

STATE OF CALIFORNIA
STATE AND CONSUMER SERVICES AGENCY
CALIFORNIA BUILDING STANDARDS COMMISSION
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Office Use Item No. _____

PARTICIPATION COMMENTS FOR THE NOTICES DATED APRIL 22, 2011
Written comments are to be sent to the above address.

WRITTEN COMMENT DEADLINE: JUNE 6, 2011

Date: 6/6/2011

From:

John Ochsendorf, PhD
Name (Print or type) (Signature)

Massachusetts Institute of Technology Department of Architecture
Department of Civil and Environmental Engineering
Agency, jurisdiction, chapter, company, association, individual, etc.

Room 5-418C 77 Massachusetts Avenue Cambridge, MA, 02139
Street City State Zip

I/We (do)(do not) agree with:

[] The Agency proposed modifications As Submitted on Section No. A5.409.3

and request that this section or reference provision be recommended:

[] Approved [] Disapproved [] Held for Further Study [] Approved as Amended

Suggested Revisions to the Text of the Regulations:

Include language for the operating emissions be included as part of any comprehensive life cycle assessment for buildings.

Reason: [The reason should be concise if the request is for "Disapproval," "Further Study," or "Approve As Amend" and identify at least one of the 9-point criteria (following) of Health and Safety Code §18930.]

(6)

Our LCA research at MIT in the Building Technology Program has repeatedly demonstrated that the greenhouse gas emissions due to operating energy typically account for approximately 90% of the life cycle emissions, while the embodied energy usually accounts for less than 10% of the life cycle emissions. I am concerned that section A5.409.3 does not include the operating energy emissions, and therefore would be missing 90% or more of the impacts of a typical building.

Furthermore, conducting a life cycle assessment of a building's operating energy is not trivial, as the emissions can vary widely depending on the energy mix, and therefore LCA is particularly well suited for capturing the implications of differing fuel inputs by region. I strongly urge that the operating emissions be included as part of any comprehensive life cycle assessment for buildings.

HEALTH & SAFETY CODE SECTION 18930

SECTION 18930. APPROVAL OR ADOPTION OF BUILDING STANDARDS; ANALYSIS AND CRITERIA; REVIEW CONSIDERATIONS; FACTUAL DETERMINATIONS

- (a) Any building standard adopted or proposed by state agencies shall be submitted to, and approved or adopted by, the California Building Standards Commission prior to codification. Prior to submission to the commission, building standards shall be adopted in compliance with the procedures specified in Article 5 (commencing with Section 11346) of Chapter 3.5 of Part 1 of Division 3 of Title 2 of the Government Code. Building standards adopted by state agencies and submitted to the commission for approval shall be accompanied by an analysis written by the adopting agency or state agency that proposes the building standards which shall, to the satisfaction of the commission, justify the approval thereof in terms of the following criteria:
- (1) The proposed building standards do not conflict with, overlap, or duplicate other building standards.
 - (2) The proposed building standard is within the parameters established by enabling legislation and is not expressly within the exclusive jurisdiction of another agency.
 - (3) The public interest requires the adoption of the building standards.
 - (4) The proposed building standard is not unreasonable, arbitrary, unfair, or capricious, in whole or in part.
 - (5) The cost to the public is reasonable, based on the overall benefit to be derived from the building standards.
 - (6) The proposed building standard is not unnecessarily ambiguous or vague, in whole or in part.
 - (7) The applicable national specifications, published standards, and model codes have been incorporated therein as provided in this part, where appropriate.
 - (A) If a national specification, published standard, or model code does not adequately address the goals of the state agency, a statement defining the inadequacy shall accompany the proposed building standard when submitted to the commission.
 - (B) If there is no national specification, published standard, or model code that is relevant to the proposed building standard, the state agency shall prepare a statement informing the commission and submit that statement with the proposed building standard.
 - (8) The format of the proposed building standards is consistent with that adopted by the commission.
 - (9) The proposed building standard, if it promotes fire and panic safety as determined by the State Fire Marshal, has the written approval of the State Fire Marshal.