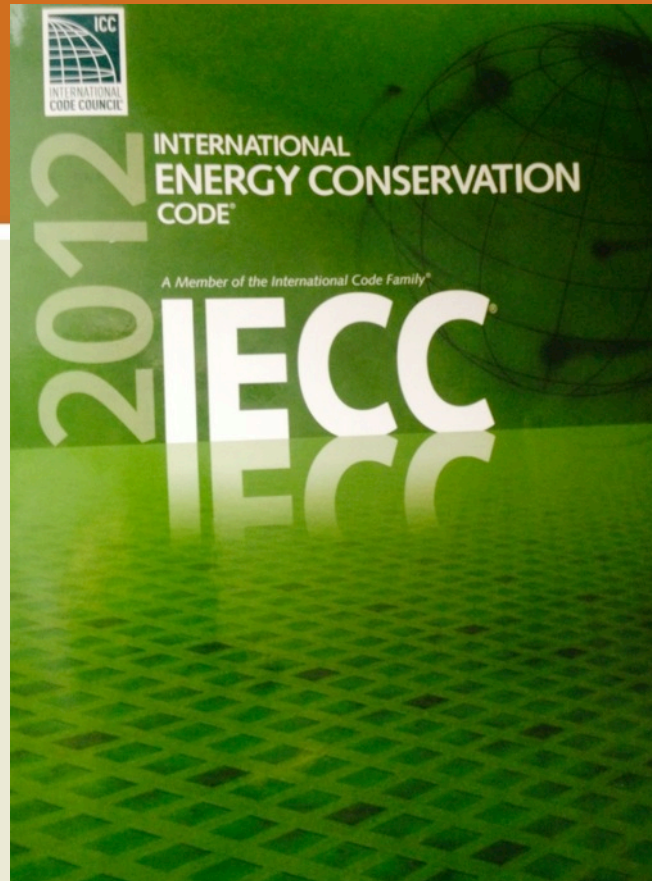
- Governor Dayton's Executive Order 11-2 sets a statewide goal of improving energy efficiency in buildings of public facilities by 20 percent in order to create jobs and decrease operational costs for Minnesotans.
- Requirements by cities for buildings built with public dollars to be LEED-certified
- CIP financing for Energy Efficiency improvements
- Building codes

Residential Building Energy Code Adoption in the Midwest





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Status of MN Energy Codes

Update to Commercial – from ASHRAE 90.1-2004 to IECC 2012 Went into effect June 2, 2015



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- About 30% more energy efficient than previous code
- ASHRAE 90.1 2010 option. Includes mandatory commissioning for both options
- Lighting upgrades

Update to Residential – from amended IRC 2006 to amended IECC 2012 Effective February 14, 2015



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- Roughly 20% more efficient than previous code
- Mandatory blower door test – 3ACH50
- More efficient windows, insulation
- Mandatory duct blaster test when ducts are in unconditioned spaces
- Balanced ventilation (added by DLI)

Rationale for Minnesota to adopt IECC 2012



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- ARRA requirements – IECC 2009
- Skipped last code update
- Minnesota has always been considered a leader; it was 2012 – do not fall behind

Minnesota Code Adoption Process



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- ICC update every three years
- Administrative Process
- Technical Advisory Committees review proposed preliminary draft by DLI, propose changes via SONARs, vote.
- Commissioner of DLI finalizes draft for CCAC
- Draft goes to public comment & agency review
- Administrative Law Judge hearings (if necessary)
- Governor's approval
- 6 month training process until enforcement (for residential energy code)

Next Minnesota Energy Code Update



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- In 2018, DLI will begin the energy code adoption process again with likely effective date of 2021
- The IECC 2015 has a compliance path of an Energy Rating Index (with minimum requirements)



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Resources for Residential Energy Code Compliance

Minnesota Energy Codes Compliance Collaborative



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- **What:** A group of stakeholders that come together on a regular basis to explore common interests and address obstacles related to **energy code compliance**
- **Why:** To establish a forum for identifying and tackling obstacles to improving energy code compliance (eventual goal 100%)

Mission Statement



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Our mission is to facilitate compliance with the building energy codes in Minnesota through a collaborative stakeholder effort, to better coordinate actions affecting energy code compliance, and to identify and prioritize steps needed to achieve compliance with building energy codes.



