Energy - Docket Optical System

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Public comment to the Draft 2013 Residential Compliance Manual, Chapter 4 – Building HVAC Requirements.

The singling out of CFI ventilation for extra watt draw verification is an unfair burden and restraint of trade in light of that fact that most HRV/ERV ventilation systems are installed such that the AHU fan must run coincident with the HRV/ERV, which uses more energy that CFI ventilation, and every thermostat has a Fan ON setting, which will use far more energy than CFI ventilation. The watt draw verification requirement should apply to all systems where the AHU fan could run more than just for heating and cooling, and for all systems where the AHU fan motor is ECM/BPM since those units can use more energy than a PSC motor fan when the duct system is very restrictive (above 1 inch w.c. external static pressure).

Where the watt draw is not measured, the default AHU watt draw of 0.8 W/cfm cannot be justified. A PSC motor fan will fall off on airflow and the system will likely fail before the W/cfm can reach 0.8 (refer to http://www1.eere.energy.gov/buildings/appliance_standards/residential/pdfs/hvac_app_07-f_furnace_fan_consumption_2011-04-25.pdf).

Not mentioned in the Manual is that the CFI ventilation system provides a greater service than exhaust ventilation in terms of ventilation effectiveness and whole-house comfort control, because of the known source of outside air with full distribution and whole-house mixing with filtration.

The repeated statement, “CFI ventilation systems can use a very significant amount of electricity on an annual basis,” is unsupported and misleading. What constitutes “very significant,” and compared to what? The maximum CFI ventilation cost in California will be about $90/yr for a system properly sized to ACCA Manual J in a 2000 ft2 house built to the CA code (refer to Rudd, A., I. Walker 2007. “Whole House Ventilation System Options – Phase 1 Simulation Study.” ARTI Report No. 30090-01, Final Report, March. Air-Conditioning and Refrigeration Technology Institute, Arlington, VA.).

Sincerely,

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