

energywise™

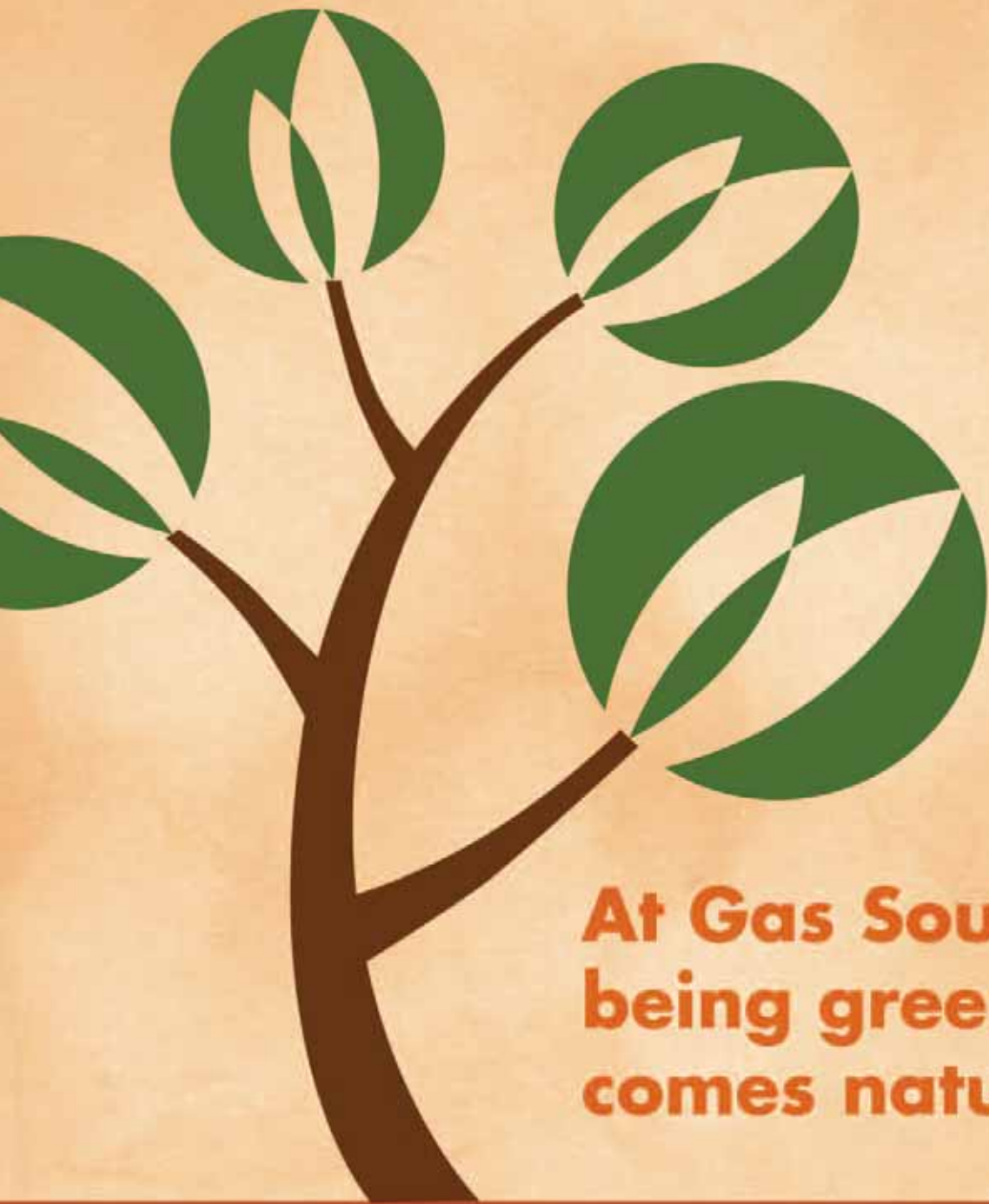
your guide to greener living

Energy Efficiency

Unlocking Your Home's Potential

HOT TOPIC
Does Your Furnace
Make the Grade

SLICE AND DICE
Tips for cutting energy use
and slashing bills in the kitchen



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Gas South is proud to provide Georgia with natural gas, an efficient and clean-burning energy source. In addition to providing great rates and outstanding service, Gas South is also committed to supporting and developing earth-friendly programs that benefit our customers, our communities and our planet. To learn more about Gas South, call us at **1-866-563-8129** or visit **www.gas-south.com**.

