"TOUGHER ENERGY CODES PROMPT 'ADVANCED FRAMING' SWITCH," BY TED CUSHMAN (ONLINE, 9/11/15)

Todd Collins (online, 9/13/15): It is unfortunate that code is the driver for advanced framing and higher energy efficiency. There are a number of reasons for improving the envelope:

- The house will be more comfortable. Cold spaces will largely go away, assuming good design and attention to detail when air-sealing is done.
- Better envelope assemblies assume better airtightness. We should be aiming for less than or equal to 1.0 ACH50.
- Better indoor air quality. Assuming the lower air infiltration, we always use an HRV or ERV with high recovery numbers. With better ventilation comes better IAQ.
- Higher energy prices are almost guaranteed, so there is a price risk that is mitigated. This is especially important for retirees or soon-to-be retirees who are or will be on a fixed income.
- Reduced cold-house risk. Better envelopes make the home more comfortable and mitigate the risk of having to make more improvements.

As an industry, residential builders need to do better; code needs to drive it overall.

Daniel R. Jenkins (online, 9/13/15): There are other reasons for advanced framing besides energy efficiency. While I am a general contractor, at my own home there are train tracks about 1,000 feet from the south-facing master bedroom. I built a double wall with 2x6s on 24-inch centers inside on a staggered layout with 2x4 studs on 24-inch centers outside. This design greatly reduces sound bridging as well as thermal bridging. The king studs at the window and the corners were the only areas where sound and thermal energy could travel through the wall. With a double wall, the amount of wood does increase, as does the labor, but these increases were minimal compared with the results. The next step was to install a Milgard window with sound-deadening capabilities. Standing in the room as a train passes, you can feel it, but you can't hear it.

"ALABAMA BUILDERS PUSH BACK ON ARC-FAULT REQUIREMENT," BY TED CUSHMAN (ONLINE, 9/8/15)

Jack Rose (online, 9/8/15): As a licensed master electrician, I am as pro-safety as they come. However, these devices [arc-fault circuit interrupters (AFCIs)] are very expensive, and my critical-thinking skills always instruct me to follow the money. The concept of stupid-proofing life from the cradle to the grave is unattainable! Where are most of these devices manufactured? Who gets the banker's share of the profit when they are sold? Who has a vested interest in lobbying the NFPA to require them?

While I can certainly sympathize with Charlie Donaghe's accident and subsequent plight, what was the condition of the extension cord that was being used in his residence? What would his reaction have been if an AFCI had been protecting the circuit that he was using? Would he have attempted to reset the device? Or would he have used another circuit, one that was not AFCI-protected? There are many more questions than answers.

I believe that if safety were the primary objective for requiring these devices in residential applications, the cost would be closer to that of a GFCI. Rather than AFCIs being a requirement for new homes, the decision should be left to homeowners after the pros and cons are explained to them. The homeowner could then make an informed decision as to whether to have them installed or not.

"ULTIMATE ELECTRIC HOT WATER HEATER SETUP," BY MATT RISINGER (ONLINE, 8/21/15)

Tripp Pankey (online, 8/23/15): I like to do the same type of setup, except I install the storage tank on the other side of the house, close to the users so there's less wait: typically the HP [heat pump] close to the kitchen and the storage close to the master. This means the kitchen won't have the full capacity of both tanks, but that's OK.

In a spray-foam house, I like to put the HP tank in the encapsulated attic *if* the attic is big enough and has enough volume to support the HP. I am in a cooling-dominated climate. However, heat rises and the attic stays warm enough during the winter.

MattRisinger (online, 8/24/15): Very cool idea! I'm a big fan of Gary Klein's hot-water research (see "Efficient Hot Water Piping," Mar/13), so I used a trunk-branch method to run the plumbing. The master bath is the furthest fixture, so we have a Metlund D'Mand pump (gothotwater.com) down there. Clients hit a doorbell button on the vanity to circulate the pump, which has a thermocouple and shuts off when it senses hot water. I like your idea, however, and might try to make that work in a future build.