

<b>DOCKETED</b>	
<b>Docket Number:</b>	19-BSTD-03
<b>Project Title:</b>	2022 Energy Code Pre-Rulemaking
<b>TN #:</b>	235138
<b>Document Title:</b>	UCLA additional hearing questions and answers
<b>Description:</b>	This document provides answers to four questions asked at the September 30 hearing that were not able to be responded to at the hearing.
<b>Filer:</b>	Peter Strait
<b>Organization:</b>	California Energy Commission
<b>Submitter Role:</b>	Commission Staff
<b>Submission Date:</b>	10/8/2020 1:09:28 AM
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**Strait, Peter@Energy**

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**Subject:** RE: FW: Additional Q&A entries following the workshop (and thanks!)

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**From:** Zhu, Yifang  
**Sent:** Wednesday, October 7, 2020 8:40 AM  
**To:** Strait, Peter@Energy <Peter.Strait@energy.ca.gov>  
**Cc:**  
**Subject:** RE: FW: Additional Q&A entries following the workshop (and thanks!)

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Hi Peter,

Thanks again for organizing the workshop. Please see my answers below.

Let me know if you have any further questions.

Best,  
Yifang

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**From:** Strait, Peter@Energy [mailto:[Peter.Strait@energy.ca.gov](mailto:Peter.Strait@energy.ca.gov)]  
**Sent:** Thursday, October 1, 2020 10:38 AM  
**To:**  
**Cc:**  
**Subject:** Additional Q&A entries following the workshop (and thanks!)

Hello Yifang,

First, my sincere additional gratitude for participating in our workshop yesterday. I am very glad that you were able to find time for us, and your presence was extremely valuable both for our Commissioner and for the stakeholder participants in the hearing.

As mentioned yesterday, the additional technical questions we received relating to your presentation are below. If you would like to provide responses to them, I will be happy to append them to the record of the proceeding. These are direct copy-and-paste from the Q&A log, so my apologies for the formatting.

Also, if you would like for us to docket a copy of your presentation, please feel free to send it to us via email and we can add it to the docket on your behalf.

The additional questions (there are four of them) follow:

Maninder Thind 10:17 AM

What were the assumptions for the PM2.5 exposure-response relationship used for estimating PM2.5-related mortalities in this study?

**We used an established log-linear health impact function and dose-response value that are pre-loaded in the EPA's BenMAP tool. This function assumes that there is a linear relationship between PM2.5 concentration and mortality for adults above 30 years of age. The BenMAP manual is a good reference for additional information: <https://www.epa.gov/benmap/benmap-ce-manual-and-appendices>**

Debra Kaden, PhD, ATS 10:59 AM

For Prof Zhu: 1. The model that the UCLA team used has many conservative assumptions, including no venting of gas appliances, significant back-drafting, use of appliances for heating, etc. For example, the report assumes short-term peak exposures can be directly compared to 1-hour AAQs, which implies that peaks last an entire hour. How long are peak exposures expected to last and wouldn't you expect 1-hour averages to be significantly lower than peaks?

**We did not simulate the length of peak exposures specifically. This is why we clarify in the report that with respect to acute health impacts, the peak values can only be directly compared to the 1-hour standards within a context where concentrations last for that entire 1-hour period. Generally, we would expect 1-hour averages to be lower than peaks, particularly for brief cooking periods like a 15-minute scenario.**

2 . Poor housing conditions disproportionately impact low income and minority populations. Replacing gas appliances with new, electric appliances will not address the broader mechanical ventilation deficits (which would improve all IAQ issues). Furthermore, modern, new appliances will add cost to the landlords, which will be passed right down to the tenants resulting in higher rents. Wouldn't it be more broadly effective to improve ventilation?

**This is an important topic but providing a comprehensive comparison is outside of the scope of this report. We agree that improving ventilation is incredibly important, particularly for vulnerable populations, which we do highlight within the report.**

Tom Phillips 10:59 AM

Dr.Zhu: re outdoor risks, how much will those be reduced as we decarbonize the grid over the next decades?

**We did not assess any alternate scenarios for grid decarbonization - our report assumed 100% clean energy is used for powering electricity as a means of looking beyond the transition period to zero-carbon resources.**

Thank you, and please let us know if there is anything else we can do for you. Also, if you would like to be informed of the followup workshop, we can add you to our email listserv or can notify you separately when the Notice is developed and posted.

Best regards,

Peter Strait (he/him or they/them)

Supervisor, Standards Development, Building Standards Office

California Energy Commission

1516 9<sup>th</sup> Street, MS 37

Sacramento, CA 95814

[www.energy.ca.gov](http://www.energy.ca.gov)