

DOCKETED	
Docket Number:	22-BSTD-01
Project Title:	2025 Energy Code Pre-Rulemaking
TN #:	253491
Document Title:	Tom Phillips Comments - Title 24 2025 Pre- Rulemaking Draft Express Terms
Description:	N/A
Filer:	System
Organization:	Tom Phillips
Submitter Role:	Public
Submission Date:	12/4/2023 11:41:17 AM
Docketed Date:	12/4/2023

*Comment Received From: Tom Phillips
Submitted On: 12/4/2023
Docket Number: 22-BSTD-01*

Title 24 2025 Pre- Rulemaking Draft Express Terms

Thank you for the extensive work to reduce the environmental impacts of buildings in California, and the opportunity to have input.

Here are my comments, in brief: the environmental impact review for the standards should address the impacts of climate change, and then propose mitigation measures, i.e.:

The interrelated risks of indoor overheating from much hotter and humid climates and increased urban heating.

The significant and increasing risks of power outages.

The standards should assess these risks for all climate zones, and either

1) propose or recommend mitigation packages that are the most cost effective over a buildings full life cycle, or

2) require a disclaimer for all buildings: "This building is not designed to provide thermal comfort and safety over their typical lifetime of 60+ year under changes in climate and urban heat; this may increase the risk of indoor overheating, health impacts, and reduced productivity." The disclaimer should be posted at the entrance of each building and in the building permit, design plans, and maintenance plans.

Note: if a building designer does develop a mitigation plan that is phased in over time, then a modified disclaimer should reflect this information.

More information is available in my previous comments on this and previous Title 24 and Cal Green Updates.

Rationale:

Building envelopes will last 60-100 years or more. If they are designed for our current climate, they will soon be maladapted due to climate change and will lock in inefficient, unhealthy buildings. The current approach of designing buildings based on historical climate and sizing HVAC systems based on historical extremes is ignoring the rapid and accelerating change in our climate. In fact, climate models have been found underestimate the extent of climate change, especially for extreme events, which are becoming much more common.

The indoor overheating risks and passive cooling solutions have been well documented, and several nations have overheating standards for new buildings. Such measures can not only reduce human health and productivity, but also reduce energy costs, embedded carbon, grid stress, and builder liability. These impacts will disproportionately

affect low income households, who tend to live in multifamily buildings, in hotter climate zones, and in homes with higher occupant densities - all factors that increase the risk of indoor heat exposure.

The future weather files and modeling methods are readily available to address and mitigate these impacts, as I have noted in previous comments on the Title 24 and Cal Green standards for several updates. Cal Adapt Data Analytics could also accelerate develop of more accurate, localized weather files. The National Passive House Network and the Passive House Institute of the United States are working on methods to address future climate change in their US standards.

Sincerely,
Tom Phillips
Healthy Building Research, Davis, CA