

**New Hampshire's Independent Energy Study Synthesis**  
**Chapter 12 - The Importance of Building Energy Codes and Code Enforcement**  
**November 30, 2012**

**Summary of Chapter 12**

Chapter 12 of the New Hampshire's Independent Energy Study provides an overview of the importance of building codes, including setting and enforcement of codes. The chapter contains 11 recommendations and sub-recommendations. More specifically, the recommendations call attention to the importance of building-energy codes, and the 2009 International Energy Conservation Code and the 90.1 ASHRAE 2007 Standards in particular. The Vermont Energy Investment Corporation (VEIC) brought to this study a broad view of energy codes best practices from other states and regions. Included in this is the encouragement of more stringent stretch codes, those that go beyond the baseline. Other energy-code recommendations made in the Independent Energy Study support the maturation of improved energy-code compliance tools. Other than expeditious ratification of the 2009 family of building codes, there were limited recommendations that require early/ immediate action by the legislature. Many of the other recommendations made in this chapter are already being addressed by or are the responsibility of other stakeholders.

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**Chapter Teams Findings**

**Top Priorities for Early Action**

*Consider Adoption of the Newest Building Energy Code as Soon as it Becomes Available*

With respect to building codes, the most important step that the legislature should take going forward is the timely review and consideration of the updated building energy codes and subsequent adoption as appropriate. While the NH legislature has recently adopted the 2009 IECC building energy code<sup>1</sup>, the 2012 IECC has been released and should be promptly reviewed and considered by the NH Building Code Review Board<sup>2</sup>. Upon completion of their review process, the BCRB should submit their recommendations to the legislature for consideration. Expeditious consideration and legislative action will ensure that New Hampshire's building occupants benefit from the associated improvements in building energy efficiency, health and comfort.

1) Review and recommendation:

NH Building Code Review Board

2) Establishment:

NH Legislature

3) Implementation:

Energy Code Collaborative or subsequent network

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<sup>1</sup> NH House Bill 137 (HB137), signed by Governor on June 18, 2012, <http://www.gencourt.state.nh.us/legislation/2012/HB0137.html>.

<sup>2</sup> The New Hampshire State Building Code Review Board (hereafter referred to as "Board") is charged with the responsibility for reviewing and amending the New Hampshire building code - <http://www.nh.gov/safety/boardsandcommissions/bldgcode/>.

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## Priorities for Medium or Long-Term Action

### *Refer the Chapter Recommendations to the NH Energy Code Collaborative<sup>3</sup>*

As many of the other recommendations made in Chapter 12 are already being addressed by or are the responsibility of other stakeholders, such as the NH Building Code Review Board, the NH Fire Marshal's Office, NH Building Officials Association, and the NH Homebuilders and Remodelers, the Independent Energy Study's Building Energy Code Chapter should be referred to the newly formed NH Energy Code Collaborative. The collaborative is a multi-stakeholder entity, composed of public, private and non-profit entities, which will analyze the April 2012 GDS report, the *New Hampshire Energy Code Compliance Roadmap*<sup>4</sup>, to determine appropriate solutions to improving energy code compliance statewide. The GDS report lays-out in roadmap-form guidance to improving compliance to 90% by 2017, a target established by the US Department of Energy and tied to stimulus funding. Due to the timing of the release of the Independent Energy Study (September 2011) and the GDS report (April 2012), the GDS report authors were able to consider the code-related recommendations prior to release of their roadmap.

Funding mechanisms for energy code training, resources, education and outreach, and enforcement support are needed to improve energy code compliance. Some New Hampshire communities seek additional clarification of code enforcement roles between the State and municipalities and clarification of compliance verification methods.

Other energy-code recommendations made in the Independent Energy Study support the maturation of improved energy-code compliance tools. These include the continuation of energy code training programs (supported by the PUC, and funded by the NH Utilities) and resources for building professionals, and consumer awareness. Additionally, the development of a Building Labeling or Rating System, whereby building occupants and owners will better understand expected energy use and costs, is also considered an important tool for implementation. The study also encourages adherence to and enforcement of the High Performance Building Code for State-owned buildings. Similar to baseline building codes, the benefits are only realized when code compliance is met.

It is anticipated that the Energy Code Collaborative group will analyze the GDS report to determine appropriate solutions. **Therefore, it is premature for the General Court to address these issues at this time.**

#### 1) Implementation:

Energy Code Collaborative or subsequent network

### *Encourage the Adoption and Achievement of Stretch Codes*

VEIC brought to this study a broad view of energy codes best practices from other states and regions. Included in this is the encouragement of more stringent stretch codes, those that go beyond the baseline. In New Hampshire, those stretch codes are currently voluntary and market driven and should remain so. However, as energy efficiency is not properly valued in the appraisal process, there is insufficient demand to support the application of such codes and this should be addressed through work with the appraisal, real estate and lending communities. Other states and communities recognize the significant benefit of

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<sup>3</sup> This initiative will target the implementation of the *NH Building Energy Code Compliance Roadmap Report*. Name subject to change in Fall 2012.

<sup>4</sup> The Roadmap report is the result of the NH Energy Code Challenge project that had goals to map out New Hampshire's existing energy code landscape, identify barriers to energy code compliance across the state's residential and commercial building sectors, and develop a plan of action outlining New Hampshire-specific recommendations for achieving 90% energy code compliance by 2017 - <http://www.nhenergycode.com/live/index.php?go=roadmap>.

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stretch codes and incentivize buildings that meet certain performance standards. **The NH legislature and PUC should consider providing an incentive for new structures that meet such stretch codes until the market is better able to value improved performance.**

1) Development:

NH Building Code Review Board

2) Establishment:

NH Legislature; and/or Public Utilities Commission

3) Implementation:

Public Utilities Commission; and Energy Code Collaborative or/subsequent network

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### **Background**

Innovative building materials and technologies continue to add complexities and performance expectations to the construction of new and renovated buildings. Building science offers opportunities to systematically incorporate modern, health-and-safety, and cost-effective measures into new construction. The professionals who design, build, and inspect homes and commercial buildings rely on tools such as building codes and standards for guidance and consistency. Energy codes are part of the family of building codes and standards developed on a three-year cycle by the International Code Council (ICC) and the American Society of Heating, Refrigeration, and Air-conditioning Engineers (ASHRAE), along with many other stakeholders and interested parties.

New Hampshire has been operating under the 2009 family of codes since April 1, 2010. Buildings that comply with the IECC 2009 and ASHRAE 90.1 – 2007 are 14% more energy efficient than those built to the 2006 codes. Although these are statewide codes, compliance rates vary significantly. According to a study by the Building Codes Assistance Project and cited in the Independent Energy Study, New Hampshire's building owners could save \$31 million dollars a year and 3 trillion BTUs of primary energy through compliance with the 2009 codes. A critical element in achieving those savings is ensuring compliance with that code. State and national studies have suggested the need to enhance compliance verification and efforts are underway in New Hampshire to facilitate 90% compliance by 2017.

The Independent Energy Study called attention to the importance of building-energy codes, and the 2009 International Energy Conservation Code and the 90.1 ASHRAE 2007 Standards in particular. Recently, the General Court adopted the 2009 code cycle. It is anticipated that future code cycles will also come before them for ratification.