STATE OF CALIFORNIA ARNOLD SCHWARZENEGGER, *Governor*

DEPARTMENT OF INDUSTRIAL RELATIONS
DIVISION OF OCCUPATIONAL SAFETY & HEALTH
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29 October 2007

Bill Pennington
California Energy Commission
1516 Ninth Street
Sacramento, CA 95814

Dear Mr. Pennington:

I am writing on behalf of the Division of Occupational Safety and Health (Cal/OSHA) to express Cal/OSHA's continued concern over the proposed changes in Title 24, subchapter 3, section 121(c)3, which would mandate the use of Demand Control Ventilation (DCV) in multi-zone occupancies with Direct Digital Control to the zone level.

While Cal/OSHA appreciates that fact that the current proposal would continue to exempt classrooms from mandated use of DCV and add an exemption for call centers, these two exemptions are insufficient to address the occupational and public health concerns that may be of equal concern in indoor environments that are not proposed to be exempted from the Title 24 DCV requirements.

Cal/OSHA believes that DCV, because of the lag time involved in sensing occupancy, can result at times in underventilated spaces. The current proposal would mandate DCV in lobbies and reception areas of medical offices and social service offices. (OSHPD does not regulate ventilation in many medical office and clinic occupancies). Any reduction of ventilation, including through the use of DCV, would be ill advised in these occupancies. Given the clientele they service, there is significant potential for the proposed DCV requirements to result in inadequate ventilation in precisely those environments where optimal ventilation is most needed--rooms and offices where people who are at increased risk of infection with aerosol transmissible diseases are likely to be present for significant periods of time in crowded conditions.

As reported by Myatt and Milton, 2004 (American Journal of Respiratory and Critical Care Medicine), under-ventilation in these types of spaces may significantly increase the risk of respiratory disease transmission. The study found that an increase of 100 ppm of carbon dioxide above background increased the risk of isolating rhinovirus from the air. Current DCV specifications permit an increase of 600 ppm carbon dioxide prior to increasing the outside air to the minimum 15 cfm per person. Given that the state has invested a great deal of resources in preparing for a flu pandemic, it would be counterproductive to take any regulatory action that would potentially increase person-to-person transmission of respiratory diseases. At a minimum, lobbies and reception areas in these environments should be exempted from DCV requirements.

More generally, the problems with DCV systems, including the reliability, responsiveness, and long term stability of CO_2 sensors, have still not been addressed (see, for example, Accuracy of CO_2 Sensors in Commercial Buildings: A pilot Study, Fisk et. Al. October 2006).

Considering the many individual reports of DCV failures, it appears ill-advised to move forward with overly broad requirements for DCV in the absence of any peer-reviewed studies demonstrating that occupant health is not compromised in environments of particular concern when DCV systems are used.

For these reasons, Cal/OSHA believes that the use of DCV in multi-zone occupancies should remain voluntary with the decision to use DCV based on sound engineering and public health considerations for each specific indoor environment.

Sincerely,

Len Welsh
Chief

ALW/zm
cc: John Duncan
Deborah Gold