

ADVISORY COMMITTEE COMMENT FORM FOR PROPOSED CODE CHANGES (This form must be submitted electronically)

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Proposed Code Change - Language

Please provide your proposed code change in strikeout/underline format. Provide the *specific* language you would like to see changed, with new words underlined and words to be deleted should be ~~stricken~~. Also, state whether the language contained in your proposal is from a code book or from an amendment currently found in Minnesota Rule. (You may provide the language (electronically) on a separate, attached sheet).

Proposed Code Change – Need and Reason

Please provide a thorough explanation of the need for this change and why this proposed code change is a reasonable change. During the rulemaking process, the Agency must defend the need and reasonableness of all its proposed changes. The Agency must submit evidence that it has considered all aspects of the proposal. (You may provide the need and reason (electronically) on a separate attached sheet).

Proposed Code Change – Cost/Benefit Analysis

Please consider whether this proposed code change will increase/decrease costs or indicate that it will not have any cost implications and explain how it will not. If there is an increased cost, will this cost be offset somehow by a life safety or other benefit? If so, please explain. Are there any cost increases/decreases to enforce or comply with this proposed code change? If so, please explain. (You may provide the cost/benefit analysis (electronically) on a separate, attached sheet).

Other Factors to Consider Related to Proposed Code Change

1. Is this proposed code change meant to:
 - change language contained in a published code book? If so, list section(s).

 - 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? Consumers, builders, and fenestration manufacturers.

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

Proposed Amendment: International Energy Efficiency Code (IECC) Table C402.4.3

Revise as follows:

**TABLE C402.4.3
MAXIMUM AIR INFILTRATION RATE
FOR FENESTRATION ASSEMBLIES**

FENESTRATION ASSEMBLY	MAXIMUM RATE (CFM/FT ²)	TEST PROCEDURE
Windows	0.2 0.30	AAMA/WDMA/CSA 101/I.S.2/A440 or NFRC 400
Sliding doors	0.2 0.30	
Swinging doors	0.2 0.30	
Skylights – with condensation weepage openings	0.30	
Skylights – all other	0.2 0.30	
Curtain walls	0.06	NFRC 400 or ASTM E 283 at 1.57 psf (75 Pa)
Storefront glazing	0.06	
Commercial glazed swinging entrance doors	1.00	
Revolving doors	1.00	
Garage doors	0.40	ANSI/DASMA 105, NFRC 400, or ASTM E 283 at 1.57 psf (75 Pa)
Rolling doors	1.00	

For SI: 1 cubic foot per minute = 0.47L/s, 1 square foot = 0.093 m²

a. ~~The maximum rate for windows, sliding and swinging doors, and skylight is permitted to be 0.3 cfm per square foot for fenestration or door area when tested in accordance with AAMA/WDMA/CSA 101/I.S.2/A440 at 6.24 psf (300 Pa).~~

Reason:

This amendment alleviates a new unnecessary, unsubstantiated and onerous requirement for windows, doors and skylights that is also problematic because it is in conflict with the test procedures required for compliance with AAMA/WDMA/CSA 101/I.S.2/A440 (NAFS) or NFRC 400.

The IECC has historically required maximum air infiltration rates for windows, sliding doors and all skylights to be 0.3 cfm/ft², and 0.5 cfm/ft² for swinging doors as specified by and in accordance with NAFS or NFRC 400. These long established rates have remained in place because modeling shows that there are no substantial energy efficiency improvements to be gained in the building envelope by a further reduction in the current 0.3 cfm/ft² for these fenestration products. The new requirements for 0.20 cfm/ft² for all windows, sliding doors and skylights, and 0.5 cfm/ft² for swinging doors are in conflict with these rates. In addition, the test pressure that should be used is unclear. For instance, NAFS specifies the test pressure to be used for the 0.30 cfm/ft² rate depending on building type, i.e, products used in low- to mid-rise multifamily and commercial buildings are tested a pressure of 1.6 psf (75 Pa), versus a pressure of 6.2 (300 Pa) for products used in mid- to high-rise buildings. No test pressure is specified for the lower rate of 0.20 cfm/ft².

Despite these facts and the lack of sound technical data or other substantiation demonstrating the need to reduce the maximum infiltration rate for all products to 0.20 cfm, the amendment was approved in the IECC as part of much broader proposal.

While meeting a maximum rate of 0.20 cfm/ft² may not be a significant problem for some fenestration products it is for others. Air infiltration and operational force are opposing requirements for operable products. A lower air infiltration

rate of 0.2 cfm/ft² can only be achieved with weather sealing that results in significant increases in the operational force which needlessly impairs operability for all users and in addition, can lead to conflicts with local, state and federal ADA & Fair Housing accessibility requirements

Regardless, reducing the maximum infiltration to 0.20 cfm/ft² from 0.30 cfm/ft² will result in added costs to production, testing, and labeling for all products when such a reduction has not been substantiated as needed or contributing significantly to additional reductions in overall envelope leakage or significant gains in overall energy efficiency. We therefore respectfully request that this amendment be approved.