Meeting Notes

Posted May 2023

Notes from 2025 Title 24, Part 6 Code Cycle Utility-Sponsored Stakeholder Meeting for:

Nonresidential Covered Processes: Laboratories

Meeting Information

Meeting Date: 5/10/2023
Meeting Time: 9:00 am – 10:45 pm
Meeting Host: California Statewide Utility Codes and Standards Enhancement Team

Meeting Agenda

Time	Topic	Presenter
9:00 AM	Welcome and Introduction	Nikki Westfall, Energy Solutions Javier Perez, PG&E Mark Alatorre, PG&E
9:20 AM	Overview	Jeff Stein, Taylor Engineers
9:25 AM	Night Set-Back, Exhaust Fan Control, Heat Recovery Backup, and Summary of Stakeholder Feedback	Jeff Stein Taylor Engineers
10:10 AM	Cost Effectiveness, Energy Savings	Abed Alkhatib, Energy Solutions
10:30 AM	Summary	Jeff Stein Taylor Engineers, Abed Alkhatib, Energy Solutions
10:35 AM	Conclusion / Wrap-Up	Nikki Westfall, Energy Solutions
10:45 AM	Adjourn	

Members of the CASE Team

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Meeting Participants (available upon request by emailing info@title24stakeholders.com)

Action Items from Meeting

- The Statewide CASE TEAM followed up on all questions or comments that required a response and were not discussed during the meeting.

Key Points from Meeting

This proposal for Nonresidential Covered Processes, Laboratories is important because:

- The Laboratories proposed code update would reduce energy use by requiring airflow turn-down when labs are unoccupied; prescriptively require exhaust air heat recovery; prescriptively limit reheat by requiring heating/cooling at each zone; and offer another pathway for compliance for reducing exhaust fan power loads, but still provide exceptions for health and safety considerations.

Stakeholder Feedback Impacting Proposals

CASE Teams rely on feedback from stakeholders to create the best proposals possible. Since Round 1, stakeholder input has impacted this proposal in these ways:

- Stakeholder feedback regarding Heat Recovery Requirement issues were raised; space constraints a heat recovery coil and the exhaust plenum needs a velocity of no higher than 500 ft per minute (compared to 2,000 ft per minute without the coil).
    - In response, we did more analysis and saw that heat recovery can actually reduce space. Although there will be a larger exhaust plenum, it reduces

the mechanical load and if you're using electric heat you'll use a heat pump on the roof, reducing space needed; heat recovery reduces roof space required for heat pumps. We reviewed labs with HR and found sufficient space if total exhaust is =20 cfm/ft2. We added an exception for above 20 cfm/ft2.

- Other stakeholder feedback included that 'lab exhaust heat recovery to a heat recovery chiller can be just as efficient'.
    - As a response, we added a new exception for labs that recover heat to a heat recovery chiller, which provides another option.

MEETING NOTES

During the meeting, questions and comments were submitted in three distinct formats which are provided in these meeting notes in these [hyperlinked for quick access] sections:

1. **In-Meeting Questions / Comments:** Questions and comments submitted verbally during the meeting via the 'raise hand' function in GoTo Webinar, where participants were unmuted to speak, or in some cases, comments submitted in writing were discussed verbally during the meeting (in which case the person that commented may not be identified in these notes).
2. **Questions / Comments Submitted Via GoTo Webinar:** See this section for questions and comments submitted in written format via the GoTo Webinar question pane.
3. **Mentimeter Polls & Responses:** This section includes public comments and questions, including screen shots of the polls that were conducted during the meeting, and responses to those polls.

Due to time limitations, not all written questions and comments were discussed during the meeting but all have responses available in these meeting notes.

In-Meeting Questions / Comments

Overview, Jeff Stein

1. **Question asked via GoTo Webinar question pane by Aaron Wintersmith: Can you clarify the setback proposal. Night setback and unoccupied setback are not equivalent. Night setback could be achieved with a schedule, unoccupied would require sensors etc. at described.**
    a. CASE Team Response (Jeff Stein): To clarify, technically this is un-occupied setback. We're proposing it be based on actual measured occupancy so would apply only when the space is truly unoccupied. You're not required to do the setback when the space is scheduled to be unoccupied but the occupancy sensor indicates the space is in fact occupied. We don't use the term 'night setback' in the code language and have removed it from the CASE report.

