



**CALIFORNIA
ENERGY**
CODES & STANDARDS

A STATEWIDE UTILITY PROGRAM

Second Stakeholder Meeting for Residential and Nonresidential IAQ Topics

March 16, 2017

WEBINAR



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ENERGY**
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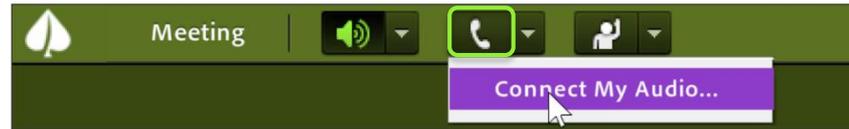
Meeting Agenda

Time	Topic	Presenter
9:00 – 9:20	Introduction	Kelly Cunningham (PG&E)
9:20 – 10:35	Residential Indoor Air Quality (IAQ)	David Springer (Davis Energy Group)
9:20 – 11:50	Nonresidential Indoor Air Quality (IAQ)	Ryan Sit (Integral Group)
11:50 – 12:00	Review and wrap-up, next steps	Kelly Cunningham (PG&E)

Hear and Be Heard!



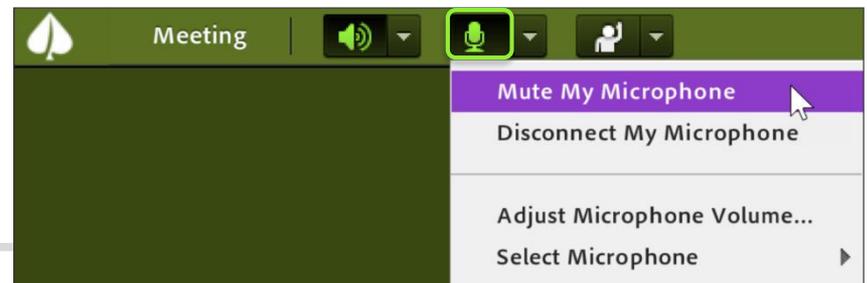
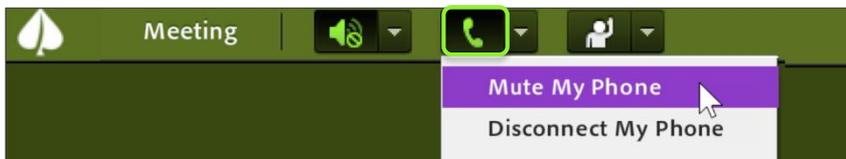
- Click the phone icon at the top of your screen, then follow the prompts



