Improved Energy Efficiency In Central Air

New federal regulations take effect this month

entral air-conditioning systems manufactured after January 23, 2006, must meet a new Department of Energy (DOE) standard for energy efficiency. While this means lower electric bills for those using the new systems, the up-front costs of the units will be higher, at least for the short term. Also, the new air conditioners are about 40 percent larger than existing units, which may create installation challenges in replacement jobs.

Energy efficiency in central-air systems is rated by the seasonal energy efficiency ratio (SEER), which is calculated by dividing the cooling output (in Btu) by the power input (in watt-hours). The higher the SEER rating, the more energy-efficient the unit. The new standard of 13 SEER replaces the 10-SEER minimum in effect since 1992.

Until spring 2004, when air-conditioner manufacturers essentially gave up the fight over standards and started retooling their factories, the NAHB supported an unsuccessful effort to change the SEER standard to 12 rather than 13. According to the association, the difference in energy savings generated by a 13-SEER unit compared with a 12-SEER unit wouldn't be large enough to offset the price increase for the homeowner. Today, of course, rising energy prices have changed the terms of that argument, making any energy savings proportionately more significant.

Individual energy savings will vary with geographical area and local electricity costs, but in general a 13-SEER unit uses 8 percent less energy than a similarly sized 12-SEER unit — and 23 percent less energy than a 10-SEER unit — to provide the same amount of cooling. Households that replace aging units in the next several years will see even greater energy savings, since most old units were purchased before 1992 and are rated 8 SEER and lower, says Glenn Hourahan, vice president of research and technology at the Air Conditioner Contractors Association.

In light of the impact air conditioning has on energy usage, potential energy savings for the country as a whole under the new plan are significant. Researchers at the American Council for an Energy-Efficient Economy calculate that enacting the new standard should shrink peak demand for electric power enough to reduce the number of new 300MW power plants needed between now and 2020 by 138 facilities. In addition, the council estimates that air pollution will decrease by 7.2 million metric tons of carbon in 2020 — an amount equal to the emissions from 3 million automobiles. — *Laurie Elden*

Edited by Laurie Elden

California Workers' Comp 2

Brand-Name Housing 3

Inflation Report 4

36-Volt Nanotech Battery 4

In compliance with a NAFTA panel ruling, the U.S. Commerce Department has recalculated the countervailing duty (CVD) on imports of lumber from Canada. Under NAFTA methodology, the penalty drops from approximately 16 percent to 0.8 percent, which effectively eliminates the CVD. However, the department will continue to collect the duty according to its own calculations - and won't return the \$5 billion already collected - until all legal issues are resolved, which could take months. A separate anti-dumping duty on Canadian lumber that currently averages about 2 percent is not affected by this action.

Think the recent wave of immigrant workers into the building trades is driving down wages for U.S.-born workers? A study published in the fall by the nonprofit National Bureau of Economic Research suggests this might be so — but only for the 9 percent of workers without a high school diploma. Wages for these workers dropped by 2.4 percent in the 1990s because of immigration. For the 91 percent of U.S.-born workers with at least a high school education, though, immigration pushed wages up by 2.5 percent, say the study's authors.

Rhode Island building permits hit a 15-year low in the first three quarters of 2005, reports the Rhode Island Builders Association (RIBA). Compared with the same period in 2004, single-family home permits were down 8.8 percent. Hailing back to 2000, the change was even more dramatic — a 32 percent drop. In a recent RIBA newsletter, association executive director Roger Warren expressed concerns that the housing market is becoming unbalanced; whereas 49,000 new jobs were created statewide in the last 10 years, he noted, only 27,000 new homes were built.

An Alabama circuit court judge ruled that illegal immigrants are eligible for workers' comp benefits. The October decision followed on the heels of a similar ruling in California (*In the News*, 12/05). According to the *Associated Press*, the Alabama case involved Omar Santos-Cruz, who was 17 years old when he suffered a 10-feet fall from a house he was working on for Lambert Construction. Judge G. William Noble ordered the company to pay the permanently disabled teenager \$240 per week in workers' comp and to pay all of his medical costs. Noble commented that he believed his decision might set precedent for subsequent cases in Alabama.

