naturalLiving

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Southeast Gas

Natural Gas:

GOOD FOR THE PLANET, GOOD FOR YOUR WALLET

INSIDE

FEATURES

IN EVERY ISSUE

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The gas versus electric match-up

NIST study finds natural gas provides lower life-cycle costs.

By Tonya McMurray

Natural gas provides a lower life-cycle cost for space and water heating in a case study of a newly-constructed Maryland home, according to a report published recently in the Journal of Building Engineering.

The study conducted recently by National Institute for Standards and Technology (NIST) civil engineer David Webb and NIST economist Joshua Kneifel evaluated the life-cycle cost and environmental impact using a life cycle assessment (LCA) of gas and electricity using NIST's Net Zero Energy Residential Test Facility (NZERTF).

The test facility is a two-story colonial home designed to

"The environmental impacts associated with using natural gas were equal to or lower than those from using electricity on-site, primarily driven by the electricity-fuel mix and energy lost through generating, transmitting and distributing electricity."

— Joshua Kneifel, economist, National Institute for Standards and Technology

PHOTO COURTESY OF BEAMIE YOUNG/NIST

The National Institute for Standards and Technology's Net Zero Energy Residential Test Facility in Gaithersburg, Maryland, provided measurements for a NIST analysis of the environmental impacts of gas and electric HVAC systems in energy-efficient Maryland homes.

resemble a typical home in the area while producing as much energy as it consumes in a given year. NZERTF is used as a test facility for a variety of equipment and operating conditions with a whole building simulation model allowing for the evaluation of a variety of "what-if" scenarios.

"To date, the operation of the house has included electric space and water heating equipment," Kneifel said. "Since heating in Maryland homes is predominantly met using gas-fired equipment, we thought that evaluating the performance of the NZERTF when using a gas furnace and water heater would be a good supplement to the experimental research already being completed."

To complete the analysis of gas versus electric fuel sources, Kneifel and Webb used a unique toolset of cost and environmental data and software to create a database of results on the NZERTF home with both electric and natural gas-fired space and water heating systems. The database of results is provided in NIST's Building Industry Reporting and Design for Sustainability (BIRDS) web application available to other researchers.

The analysis, which looked at life-cycle costs over a 30-year period, showed lower life-cycle costs from implementing natural gas-fired equipment in the NZERTF constructed to meet Maryland's residential building energy code.

ASSESSING EFFICIENCY: ENERGY STAR® LABEL HELPS CONSUMERS SAVE MONEY AND ENERGY

The typical American household spends about $2,000 a year on energy bills, according to the Environmental Protection Agency (EPA). But paying attention to the ENERGY STAR® label on appliances and other products can help consumers reduce costs while reducing their carbon footprint.

The ENERGY STAR program was created by the EPA in 1992 under the authority of the Clean Air Act. A joint partnership of the EPA and the U.S. Department of Energy, the program provides a simple and unbiased assessment of energy efficiency to help consumers and businesses make more informed choices.

"Products that earn the ENERGY STAR label save energy, save money and help protect the environment," said Enesta Jones, spokesperson, Environmental Protection Agency. "With ENERGY STAR, you can save 30 percent, or about $575, on your annual bill, while avoiding more than 5,500 pounds of greenhouse gas emissions."

ENERGY STAR-certified gas furnaces, for example, are up to 15 percent more efficient than a baseline gas furnace model and can save up to $85 a year in energy costs, according to the EPA. An ENERGY STAR- certified gas storage water heater uses 8 percent less energy than a non-certified gas water heater.

And those savings are on top of the energy savings already provided by natural gas appliances. The American Gas Association estimates that homes using natural gas for heating, cooking and clothes drying can save more than $800 a year compared to homes using electricity for those tasks.

In 2017, the last year for which statistics are available, the EPA reports that ENERGY STAR partners helped Americans save $30 billion in energy costs. Since 1992, more than 6 billion ENERGY STAR products have been sold. And, altogether, ENERGY STAR and its partners have saved American families and businesses nearly 4 trillion kilowatt-hours of electricity and reducing greenhouse gas emissions by more than 3 billion metric tons. Those greenhouse gas reductions are equivalent to the annual emissions of more than 600 million cars.

