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*Comment Received From: Justin Koscher  
Submitted On: 6/21/2024  
Docket Number: 24-BPS-01*

## **PIMA Comments**

*Additional submitted attachment is included below.*

Sent via [Electronic Commenting System](#)

June 21, 2024

California Energy Commission  
Docket Unit, MS-4  
Docket No. 24-BPS-01  
715 P Street  
Sacramento, California 95814

**Re: California Building Energy Performance Strategy Report  
Docket No. 24-BPS-01**

Dear Energy Commission:

Thank you for the opportunity to participate in the California Energy Commission's (CEC) outreach regarding the State's [strategy](#) for developing a building energy performance standard. Building performance standards can be an effective policy for reducing the negative environmental consequences of energy use in existing buildings. While building energy codes do apply to existing buildings, requirements are typically only triggered by alterations or additions. Furthermore, the scope and compliance levels are currently limited as it relates to existing buildings. Therefore, building performance standards would represent an additional and more comprehensive policy for addressing existing buildings and would also help encourage compliance with the building energy code.

**Question 1: Stakeholder Contact Information and Areas of Interest**

- *Names and email addresses of public contacts for you and your organization.*
  - Polyisocyanurate Insulation Manufacturers Association (PIMA)
  - Justin Koscher, President
  - [JKoscher@pima.org](mailto:JKoscher@pima.org)
- *What are your areas of interest in this report development process?*
  - PIMA is interested in the development and implementation of policies affecting existing building energy efficiency. In particular, PIMA is interested in requirements that draw attention to the need for renovating the building envelope (roofs and walls) of existing buildings.
- *Description of your organization and the constituency you represent.*
  - PIMA is the trade association for North American manufacturers of rigid polyiso foam insulation. This product 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 fifty (50) manufacturing facilities across North America. More information is available at [www.polyiso.org](http://www.polyiso.org).
- *What is the best way to outreach and engage with your constituency?*
  - Reach out through our the trade association (PIMA).

**Question 2: What building performance metrics (such as site energy use intensity, carbon dioxide equivalent emissions, or peak electric demand) should be considered in a building performance strategy? What building performance metrics could be used to trigger building-level interventions (such as enforcement, incentives, etc.)?**

Regarding the appropriate performance metric, SB 48 appears to suggest using a carbon dioxide equivalent metric. If this metric is selected, it would be important not to lose sight of the role that energy efficiency plays in facilitating (or enabling) other decarbonization measures such as effective implementation of electric heat pumps. Additionally, building energy efficiency measures are critical when it comes to managing energy use and grid demand regardless of whether the energy/electricity is generated from renewable sources or fossil fuels.

As stated in California's 2021 [Integrated Energy Policy Report](#) (IERP), "while electrification of buildings is a key strategy to decarbonizing buildings, energy efficiency remains a foundational strategy to limit load growth, keep consumer costs down, and reduce GHG emissions" (see volume one, page 19). Under the heading, "The Ideal Building: Efficient, Low Carbon, and Flexible," the 2021 IEPR goes on to describe buildings that do not rely on just one approach but use a combination of decarbonization measures that complement and reinforce each other creating the "ideal building."

For example, efficient building envelopes and high-performance windows not only improve comfort and reduce heating and cooling costs, but increase the potential for valuable automated load shift. Improving envelopes is a necessary first step to retrofitting the existing building stock toward this ideal building vision since it reduces energy costs regardless of fuel. An improved building envelope effectively creates additional thermal storage at no cost. Installing technology that communicates and automates demand shift while prioritizing customer needs can ensure that customers receive a share of the value they generate and that the changes persist over the long-term (see volume one, page 69).

**Question 5: What types of support and resources would be necessary to help building owners meet building performance targets?**

It would be useful to provide building owners with assistance that helps them anticipate and take advantage of the opportunities created by common building alterations that are a natural part of a building's lifecycle, such as reroofing and the replacement of equipment and controls. This type of assistance would support the directive under SB 48 that the building performance strategy provide "flexibility, to the extent feasible, for covered building owners to select among technology options and to align the timing of building upgrades with equipment replacement cycles" (emphasis added). See [SB 48](#). See [California Public Resource Code, Section 25402.16\(c\)\(3\)](#). Building owners that own and operate buildings within the scope of SB 48 should be required to complete building energy audits and develop multiyear asset management plans to implement the measures identified within the energy audit. This type of long-term planning will reduce the cost of compliance over time by aligning energy efficiency improvements with the natural replacement cycle of many building components. Additional information on the benefits of energy audits and long-term planning is included below.

**Question 9: How should cost effectiveness be measured and incorporated into building performance strategies or requirements? How should cost effectiveness be determined?**

Cost-effectiveness can be incorporated by requiring building owners to perform ASHRAE level 2 energy audits during each compliance period and using findings of those audits to guide which energy efficiency measures to pursue. Also, recognizing that the most cost-effective time to implement an energy efficient upgrade is during the replacement of equipment or a portion of the envelope, it would be beneficial to include an assessment of the expected useful life of building components as part of the BPS policy so that building owners can appropriately plan for these events and future opportunities for improving building performance.

Both can be accomplished by incorporating elements of ASHRAE Standard 100 (Energy Efficiency in Existing Buildings) as part of the BPS policy, as was done in Washington State. ASHRAE Standard 100, section 4, requires buildings that do not meet an EUI target to perform a level 2 audit and to implement measures found to be cost effective (see section 4.3.2.2). Additionally, section 5 of ASHRAE Standard 100 requires the development of a “capital management plan,” which is defined as a “financial plan to set aside capital to replace or upgrade building systems at the end of their useful life and/or to improve performance and energy efficiency” (see section 5.1.2.10).

With regards to expected useful lifetimes, Washington State has gone a step further and allows credit for energy efficiency measures that will be implemented in the future when the component is expected to be replaced (see Washington State BPS rule section Z4.5.1). In addition, Oregon is currently developing a BPS policy that will be modeled after ASHRAE Standard 100, so there will likely be compliance and implementation benefits if California selects a similar approach. See [Oregon Department of Energy BPS stakeholder engagement website](#).

Lastly, California should consider the development of prescriptive options that would provide an alternative compliance path for certain buildings. This set of prescriptive options may lower the cost of compliance for owners of smaller buildings who may lack the resources to complete comprehensive energy audits and the suite of improvements identified through such audits. While prescriptive options can be beneficial, the CEC should carefully evaluate the scope of buildings allowed to demonstrate compliance with the BPS policy under such a pathway to ensure that it does not provide a weakened loophole for buildings and/or owners that have the resources to comply with the performance-based pathway.

**Questions and Contact Information**

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