



CALIFORNIA STATEWIDE UTILITY CODES AND STANDARDS PROGRAM



Notes from May 7, 2014 Stakeholder Meeting

Posted May 27, 2014

MEETING INFORMATION

Meeting Date: May 7, 2014

Topics Discussed: Nonresidential Envelope U-factors , Elevators Lighting & Ventilation, Escalators & Moving Walkways Speed Controls

Host: California Statewide Investor Owned Utility Codes and Standards Team

ATTENDEES

First Name	Last Name	Contact	Organization
IOU CASE TEAM			
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OTHER PARTICIPANTS			
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William	Callahan	Director@arcbac.org	Associated Roofing Contractors of the Bay Area Counties

MEETING AGENDA

11:00 - 11:15	Introduction: Overview of 2016 Title 24 Development; Summary of stakeholder outreach purpose and procedure
11:15 - 12:15	Nonresidential Envelope U-factors
12:15 - 12:30	BREAK
12:30 - 1:00	Residential and Nonresidential Elevators Lighting & Ventilation (Based on ASHRAE 90.1)
1:00 - 1:30	Nonresidential Escalators & Moving Walkways Speed Control (Based on ASHRAE 90.1)
1:30 - 1:45	Review and wrap-up, next steps

RECAP

- ◆ Overall
 - IOU CASE Team requesting stakeholders. Stakeholders can provide input to CASE Authors or to info@title24stakeholders.com.
 - IOU CASE Team encourages stakeholders to review content on Title24Stakeholders.com.
- ◆ Nonresidential Envelope U-factors
 - For nonresidential buildings, the primary objective of the 2016 code change is to maintain Title 24 standards so the resulting energy performance is equal to or better than energy performance of buildings that comply with ASHRAE 90.1-2013. We are focusing primarily on opaque U-factors because the opaque standards in ASHRAE 90.1-2013 are more stringent than Title 24 opaque standards.



- Some stakeholders commented that the envelope measures should not be mandatory. Addressing mandatory envelope requirements is outside the scope of this particular code change proposal. CEC is interested in working with stakeholders to better understand concern.
- Additional insulation does not worsen acoustic quality and sound transmission levels, but lightweight, rigid insulation alone may not be sufficient to reduce sound transmission from the outdoors in areas where this is a concern
- Air leakage is addressed in Title 24, but it is not addressed in this code change proposal.
- ◆ Elevator Lighting and Ventilation
 - ASHRAE 90.1-2013 lighting requirement is 35 lumens per watt. CEC and NRDC encourage IOU Team to propose a more stringent requirement. IOU CASE Team will investigate a higher lpw requirement.
 - It is important that lights and ventilation remain operable if the elevator gets stuck. IOU CASE Team will investigate this issue.
- ◆ Escalator and Moving Walk Way Speed Controls
 - Speed controls are relatively new to the California market. May be better to time test before making mandatory.
 - NRDC, CEC, CAL/OSHA recommend making requirement prescriptive as opposed to mandatory. CASE Team will investigate this option.
 - Title 8 Elevator Safety Orders are currently based on ASME A17.1 2004, which does not allow speed controls for moving walkways. CAL/OSHA in the process of updating to reference A17.1-2013, which does allow speed controls. Expect CAL/OSHA will adopt the 2013 version within the year. CEC cannot adopt the Part 6 Title 24 until Title 8 is updated.

MEETING NOTES

These notes summarize the discussion at the IOU-sponsored stakeholder meeting that occurred on May 7, 2014.

Overview of 2016 Title 24 Development

- ◆ Heidi Hauenstein (Energy Solutions) presented
- ◆ Presentation available here: http://title24stakeholders.com/wp-content/uploads/2014/05/U-factors_Elevator_Escalator-Stakeholder-Meeting_May7_2014.zip
- ◆ No comments or questions received during stakeholder meeting.