GAS  **SOUTH**

Get Comfortable.

Cool Weather and Conservation

Whether it's energy, gasoline, or water, conservation is a topic that's top of mind for many Atlanta homeowners. It's also a time of year when we spend more time indoors, and this edition of EnergyWise™ features tips to make your home more comfortable—and energy efficient—during the winter months. And though the sweltering summer temps are a memory, it's important we continue to be water-savvy at home. We uncover things you can do to preserve this precious natural resource.

We also meet Chef David Larkworthy, one of the founders of 5 Seasons Brewing, which will soon open its third brewpub in metro Atlanta. An organic-inspired chef, he shares his philosophy on cooking with local ingredients and brewing organic beer. And if your kitchen sees a lot of action this time of year, you'll enjoy our recommendations to make it even more energy efficient.

Coolray and Mr. Plumber have joined Gas South to bring you EnergyWise. Presented by Atlanta Gas Light® EnergyWise is designed to foster a greater understanding of the environment and the impact our choices have on its sustainability. After all, the more you know, the more you can do to make a difference.



Over **98%** percent of respondents to an EnergyWise poll turn off the lights when they leave a room.

Visit atlantamagazine.com/energywise to participate in this month's poll.

Cooking Up Energy Savings

Choosing the right kitchen appliances and using them in an energy-conscious fashion can reduce your energy use and lower your bills. Here's some advice on getting the most bang for your energy buck.

Use the **MICROWAVE**. It uses between one-fifth and one-half the energy of conventional electric ovens and is most efficient at cooking small portions and defrosting.

Cook with gas. **GAS OVENS** and **COOKTOPS** are more efficient than their electric counterparts because the fuel is used directly for cooking. You'll also enjoy precise temperature control and response with a natural gas range.

Install an **ENERGY STAR®-QUALIFIED DISHWASHER**, which uses at least 41 percent less energy than the federal minimum standard for energy consumption. Newer models can also save hundreds of gallons of water annually.

The refrigerator is the single biggest energy hog in the kitchen, accounting for as much as 15 percent of a household's total annual energy use. Opt for an **ENERGY STAR®-QUALIFIED REFRIGERATOR**, which requires about half as much energy as models manufactured before 1993, thanks to high-efficiency compressors, improved insulation, and more precise temperature and defrost mechanisms.

CHANGE YOUR HABITS. The most energy-efficient appliances will only save you so much. To achieve maximum impact, you'll want to adopt these energy-conscious habits:

- Run your dishwasher only when full—and resist the urge to pre-rinse. Newer models can handle even dried-on foodstuff.
- Keep your refrigerator between 37 and 40 degrees and make sure the door seal is tight. Test it by closing the door on a dollar bill and try to pull it out. If it comes out easily, the door may need adjusting or the seal may need replacing.
- Vacuum the condenser coils on your refrigerator regularly.
- Reduce the number of times you open the oven when cooking, since heat escapes each time.



Ask the Energy Wizard

Do you have a question for the Energy Wizard?
Get answers and learn more at EnergyWizard.info or
send your question to energywizard@energywizard.info.
The Energy Wizard is your source for energy information and advice.



Banish Cold Spots for Good

Dear Energy Wizard: During winter months, I have several cold spots in my home. I try to warm these areas with electric space heaters, but it's still not comfortable and is quite expensive! Is there a better way? *Meter Spinner*

Dear Meter Spinner: Pull the plug on those old-fashioned, inefficient electric space heaters! When cooler weather sets in, there are certain rooms that get used less because of cold spots. But with the consistent and even heat provided by a natural gas infrared heater, you can enjoy comfortable heat everywhere, all winter long. Natural gas heaters are efficient, easy to install, and available in sizes to fit every space. They're an economical and effective way to warm problem areas—and will keep you warm even during a power outage.

If, however, it's a larger room or a whole area of your home that's giving you the cold shoulder, then a new product from Rinnai® may be just the solution you need. Their direct vent heater uses a fan assist to mix heated air throughout the space, which means it can heat a larger space more comfortably. It can even entirely heat a smaller home! Available in a variety of sizes and colors, it features an innovative cool-to-the-touch cabinet, making it safe enough for the family room.

