

January 15, 2014

Director Paul Thomsen  
Governor's Office of Energy  
755 North Roop Street, Suite 202  
Carson City, Nevada 89701



***Re: Adoption of the 2012 International Energy Conservation Code (IECC)***

Dear Director Thomsen,

The Polyisocyanurate Insulation Manufacturers Association (PIMA) would like to take this opportunity to comment on Nevada's review and adoption of an updated building energy code. PIMA supports your efforts to strengthen the State's code and urges you to adopt the 2012 IECC for commercial and residential buildings without weakening amendments. Adoption of the 2012 IECC would assure solid, cost-effective, and energy-efficient construction practices for Nevada residents and businesses. Adoption would help to make homes more affordable to own and operate and Nevada businesses more competitive.

**New Residential and Commercial Building Construction**

Adopting the 2012 IECC as part of the Nevada building code would provide many benefits and/or protections for the home or building owner, including:

- Improved thermal performance for the walls, ceiling and floors;
- Improved window efficiency;
- Reductions in wasted energy from leaky heating and cooling ducts;
- High-efficiency lighting; and
- Improved air sealing of the building envelope.

Residential and commercial buildings are responsible for 41% of the total U.S. energy use, so it is essential for Nevada to address building construction practices as part of its energy policy objectives and goals. Building energy codes are the most effective tool for reducing energy use in buildings and making our homes and commercial buildings less expensive to operate.

According to the U.S. Department of Energy (DOE), Nevada homes would use 25.9% less energy under the 2012 IECC as compared to the current Nevada code (i.e., the 2009 IECC). DOE also finds that the net annual consumer savings (which includes energy savings, change in mortgage payments, and other costs) would average \$214 and homeowners would see a net

positive cash flow within two years.<sup>1</sup> DOE has not completed a separate calculation of energy savings with respect to commercial buildings in Nevada, but for the nation as a whole the savings resulting from adoption of the 2012 IECC (or ASHRAE Standard 90.1-2010) would average 18.5%.<sup>2</sup>

The Pacific Northwest National Laboratory (PNNL) recently completed an economic analysis that highlights the positive impact that an updated code would have on employment in the state. According to this study 850 new jobs would be created as a result of the effect the new standards have on home construction practices. In addition to the additional jobs related to home construction, there would also be an increase in jobs that result from spending that is diverted from energy bill payments to spending that has a greater economic impact on the state. This improvement in employment is cumulative and starts at 75 new jobs the first year after the new code is in place and grows by that amount each year. The result after 10 years would be 750 new jobs, assuming a constant rate of new home construction.<sup>3</sup> This information also reminds us that having an energy-efficient housing stock with lower utility bills will help Nevada citizens weather the next home foreclose crisis. The PNNL report only looks at the economic effects for residential construction, but similar positive employment impacts would be expected from the commercial sector as well, so the total impact will be much larger.

### **Alterations to Existing Buildings**

Many of the IECC's energy saving requirements for new buildings also apply to alterations in existing buildings, an important feature of the model energy codes that has been in place since the years 1999 and 2000. The application of energy codes to alterations is important for two principle reasons. First, most buildings were constructed under relatively weak or nonexistent state and/or local energy codes, so these older buildings offer an important opportunity for increased energy savings.<sup>4</sup> The most effective time to take advantage of these opportunities is during an alteration or renovation. Second, as with new construction, the application of codes to alterations helps to overcome market barriers to energy efficient building practices, such as the presence of split incentives and the emphasis on first-cost considerations over long-term energy savings.

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<sup>1</sup> U.S. Department of Energy, Office of Energy Efficiency and Renewable Energy, June 2012, [Nevada Energy and Cost Savings for New Single-and Multifamily Homes: 2012 IECC as Compared to the 2009 IECC](#).

<sup>2</sup> Department of Energy, [Building Energy Standards Program: Final Determination Regarding Energy Efficiency Improvements in the Energy Standard for Buildings, Except Low-Rise Residential Buildings, ANSI/ASHRAE/IESNA Standard 90.1-2010](#); October 19, 2011; 76 FR 64904.

<sup>3</sup> Pacific Northwest National Laboratory, [Potential Job Creation in Nevada as a Result of Adopting New Residential Building Energy Codes](#), MJ Scott and JM Niemeyer, September 2013.

<sup>4</sup> Median life for most building categories ranges between 50 and 65 years. Over 50% of the existing commercial floor space was built prior to 1980. [2011 Building Energy Data Book](#), U.S. Department of Energy, Office of Energy Efficiency and Renewable Energy, pages 3-10 (table 3.2.6) and 3-4 (table 3.1.8), respectively.

The ASHRAE Standard 90.1 and IECC requirements related to alterations are focused and relatively limited compared to the requirements for new construction. They do not apply to every type of alteration and, for the alterations that are covered, they only apply to the components or equipment that is new or being replaced. Also, the requirements for alterations only apply in instances where the code setting bodies believe compliance with the standard is cost effective and technically feasible. For example, when a commercial building removes the old roof covering and replaces it with a new membrane, the insulation underneath that membrane should be brought up to current standards, or even replaced if it is wet or otherwise damaged (IECC (2012) sections section C401.2.1 and C101.4.3, exception 5, and IBC (2012) section 1510.3).

### **Information about the Polyisocyanurate Insulation Manufacturers Association (PIMA)**

PIMA is the trade association for manufacturers of rigid polyiso foam insulation, a product that is used in most low-slope commercial roofs as well as in commercial and residential walls. PIMA members have a nationwide presence with manufacturing facilities located across the United States, including: 31 polyiso plants, numerous facilities that produce the raw materials used in polyiso manufacturing, and plants that produce roof membranes, metal flashings and other products essential to building construction. PIMA members with facilities located in Nevada include: Rmax (polyiso insulation manufacturing facility in Fernley); Firestone Building Products Company (thermoplastic roof membrane manufacturing facility in North Las Vegas and a metal manufacturing plant in Reno); and Johns Manville (polyiso insulation manufacturing facility also in Fernley). These Nevada employers fully support your efforts to adopt the 2012 IECC without changes.

I hope this information will be helpful in your deliberations. Please contact me if you have any questions.

Sincerely,

A handwritten signature in black ink that reads "Jared O. Blum". The signature is written in a cursive, flowing style with a large loop at the end of the last name.

Jared O. Blum  
President