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City in America



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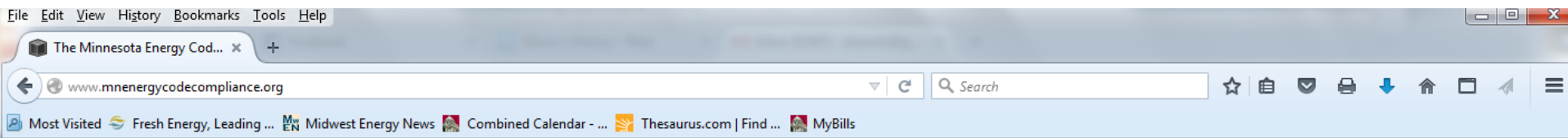
**BUILDING
KNOWLEDGE**

Work to-date



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- Hold meetings to identify biggest issues and solutions with meeting new energy codes
- Created subcommittees to deal with specific issues
- The Interpretation and Verification committee completed a "Common Practices" document to assist building officials with new aspects of the residential energy code.
- Website went live
<http://www.mnenergycodecompliance.org/>
- Planning education/training events



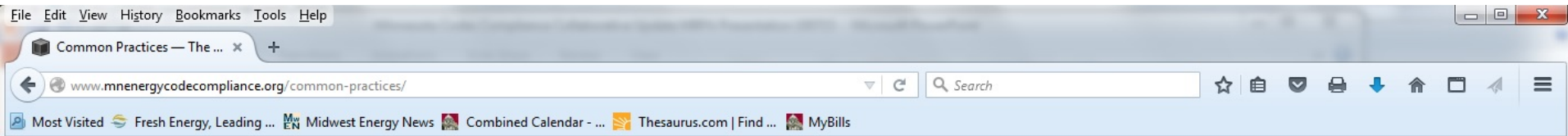
THE MINNESOTA ENERGY CODE COMPLIANCE COLLABORATIVE

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The Minnesota Energy Code Compliance Collaborative

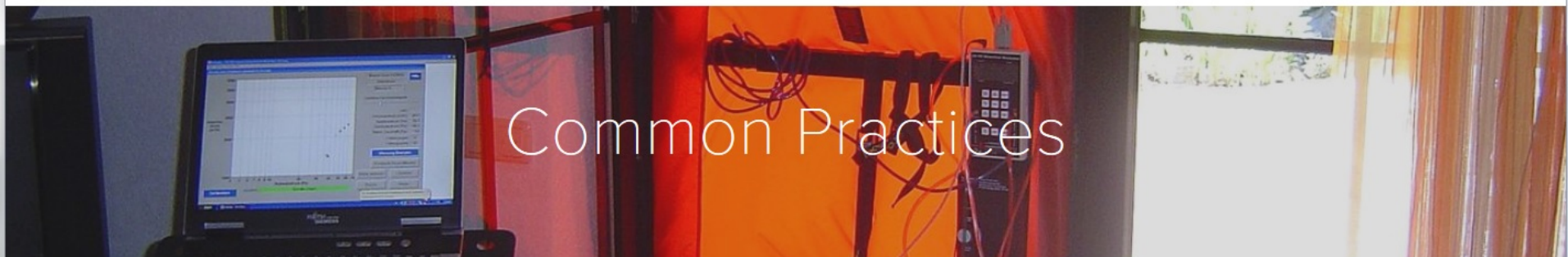
Welcome to the Minnesota Energy Codes Compliance Collaborative. Formed in 2014, the collaborative is comprised of builders, contractors, code officials, state agencies, energy raters and companies, and energy advocates. To fulfill its **mission statement**, the collaborative has formed subcommittees dedicated to addressing specific issues related to energy code compliance.

www.mnenergycodecompliance.org



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The Interpretation and Verification Committee created a document of common building practices that answer common questions and meet the new Minnesota residential energy code.

[Common Practices Document for Code Officials](#)

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2015 Minnesota Residential Energy Code (MR 1322) SIGNIFICANT CHANGES
INCLUDING CODE COMMENTARY (July 15, 2015 Update)

Note: The following information contains simplified explanations of significant changes to the 2012 International Energy Conservation Code (Residential Provisions) adopted with Minnesota Amendments on February 14, 2015, along with commentary explaining the intent of selected sections for clear understanding of the code. The commentary is advisory only.

R103 Construction Documents. Include the following:

- A. Insulation materials and R values
- B. Fenestration U factors and SHGCs
- C. Area-weighted U factor and SHGC calculations
- D. Mechanical system design criteria
- E. Mechanical and service water heating system and equipment types, sizes and efficiencies.
- F. Equipment and system control
- G. Fan motor horsepower and controls
- H. Duct sealing, and the location and insulation of ducts and pipes
- I. Lighting fixture schedule with wattage and control narrative
- J. Air sealing details

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Energy Code Compliance Resources

[DLI - Minnesota 2015 Building Code](#)

[DLI Letter of Interpretation for above-garage spaces](#)

[MN Energy Codes Collaborative "Common Practices" interpretation document](#)

[Find a professional to conduct a Blower Door and/or Duct Test](#)