Water Wise

Like all of our natural resources, there is a finite amount of water on the planet. But until the recent drought, that's something few of us considered. "We've been spoiled for years," says Joe W. Hayes, plumbing manager of Mr. Plumber of Atlanta. "Part of what we're doing in the plumbing business is working to change that mindset." To that end, Hayes offers advice on things we can all do to conserve water in our homes.

INSTALL A LOW-FLOW TOILET.

For years after the federal government mandated 1.6-gallon toilets in 1995, they got a pretty bad rap. Hayes explains that manufacturers had to scramble to comply and the toilets simply weren't designed to operate efficiently. Today, all of that has changed, he says. Not only have standard low-flow toilets been reengineered, new

ultra high-efficiency toilets (HETs) which use at least 20 percent less water hit the market last year. Some of them use less than a gallon per flush, and many local jurisdictions offer rebates to encourage the installation of low-flow toilets.

RETROFIT FAUCETS AND SHOWERHEADS.

Some Georgia counties have put mandates in place that require homebuyers to replace inefficient plumbing fixtures before the house can be purchased. In addition to installing low-flow toilets, inefficient faucets and showerheads must be retrofitted.

Hayes says that showerheads should emit no more than two and a half gallons of water per minute, kitchen faucets should be limited to two gallons a minute, and bathroom faucets to a gallon. He adds, "You can save almost 1,500 gallons a year in one shower by changing the showerhead."

WORK ON YOUR WATER HEATER.

Tankless water heaters have become very popular in the last few years, says Hayes. And that makes a lot of sense when you consider the energy savings that come from only heating water when it's needed. What doesn't make sense is offsetting those savings with wasteful behaviors. "Some people will take longer showers when they know they have unlimited hot water," he explains. Another major waste of water occurs while we wait for it to heat. Hayes suggests that tank-type heaters be retrofitted with a circulation pump which allows for instant hot water and can save up to 12,000 gallons a year.

For more information on products, policy, and rebates, visit: northgeorgiawater.com or atlantawatershed.org.



Our *choices* effect the next generation...



Imagine Having Endless Hot Water *And* Lower Energy Bills.

You don't use hot water 24 hours a day, but you're paying to heat water 24 hours a day. With a standard water heater, you heat and reheat the same water even when you're sleeping.

A tankless water heater from Mr. Plumber is a more efficient way to heat water. By heating water on demand, it is up to 50 percent more energy efficient than traditional water heaters and delivers an endless supply. You only pay to heat water when you need it and for as long as you need it... leaving some for the next generation.



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Tankless Water Heaters, Drain Cleaning, Septic Services... *Call Mr. Plumber Night or Day.*

Beat the Cold, Save Some Cash

WINTER WEATHER brings with it many opportunities to conserve energy. By taking a few steps to winterize your house you can significantly reduce your energy consumption, as well as your bills.

DO AWAY WITH DRAFTS

Drafts can reduce a home's energy efficiency by 5 to 30 percent a year, according to the U.S. Department of Energy. Fortunately, this is an easy problem to address. The simplest fix is the draft snake, a rolled bath towel or custom-made strip placed across the bottom of drafty doors and windows. It also pays to seal up gaps with caulking and weather-stripping. Inspect places where different building materials meet—corners, around chimneys, where pipes or wires exit, and along the foundation. Hold a lit incense stick near doors, windows, and other potential problem areas. If the smoke wavers, you've got a leak to seal.

TUNE UP OR UPGRADE YOUR FURNACE

Keeping your furnace clean and properly adjusted will reduce energy use and heating costs. "We recommend checks at least twice a year," says Eric Evans, Coolray service manager. "These are seasonal checks—one for the summer months and one for the winter months. These inspections will not only increase the efficiency, but will also prolong the life expectancy of both the air conditioner and the furnace." And if it's time to replace your furnace, go with an ENERGY STAR-qualified natural gas model, which is up to 15 percent more efficient than standard new furnaces and as much as 50 percent more efficient than some older ones.