2. **Verbal question asked via GoTo Webinar question pane by Ted Tiffany: Is this going to change the 300 Ton air cooled chiller limitation if it's a heat recovery air source heat pump?**
    a. CASE Team Response (Jeff Stein): I don't think it will change the limit but a heat recovery chiller is not an air source chiller. There's a separate category for air source chillers. It doesn't necessarily fall under the 3 ton limit.

Night Set-Back, Exhaust Fan Control, Heat Recovery Backup, and Summary of Stakeholder Feedback

3. **Comment via GoTo Webinar by Aaron Wintersmith: How are exhaust regulated?**
    a. CASE Team Response (Jeff Stein): The current code says if your design fume exhaust rate is greater than minimum ventilation rate (i.e, hood-dominated) then the fume hoods must be VAV and capable of turning down to the minimum ventilation or pressurization rate. Some VAV hoods are also required to have auto sash closers. The proposal basically says the system needs to be able to turn down to the occupied minimum rate when occupied and the minimum unoccupied rate when unoccupied.

4. **Question asked via GoTo Webinar question pane by Aaron Wintersmith: About ACH subscript ACH subscript 10 is an entirely new metric for the industry/country. I'm not aware that ASHRAE or other reference standards use such. This is likely to cause significant complications.**
    a. CASE Team Response (Jeff Stein): I share that concern and it's possible it would drop this entirely. Air changes has been the metric people use. There are in-house standards for air changes in labs. We want to recognize what the industry is using but also recognize it's a fairly flawed metric. This may not be the final language.

5. **Question asked via GoTo Webinar question pane by Ted Tiffany: Are you applying this new requirement to laboratories within the healthcare occupancy/ HCAI? Or is there a clear exception for HCAI?**
    a. CASE Team Response (Jeff Stein): We haven't changed the current healthcare exception. Healthcare facilities are exempt from all of the lab requirements in section 140.9(c), including the new ones proposed herein.

6. **Question asked via GoTo Webinar question pane by Stephen Hemply: How would this apply if at all to clean room environments being maintained at positive pressure relative to their exterior while containing wet chemical benches exhausted for employee health protection?**
    a. CASE Team Response (DJ Joh): The proposed code for turndown has such exceptions. If there's a concern about contamination the turn down does not apply.
    b. CASE Team Response (Jeff Stein): Likewise, there's another pressurization exception – you are not required to turn down below what you need for pressurization.

Cost Effectiveness and Energy Savings, Abed Alkhatib

No questions were asked verbally during this part of the meeting.

Wrap-Up

- All 20 Draft CASE Reports will be posted May through June at title24stakeholders.com
- Meeting adjourned at 10:47 AM

Questions / Comments Submitted Via GoTo Webinar

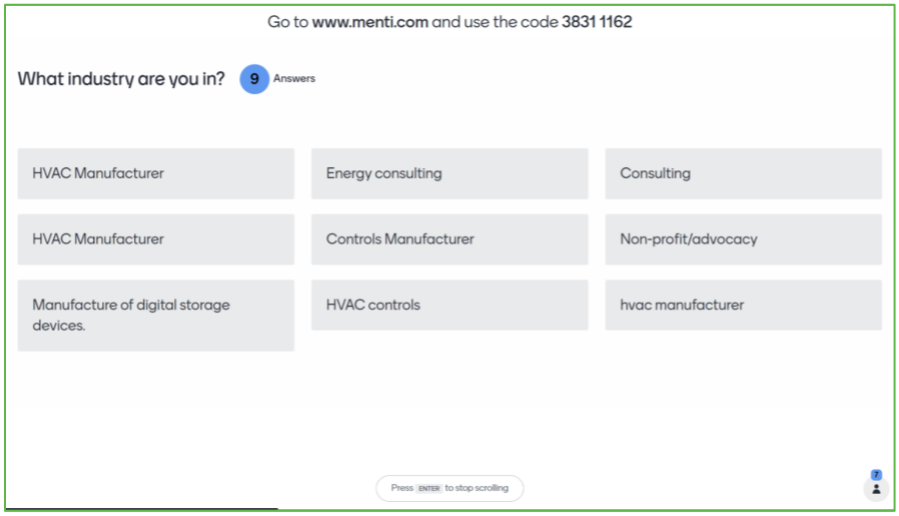
The questions and comments below are provided as-submitted in the GoTo Webinar Question pane. Responses provided by CASE Team support team. In addition, some of these questions were verbally discussed during the meeting and are captured in the In-Meeting Questions / Comments section above.

