

*Comment Received From: ConSol on behalf of Toll Brothers  
Submitted On: 6/17/2021  
Docket Number: 21-BSTD-01*

**Toll Brothers - comment on requirements for duct insulation in conditioned space**

*Additional submitted attachment is included below.*



June 2nd, 2021

California Energy Commission  
1516 Ninth Street, Docket Office, MS-4  
Sacramento, CA. 95814  
docket@energy.ca.gov,

Dear Commissioners,

Re: Docket Number 21-BSTD-01 2022 Energy Code Update Rulemaking

Thank you for the opportunity to comment on the “Express Terms 2022 Energy Code, Title 24 Parts 1 and 6”, published to this docket on 5/6/2021. We appreciate the Energy Commission’s ongoing dedication to balancing the desire for increased energy efficiency in new construction with the needs and concerns of the building industry.

As a company, we are committed to building houses that are energy efficient, cost-effective, and affordable. As such, we are constantly open to new construction practices and technologies that will help us design and build homes as efficiently as possible, without impacting occupant comfort or livability.

We are therefore disappointed to see that the Express Terms include language that would reduce our options for conditioned air distribution by effectively banning the use of uninsulated ducts in conditioned space. Section 150.0(m)1B, covering duct insulation requirements, would only allow uninsulated ducts in fully exposed locations, which is not a realistic option for obvious aesthetic reasons. The realistic option for uninsulated ductwork is for it to be run in cavities within the building thermal envelope. This currently requires insulation of R-4.2, which is reduced to R-3 or R-1 in the Express Terms. While this reduction will potentially reduce the cost of ducts run in conditioned space, the requirement for these ducts to be insulated at all is, we believe, unnecessary and unduly burdensome.

There is no requirement for insulation on ducts in conditioned space in either the IRC or the IECC, and no US state requires ducts in conditioned space to be insulated. As a national builder, the need to change designs for the California market will impact our overall costs and our ability to deliver efficient houses to California customers.

While we understand the Commissions caution regarding potential condensation issues, we have used uninsulated ducts in houses in climates with higher humidity levels than California and have not had any problems related to condensation. Based on this experience, we are confident that uninsulated ducts can be used in California without issue.

We recommend that rather than further limiting the use of uninsulated ducts, the language in the Express Terms should be amended to allow the unrestricted use of uninsulated ducts in the building's conditioned space. This can be simply achieved by amending Section 150.0(m)1B to read:

“Portions of supply-air and return-air ducts and plenums of a space heating or cooling system outside of the buildings conditioned space shall be insulated to a minimum installed level of R-6.0”

Thank you for your consideration.

Sincerely,

A handwritten signature in blue ink, appearing to read 'John Mangano', with a large, stylized initial 'J' and a circular flourish at the end.

John Mangano  
Sr. Vice President  
Architecture & Business Technologies

JM/sf