Do you know your home's carbon footprint? Find out for yourself at comfortableresponsible.org

WATCH THE THERMOSTAT

In most households, heating and cooling costs make up more than 50 percent of the energy budget. Turning down the heat when you leave the house is one of the surest ways to save money. For every degree you lower the thermostat, you can expect to save between 1 and 3 percent on your heating bill. And if you have trouble remembering to adjust it, consider a programmable thermostat, which can save the average family \$180 a year.

RUN FANS IN REVERSE

Most of us associate fans with the long, hot days of summer. But many ceiling units come with a switch that reverses the direction of the blades. Switching to clockwise rotation creates an updraft, which blows warm air pooled near the ceiling back into the living space. The simple flip of a switch can cut your heating costs as much as 10 percent.

INSTALL STORM DOORS AND WINDOWS

Installing a storm door can increase energy efficiency by 45 percent, by reducing drafts while letting in light. Storm windows, particularly ENERGY STAR-qualified models, can also make a huge difference when the cold wind begins to blow. Always make sure they are in the down position and are securely shut. If you're not able to make such an investment, a more affordable means of buffering your home against drafts is a window insulation kit, which you can pick up at your local hardware or discount store. When properly installed, window plastic is virtually invisible. Remember to leave the blinds open during the day in rooms that get a lot of sun.

CHANGE FURNACE FILTERS

"Filter inspection, cleaning, or replacement is one of the most essential factors to efficient operation of your furnace or heat pump system," says Evans, who recommends changing them every three months. Dirty filters restrict airflow and increase energy use. To avoid the hassle, consider switching to a permanent filter. While disposable fiberglass filters trap 10 to 40 percent of debris, electronic filters trap around 88 percent and are much better at controlling the bacteria, mold, viruses and pollen that cause illness and irritation. Another option is a genuine HEPA filter that can remove at least 99.97 percent of airborne particles and is based on Department of Energy standards.

INSULATE, INSULATE, INSULATE

Insulation is one of the best ways to save energy and money in your home. Add more insulation between walls, and, since warm air rises, make sure your attic floor is well covered. Choose insulation with the highest R-value practical, which is a measure of its heat-blocking power. In fact, you can save up to 10 percent of your annual heating and cooling costs by simply bringing your attic insulation levels to R-49 (18 inches).



START SAVING with a **SWEATER**

A light long-sleeved sweater is worth about 2 degrees in added warmth, while a heavy one adds about 4 degrees.

Butternut Crab Cakes

- 1 medium organic Georgia butternut squash
- 2 pounds fresh jumbo lump crab
- 1 large egg
- 5 scallions, thinly sliced
- 1 clove garlic, minced
- 1 teaspoon butter
- Pinch cayenne pepper
- Pinch kosher salt

Preheat oven to 325 degrees. Cut the butternut squash in half and place on a sheet pan, cut side down and roast for 20 to 30 minutes or until just soft to the touch on the neck of the squash. Remove from oven and cool. When cool remove the seeds and center and set aside. Use a spoon to remove the rest of the flesh from the skin and set aside. Measure one cup of squash and place in the refrigerator until cold.

Sautee garlic and scallions over medium high heat with butter for 2 minutes and cool in fridge to preserve color. Add cayenne pepper and salt.

Check crabmeat and remove any shells. To make the crab and butternut mousse, place 4 ounces (1/2 cup) of crabmeat and the egg in a food processor and puree on high for 30 seconds. Add the cup of butternut squash you reserved from before and process for 30 more seconds.

Place the crab and butternut mousse in a bowl. Fold in the crab, scallions, and garlic.

Scoop or spoon 4-ounce "cakes" on a nonstick sheet pan and cook in 325-degree oven for 12 to 20 minutes until just set. Remove from oven and enjoy.

They are great by themselves or with a little sauce, slaw, or arugula salad.

Recipe courtesy of Chef David Larkworthy



Earth-Friendly Eats & Energy

Chef David Larkworthy of 5 Seasons Brewing Company insists on fresh food, great beer, and smart energy

IN 2001, restaurateur Dennis Lange and chef David Larkworthy opened 5 Seasons Brewing Company at The Prado, offering fresh food and handcrafted beers, which incorporate the finest seasonal ingredients from local farmers. In 2006, Larkworthy teamed up with Crawford Moran, former owner and master brewer of Atlanta's beloved Dogwood Brewing Company, to open 5 Seasons North, in Alpharetta. The third pub, 5 Seasons Westside, will open in Midtown soon.