Nonresidential Envelope U-factors

- ◆ John Arent (Architectural Energy Corporation, on behalf of the Statewide IOU C&S Team) presented
- ◆ Presentation available here: http://title24stakeholders.com/wp-content/uploads/2014/05/U-factors_Elevator_Escalator-Stakeholder-Meeting_May7_2014.zip



Comments and Feedback:

- ◆ When will the proposed envelope requirements be available?
 - Approximately 4 – 6 weeks.
- ◆ Mark Nowak: Why focus on opaque envelope?
 - John Arent: The Energy Commission has stated that residential measures, particularly measures that will allow California to meet 2020 ZNE goals, is the focus of the 2016 code change cycle. For nonresidential buildings, the primary objective is to maintain Title 24 standards so the resulting energy performance is equal to or better than energy performance of buildings that comply with ASHRAE 90.1-2013. We are focusing primarily on opaque U-factors because the opaque standards in ASHRAE 90.1-2013 are more stringent than Title 24 opaque standards.
- ◆ David Goldstein: CEC should harmonize residential requirements so buildings with 3 stories or fewer have the same or similar requirements as buildings with more than 3 stories. Currently, residential buildings with more than 3 stories are classified as nonresidential.
 - Mazi Shirakh: CEC does not disagree, but the Energy Commission does not have enough resources to address everything. Harmonizing the residential standards is not the highest priority objective. It will have to wait until the 2019 code cycle or later.
 - Heidi Hauenstein: We will not be discussing residential measures today. Residential envelope measures will be discussed at the May 8, 2014 Stakeholders meeting.
- ◆ Jeff Stein: Envelope measures should not be mandatory. How did they end up as mandatory measures? They are not cost effective, and will likely result in significant backlash. Can the mandatory requirements be removed with an emergency rulemaking?
 - Steve Gross: Interface Engineering agrees with this concern.
 - Mazi Shirakh: The mandatory standards were established in 2008. There were opportunities to weigh in during the 2008 code change cycle.
 - John Arent: There are both mandatory and prescriptive requirements in Title 24. The mandatory requirements are not as stringent as prescriptive requirements.
 - John Arent: The mandatory requirements were established using the efficiency levels that were cost effective in all climate zones. That is, the “least stringent” efficiency levels from all California climate zones.
 - Jon McHugh: According to CEC’s lifecycle cost methodology, envelope measures are evaluated over a 30-year period of analysis. If a measure pays back within 30 years, it passes cost effectiveness requirements.
 - Mazi Shirakh: There will not be an emergency rulemaking, but if there are reasons that we should remove the mandatory requirements CEC could consider the change for the 2016 rulemaking.
 - John Arent: Modifying the mandatory requirements is not included in the scope of the measure presented today.
 - **IOU CASE Team will work with CEC, Jeff Stein, and others that want to participate to set up a separate call to discuss this issues.**
 - Mazi Shirakh: Request that Jeff Stein and other stakeholders provide summary of issues prior to this call so CEC and IOU CASE Team can come to call prepared. Please send input to IOU CASE Team and copy Mazi from CEC.
- ◆ Jon McHugh: Are you mapping California climate zone 15 to ASHRAE 2?
 - John Arent: I will have to check, but believes it is a hybrid between ASHRAE 2 and 3



- John Arent: It is difficult to map California climate zone 16 to ASHRAE climate zone because climate zone covers a wide geographic region. (Depending on the county and local elevation, climate zone 16 can map to ASHRAE climate zone 3, 4, 5 or 6)
- ◆ Mark Nowak: How do you account for interaction of multiple envelope components?
 - John Arent: We are looking at component each individually. In past code cycles, the Energy Commission has analyzed groups of measures together. This analysis of multiple measures occurs after the IOU Team proposals have been submitted.
- ◆ David Goldstein: Plug load and lighting energy use will account for increasingly large portion of overall building energy use. Consider reduced internal gains to see how future plug load and lighting efficiency will play into energy use projections.
 - John Arent: This is not in the scope, but we can discuss this issue.
- ◆ Jon McHugh: Please explain impacts on acoustics sound transmission.
 - John Arent: Additional insulation does not worsen acoustic quality and sound transmission levels, but lightweight, rigid insulation alone may not be sufficient to reduce sound transmission from the outdoors in areas where this is a concern, and may require other measures, such as staggered studs or gypsum board, to meet high performance requirements in ASHRAE 189.1.
- ◆ David Goldstein: Does this proposal address air leakage?
 - Air leakage is addressed in Title 24, but it is not addressed in this code change proposal.

Follow Up Items

- ◆ IOU CASE Team will work with CEC, Jeff Stein, and others that want to participate to set up a separate call to discuss this issues.
 - CEC requested that stakeholders provide summary of issues prior to this call so CEC and IOU CASE Team can come to call prepared. Please send input to IOU CASE Team and copy Mazi from CEC.