PARTNERING FOR ENERGY EFFICIENCY

Under the ENERGY STAR program, thousands of industrial, commercial, utility, state and local organizations across many industrial sectors partner with the EPA to build and deliver energy-saving products and solutions that are more environmentally friendly.

"This is a result of low natural gas price relative to electricity," Kneifel said. "The environmental impacts associated with using natural gas were equal to or lower than those from using electricity on-site, primarily driven by the electricity-fuel mix and energy lost through generating, transmitting and distributing electricity."

He cautioned that the study is based on a single location, current technologies, local conditions and available data.

"The results may be similar for locations with a similar climate, energy prices, electricity-fuel mixes and construction costs," Kneifel said. "However, it is difficult to make any assertion because of the numerous factors that can influence the results. Both cost data and environmental data can change over time. For example, the electricity-fuel mix in the region has been shifting away from coal and nuclear toward natural gas, which can impact the resulting LCA results. Therefore, the results in the study are based on the best available cost and LCA data as of 2016."

NIST has made available the BIRDS database as well as the research methodology to allow for testing in other areas. In addition, Kneifel and Webb plan to update their study as new data is released to track the impact of changing conditions. ■

In addition to certifying energy efficient products, the ENERGY STAR program provides a suite of tools and resources that help businesses and consumers identify more cost-effective approaches to managing energy use in their buildings, plants and homes. More than 700 utilities and state and local governments use ENERGY STAR tools and products as part of energy-efficient programs that reach 95 percent of U.S. households, according to the EPA.

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— Enesta Jones, spokesperson, Environmental Protection Agency

EARNING THE ENERGY STAR

More than 75 product categories are eligible for the ENERGY STAR rating, including lighting, electronics, office products, appliances, heating, ventilation and air conditioning equipment, and commercial foodservice equipment. Natural gas appliances covered by the ENERGY STAR program include furnaces, ovens, water heaters and clothes dryers.

The EPA requires that ENERGY STAR-certified products contribute significant energy savings while delivering the features and performance that consumers want. Requirements are designed so that when an ENERGY STAR product costs more than its less-efficient counterparts, the energy savings allow purchasers to recover their investment in a reasonable period of time.

To earn the ENERGY STAR label, products must be certified by a third-party based on testing in an EPA-recognized lab. The testing evaluates whether the products save energy without sacrificing features or functionality to give consumers the confidence that they are getting both product quality and energy efficiency.

ENERGY STAR products are also subject to off-the-shelf verification each year to ensure that changes or variations in a product's manufacturing process don't change the product's compliance with ENERGY STAR requirements.

The ENERGY STAR program offers several resources to help consumers find certified products. The ENERGY STAR product finder (www.energystar.gov/productfinder) provides information for several categories of ENERGY STAR certified products, including where the products can be purchased and estimated prices.

Many local utility companies provide rebates for purchases of a wide range of energy-efficient products, including appliances, electronics, heating and cooling equipment, fans and building products. Because ENERGY STAR-certified products meet stringent energy-efficiency standards, they often qualify for utility rebates. To find out what current rebates are available, contact your local utility company or use the ENERGY STAR rebate finder (www.energystar.gov/rebatefinder). ■

The natural choice

Gas provides clean, affordable and efficient energy.

By Tonya McMurray

When consumers think of energy efficiency, they often think of renewable fuels such as biofuels and hydrogen fuel. But natural gas offers a cost-effective, environmentally friendly energy source that is readily available throughout the United States.

Indeed, some 178 million Americans already rely on natural gas for its affordability, reliability and comfort, said Lori Traweek, chief operating officer, American Gas Association (AGA).

Space heating is the most common use for natural gas, but natural gas is also an efficient and affordable fuel source for other residential uses such as water heating, clothes drying and cooking.

"There are many reasons that more than half of households in the United States rely on natural gas for space heating," said Dena Wiggins, president and CEO, Natural Gas Supply Association (NGSA). "Consumers will tell you they like natural gas because it's affordable, it's clean and it provides precision cooking, warm heating and efficient energy. Whether it's a natural gas furnace or water heater, natural gas provides comfort and warmth quickly, exactly and responsively."