[100 Minnesota 2015 Building Code](#)

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MINNESOTA BUILDING PERFORMANCE ASSOCIATION

Information and solutions for a safe, healthy, comfortable, durable and energy efficient home

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- Renewable Energy
- Roofing-Siding

Services Offered:

- Duct Testing
- Blower Door
- Energy Audit
- Infrared
- Home Performance Testing
- Home Performance Contracting
- Home Performance Consulting
- HERS Rating
- HVAC-Mechanical
- Insulation
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Building Type:

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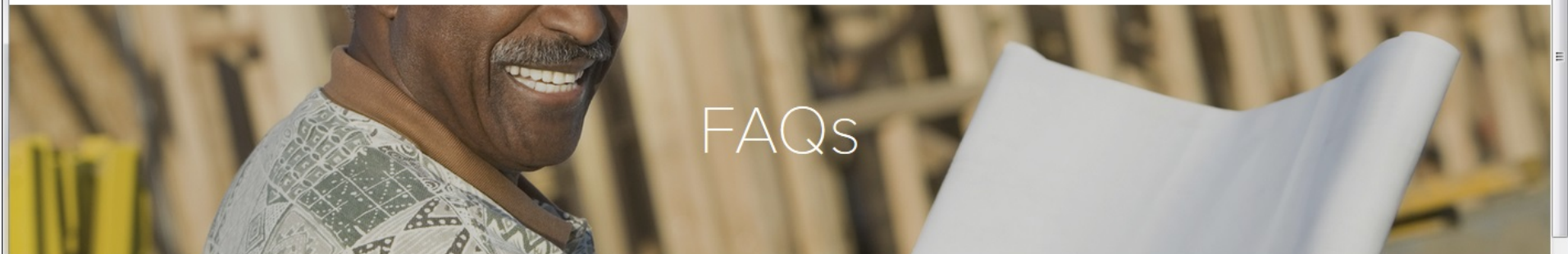
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Frequently Asked Questions (FAQs) about energy code compliance

Where can copies of the energy codes be obtained?

Copies of the 2015 Minnesota Building Code can be obtained from the [Minnesota Department of Labor and Industry website](#). Copies of the 2012 International Energy Conservation Code (IECC) can be purchased from the [International Code Council website](#). Copies of ASHRAE standards can be purchased from the [ASHRAE website](#).

What are the enforcement dates for the new energy codes in Minnesota?

The new residential energy code (IECC 2012 w/amendments) went into enforcement on February 14, 2015. The new commercial energy code (IECC 2012 w/ASHRAE 90.1-2010 option) went into enforcement on June 2, 2015.

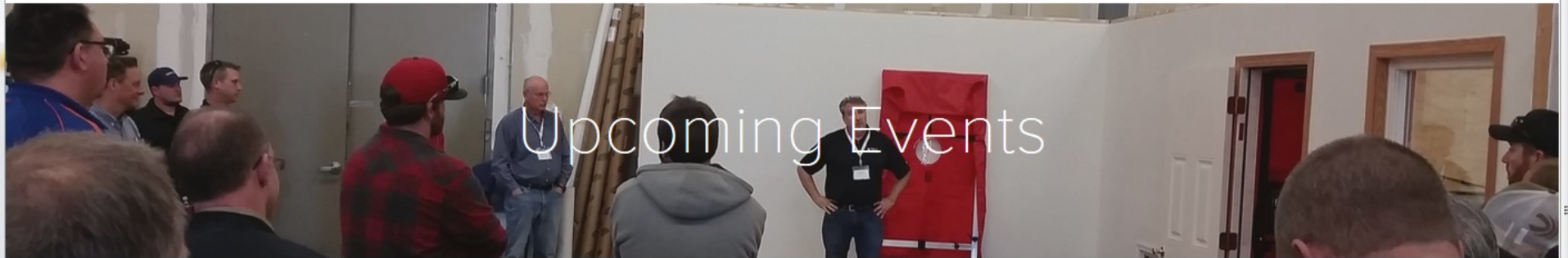
What are some of the changes to the new residential energy code?

Some changes and interpretations to the new residential energy code can be found in the Minnesota Energy Codes Compliance Collaborative's [Common Practices document](#).

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Upcoming Energy Code Events in Minnesota

- Minnesota Building Performance Association's Fall Energy Forum. The Status of the New Energy Code - A Panel Discussion. Wednesday, October 7th, 2015, 2pm - 4:30pm. Maple Grove, MN. [Click here](#) for more information.
- Midwest Energy Efficiency Alliance's 6th Annual Energy Codes and Benchmarking Conference. November 3-5, 2015. Minneapolis, MN. [Click here](#) for more information.

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