

ADVISORY COMMITTEE COMMENT FORM FOR PROPOSED CODE CHANGES

(This form must be submitted electronically)

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1323, CE- 34

Proposed Code Change - Language

2012 IECC Chapter 4 COMMERCIAL ENERGY EFFICIENCY
Section C403.2.1 Calculation of heating and cooling loads.

Revise as noted:

Section C403.2.1 Calculation of heating and cooling loads. Design loads shall be determined in accordance with the procedures described in ANSI/ASHRAE/ACCA Standard 183, Peak Cooling and Heating Load Calculations in Buildings Except Low-Rise Residential Buildings. ~~The design loads shall account for the building envelope, lighting, ventilation and occupancy loads based on the project design. Heating and cooling loads shall be adjusted to account for load reductions that are achieved where energy recovery systems are utilized in the HVAC system in accordance with the ASHRAE HVAC Systems and Equipment Handbook. Alternatively, design loads shall be determined by an approved equivalent computation procedure, using the design parameters specified in Chapter 3.~~

a. Heating and cooling equipment sizing may be up to 10% greater than the calculated peak heating and cooling loads to allow for building pickup and cool down after temperature setback conditions.

Proposed Code Change – Need and Reason

Reasons: Standard 183 gives comprehensive procedures to be used in determining building heating and cooling loads. These are partially duplicated in the deleted text above. It would be better to refer to and use the text that already exists in Standard 183. Also, there are reasons for not reducing heating and cooling loads when energy recovery systems are used. Those systems may require servicing that is performed with the systems still operating, in which case heating or cooling loads may be greater than with the heat recovery system functioning.

The oversizing of the heating and cooling equipment is appropriate to allow for the occupied building temperature to be more quickly attained after unoccupied setback/setup conditions, particularly after a weekend when the outdoor conditions have been extreme, either cold or hot. That oversizing in most cases does not result in increased energy consumption, as modern equipment with digital controls operates more efficiently at part load conditions.

Proposed Code Change – Cost/Benefit Analysis

The benefit of the proposed code change is that it clarifies the requirements and eliminates possible conflict with other Standards in use. The benefit of allowing slightly oversizing of heating and cooling equipment is to provide reasonable building occupied temperature recovery times.

Other Factors to Consider Related to Proposed Code Change

1. Is this proposed code change meant to:

Xchange language contained in a published code book? If so, list section(s). 2012 IECC subparagraph identified above

change language contained in an existing amendment in Minnesota Rule? If so, list Rule part(s).

delete language contained in a published code book? If so, list section(s).

delete language contained in an existing amendment in Minnesota Rule? If so, list Rule part(s).

neither; this language will be new language, not found in the code book or in Minnesota Rule.

2. Is this proposed code change required by a Minnesota Statute or new legislation? If so, please provide the citation to the Statute or legislation. No
3. Will this proposed code change impact other sections of a published code book or of an amendment in Minnesota Rule? If so, please list the affected sections or rule parts. No
4. Will this proposed code change impact other parts of the Minnesota State Building Code? If so, please list the affected parts of the Minnesota State Building Code. No
5. Who are the parties affected or segments of industry affected by this proposed code change?
6. Can you think of other means or methods to achieve the purpose of the proposed code change? If so, please explain what they are and why your proposed change is the preferred method or means to achieve the desired result. No
7. Are you aware of any federal requirement or regulation related to this proposed code change? If so, please list the regulation or requirement. No