Mortgage investor Freddie Mac will fund \$1 billion of below-market-rate mortgages for the purchase or repair of homes in federally designated Hurricane Katrina disaster areas. Qualified borrowers may also use the loans to buy a home elsewhere in the same state if they had a mortgage on a principal residence in a storm disaster area as of August 28, 2005. According to Freddie Mac, as many as 10,000 low-income families could benefit from the program.

How many houses does a big builder build? D.R. Horton announced that it sold more than 50,000 homes for a profit of \$1.5 billion in the past fiscal year, setting new records in the residential building industry.

California Comp System Harmful to Workers, Say Doctors

Since 2003, when California enacted a series of reforms as part of an effort to overhaul its workers' comp system, the state's premiums have decreased by 26 percent. At the same time, says state insurance commissioner John Garamendi, insurers are paying out just 38.5 cents for every premium dollar they earn. Even as he continues to push for cumulative rate decreases of closer to 50 percent, Garamendi calls the progress to date "great news for our state's economic health."

But what about the health of the state's labor force? The California Medical Association released a report in November concluding that the current workers' comp system is "hostile to physicians and often harmful to the patients." Dissatisfaction with workers' comp is so high that 63 percent of the 250 physicians surveyed want to decrease or end their involvement with comp cases. The CMA study claims that workers are not getting "timely and necessary medical care" because nonqualified persons are making medical treatment decisions — which are often overturned on appeal. In short, the report asserts, an overriding focus on saving money is increasing administrative delays and extending the amount of time a worker is out of the labor force.

Responding to these charges, Susan Gard, public information officer at the California Division of Workers' Compensation (DWC), emphasizes that the reforms are a work in progress: "The reforms have been a big change for doctors and insurers, and there have been some growing pains around that for both." She adds that one of the CMA's major concerns is being addressed by new DWC regulations that impose penalties of up to \$400,000 against insurers who delay a "utilization review" of the injured worker's treatment plan.

To determine whether the new rules have made it more difficult for injured workers to get medical care, the DWC has contracted with UCLA to conduct a survey of 1,200 physicians and 1,000 injured workers; the results will be available at the end of the summer. — *Laurie Elden*

Big Builders Sell Big-Name Lifestyles

Sony. Levi Strauss. General Electric. Gap. You'd have to live in a cave on an island in the middle of the sea not to be familiar with those brands. Instantly recognizable, they've become part of our everyday speech, along with the names of countless other mass producers of consumer goods.

Unfortunately, that kind of name recognition — for a variety of reasons — just doesn't extend to home builders. Nevertheless, at least three companies are determined to cash in on the cachet of highprofile brand names — not their own, but someone else's.

KB Home, for instance, is counting on big-name curb appeal to sell its "New Homes Created With Martha Stewart" (above, top), located in the company's Cary, N.C., Twin Lakes development. Inspired by Stewart's personal residences, the designs feature large laundry rooms and closets and a selection of fixtures billed as "Martha Stewart's favorites." The houses range in size from 1,500 to 4,100 square feet and in price from





\$200,000 to \$450,000.

For home buyers more inclined to drive a tractor than embroider a place mat, St. Lawrence Homes has begun building "Trenton — A John Deere Signature Community" (left, bottom) in Durham, N.C. Prices start at around \$375,000 for a 2,500- to 3,800-square-foot home that includes John Deere landscaping equipment and services. The lots run about half an acre to an acre, big enough to accommodate a small lawn tractor. And, yes, the houses come in colors other than yellow and green.