- If you connect via phone, mute your PC speakers to avoid feedback

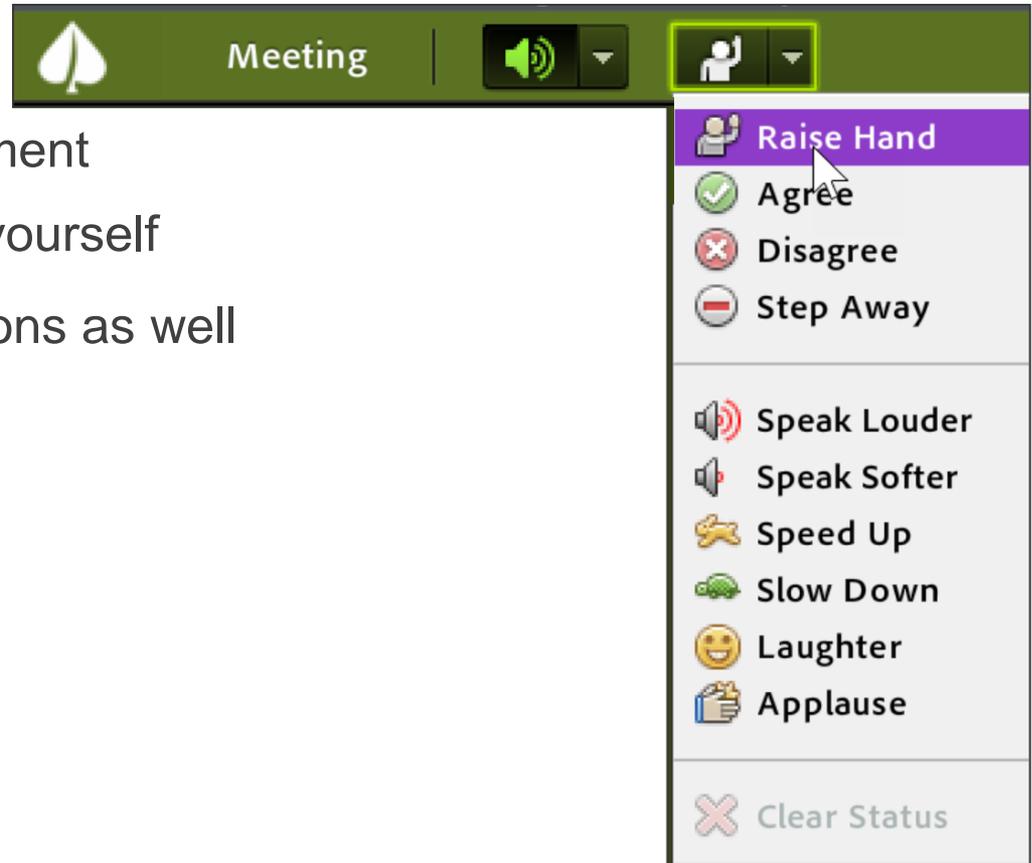


- Mute your phone or microphone to avoid contributing unwanted background noise — unmute yourself when you want to talk

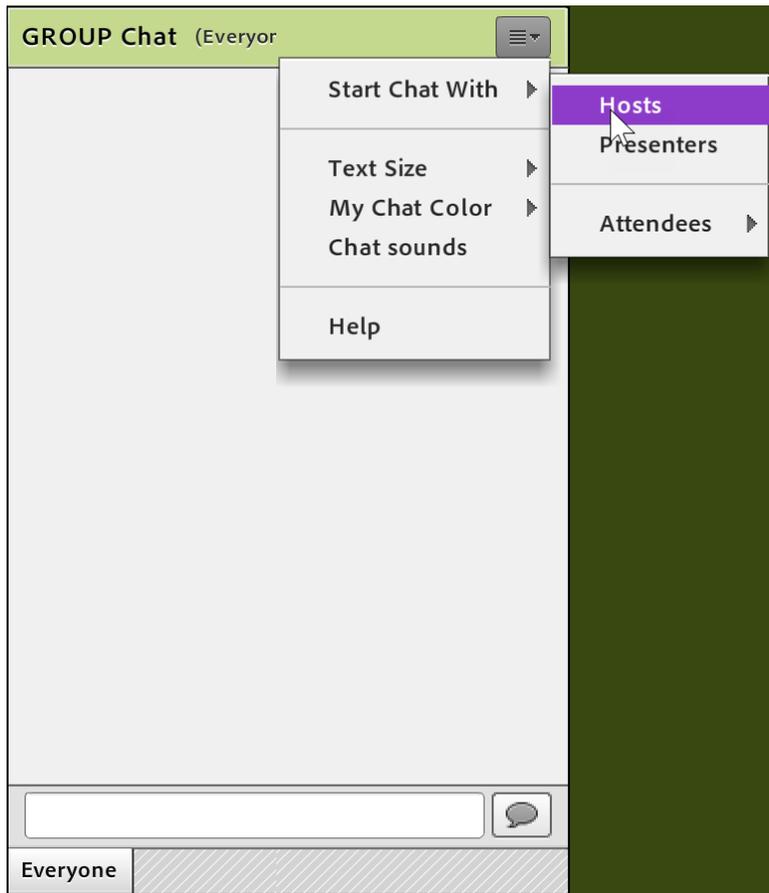


Communicate with Icons

- Raise your hand
 - We'll call on you in a moment
 - Don't forget to "unmute" yourself
- Feel free to use the other icons as well