Larkworthy works with about a dozen local farms to bring the freshest organic produce and hand-cut, all-natural meats to the table. In addition to a core menu, the restaurants feature twenty to thirty seasonal specials every day. They also bake all of their own breads and make everything from salad dressings to sorbets themselves. Some of the spent grain, a byproduct of their brewing operation, is added to the bread, and the rest is given to the organic farms with whom they do business for use in composting or as feed for organically raised animals.

In addition to playing an integral part in the local organic farming and dining scene, Larkworthy and his partners are equally committed to other Earth-saving endeavors, from using biodegradable straws to insisting on energy efficiency. "We use natural gas in the boiler at Sandy Springs," says Larkworthy, and they're anxious to convert the electric one at the Alpharetta location, which came with the building. "We hate it. It uses so much electricity, it's ridiculous." He adds that all of their stoves, ranges, and grills are also fueled by natural gas. And, of course, there's also the circular natural gas fireplace at the heart of 5 Seasons North. Particularly inviting this time of year, the fireplace puts out plenty of heat and affords the soaring space the ambiance of a mountain lodge, all without the smoke and ash associated with wood-burning types.

Register to win dinner for two at a 5 Seasons Brewing Company restaurant.

Participate in an *EnergyWise* online survey about energy and the environment. Visit atlantamagazine.com/energywise by February 14, 2009 for your chance to win.

Over **59%** of respondents to an *EnergyWise* poll make a point of purchasing locally grown foods.

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Clean Energy

The Future of the Fill-Up

According to the Department of Energy, there are only 339 public natural gas fueling stations in the country. But the City of College Park recently added one to that tally. One of the nation's newest CNG stations recently opened for business in the city just south of Atlanta. The station, which is the largest in Georgia, is a partnership between the City and Clean Energy. It's located near Hartsfield-Jackson International Airport, and that is considered key to its future success. College Park City Manager Jim Smith explains that in addition to buses from MARTA, C-TRAN (Clayton County transit), and Woodward Academy, he hopes the station will service the thousands of buses, limousines, and taxis that frequent the airport. Smith is also excited about the potential environmental impact. "We're going to serve a real need in reducing pollution around the airport," adding, "We're considered a green city, [and] this station complements our whole green power initiative."

The natural gas-powered **Honda Civic GX** is recognized by the U.S. EPA as the **cleanest** commercially available internal-combustion vehicle **on the road today**.

Paving the Way for Natural Gas Vehicles

CLEAN. AFFORDABLE. ABUNDANT.

Compressed natural gas (CNG) may well be the future of transportation fuels. A readily available alternative to gasoline, CNG is made by compressing natural gas to less than one percent of its volume at standard atmospheric pressure.

You can cook and heat your home with natural gas, but a natural gas vehicle? Absolutely! Known as NGVs, there are more than six million worldwide, but only about 150,000 in the U. S. since we've enjoyed relatively modest gasoline prices for so long. The Honda Civic GX is the nation's only light-duty, factory-produced CNG vehicle in production today. But if you want one, you'll need to get in line because they're selling out faster than they can roll off the assembly line, despite Honda's announcement they're doubling production for 2009. More manufacturers are developing NGVs, though, such as the recently unveiled CNG-electric hybrid Camry by Toyota.

There are plenty of CNG-powered vehicles on the road already. Public transportation systems across the country have been using NGVs for decades, and today between 12 and 15 percent of the nation's public transit buses—including more than 450 in MARTA's fleet—run on natural gas. Around town, Georgia Tech and UPS support the use of NGVs, in addition to MARTA. And you may have seen Atlanta

Gas Light's custom-painted Honda Civic GX on area highways.

So what's different about a natural gas vehicle? Very little from an operational or experience perspective. It looks, feels, and drives the same as its gasoline-powered counterpart. But you'll need fewer service appointments because it runs so clean, and you can enjoy the convenience



of filling your natural gas vehicle at home. Home fueling units, known as Phills, can be installed in your garage for overnight fill-ups, saving you a stop at the filling station and saving you even more money as well. Speaking of saving money, natural gas fuel presents a cost savings of up to 40 percent over gasoline and NGVs get about 39 miles per gallon highway and 28 miles per gallon in the city.* You may even spend less time on the road since, as the driver of an alternative fuel vehicle, you can cruise along in the HOV lane—with or without a passenger.