Annual energy costs for residential customers using natural gas have been lower than the cost for propane, fuel oil or electricity since 2010 – and those costs are projected to stay low through 2040, according to estimates by the U.S. Energy Information Administration (EIA).

The AGA estimates that households using natural gas for heating, cooking and clothes drying see an average savings of $874 per year compared to homes using electricity for those appliances. Lower natural gas prices have resulted in savings of almost $50 Billion for natural gas customers over the past four years, according to the association.

With new technology, an abundant domestic natural gas supply, and an extensive and reliable delivery infrastructure, natural gas is an affordable and efficient option for consumers.

BETTER TECHNOLOGY

Technological advances in the last several years have brought greater efficiency in production, delivery and use of natural gas. Over the past 40 years, the number of natural gas residential customers has grown by 70 percent; however, today's consumers use nearly 40 percent less natural gas because of increased efficiency throughout North America.

"This trend is due, in part, to installation of tighter-fitting windows and doors, better insulation, utility-sponsored energy-efficiency programs and the development of increasingly more efficient natural gas appliances," AGA's Traweek said.

AGA data shows that natural gas utilities have increased spending on efficiency programs by almost five times over the last 10 years. And manufacturers of gas appliances have continued to refine their products, with many natural gas furnaces and boilers now achieving a 97 percent efficiency rating.

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ABUNDANT SUPPLY

Technology has also played a role in increasing the availability of large, domestic natural-gas resources. The Potential Gas Committee (PGC) recently reported that the U.S. natural gas supply has increased 20 percent since 2016, creating the most abundant supply in the 54-year history of reporting from the PGC. In 2018, the United States became a net exporter of natural gas for the first time in 60 years.

"Because of its abundance in the United States, natural gas provides an immediate resource that not only dramatically cuts emissions from oil and coal, but is consistently one of the most affordable forms of energy for hard-working families," NGSA's Wiggins said.

Domestic natural gas supplies are expected to be sufficiently robust to meet growth in demand across all sectors for at least the next decade, according to the EIA. With so much of the natural gas supply coming from domestic sources, North American consumers are not significantly impacted by changes in political alliances and other disruptions in foreign fuel supply, all of which help keep natural gas prices more affordable for consumers.

RELIABLE DISTRIBUTION

Because the natural gas distribution system is largely underground, it is a fuel source that consumers can rely on regardless of weather.

"America's natural gas utilities invest $824 every second on enhancing the safety of natural gas distribution and transmission systems," Traweek said. "That investment, and the men and women who operate that system, fuels its reliability and resilience in even the most challenging weather conditions."

One goal of the AGA is expanding the availability of natural gas as an option for more consumers throughout the U.S., she said.

"Pipelines in the United States deliver natural gas to more than 178 million Americans, but there are still areas in the country that do not have access," Traweek said.

ENVIRONMENTAL BENEFITS

The AGA estimates that greater direct use of natural gas for heating and cooling, water heating, cooking and clothes drying can cut carbon emissions nearly in half.

Natural gas is the cleanest of all fossil fuels, producing half as much carbon dioxide as electricity generated by coal, according to the Environmental Protection Agency (EPA). Natural gas also produces less than a third as much nitrogen oxides and 1 percent as much sulfur oxides as electricity. Because of that, natural gas is less a factor in environmental hazards such as smog (composed primarily of carbon monoxide and nitrogen oxides) and climate change.

The energy efficiency of natural gas has become increasingly important in generating electricity as natural gas has consistently replaced coal as a fuel source for power plants. More than a third of electricity generation in the U.S. comes from natural gas.

"Natural gas is the dominant fuel source for generating electricity since it's clean, abundant and reliable," Wiggins said. "As natural gas has replaced coal as the leading source of electricity, it has reduced the nation's carbon emissions to a 25-year low. Because of its versatility and reliability, it has become an ideal partner for renewables, and it is empowering the transition to a clean energy future."