Technical Support for the Meeting Room



Tech support is standing by

- Use “Chat” (lower left of your screen)
- Direct your question or comment to “Hosts”
- Give us a moment to chat back

Supporting Resources

- Click on links in the Downloads pod
- Use “tabs” to switch between general downloads and laboratory-specific downloads

Click on a “tab” to switch between views
(It changes your view, but not others’)

DOWNLOADS

General Laboratory

- Title 24, Part 6 Stakeholders website (Title24Stakeholders.com)
- ▷ Statewide Utility-sponsored Stakeholders Meetings
- ▷ Meeting Notes: First Stakeholders Meeting — Laboratory Measures
- Energy Code Ace website (EnergyCodeAce.com)
- ▷ See **Reference Ace** for 2016 Standards, Appendices, and Compliance Manuals
- California Energy Commission 2019 Standards webpage
- Second Stakeholder Meeting for Laboratory Measures: Appendix to Introduction

How to save downloaded files

DOWNLOADS

General Laboratory

- Advanced Exhaust Dispersion Design
- Laboratory Standards and Guidelines
- Market Assessment of Energy Efficiency Opportunities in Laboratories
- Modeling Exhaust Dispersion for Specifying Acceptable Exhaust/Intake Designs
- ASHRAE Feature: Saving Energy in Lab Exhaust Systems
- Specifying Exhaust Systems That Avoid Fume Reentry and Adverse Health Effects
- Stakeholder input request
- DRAFT CODE LANGUAGE: Variable Exhaust Flow Control
- DRAFT CODE LANGUAGE: Fume Hoods

How to save downloaded files

Statewide Utility Team Title 24, Part 6 Advocacy Support

- The Utilities support the California Energy Commission by proposing changes to the Building Energy Efficiency Standards that are:
- Feasible | Cost effective | Enforceable | Non-proprietary



Statewide Utility Team Title 24, Part 6 Advocacy Support

- For information on the Energy Commissions' rulemaking process, visit: <http://www.energy.ca.gov/title24/2019standards>



Objectives of Today's Discussion

Discuss and get input on:

- Code change proposals
- Technical and market feasibility
- Compliance and enforcement
- Cost effectiveness results (preliminary)
- Energy savings analysis (preliminary)

YOUR PARTICIPATION WILL INFORM THE CODE CHANGE PROPOSALS!



Invitation to Participate

We want to hear from you

- Supporting and opposing viewpoints are welcome
- We may not be able to reach resolutions today
- There are no stupid questions
- Mute your phone, but do not place us on 'hold'
- Clearly state your name and affiliation prior to speaking
- Speak loudly (without shouting)

NOTES & PRESENTATION MATERIALS: www.Title24Stakeholders.com

Invitation to Participate

Participate in today's discussion by:

- Answering polls
- Use chat function
- Speak up and ask questions

Continue the discussion:

- Email or call CASE Authors
- Email info@title24stakeholders.com
- Contact California Energy Commission staff

NOTES & PRESENTATION MATERIALS: www.Title24Stakeholders.com

Utility-Sponsored Stakeholder Meetings, March 2017

#	Date	Time	Meeting Group	Measures in Group
1	March 07, 2017	9:00 - 12:00	Laboratory Spaces	<ol style="list-style-type: none"> 1. Induction Exhaust Fans 2. Fume Hood Sash Closures
2	March 14, 2017	9:00 - 12:00	Residential Envelope	<ol style="list-style-type: none"> 1. Residential High Performance Walls 2. Residential High Performance Attics 3. Residential Improved Fenestration Products 4. Residential Quality Insulation Installation (QII)
3	March 15, 2017	9:00 - 12:00	Nonresidential HVAC 1	<ol style="list-style-type: none"> 1. Proposal Based on ASHRAE 90.1-2016 <ol style="list-style-type: none"> a. (1 of 7) Water Side Economize 2. Cooling Tower Minimum Efficiency 3. Fault Detection Diagnostics (FDD) for Built-up Systems
4	March 16, 2017	9:00 - 12:00	<ul style="list-style-type: none"> • Residential HVAC • Residential/ and Nonresidential IAQ 	<ol style="list-style-type: none"> 1. Residential Quality HVAC 2. Residential Indoor Air Quality (IAQ) 3. Nonresidential Indoor Air Quality (IAQ)
5	March 21, 2017	9:00 - 12:00	Warehouses	<ol style="list-style-type: none"> 1. Hybrid Condensers 2. Loading Dock Seals