*Department of Energy, July 2007 Clean Cities Alternative Fuel Price Report, and cngnow.com

Natural gas vehicles produce up to **90%** fewer emissions than petroleum-fueled vehicles.



Each year, family vehicles in the United States consume over **76 billion gallons of fuel**, enough to fill more than 8 million tanker trucks. Lined up end-to-end, they would span the U.S. from New York to Los Angeles forty-five times! *Source: California Environmental Protection Agency.*





Natural Gas. Cleaner at every turn.

With natural gas, every turn of the range, hot water faucet, thermostat and dryer helps save energy and the environment. That's because natural gas is efficient and clean, and natural gas appliances can shrink a home's carbon footprint by up to 40% over electric. Visit comfortableresponsible.org to learn more about the wonders of natural gas.





A PhD in AFUE

It's smart to know the impact your energy choices have on the environment—and your wallet. As much as half of the energy used in your home goes to heating and cooling, so making wise choices about your home's heating system can have a big impact on both your utility bill—and your comfort. A measure of your furnace's performance, its AFUE (Annual Fuel Utilization Efficiency), also says a little bit about your environmental consciousness.

Test yourself and see how many eco credits you've earned!

90%+ AFUE

At this level, a furnace is condensing, which means it recaptures some of the heat wasted in traditional systems by condensing escaping water vapor. These are the most efficient models available today. With a 90%+ AFUE furnace in your home, you're at the head of the class!



80% AFUE

Traditional power combustion furnaces are between 80 and 82% AFUE. While that's better than many older models, it's just above the minimum 78% AFUE required of all furnaces sold in the U.S. today. An 80% AFUE furnace delivers solid results, and a model with variable speed earns extra credit!



LESS THAN 80% AFUE

A furnace with an 80% AFUE rating converts 80 percent of the fuel to heat, and the other 20 percent is lost. If your furnace has an AFUE lower than 80%, you're missing out on both comfort and efficiency benefits. You're trying really hard, and will see improvement with some extra study time!



NO AFUE

If you're lacking an AFUE score, you're missing out on the comfort and environmental benefits natural gas delivers. An electric heat pump behind the shrubs outside could keep you from achieving your goals. Take that money you've been spending on sweaters and mittens and invest in a tutor to show you the path to green goodness and energy efficiency!



Purchase Power

Managing your energy use saves money and natural resources. And in today's market, there are many products to help with the process.



High Efficiency Furnaces

The standard measurement for gas furnace efficiency is the Annual Fuel Utilization Efficiency (AFUE) rating. All furnaces come posted with this rating, generally in the form of the yellow EnergyGuide label. It measures the amount of heat delivered to your home compared to the amount of fuel required by your furnace. AFUE ratings range from a minimum of 78% to a high of 96.7%. Most manufacturers list their furnaces as "high efficiency," and they are when compared to older furnaces in many homes. But the Department of Energy defines "high efficiency" as an AFUE rating of 90% or higher and classifies lower-AFUE models as "mid efficiency." Furnaces more than fifteen years old are exceptionally inefficient due to today's technological advancements in product development.

High efficiency furnaces (90%+ AFUE) offer a number of advantages over less efficient models. Aside from obvious operating efficiencies, they are typically quieter, equipped with more precise electronic control packages, and carry a lifetime warranty on several major components. While the AFUE rating is valuable, other factors play an important role in how efficiently and economically your heating and air conditioning system operates. Design and condition of your duct system, your contractor's experience, and the manufacturer's warranty are all key elements of an efficient comfort system. "Proper sizing and quality installation are essential to getting the most from your new equipment," says Eric Evans, Coolray service manager.

If you're interested in the most efficient, comfortable natural gas furnace system available, then consider a super-efficient two-stage condensing gas furnace, which ranges from 92% to 96% AFUE. It matches the heating output with the current requirements of your home, simultaneously maximizing comfort and minimizing operating costs. It also offers the option of multi-stage cooling equipment to provide exceptional comfort and energy savings during warmer months, too. High efficiency furnaces come with a higher initial cost, but substantial energy savings can be realized when considered over the life of the unit. Not to mention the peace of mind that comes with making a more environmentally responsible choice for your home.