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INDUSTRY NEWS

Vermont to Require Mechanical Ventilation in All New Homes

Vermont, following in the footsteps of Washington and Minnesota, will soon become the third US state to require a mechanical ventilation system in all new

homes. After more than a year of sometimes trying work, a committee charged with updating the state's Residential Building Energy Standards (RBES) reached a consensus on mechanical ventilation and is forwarding its recommendations for formal rulemaking. The committee is also recommending that Vermont adopt the 1998 *International Energy Conservation Code*, published by the International Code Council (see *EDU*, February 2000).

"We know what the elements pertaining to mechanical ventilation are going to be now," says Jeff Forward, a staff member on the RBES Update Advisory Committee. "But we still have the challenge of formal rulemaking ahead of us. We want to allow flexibility in meeting the code requirements, yet keep the document simple. Hopefully, those two qualities won't be mutually exclusive." Forward says that Vermont hopes to avoid some of the problems that have cropped up in Washington and Minnesota where complexity in the code language has sometimes produced poor results in the field (see *EDU*, December 1999 and November 1998).

The committee's recommendations regarding mechanical ventilation are summarized as follows:

- All new homes constructed under the RBES code must have a whole-building ventilation system. This could be a completely separate mechanical system (e.g., air-to-air heat exchanger with dedicated ductwork) or a simple bath fan that exhausts stale air from the bath and other areas for extended periods.
- The ventilation system must be equipped with adjustable controls that enable a long runtime. Runtimes will not be specified, and any control strategy that allows for extended or continuous operation will be acceptable.
- The system must provide an effective whole-house net flow rate of at least 15 cfm per person when the house is occupied. The minimum flow rate can be certified by an approved on-site test that references an established test protocol (e.g., the American Society of

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Heating, Refrigerating and Air-Conditioning Engineers) or by installing equipment according to the manufacturer's instructions to meet the flows prescribed in Table 1.

- Surface-mounted ventilation equipment must have a sone rating of 2 or less as determined by Heating and Ventilating Institute standards. (Definitions will need to be developed for in-line fans, heat-recovery ventilators, and surface-mounted fans.) The rules should be written so as not to discourage the use of centrally located fans that service more than one room.
- Only fans rated for "continuous duty" will be acceptable. Where there is a lack of definition, electrical consumption could be a proxy for continuous duty.
- All fans (including local exhaust fans) must be installed in accordance with manufacturer's design requirements and in a manner that doesn't diminish the capacity of the fan by more than 33%.
- Atmospheric combustion appliances will be permitted under the revised code. However, they must have adequate outside makeup as established by the National Fuel Gas Codes, and the makeup air must be ducted from outside.
- Fireplaces and wood stoves must either be "closed combustion," with tight-fitting doors and ducted combustion air, or be tested to ensure that they operate within acceptable limits.

Forward tells *EDU* that the committee is recommending that the implementation of the ventilation component

of the code be delayed until January 2002. This will give the Vermont Department of Public Service and the Energy Code Assistance Center time to develop and deliver a series of training workshops for builders, HVAC contractors, and other stakeholders. The rest of RBES is expected to take effect in the second quarter of 2001.

About 40 stakeholders worked to develop the consensus draft for RBES, including the Home Builders and Remodelers Association of Northern Vermont, which Forward describes as a "valuable partner" in the process. Others include: The Building Code Assistance Project, Energy Rated Homes of Vermont, Foamtech, Vermont Star Homes Program, Vermont Gas Systems, Controlled Energy Corp., Hearth Products Association, and the Gas Appliance Manufacturers Association.

For more information or for meeting summaries, see the Vermont Department of Public Service's Web page at www.state.vt.us/psd/.

LP, Osmose Launch New Family of Termite-Proofed Framing Products

Louisiana-Pacific's (LP) Specialty Products Division (Hunterville, North Carolina) and Osmose (Griffin, Georgia) are introducing a whole new line of borate-treated building materials designed to combat structural damage caused by Formosan subterranean termites. As shown in Figure 1, the new family includes four new trademarked products: BarrierFloor; SmartSystem Siding; BarrierPanel (OSB and plywood sheathing); and TechShield (roof sheathing with a radiant-foil overlay).

Table 1 — Prescriptive Capacity Fan Requirements

Number of Bedrooms	Minimum Nominal Rated Total Fan Capacity ¹ (at 0.1" w.c.)	Minimum Number of Fans to Meet Whole-House Airflow Rates
1	50	1
2	75	1
3	100	1
4	125	1 with centrally ducted system; otherwise 2
5	150	1 with centrally ducted system; otherwise 2
For homes over 3,000 square feet	1 cfm/100 square feet	1 with centrally ducted system; otherwise 2

¹Represents the total installed rated capacity of all fans designed for whole-house ventilation. While 15 cfm per person is the optimum capacity, it is assumed that most fans will not operate at their rated capacity once they are installed. Therefore the prescriptive capacity table below includes an assumption that most fans will only operate at 66% of their rated capacity.

EDITOR: Don Best

Publisher: Karen Fine Coburn

Production Manager: John Brookhouse

Editorial Office: Don Best, 65 Hallwood Drive, Surry, NH 03431; Tel/Fax: (603) 357-5689, E-mail: letters@top.monad.net.

Circulation Office: Cutter Information Corp., 37 Broadway, Suite 1, Arlington, MA 02474-5552; Tel: (781) 641-5118, or in North America, (800) 964-5118, Fax: (781) 648-1950, or in North America, (800) 888-1816, E-mail: info@cutter.com, Web site: www.cutter.com/energy/.

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