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The Energy Comments on the Proposed 2019 Residential Energy Code

Thank you for the opportunity to comment on future code updates. The EnergyGuy supports the mission of the CEC, and appreciates the collaborative and transparent process of code revision.

After reviewing the proposed changes, we have one issue which we would like clarified.

Under section 4.4.1.15 “Forced Air System Duct Sizing, Airflow Rate and Fan Efficacy” it states the following:

“Adequate airflow is critical for cooling equipment efficiency. Further, it is important to maintain adequate airflow without expending excessive fan power. §150.0(m)13 requires system airflow and watt draw to be HERS-verified. See Reference Residential Appendices RA3.3 for the applicable HERS verification procedures.

Forced air systems that provide cooling must comply either the airflow rate and fan efficacy verification, or may comply with the return duct design specifications given in Tables 150.0-C and D.:

1. Airflow and watt draw measurement and determination of fan efficacy:

When using the airflow (cfm/ton) and fan efficacy (watt/cfm) method, the following criteria must be met:

- a. Provide airflow **through the return grilles** that is equal to or greater than
 - 350 CFM per ton of nominal cooling capacity for systems that are not small duct high velocity systems.
 - 250 cfm per ton is allowed for small duct high velocity systems.”

Question: The phrase “through the return grilles” eliminates the two currently approved methods of measuring airflow using plenum pressure matching directly from the air handler access door, or using a flow grid inserted into the filter slot on the FAU. It should be noted that, in our professional opinion, these two options represent the most accurate tests to measure the actual airflow over the coils. As such, we would not want to see these options eliminated. Is this truly the intention of the CEC, or is this simply a textual error?

Whatever the answer is, we respectfully recommend the following amendment:

“Provide airflow ~~through the return grilles~~ that is equal to or greater than”

Thank you.

Bruce Edgar