America's natural gas utilities are continuing to look for ways to reduce natural gas emissions through next-generation natural gas technologies such as renewable natural gas (RNG) and Power-to-Gas (P2G), Traweek said.

RNG turns the methane produced from farms, landfills and wastewater treatment plants into a low-carbon fuel source that is interchangeable with conventional fossil-fuel derived natural gas.

P2G turns excess electricity generated during periods of low demand into hydrogen and oxygen gases. The oxygen can be released into the atmosphere or sold for industrial use while the hydrogen can be stored. The stored hydrogen can be blended with natural gas or combined with carbon dioxide to create synthetic methane, which can be used as a replacement for fossil-fuel generated natural gas.

Those new technologies will help keep natural gas at the forefront of clean, reliable and affordable energy, Traweek said. ■

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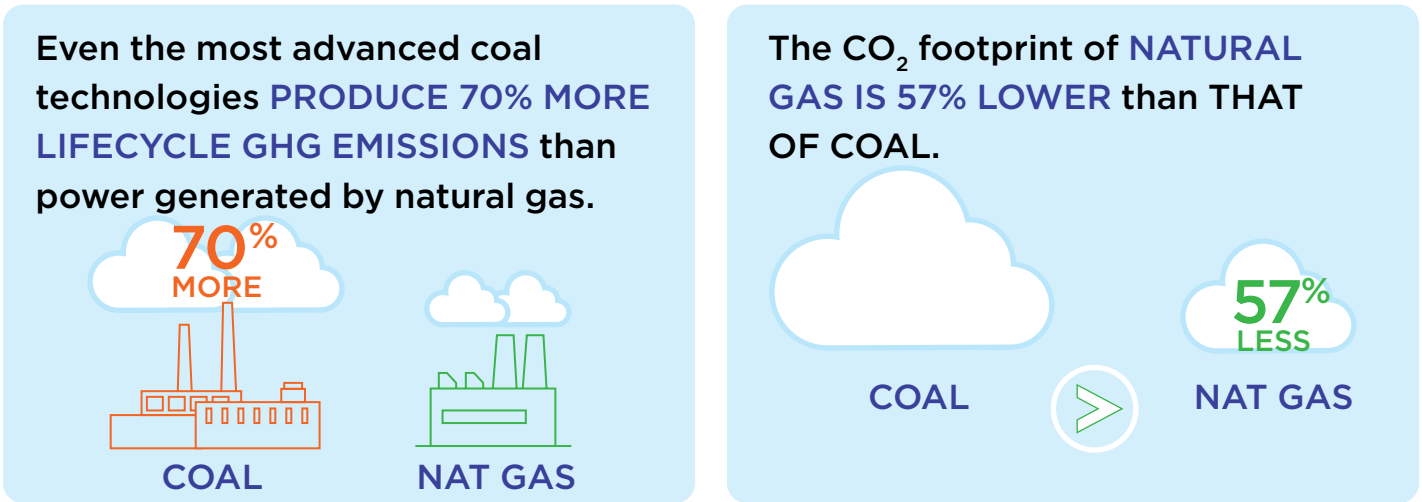
— Lori Traweek, chief operating officer, American Gas Association



SOURCE: NATURAL GAS SUPPLY ASSOCIATION.

Natural gas has become the dominant fuel source for electricity generation, which has contributed to a 25-year low in carbon emissions.

Two bathtubs? Yes

Natural gas water heaters provide comfort, reliability and affordability.

By Tonya McMurray

Water heating is typically the second-largest energy expense for consumers, accounting for about 18 percent (or between $400 and $600) of the average home's energy use, according to the U.S. Department of Energy (DOE). Reducing hot water use, implementing energy-saving strategies and choosing an energy-efficient, natural gas water heater can all help homeowners reduce monthly water heating bills.

Natural gas water heaters cost less to operate than electric water heaters and can heat water twice as fast, allowing consumers to enjoy two bathtubs of hot water heated by natural gas for the same cost as one tub heated by electricity.