Participant	Question Asked	Response	Responder
John Bade	Is it expected the cooling coils in the zones will not need to provide dehumidification?	Zone cooling coils will provide sensible and latent cooling. The cost of condensate drains is included.	Jeff Stein
John Bade	My question about dehumidification has been answered. I see the condensate drain on the drawing.	Thank you!	Cosimina Panetti
Jim Coogan	The CASE team asked: Are there any requirements that prevents a reduction in airflow when labs are unoccupied? If the sources of contamination continue in an unoccupied lab, is that part of the answer?	Yes, ES&H exceptions allows for turndowns to be avoided in the case of contamination concerns.	Joh DJ
Jim Coogan	Should the code address that explicitly?	See responses to the question above and below.	Jeff Stein
Jim Coogan	that was a reference to the question I submitted right ahead of it. about contaminants in unoccupied labs	The risk of contaminants in unoccupied labs is lower than in occupied labs both because accidents are less likely to occur and because no one is there to be impacted by an accident. Thus unoccupied setback is now common in labs. Some labs use active contaminant monitoring to further set back rates when contaminant levels are acceptable (I believe UC Irvine uses monitoring and 4 ACH occupied and 2 ACH unoccupied). In addition to the EH&S exception, the requirement only says “capable of reducing…”. It does not prohibit overriding normal ventilation if an	Jeff Stein

Participant	Question Asked	Response	Responder
		active contaminant monitoring system indicates high contaminant levels.	
Stephen Hemperly	What indoor air quality standards are being used to ensure building occupant health is not compromised by energy reduction efforts?	All measures have an HSE exception that ensures that all HVAC setpoints and levels do not interfere with existing health and safety levels for contaminants and air change rates.	Joh DJ
Stephen Hemperly	How would this apply if at all to clean room environments being maintained at positive pressure relative to their exterior while containing wet chemical benches exhausted for employee health protection?	ES&H requirements have a specific exemption from the proposed code; proposed changes would not impact this scenario if turndown could impact the ES&H – design setpoints.	Joh DJ
Ted Tiffany	Is this going to change the 300 Ton air cooled chiller limitation if it's a heat recovery air source heat pump?	The Cooling Tower CASE Report is revising that requirement to make it clear that it does not apply to heat recovery chillers.	Jeff Stein
Ted Tiffany	That is NOT clear in the standards, it should be clarified.	See clarification in this case report: https://title24stakeholders.com/wp-content/uploads/2023/05/2025_T24_CASE-Report-DRAFT_Cooling-Tower-Efficiency-1.pdf	Jeff Stein
Ted Tiffany	Are you applying this new requirement to laboratories within the healthcare occupancy/ HCAI?	140.9C is exempt for healthcare facilities.	Joh DJ
Ted Tiffany	or is there a clear exception for HCAI?	Yes	Jeff Stein
Aaron Wintersmith	Can you clarify the setback proposal. Night set back and unoccupied setback are not equivalent. Nigh setback could be achieve with a schedule, unoccupied would require sensors etc. at described.	Technically this is unoccupied setback because it calls for occupancy sensors to setback to unoccupied rates. We will update the CASE report to use “unoccupied setback” rather than “night setback”	Jeff Stein
Aaron Wintersmith	Regarding setback airflow rates. How is general exhaust vs. fume hood exhaust considered/regulated? I might expect fume hood exhaust to be independent of occupied status ...	That part of the requirement is not really changed. If the design flow rates for the fume hoods are above 6 ACH occupied/ 4 ACH unoccupied then the fume hoods need to be VAV hoods so that the total exhaust rate is reduced to 6 ACH occ and 4 ACH unoccupied (or as required by code, EH&S, etc.)	Jeff Stein
Aaron Wintersmith	ACH subscript 10 is an entirely new metric for the industry/country. I'm not aware that ASHRAE or other reference standards use such. This is likely to cause significant complications	ACH subscript 10 has been removed from the proposed language	Jeff Stein

Mentimeter Polls & Responses

Introduction Poll



There were no other responses to the in-meeting polls that asked for feedback during the meeting, as attendees chose to use GoTo Webinar for questions and comments.