

Letters

Another Look at Energy Claims

In “A Close Look at Common Energy Claims” (6/08), Martin Holladay makes the following statement about the voluntary lowering of thermostat settings in homes with radiant floor heating: “The only problem with the theory is that no reputable study has ever shown it to be true, while at least one study has disproved it.” This appears to be based on hearsay and one rather small, unscientific survey conducted by a Canadian utility company. A little digging into “operative temperature” would quickly debunk Mr. Holladay’s assertion. ASHRAE (American Society of Heating, Refrigerating, and Air-Conditioning Engineers) has done extensive research in this field. The fact is that as the radiant component of comfort increases, the convective (air temperature) component decreases. It is not just a theory, it is well-proven.

Mr. Holladay also concludes that the lower water temperatures required by a radiant system would result in “very minor energy savings.” Again he shows his lack of understanding. A hot-water baseboard system operates at around 180°F to 200°F, whereas a radiant floor system often operates between 100°F and 130°F. High-efficiency boilers derive their efficiencies from extracting as much heat as possible from the flue gases. The more heat extracted, the lower the flue gas temperature and the more efficient the heat source. Lower supply temperatures translate into more energy-efficient heat sources. Installing a high-efficiency condensing boiler is a waste of time on a conventional hot-water baseboard system, but it results in significant energy savings on low water temperature systems.

Lawrence Drake
Executive Director
Radiant Panel Association
Loveland, Colo.

Author Martin Holladay responds: Mr. Drake is correct that ASHRAE studies have shown that people near a radiant heat source feel comfortable at lower air temperatures than people without a nearby radiant heat source. For example, people can feel comfortable in a cold ski chalet as long as they are standing near a wood stove with a

roaring fire. In a well-insulated house, however, a “radiant” floor will rarely be radiating much heat. During most daylight hours, the temperature of the floor is likely to be close to the indoor air temperature, except on the coldest days of the year.

Mr. Drake is also correct that a properly sized condensing boiler can save energy compared with a conventional boiler, as long as the system has been carefully designed and commissioned to assure that the boiler operates in condensing mode. It should be pointed out, however, that condensing boilers cost significantly more than conventional boilers and still make up only about 15 percent of the United States market for new boilers. The majority of new hydronic systems in the U.S. — including in-floor radiant systems — use a conventional boiler as a heat source.

Feeling the Financial Squeeze

My company is building a private preschool here in Southern California. I’ve been billing my clients on a regular schedule and had been receiving timely payments until a few weeks ago, when the clients learned their bank had canceled their line of credit. That effectively shut down all work on the project till new funding was put into place. Needless to say, this devastated my clients, who had 40 students ready to descend on the new school this fall.

Fortunately, my subs and suppliers have been very understanding, which made reaching a solution with the clients a lot easier. We all understood that the problem was with the bank and wasn’t the clients’ fault. No one was blamed, which helped restore the clients’ confidence in their project. They have since gathered enough funding from private sources to continue the work, with a new completion date set for later in the fall.

I’m sharing this as a note of warning to other builders: If any of your clients are funding their project with a line of credit, it would be prudent to give some thought to backup funding, in case the bank freezes the funds.

Tony Czuleger
IMC Construction and Development
Redondo Beach, Calif.