"When available, natural gas has been a reliable and affordable source of energy for heating water since the inception of the tank-type water heater you see today," said Tim Gaughan, regional sales manager, utilities and high efficiency products, Rheem Manufacturing Co. "For tank-type water heaters, natural gas provides quick recovery of heating the water for high-demand periods. For tankless water heating, natural gas offers the ability to supply continuous hot water and high efficiency for lower operating costs."

TRADITIONAL TANK WATER HEATERS

The tank-storage water heater is still the most common water heater for residential use. A storage water heater receives cold water from the home's water supply and heats the water to a predetermined set point with a gas burner at the bottom of the tank. Hot water is delivered throughout the home through the plumbing system as needed by a homeowner. As hot water leaves the tank, the colder water is delivered to the bottom of the tank to be heated.

Depending on the tank size, a storage water heater offers a reservoir of 20 to 80 gallons of hot water. Because water is constantly heated in the tank, some energy is wasted keeping water hot even during off-peak hours.

TANKLESS WATER HEATERS

Tankless water heaters offer on-demand hot water and can provide an energy savings of up to 30 percent over a storage-tank heater because tankless systems heat water only when it's needed.

Tankless systems have a gas burner that ignites when a hot water faucet is turned on to heat the water as it's being used. The burner turns off once the hot water faucet is turned off. Tankless systems

generally provide from 3 to 9 gallons of hot water per minute, depending on the water heater's gas BTU per hour input and the incoming water temperature. Because water is heated as needed, there is no risk that peak periods will use up all the hot water as sometimes happens with a tank-storage system.

"The end-user will experience noticeable energy savings and continuous hot water, avoiding potential cold showers," Gaughan said.

ENERGY EFFICIENCY

Regardless of the type of water heater installed, consumers should look at the energy efficiency of the water heater to reduce both cost and environmental impact. The Uniform Energy Factor (UEF) is a DOE measure to help consumers determine the energy efficiency of water heaters. Under the UEF, water heaters are divided into four categories, called bins, based on hot water usage.

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The DOE requires water heaters to list the First-Hour Rating (FHR) on the Energy Guide label to help consumers compare different models and sizes. The FHR is the number of gallons of hot water the heater can supply each hour when starting with a tank full of hot water. The FHR rating will depend on tank capacity, the heat source and the input rate of the burner or element.

Natural gas heaters generally have a higher FHR ranking than electric because of the efficiency of natural gas as a fuel source.

PHOTO COURTESY OF RHEEM MANUFACTURING CO.

Natural gas water heaters cost less to operate than electric water heaters and heat water twice as fast to help homeowners reduce monthly water heating bills.

CHOOSING YOUR HEATER

The DOE cautions that the cheapest water heater may not be the least expensive to operate over time. To help assess the lifetime cost of a water heater, the DOE recommends that consumers consider the water heater's size, FHR, fuel type, energy efficiency and yearly energy costs.

"With the continual demand for higher efficiency and technology, water heater manufacturers have improved their overall efficiency in all market segments: residential, commercial and industrial," Gaughan said.

He added that many models now come with leak detection, Wi-Fi connectivity and time of use scheduling to help consumers better manage their energy use. ■

GOING TANKLESS: ON-DEMAND HOT WATER OFFERS MAXIMUM EFFICIENCY AND COMFORT

Tankless water heaters are increasingly popular with homeowners because they offer an endless supply of hot water while significantly reducing energy costs.

"Tankless water heaters are ideal for anyone who wants to save money on their energy bills, is conscious of their environment and wants to provide the most comfortable experience for themselves, their family and their guests," said Manny Jimenez, senior tankless application specialist, Navien Inc.

Tankless water heaters stay in a standby mode until a sensor determines a need for hot water within the plumbing system, he said. Once the sensor detects a need for hot water, the system heats the water to a predetermined set point and then delivers an endless stream of hot water, regardless of how many people are showering or how many appliances are using hot water. Because the water is heated as it's distributed, a tankless system doesn't run out of hot water if it's properly sized, Jimenez said.

Because tankless systems deliver hot water only when needed, they save both energy and money.

"A tank-type water heater must maintain the set-point temperature 24/7, 365 days a year, whether it's needed or not," he added.