Orvis may not spark the same level of recognition as Martha Stewart and John Deere, but the company's upscale outdoor-sport message ties right in with Rocky Mountain Log Homes' customer base. The builder's co-branded homes will range in price from \$550,000 to \$1.2 million, with the Orvis logo stamped into some interior trim. The homes will come premilled but not prefabricated; plans include a workbench for fly-tying. — *Laurie Elden*

Lots of companies give away pencils printed with the company's name — some even give away coffee mugs. But Home
Depot wasn't giving anything away in November when Lawrence,
Mass., carpenter Michael Panorelli accidentally left the giant chain's Methuen store with a used pencil he had picked up to write some lumber calculations. Panorelli told the local *Eagle-Tribune* that one of the store's employees tracked him out to the parking lot and, citing the ill-gotten pencil, handed him a

letter banning him from Home Depot stores nationwide. Home Depot ended up sending Panorelli an apology, but the carpenter was unmoved. He told the *Associated Press*, "I have no intention of going back in there."

Armed with a video camera, Washington, Mo., police staked out a parking lot at Lowe's Home Improvement Center after receiving several reports of tool theft, *The Missourian* reported recently. In the

resulting video, one person in particular stood out; he never went into the store, preferring instead to check out the beds of construction vehicles. Subsequently, the police got themselves a truck, put a bunch of tools in the back, and parked it in the Lowe's lot. The suspected thief, Michael Crane, along with his companion, Lisa Webb, literally took the bait out of the back of the truck; the couple were arrested on their way out of the parking lot.

Ohio has temporarily put the kibosh on any use of eminent domain for the purpose of economic development. On November 16, Governor Bob Taft endorsed the measure, which also sets up a task force to study the issue. The moratorium runs out on December 31, 2006.

The walls had ears — and four paws and a tail — in Emily Vano's new Louisburg, Kan., home. After Vano and some workers heard noises near the bathtub, the workers opened up a wall and found a cat, frightened but alive. The builder guessed that the animal had been hiding under the tub when the drywall was installed some three weeks earlier, says the Associated Press.

Prices Up for PVC, Asphalt, Insulation

he prices of many construction materials experienced double-digit inflation in 2004 and 2005, concludes a recent report from the Associated General Contractors of America. In the association's "Construction Inflation Alert," AGC chief economist Simonson notes that even though the Consumer Price Index has shown only moderate inflation in the last two years, the construction industry has seen a steep increase in overall costs, especially for raw materials such as diesel fuel, asphalt, gypsum, copper, and brass.

One exception was prices for the wood-products category; they actually fell in the 12 months ending September 30, tempering the 16.5-percent price increases of the previous year.

The data used in the report predates Hurricanes Katrina and Rita, but Simonson predicts that prices for materials requiring oil or natural gas as feedstock — PVC, asphalt, roofing materials, insulation — will be "much higher priced, at least through the winter heating season, than if the storms had not occurred." — Laurie Elden

Ramping Up Cordless-Tool Voltage

Though it's better known in the cellular phone and laptop worlds, lithium-ion technology is opening up new possibilities for cordless power tools.

About a year ago, Milwaukee Electric Tool Corp. introduced a line of 28-volt cordless tools (see *Toolbox*, page 105) powered by lithium-ion batteries from E-One Moli Energy Corp. Makita USA followed in the autumn of 2005 with its own lithium-ion line, but opted to capitalize on the smaller size of the lithiumion battery and offer a lighter-weight 18-volt cordless tool.

This month, at the International Builders' Show, the voltage is going to

surge yet again when Black & Decker releases a line of DeWalt 36-volt lithium-ion battery-powered tools, including a hammer drill, reciprocating saw, circular saw, impact wrench, rotary hammer, jigsaw, flashlight, and various combo kits.

Black & Decker's 36-volt battery, which was developed by A123Systems in Watertown, Mass., is different from the other lithium-ion batteries in that it uses nanotechnology to overcome the weight and safety barriers that typically limit high-voltage batteries, says Ric Fulop, A123Systems' co-founder and vice president of business develop-

ment. Nanoscale battery materials are highly compact and allow for lower impedance and more efficient power transmission.

"Traditional lithium-ion batteries are not safe when you draw high currents," Fulop explains. "Our battery chemistry is thermally stable, and as a result can deliver several times as many cycles. But the exciting thing about this technology is the innovation in tools that it will make possible. With this technology, you can beat the cord; that is, you can get more power from a battery than from the outlet in the wall." — Laurie Elden