



You may remember “Cash for clunkers,” the 2009 federal program that encouraged Americans to trade in their older, gas-guzzling automobiles for more efficient, modern models.

The government paid more than \$3 billion to help facilitate the purchase of new vehicles.

And many HVAC construction contractors are familiar with “Cash for caulkers” — state and federal tax credits that pay homeowners to upgrade windows, furnaces and air conditioners or insulate their homes.

But when it comes to the efficiency benefits of sealing existing HVAC systems, many industry officials are asking why there aren’t more dollars for ductwork. Some estimates say up to 70 percent of U.S. homes have substantial duct leakage. Homeowners who attach an air conditioner with a high seasonal energy-efficiency ratio to ducts that leak excessively are not getting the energy savings they’re expecting or paying for.

It’s a problem that officials with Carlisle HVAC Products have long acknowledged. The Wylie, Texas-based company makes many products — wraps, tapes (rolled

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*—Frank Forrest,
Carlisle HVAC Efficiency Solutions
Product Manager*



mastics sealants), brush-on sealants, sprayable sealants and coatings, and robotic duct-sealing devices — designed to boost the efficiency of HVAC equipment, usually focusing on keeping ductwork clean and leak-free.

Despite the promise of a quick payback in energy savings for building or homeowners who invest in duct-sealing services, the scarcity of incentives means that many people, including HVAC contractors, don't know enough about them, said Tim Eorgan, Carlisle HVAC's specified products manager.

Perhaps that's why the U.S. government's EnergyStar program website (www.energystar.gov), doesn't have much about the topic. While it acknowledges that energy is lost through leaking ductwork and says sealing and insulating them can boost efficiency by up to 20 percent, it also tells visitors that the Internal Revenue Service "hasn't issued any guidance" as to whether such work qualifies for tax credits.

Another attempt by EnergyStar on the website to clear up the confusion isn't much help: "But only the materials would be eligible for the tax credit," the site says. "And the labor is the primary cost of sealing ducts."

It doesn't surprise Eorgan, who says utility companies and lawmakers are more likely to craft incentive programs around higher-profile improvements, such as new furnaces or compressors.

"I'm guessing they must go for the low-hanging fruit of working in conjunction with fiberglass insulation companies or the big equipment manufacturers such as Trane or Carrier," Eorgan said. "It just hasn't gotten that level of awareness yet."

Explaining the economic benefits of duct sealing in a way that homeowners can understand is often difficult, many industry experts say. Frank Forrest, Carlisle HVAC's efficiency solutions product manager, cited a study by Lawrence Berkley National

Laboratory that says the 30 percent duct leakage common in many U.S. homes can reduce the air conditioner's SEER by 42 percent.

Translating those findings from mathematical equations and charts into a format that's easily understood by the public is difficult, he said. They may understand that having cooled air leaking into a hot attic is not good, but few realize just how much it can affect their energy bills.

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If the public is not tuned in to the need for duct sealing, it may not be a surprise that many HVAC contractors aren't either, Eorgan said.

"They want to sell the big-money items," he said. "To get up there and seal ductwork, it's not as easy. When you're going and replacing lamps, you're in a controlled environment. But when you're (sealing) ductwork... there is more work involved."

To help educate contractors, Hardcast offers classes on the need for duct sealing through its Carlisle HVAC authorized applicator training program (details are at www.carlislehvac.com/forms/training.aspx). The courses include tips on how to explain the process and the expected savings to home and building owners, Forrest said. It also discusses the profits available to companies that offer the service.

While they are not widespread, there are some state and local programs offering money for duct sealing. If you visit www.dsireusa.org, which stands for "Database of State Incentives for Renewables and Efficiency," you'll find a

handful of localities that offer tax incentives for residential and commercial work nationwide.

Many times, the commercial programs are customized based on the proposed kilowatt savings.

"The big thing we find with these types of programs is they're offered out there, but they're typically lumped in with a ton of other kinds of efficiency technologies," Forrest said. "So I think the duct- and air-sealing side of life is kind of buried... lumped in with tankless water heaters, caulking and weather stripping and air conditioners and heat pumps and furnaces."

A recent study by the Levy Partnership Inc. and High Performance Building Solutions done as part of the U.S. Department of Energy's Building America program noted the benefits of duct sealing in public housing projects.

The study said that sealing residential ductwork using traditional methods (wraps, tapes and brushed- or sprayed-on sealants),



especially at the HVAC system's registers, air handlers and return-air vents, was responsible for 70 percent of the system's total reduction in air leakage. Manually applied sealants also had the shortest payback time — just over two years.

One utility that has long offered incentives for performing such work is Texas-New Mexico Power, which serves 239,000 homes and businesses in the Lone Star State. The utility currently offers rebates that range from \$191 to \$280 per kilowatt, depending on how difficult the ductwork is to access or whether the home is in an economically depressed neighborhood.

Under the program, contractors visit a property to assess the state of the HVAC system and perform sealing as needed. Homeowners are not charged for the work. Incentives are paid directly to contractors.

Eric Paul, spokesman for the utility, said that in 2015, area companies completed 928 duct-sealing projects.

"From that we paid \$338,000 in incentives to contractors," Paul said.

The work reduced energy demand for Texas-New Mexico Power by 420 kilowatts and cut energy consumption by 2,478 megawatts — saving homeowners money on their utility bills.

Eorgan said it may take another spike in energy costs for the public and more providers like Texas-New Mexico Power to embrace duct sealing.

"They're already doing this over in Europe. Their energy costs are a lot higher than here," he said. "It just comes down to when those costs get so high that people are going to be looking for any penny to save."

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