MEETING SCHEDULE ALSO AVAILABLE AT: www.Title24Stakeholders.com



Stakeholder Meetings in March 2017 (continued)

#	Date	Time	Meeting Group	Measures in Group
6	March 22, 2017	9:00 - 12:00	Nonresidential Lighting 1	<ol style="list-style-type: none"> 1. Nonresidential Indoor Lighting Sources 2. Nonresidential Indoor Light Controls 3. Nonresidential Lighting Alterations
7	March 23, 2017	9:00 - 12:00	Residential Water Heating	<ol style="list-style-type: none"> 1. Residential Compact Hot Water Distribution Design 2. Residential Drain Water Heat Recovery
8	March 28, 2017	10:00 - 12:00	Demand Response	<ol style="list-style-type: none"> 1. Demand Response Clean Up
9	March 29, 2017	9:00 - 12:00	Nonresidential HVAC 2	<ol style="list-style-type: none"> 1. Proposal Based on ASHRAE 90.1-2016 <ol style="list-style-type: none"> a. (2 of 7) Fan System Power b. (3 of 7) Exhaust Air Energy Recovery c. (4 of 7) Equipment Efficiency d. (5 of 7) Transfer Air for Exhaust Air Makeup e. (6 of 7) Demand Control Ventilation for Classrooms f. (7 of 7) Occupant Sensor Ventilation
10	March 30, 2017	9:00 - 12:00	Nonresidential Lighting 2	<ol style="list-style-type: none"> 1. Nonresidential Outdoor Lighting Sources 2. Nonresidential Outdoor Lighting Controls 3. Nonresidential Advanced Daylighting Design

Tentative Schedule for 2019 Code Development Cycle

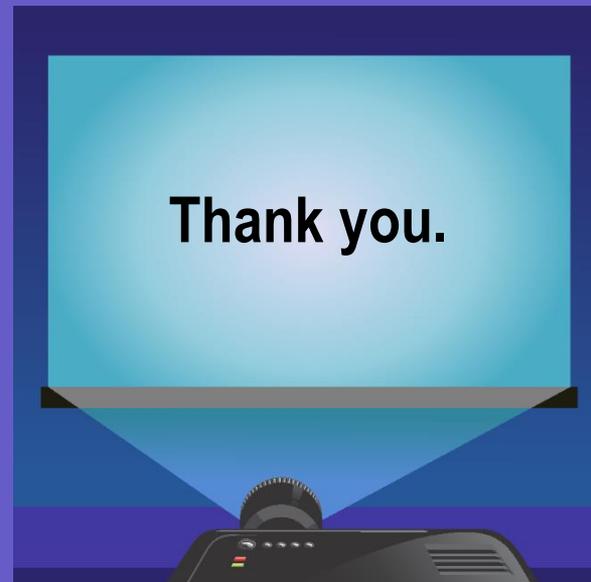
Milestone	Date(s)
Utility-Sponsored Stakeholder Meetings	March 2017
Utility Team Submits Draft CASE Reports	April 2017
CEC Pre-rulemaking Workshops	May 2017 – June 2017
Utility Team Submits Final CASE Reports	June - July 2017
CEC Rulemaking	Nov 2017 – May 2018
2019 Standards Adopted	May 2018
2019 ACM Reference Manuals and Compliance Manuals Approved	Nov 2018
2019 Standards Effective	January 1, 2020

Are you ready to participate?



Let's move on to...

Variable Exhaust Flow Control



- **Kelly Cunningham**
KACV@pge.com