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Traditional hot water storage-tank systems use significant energy reheating stored water that has cooled off while in the tank or heating cold water that flows into the tank after the original water is depleted. Heating the water only when it is needed results in up to 40 percent energy savings, Jimenez said. In addition, tankless systems are small and take up minimal space.

To get maximum benefit from a tankless system, it needs to be correctly sized.

"Tankless water heaters are not sized in the same manner as tank-type heaters since there is no recovery needed," Jimenez said. "This can be confusing for some as they mistakenly assume a 199,000 BTU tankless system can replace a 199,000 BTU tank system. That can lead to underperformance."

Because tankless systems deliver hot water only when needed, they save both energy and money.

A tankless system may need more BTUs to ensure that it can provide adequate flow rate to meet the demand. To determine the correct size, your retailer or plumber will look at the water temperature coming into the heater, the peak demand for hot water and the heater's overall efficiency.

While the initial cost of tankless water heaters is typically higher than a conventional tank heater, the tankless heater has a lower overall lifecycle cost, according to the U.S. Department of Energy (DOE). Tankless water heaters have a life expectancy of 20 years compared to 10 to 15 years for tank heaters. And, tankless heaters can provide 35 percent to 45 percent savings on energy bills, based on DOE estimates.

Tankless systems certified by the Environmental Protection Agency's ENERGY STAR® program are often eligible for utility rebates to help offset the initial purchase price. ■

Now we're cooking

Outdoor kitchens provide focal points for open-air living areas.

By Tonya McMurray

Just as the kitchen is often the centerpiece of the home, its set up can provide an ideal focal point for outdoor living spaces. Whether simple or high-tech, outdoor kitchens allow homeowners to enjoy the fun of outdoor activities rather than being stuck indoors cooking.

Outdoor kitchens are just one piece of a growing interest in outdoor living, said Jerry Scott, senior vice president, RH Peterson Co.

"Outdoor kitchens and complete outdoor rooms continue to be a top sought-after amenity for new homes and remodels as well," he said. "This is spurred by the desire to invest in the home and spend more family and entertaining time there while avoiding traffic, crowds and the high cost of dining out. Today, many home improvement shows are featuring the outdoor kitchen or outdoor room, which is inspiring the imagination and desire of homeowners."

Emily McGee, director of communications, Hearth, Patio & Barbecue Association (HPBA), agrees, noting that interest in outdoor kitchens increases every year at the association's expo.

"Outdoor kitchens and complete outdoor rooms continue to be a top sought-after amenity for new homes and remodels as well."

— Jerry Scott, senior vice president, RH Peterson Co.

"The options, innovation and technological advances are remarkable and always changing," she said. "Your backyard is your oasis. More and more people are viewing their outdoor areas as an additional part of their home and finding ways to use it year-round."

Creating an outdoor kitchen and living space is also a fairly easy renovation for homeowners, McGee said.

"When you update a patio, you're not displaced, and no contractors are working in your home throughout the day," she said. "It's also one of the more affordable rooms in your home to update."

CREATING THE OUTDOOR KITCHEN

In addition to budget, homeowners considering a kitchen area for their outdoor living space should consider the type of entertaining they will do, how often they will use the space, how many people they plan to entertain and the amount of space they have to devote to a kitchen area. They may also want to consult with specialty retailers and manufacturers to get an idea of the available options.

"An outdoor kitchen can be a luxurious and fully equipped area or much simpler with work areas and cooking elements," McGee said. "They can include smokers,

PHOTO COURTESY OF RH PETERSON CO.

Grills – both simple and elaborate – are a center point of outdoor kitchens, bringing the reliability and efficiency of natural gas to help create the perfect backyard oasis.

grills, pizza ovens and firepits. They may want to add a heating element to maximize its functionality. A homeowner can probably develop a great plan for any budget."

Natural gas grills are often the centerpiece of outdoor living spaces. Grills can be modestly sized and freestanding or large permanent fixtures. With more precise temperature controls than charcoal grills, natural gas grills help produce more consistent cooking results and take the guesswork out of outdoor cooking.

