

*Sent via Electronic Mail*

June 27, 2019

Barry Murphy, Energy Efficiency Program Specialist  
Department of Public Service  
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[PSD.CodeUpdateComm@vermont.gov](mailto:PSD.CodeUpdateComm@vermont.gov)

**Re: Proposed 2019 Vermont Commercial Building Energy Standards (CBES)**

Dear Mr. Murphy,

The Polyisocyanurate Insulation Manufacturers Association (PIMA) is writing in support of Vermont's adoption of the 2018 International Energy Conservation Code (IECC) as part of its updated Commercial Building Energy Standards (CBES). Adopting this proposal is an important and cost-effective policy for addressing the negative economic and environmental impacts caused by building energy waste – a sector that is responsible for 40% of total U.S. energy use, but 50% of Vermont's energy use.<sup>1</sup> Updated and rigorous (but flexible) building energy codes will help Vermont to cost-effectively achieve a range of benefits, including:

- Reduced air pollution and climate change impacts;
- Consumer and business cost savings;
- Increased flexibility and reliability of our energy system and grid;
- Reduced peak energy demand; and
- Improved energy productivity and a stronger economy.

In addition to these benefits, highlighted below are three provisions in the CBES update that PIMA supports that both strengthen the code and add flexibility.

- **Section 402: improved thermal envelope requirements.** The reduction in heating and cooling will quickly pay for the upfront cost of the improved envelope by enabling the use of equipment that is both smaller and that employs new heating and cooling technologies and strategies. The thermal envelope is difficult to improve after a building is constructed, but can last the entire life of a building. Therefore, these improved requirements will benefit Vermont residents, business, and the environment for decades.
- **Section C406 (Option Packages): increased number of eligible measures and conversion to a point system.** The new approach under C406 better aligns the credits earned with the actual energy savings expected with each option. This approach includes a wider range of small and large measures

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<sup>1</sup> Vermont Energy Consumption by End-Use Sector, 2017, U.S. Energy Information Administration, <https://www.eia.gov/state/?sid=VT#tabs-2>

related to multiple building components, which will improve the effectiveness and flexibility of the code for designers and builders. The State of Washington has successfully implemented a similar approach.

- **Section C402.2.1: compliance option for tapered roof insulation.** For purposes of roofs with insulation entirely above deck, this proposal would allow compliance using average R-value when using tapered roof insulation systems as long as a minimum R-12 is maintained. Although a similar compliance option is available under ASHRAE 90.1, this language will add clarity and flexibility to the CBES and make compliance easier for roof designers and contractors.

Staying current with the model energy code ensures that Vermont has access to the regular improvements in construction practices and component technologies. This is especially true in the area of commercial buildings where the relative fast pace of innovation has resulted in significant energy savings over the last three code cycles (8% in the most recent cycle alone!). According to the energy modeling completed for Vermont's Department of Public Service (and described in the preamble of the proposed rule), adopting the proposed 2019 CBES would result in annual energy savings of \$8,000 to \$16,000 with a simple payback of 6 to 9 years, depending on the building category. Considering the lifespan of these investments, this is a very significant and cost-effective proposal.

Most of the country now views strong building energy codes as an effective policy that benefits the economy and the environment. In fact, at least 65% of the U.S. population now reside in areas of the country that have adopted either the 2015 or 2018 IECC,<sup>2</sup> clearly demonstrating that strong energy codes are a popular and a cost effective energy policy. An important reason for this is the positive impact energy codes have on jobs and the local economy. An analysis from 2013 by the Pacific Northwest National Laboratory (PNNL) found that updating building energy codes in just the four states considered for this study would increase employment by 5,370 jobs when moving from one IECC edition to the next, more stringent edition.<sup>3</sup> This happens as a result of two mechanisms: (1) the positive effect the new standards have on home construction practices; and (2) the jobs that result from spending that is diverted from energy bill payments to spending that has a greater economic impact on the local economy. The PNNL studies only considered the effect on the residential sector, but similar positive employment impacts would be expected within the commercial sector as well, so the overall impact would be even larger. The State of Massachusetts estimated similar job growth associated with their adoption of more advanced building energy codes: 3,000 jobs over 10 years.<sup>4</sup> As with other states, the impact of energy-efficiency on job creation has already grown quite large. In fact, energy-efficiency is now the largest energy sector employment category in Vermont accounting for 11,000 jobs, according the most recent NASEO/EFI report on state energy employment.<sup>5</sup>

Vermont should be congratulated for rolling up its sleeves and doing the hard work of implementing policy measures that match its climate and greenhouse gas emission goals. Unfortunately, far too many states

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<sup>2</sup> Business Council for Sustainable Energy and Bloomberg New Energy Finance, 2019 Sustainable Energy in America Factbook, February 2019, pg. 104. <http://www.bcse.org/factbook/#>

<sup>3</sup> MJ Scott and JM Niemeyer, Potential Job Creation in Nevada as a Result of Adopting New Residential Building Energy Codes, Pacific Northwest National Laboratory, September 2013. Same authors and dates for the reports for Minnesota, Rhode Island, and Tennessee. The study looked at the effect of moving from the 2009 IECC to the 2012 IECC for residential buildings. <https://www.energycodes.gov/potential-job-creation-result-adopting-new-residential-building-energy-codes>

<sup>4</sup> Massachusetts Secretary of Energy and Environmental Affairs, December 29, 2010, Massachusetts Clean Energy and Climate Plan for 2020, pg. 20. <https://www.greenneedham.org/blog/wp-content/uploads/2011/02/2020-clean-energy-plan.pdf>

<sup>5</sup> See: The 2019 U.S. Energy & Employment Report and Energy Employment by State--2019, by the National Association of State Energy Officials (NASEO) and the Energy Futures Initiative (EFI), <https://www.usenergyjobs.org/2019-report>.

have adopted lofty greenhouse gas emission reduction goals, but have not followed-up with concrete measures. Vermont is showing true leadership in this area.

### **About PIMA**

PIMA is the trade association for North American 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. Polyiso insulation products and the raw materials used to manufacture polyiso are produced in over 50 manufacturing facilities across North America.

Thank you for the opportunity to submit these comments. Please contact me should additional information be necessary ([jkoscher@pima.org](mailto:jkoscher@pima.org); (703) 224-2289).

Sincerely,



Justin Koscher  
President