

From: Murray, Chuck (COM)
Sent: Tuesday, June 11, 2013 8:18 PM
To: Ray Allshouse (rallshouse@ci.shoreline.wa.us)
Cc: 'Jonlin, Duane'; 'Eric Vander Mey'; Tim Nogler (COM) (tim.nogler@des.wa.gov)
Subject: Comment on Energy Code Proposals E04 and E05.

To: Ray Allshouse, Washington State Building Code Council Chair

RE: Energy Code Proposals E04 and E05.

The Washington State Department of Commerce, State Energy Office respectfully provides the following information in support of the current energy code rulemaking activities. This includes specific comments on proposed code changes E04 and E05. First I will provide some comments on timing and process.

There is some conversation about moving the proposed code changes as emergency rules or through some other expedited process. Commerce recommends that the Council move the proposals through the standard rulemaking process. This assures that the proposed changes are fully considered and that the integrity of the code development process is maintained.

I would also like to include a reminder that adopting energy code changes that increase energy in new commercial buildings should be limited. Both proposal E04 and E05 have the potential to increase energy use compared to the recently adopted 2012 WSEC. While the Council has flexibility, they need to keep the enabling statutes in mind. RCW 19.27A.025 notes, *"The state building code council may, by rule adopted pursuant to chapter 34.05 RCW, amend that code's requirements for new nonresidential buildings provided that: (a) Such amendments increase the energy efficiency of typical newly constructed nonresidential buildings;"*

When the Energy Code TAG considered the adoption of the commercial building glazing area targets of the IECC, the general understanding was that to exceed these limits the applicant would need to utilize the systems analysis approach. This allows the applicant to apply other energy efficiency measures to offset the increased energy use typical of buildings with more glazing. This will include a combination of equipment efficiency improvements, lighting strategies, and better building envelop systems. The proposed code changes E04 and E05 take a different track. They propose prescriptive alternatives.

Proposals E04 and E05 consider prescriptive alternatives to increase the code target glazing area for commercial buildings. In general I support the development of additional prescriptive compliance options. Because prescriptive methods are more transparent than a systems analysis approach, they tend to lead to good code compliance. Commerce has considered proposals E04 and E05 with this in mind. Energy efficiency is also a key criterion.

Commerce does not support the changes proposed in E04. The existing language adopted in the 2012 WSEC provides a good prescriptive option for increased glazing area through daylighting. This approach is a compromise in energy efficiency but acceptable with the prescribed limitations. E04 reduces the amount of required floor area in the daylight zone, reducing the potential for energy savings. Also, E04

is needlessly complex, diminishing the benefits of a prescriptive option. I do not recommend adopting this language.

Commerce will support the adoption of E05 as presented in the June 13, 2013 Energy Code Tag Report. Providing an additional prescriptive option through the use of improved glazing is reasonable. The proposal will increase energy use in some buildings. This is reasonably controlled through the limitations in scope included in the proposal. It is essential that limiting this proposal to buildings with 40% or less glazing area be maintained. It is also important that this option not be used as an alternative target for the systems analysis approach. As written, I support moving this proposal into rulemaking.

I would like to include one additional reference for the Council to consider during this rulemaking. The U.S. Department of Energy has prepared the *Technical Support Document: Strategies for 50% Energy Savings in Large Office Buildings, (2010)*. This considers the first cost and savings related to window to wall area ratios. The finding of this report is that in a range of glazing area from 20 to 40 percent, lower glazing areas reduce both first cost and life cycle cost for new buildings. This document may be downloaded using this web address. <http://www.nrel.gov/docs/fy10osti/49213.pdf>

Sincerely,

Chuck Murray
Senior Energy Policy Specialist
State Energy Office

cc:

Duane Jonlin,
Eric Vander Mey
Tim Nogler