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To: CEC Staff
From: Jeff Stein
Subject: Occupant Sensor Ventilation Control Proposal
Date: May 16, 2012

We strongly object to the Occupant Sensor Ventilation (OSV) proposal in the 15 day language released today.

1. As written, the OSV requirement trumps the DCV requirement. The DCV section has an exception for OSV but the OSV section does not have an exception for DCV. A large conference room, for example, would be subject to both requirements. Thus it would have to do OSV, even if it had DCV. DCV saves more energy than OSV and is an existing, well established technology. Please add an exception to the OSV requirement (120.2(e)3) for zones that have DCV.
2. The word "occupant" in the phrase "and the occupant does not require cooling or heating" does not make sense because the zone is unoccupied. We suggest changing it to something like "space temperature is between heating and cooling setpoints"
3. The requirement to go to zero supply air within 30 minutes (120.1(c)5.C and D) is in conflict with the new requirement to reset the 2 hr average outdoor air rate to 0.04 or 0.07 cfm/ft^2 (120.1(c)5.E). Either C and D should be deleted or E should be deleted.
4. The new requirement to reset the 2 hr average outdoor air rate to 0.04 or 0.07 cfm/ft^2 (120.1(c)5.E) is very confusing and will be very difficult to implement. The confusing wording and references could easily result in people implementing it wrong and either under or over ventilating.
5. It is so complicated that it would basically require a DDC system to implement. The cost of a DDC system cannot be justified in all cases where OSV is now required. Therefore it should only be limited to systems with DDC or should be simplified so that it can be achieved with readily available programmable thermostats.
6. Where an OSV is required/allowed it should not require the minimum ventilation rate to be reset to a rate that is lower than the area based minimum (e.g. 0.15 cfm/ft2) but it should also allow it to be reset as low as 0 cfm/ft^2. In this way, owners can shut off ventilation if they want to but are not required to do so. A high density space like a conference room where OSV is required would still achieve considerable energy savings because the unoccupied min ventilation rate would be no higher than 0.15 cfm/ft^2 rather than say 0.5 cfm/ft^2. This will be less objectionable to anyone concerned with indoor air quality and will be much easier to implement.

7. Please delete the requirement to "Automatically setup the operating cooling temperature set point by 2°F or more and setback the operating heating temperature set point by 2˚F or more". The energy savings are miniscule (no savings at all in interior zones) and the potential for comfort impacts and negative backlash are large. Owners can still do this if they want but should not be required to do so. Perhaps change it to something like "the controls shall be capable of …"
8. Similarly, requiring hotel and motel guest rooms to widen the deadband by at least 10^{o}F will affect comfort and will result in guests or maintenance staff trying to defeat the system which could erase the more significant savings from shutting off lights. Perhaps change it to something like "the controls shall be capable of …"
9. Multipurpose rooms went from 1,000 ft^2 in the 45 day language to 100 ft^2 in the 15 day language. Was this intentional?