Elevator Lighting and Ventilation

- ◆ John Baffa (ASWB Engineering, on behalf of the Statewide IOU C&S Team) presented
- ◆ Presentation available here: http://title24stakeholders.com/wp-content/uploads/2014/05/U-factors_Elevator_Escalator-Stakeholder-Meeting_May7_2014.zip

Comments and Feedback:

- ◆ David Goldstein: LEDs get a lot higher efficacy than 35 lumens per watt. Suggest increasing lumens per watt requirement.
 - John Baffa: IOU CASE Team proposed 35 lumens per watt because that is consistent with the ASHRAE 90.1-2013 standards.
 - Mazi Shirakh: I agree that 35 lumens per watt is weak and that we can propose a standard that is more stringent than ASHRAE 90.1-2013.
 - Jon McHugh: Are there any preemption issues with proposing a lumens per watt requirement?
 - Mazi Shirakh: There may be preemption issues. There should not be a problem if the standard is set at 45 lumens per watt, and therefore recommended that the IOU CASE Team include a 45 lumen per watt requirement in their proposal.
 - **CASE Team will investigate increasing the lumens per watt requirement for elevators.**
- ◆ Mike Shields: Would requirement apply to existing elevators?
 - John Baffa: No. It would only apply to new elevators and for major renovations .
- ◆ Mike Shields: What happens when there is an error / failure in the elevator? Is the sensor smart enough to keep the lights and ventilation on when people are stuck inside?
 - John Baffa: Occupancy sensor should sense people in the elevator and keep lighting and ventilation on.
 - Mike Shields: Not sure all manufacturers are using occupancy sensors. Some may be using timers, putting sensors on doors, or using some other mechanism.
 - Jon McHugh: Would it makes sense to have an override button that an occupant can push to make sure lighting and HVAC remain on.
 - **CASE Team will investigate ways to keep lights and ventilation on if elevator gets stuck, including considering specifying which type of sensors can be used for Title 24 compliance.**
- ◆ Mike Shields: There used to be an elevator code in Title 24. Not sure which part of Title 24 it was in.

Follow Up Items

- CASE Team will investigate increasing the lumens per watt requirement for elevators.
- CASE Team will investigate ways to keep lights and ventilation on if elevator gets stuck, including considering specifying which type of sensors can be used for Title 24 compliance.



Escalator and Moving Walk Way Speed Controls

- ◆ John Baffa (ASWB Engineering, on behalf of the Statewide IOU C&S Team) presented
- ◆ Presentation available here: http://title24stakeholders.com/wp-content/uploads/2014/05/U-factors_Elevator_Escalator-Stakeholder-Meeting_May7_2014.zip

Comments and Feedback:

- ◆ Mike Shields: Would the escalator and moving walk way control measure apply to retrofits?
 - John Baffa: It will not apply to routine maintenance that does not trigger code. It would apply to major retrofits.
- ◆ Mike Shields : Requirements for escalator sleep mode are fairly new and not time tested.
- ◆ Mike Shields : There is variability in sensor performance. One manufacturers' sensors do not sense black well.
 - John Baffa: Agree. We have also heard that some sensors do not work well when people approach from the side.
- ◆ Mike Shields: There may be safety concerns. We do not have a good sense of how the controls will work. Surest way to provide safety is to not modulate speed at all.
- ◆ Mike Shields: We believe this should be permissible, but not required.
 - David Goldstein: Why not make this a prescriptive requirement instead of a mandatory measure? This way people can choose not to install the controls if they are concerned about safety. I think most people will choose to install the controls, but they have the option not to do it.
 - IOU CASE Team and CEC agree that this is a good idea.
 - Mike Shields: Apart from safety concerns, there are some building designs where controls may not be desirable due to the building layout, or expected usage patterns.
 - **CASE Team will investigate making escalator and moving walkway controls requirements prescriptive as opposed to mandatory.**
- ◆ Mike Shields: Cost assumptions are probably reasonable.
- ◆ Mike Shields: Maintenance cost savings would be realized because the controls reduce wear and tear on equipment so equipment has to be replaced less frequently. A 2% reduction in annual maintenance costs seems reasonable. Labor costs would remain the same. Labor cost of \$400/month is consistent with labor contracts for the oldest escalators in operation.
- ◆ Follow Mike Shields: Title 8 Elevator Safety Orders(which cover escalators and moving walkways as well) are currently based on ASME A17.1 2004, which does not allow speed controls. We are in the process of updating to reference A17.1-2013. Expect CAL/OSHA will adopt the 2013 version within the year.
 - Mazi Shirakh: CEC cannot adopt the Part 6 Title 24 until Title 8 is updated.



Follow Up Items

- CASE Team will investigate making escalator and moving walkway controls requirements prescriptive as opposed to mandatory.