Gas grills ignite quickly without the long warmup time required for charcoal grills, and the fuel supply is always available. Unlike propane grills, there's no chance of a tank being low or running out during a cookout. Because natural gas grills connect directly to a home's existing natural gas line, the fuel is always available and ready to go. Plus, natural gas cookouts cost about one-sixth the cost of a charcoal cookout and three-fourths the cost of a propane cookout.

Beyond the grill, many homeowners add griddles, side cookers, sinks, faucets, refrigeration and food prep areas, Scott said. Other features often included are cocktail bars, dishwashers and storage areas.

Fireplaces, fire pits or fire bowls provide extra ambiance as well as a place for after-dinner conversation. Because there are no sparks or hot embers flying about, gas fire pits and fireplaces are safer and can be located almost anywhere – even close to patio furniture or wood decks. Unlike wood fires that take time and effort to ignite, gas fire features start with the flip of a switch, and there is no need to clean out ashes after enjoying a cozy evening fire.

Many homeowners opt to add outdoor lamps or tiki torches for a finishing touch to their kitchen area. Whether enclosed or with open flames, outdoor lighting fueled by natural gas offers a reliable light source, even during a power outage. And, while bugs flock to electric lighting, natural gas lighting does not tend to attract insects.

"It's no longer simply an outdoor grill," Scott said. "Homeowners are installing a complete kitchen to allow outdoor preparation for complete meals. The outdoor living area is an investment rather than an expense. It's an investment in your home and an investment for your family." ■

Welcome spring!

Home maintenance ideas to prepare for warm weather.

By Tonya McMurray

The longer and warmer days of spring are a great time to make sure your home is ready for warmer weather and to identify home projects for the coming summer months. And for homeowners in colder climates, a quick spring inspection and routine maintenance is especially important to identify any weather-related damage, said Nick Gromicko, founder, International Association of Certified Home Inspectors.

SPRING LANDSCAPING

Your yard is probably one of your prime targets for spring maintenance work. A well-managed landscape can help extend the energy efficiency offered by natural gas and complement outdoor living spaces populated by natural gas appliances.

Grass is 31 degrees Fahrenheit cooler than asphalt and 20 degrees cooler than bare soil, according to the National Association of Landscape Professionals (NALP). And trees shading homes can reduce attic temperatures by as much as 40 degrees.

Pull up old annuals and thin perennials to get ready for the new planting season. Prune and trim trees and shrubs. Home inspectors recommend keeping branches five to 7 inches from your home to minimize

PHOTO COURTESY OF LOVEYOURLANDSCAPE.ORG/JAMES MARTIN ASSOCIATES, CHICAGO, ILLINOIS

Getting your home and yard ready for spring requires some basic landscaping and a few general maintenance tasks.

moisture transfer to the roof or siding. Keeping branches away from your home also discourages squirrels and other animals from taking up residence in your attic.

Be sure to check around natural gas meters and appliances to remove branches, leaves or other debris that might block vents or air intakes to ensure safety and maximize energy efficiency. Clean and inspect your gas grill, fireplace, fire pit and other appliances to make sure nothing has been damaged over the winter.

Fill in low areas in the yard or next to your home to minimize spring flooding and reduce the risk of standing pools of water that might attract mosquitoes and other pests.

In addition to spring landscaping, be sure to check out the exterior of your home to identify any winter damage or excess wear.

"In colder climates, spring is the time to check your roof, gutters and downspouts to see what damage was caused by snow, ice and hail and to assure that the wet season doesn't cause water to enter your home or around your foundation," Gromiko said.

Check your siding and outside walls for peeling paint or rotting wood and replace trim as needed. Occasional cleaning with a pressure washer will keep mold from growing. Inspect your foundation for cracks or other signs of deterioration.

