

The New Rules of Central Air

Federal Regulations Make AC More Energy-Efficient, But Units Are Pricey, Bulky

By SARA SCHAEFER MUÑOZ

IN RESPONSE to new federal standards for central air conditioning that went into effect earlier this year, manufacturers are rolling out a slew of more energy-efficient units. While buyers will likely save money on their summer energy bills, the new air conditioners are more expensive, bulkier and harder to install.

The regulations require all units entering the market to have a minimum seasonal energy efficiency ratio—which measures output compared to power consumption—of 13, up from 10. As Americans in areas across the country—from Southern California to Baltimore—face energy rate increases this summer, units following the new standards can reduce people's bills by about 30%, depending on the region.

The new standards come as the market for central air conditioning is growing. According to the Air-Conditioning and Refrigeration Institute, a trade group in Arlington, Va., manufacturer shipments of central air conditioning units were two million from January to March this year, up

Lowering your Energy Bills

How to save on AC costs this summer

- Purchase the highest **Seasonal Energy Efficiency Ratio (SEER)** that you can afford.
- **Bigger is not always better.** Poorly-sized air conditioning units can inflate your energy costs.



- A **programmable thermostat** can coordinate with your daily patterns, reducing cooling bills by up to 10 percent.
- **Maintain your equipment** with a professional tune-up; clean or replace filters monthly.

Source: Alliance to Save Energy

19% from same period last year. The increase in demand is driven in part by new home construction. According to Census data released yesterday, new home sales were up 4.9% in April. The industry estimates that about 30% of central air conditioners are ordered for new construction,

and the rest are replacements.

While the new units can lead to lower energy bills, they are more costly upfront: They usually start around \$4,000. Polly Burkert, a school administrator in Columbia, Maryland, in April spent nearly \$5,000 to replace her 30-year-old system. After she heard her local utility was planning a 72% rate rise, she opted for a unit with higher than the minimum efficiency standards. "I decided I had to make the move and do it," she said.

Federal tax credits of up to \$300 made available through the 2005 energy act are available to consumers who buy systems more efficient than the new minimum. Consumers may also be eligible for rebates from local utilities. For example, in Texas, Austin Energy offers a rebate of \$400 before June 16. In Iowa, Alliant Energy-Interstate Power & Light is offering up to \$500 when customers buy a more-efficient system this year.

Apart from cost, increased efficiency comes with another downside: the units are about 20% larger. (They require more space for extra air flow.) The higher system costs are in part driven by installation, with the bigger size causing headaches for contractors. Some estimate installation costs have risen by as much as 25% because of the equipment and extra manpower it takes to lift the new units, which can weigh nearly 300 pounds. Other contractors say they have had to buy bigger

Please Turn to Page D2, Column 1

The New Rules of Central Air

Continued From Page D1

trucks to deliver the pieces.

Central air conditioning systems usually have two major components: an outdoor unit that expels the heat, and an indoor unit that cools the air. The larger size of indoor parts in the new models—which in small homes or condos is often kept in a closet—means homeowners may have to knock down walls or otherwise enlarge the closet when it's time for replacement. Outside, it could mean some additional landscaping to block the apparatus. "Don't expect that AC to fit behind the little shrub anymore," says Jack Sinkler, a vice president of marketing with Rheem Manufacturing, a subsidiary of Japan-based Paloma Co., Ltd., which makes hot-water heaters and residential air conditioners.

Manufacturers of air conditioning components have come up with a variety of ways to retool the inner workings of the units to make them more efficient. For example, St. Louis-based Emerson Electric Co. increased the efficiency by using fewer moving parts. The new models are also quieter, and some use less refrigerant, the chemical cooling substance. According to the Appliance Standards Awareness Project, an advocacy coalition based in Boston, Mass., a homeowner in Chicago who upgrades from a less-efficient model could save between \$40 and \$90 a year on energy bills, depending on the efficiency of the old system. A homeowner in Dallas could save between \$200 and \$400.

The 2005 energy act also provided incentives for manufacturers to make

higher-efficiency products like refrigerators and dishwashers, marked with Energy Star label, which means an appliance has to use less energy than minimum efficiency standards for its category. For instance, refrigerators have to use at least 15% less energy than the standard, and dishwashers have to be at least 25% more energy-efficient than the standard.

Air conditioning manufacturers have made significant investments to meet the new efficiency standards. Lennox International Inc., a Richardson, Texas-based maker of residential and commercial air conditioning and heating systems, saw its total capital expenditures rise by more than 50% to 63 million last year, mostly due to equipment investment related to the new standards, says a company spokesman. And United Technology Corp.'s Carrier Corp. said it spent \$250 billion and increased its plant capacity by 50% to meet the new standards and improve its existing line.

Michael Murphy, a manager for a cement company in Tampa, Florida, recently installed a 13 SEER central air system for a new addition on his home. While the unit is slightly bigger than the older models he has, he says the size and expense was worth it: it's quieter, and so far, the extra system caused only an \$18 rise in his \$200-a-month electric bill.

Manufacturers are using the upgrades to tack on more features. Rheem, for example, offers a thermostat tool that tells homeowners when to call a technician, and microprocessor in the outdoor unit tells the technician what the specific problem is, such as a blocked filter or low refrigerant.