REC2D-7-23

IECC RE: R403.6.2, TABLE R403.6.2

Proponents:

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2024 International Energy Code [RE] [RE Project] R3

Revise as follows:

R403.6.2 Whole-dwelling mechanical ventilation system fan efficacy.

Fans used to provide whole-dwelling mechanical *ventilation* shall meet the efficacy requirements of Table R403.6.2 at one or more rating points. Fans shall be tested in accordance with the test procedure referenced by Table R403.6.2 and *listed*. The airflow shall be reported in the product listing or on the label. Fan efficacy shall be reported in the product listing or shall be derived from the input power and airflow values reported in the product listing or on the label. Fan efficacy for fully ducted HRV, ERV, ~~balanced~~*balanced ventilation systems*, and in-line fans shall be determined at a static pressure of not less than 0.2 inch w.c. (49.85 Pa). Fan efficacy for ducted range hoods, bathroom and utility room fans shall be determined at a static pressure of not less than 0.1 inch w.c. (24.91 Pa).

TABLE R403.6.2 WHOLE-DWELLING MECHANICAL VENTILATION SYSTEM FAN EFFICACY[a]

SYSTEM TYPE	AIRFLOW RATE (CFM)	MINIMUM EFFICACY (CFM/WATT)	TEST PROCEDURE
HRV or ERV	Any	1.2[a]	CAN/CSA C439
Balanced ventilation system without heat or energy recovery	Any	1.2[a]	ASHRAE 51 (ANSI/AMCA Standard 210)
Range hood	Any	2.8	
In-line supply or exhaust fan	Any	3.8	
Other exhaust fan	< 90	2.8	
	≥ 90 and < 200	3.5	
	≥ 200	4.0	
Air-handling unit that is integrated to tested and *listed* HVAC equipment	Any	1.2	Outdoor airflow as specified. *Air-handling unit* fan power determined in accordance with the applicable US Department of Energy Code of Federal Regulations DOE10 CFR 430, or other approved test method .

For SI: 1 cubic foot per minute = 0.47 L/s.

a. For ~~balanced systems~~*balanced ventilation systems*, HRVs, and ERVs, determine the efficacy as the outdoor airflow divided by the total fan power.

Reason:

PCD2 introduces a new term and definition for “balanced ventilation system”. This term was introduced in the newly expanded R408 Additional Efficiency Requirements section. In other sections, in the 2021 IECC, the term was undefined and just called “balanced” (R403.6.2). In PCD2, there still remains two instances where “balanced” or “balanced system” is used and should be reviewed to determine whether the defined term is more appropriate.

Cost Impact:

The code change proposal will neither increase nor decrease the cost of construction.

None