Inspect your roof flashing and eaves and examine shingles to see if any are loose or missing. Shingles that curl (turn up) or claw (turn down) can make your roof more susceptible to leaks. You'll also want to clean out and reattach gutters and downspouts, so they effectively direct water away from the house

Examine your deck, porch and wooden fence to check for deteriorating wood and fix loose railings or slats. HomeAdvisor, an online portal to connect homeowners to maintenance professionals, recommends treating decks and wood fences every four to six years, depending on the amount of exposure to sun and rain. ■

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HONEY-GLAZED PORK TENDERLOIN

INGREDIENTS

1/4 cup honey, plus more for drizzling
1/4 cup sherry vinegar
1 tablespoon whole-grain Dijon mustard
1/4 teaspoon ground cayenne pepper
1 (1- to 1 1/2-pound) pork tenderloin
1 teaspoon kosher salt, plus more as needed
3/4 teaspoon freshly ground black pepper, plus more as needed
1 tablespoon butter
1 tablespoon oil
2 teaspoons finely chopped fresh rosemary (optional)

DIRECTIONS

1. Arrange a rack in the middle of the oven and heat to 400°F.
2. Whisk together the honey, vinegar, mustard and cayenne in a small bowl; set aside.
3. Trim any silver skin from the tenderloin. Turn under the tapered end and tie it in place with kitchen twine, or leave it loose to create a portion that will be very well-done. Pat the pork dry with paper towels and sprinkle generously with the measured salt and pepper.
4. Heat the butter and oil in a large, ovenproof skillet over medium-high heat. Add the pork and cook until well-browned on all sides, turning with tongs, about five minutes total.
5. Place in the oven to roast until an instant-read thermometer inserted horizontally into the end of the pork registers 140°F, about 12 minutes. Remove the skillet from the oven and transfer the pork to a clean plate.
6. Place the skillet over medium-high heat. Pour the honey mixture into the skillet and stir to loosen any browned bits. When the liquid begins to sizzle, return the pork and any juices to the skillet. Gently tilt the skillet so that the liquid pools on one side of the pan and continuously spoon it over the top of the pork until the liquid thickens into a syrupy glaze, about two minutes. Transfer the pork to a serving platter and pour the glaze over the top. Let rest for five minutes. The internal temperature of the pork will rise to 145°F to 150°F.
7. Cut the pork crosswise into slices. Drizzle with more honey and sprinkle with salt, pepper and rosemary if using. Serve warm.

PHOTO COURTESY OF WWW.THEKITCHN.COM

SOURCE: WWW.THEKITCHN.COM

SPINACH AND ARTICHOKE FRITTATA

INGREDIENTS

10 large eggs
1/2 cup full-fat sour cream
1 tablespoon Dijon mustard
1 teaspoon kosher salt
1/4 teaspoon freshly ground black pepper
1 cup grated Parmesan cheese (about 3 ounces), divided
2 tablespoons olive oil
About 14 ounces marinated artichoke hearts, drained, patted dry and quartered
5 ounces baby spinach (about 5 packed cups)
2 cloves garlic, minced

DIRECTIONS

1. Arrange a rack in the middle of the oven and heat to 400°F.
2. Place the eggs, sour cream, mustard, salt, pepper and 1/2 cup of the Parmesan in a large bowl and whisk to combine; set aside.
3. Heat the oil in a 10-inch cast iron or oven-safe nonstick skillet over medium heat until shimmering. Add the artichokes in a single layer and cook, stirring occasionally, until lightly browned, six to eight minutes. Add the spinach and garlic, and toss until the spinach is wilted and almost all of the liquid is evaporated, about two minutes.
4. Spread everything into an even layer. Pour the egg mixture over the vegetables. Sprinkle with the remaining 1/2 cup Parmesan. Tilt the pan to make sure the eggs settle evenly over all the vegetables. Cook undisturbed until the eggs at the edges of the pan begin to set, two to three minutes.
5. Bake until the eggs are completely set, 12 to 15 minutes. To check, cut a small slit in the center of the frittata. If raw eggs run into the cut, bake for another few minutes. Cool in the pan for five minutes, then slice into wedges and serve warm.

RECIPE NOTES

Frozen spinach: 6 ounces of frozen chopped spinach can be used in place of fresh baby spinach. Thaw, drain, and press well to remove as much liquid as possible, and cook for just one minute with the garlic before pouring on the egg mixture.

Leftovers can be stored in a covered container in the refrigerator for up to five days.

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