

naturalLiving

Fall/Winter 2019

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Natural Gas:
Smart, Sensible and Stylish



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New technology increases energy efficiency and savings.

By Tonya McMurray

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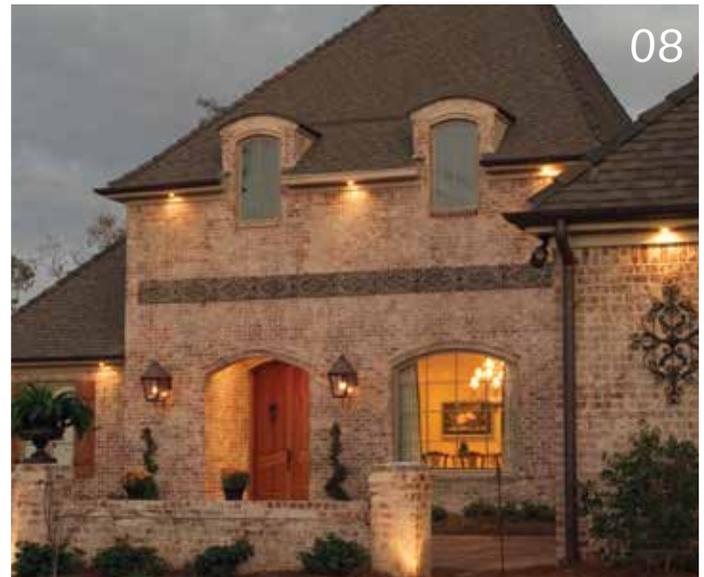
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Winter-ready

Cold weather preparation can bring energy savings.

By Tonya McMurray

With the winter months approaching, now is the time to prepare homes for cold weather. A little upfront planning can bring significant energy savings.

Because heat is one of the most significant winter energy expenses, homeowners should pay particular attention to their home-heating system. If the heating system is fueled by natural gas, winter preparation is relatively simple. Natural gas is “always on,” so there is no need to plan for the purchase of winter fuel as with other homes heated by propane or fuel oil.

Natural gas burns cleanly, so there is less need for chimney cleanings and extensive equipment maintenance. However, it’s a good idea to have chimneys and flues inspected to make sure there are no blockages that could lead to the buildup of carbon monoxide gases. Homeowners will also want to have the boiler, furnace or heat pump inspected to ensure

If the heating system is fueled by natural gas, winter preparation is relatively simple. Natural gas is “always on,” so there is no need to plan for the purchase of winter fuel as with other homes heated by propane or fuel oil.

they are in good working order.

Once the heating system is squared away, homeowners should monitor their thermostat. Keeping the heat set at around 68 degrees Fahrenheit provides reasonable comfort while reducing energy use.

Turning the thermostat down by 8 degrees at night or during the day when no one is home can save up to \$180 a year in heating costs, according to the Alliance to Save Energy, or ASE, a nonprofit, bipartisan alliance of businesses, governments, environmental organizations and consumers.

If there are unused rooms in the home, consider shutting or covering heating vents in them, so heat is not going to those areas. If a fireplace is being used, be sure to close the flue when the fire is out so cold air won’t sneak into the home through the chimney.

To make the best use of a heating system, take advantage of sunny days by opening blinds and curtains — especially on the south side of the home — to allow sunlight to add natural warmth to the house.

SEALING THE DRAFTS

The U.S. Department of Energy estimates that drafts waste 30 percent of the average homeowner’s energy use. Before winter arrives, check to make sure there are no

(continued on page 15)





Turn on the lights

New technology increases energy efficiency and savings.

By Tonya McMurray

When looking for ways to make a home more energy efficient, high-tech might not be the first thought that comes to mind. But an increasing number of technology solutions offer both energy and cost savings for homeowners.

Home-automation systems, or smart home technology, gives homeowners a hands-on approach to managing energy use within their homes. These systems allow them to control almost any home appliance from any internet-connected device.

A smartphone app can turn Wi-Fi-connected lights off and on. For example, a light can be turned on as someone is on their way home in the evening instead of leaving it on all day. Or, the lights can be turned on and off while a homeowner is on vacation, so it looks like someone is home. Wi-Fi-enabled ceiling fans can link to smart thermostats and automatically adjust the fan speed and direction based on the ambient temperature in the room.

TEMPERATURE CONTROL

Smart thermostats are the newest iteration of the programmable device. Like programmable thermostats, smart thermostats allow homeowners to set different schedules to manage their household's temperature. But smart thermostats can automate that process even more, and they allow control of heating and cooling systems remotely.

New, high-tech smart thermostats are equipped with sensors that automatically adjust a home's temperature according to a person's lifestyle and schedule. Geofencing — the use of GPS or RFID technology to create a virtual geographic boundary — features included in many smart thermostats can determine when a homeowner leaves for the day so it can turn down the heat and then turn it up when the person is on their way home.

Some ENERGY STAR®-certified smart thermostats can learn a homeowner's preferences automatically and establish a schedule that

reverts to energy-saving temperatures when a homeowner is away or asleep. ENERGY STAR is a program run by the U.S. Environmental Protection Agency and U.S. Department of Energy that promotes energy efficiency.

The average American household spends almost half of its annual energy bill, more than \$900 a year, on heating and cooling, according to ENERGY STAR®; so, the increased control a smart thermostat provides can result in significant savings.

ON-DEMAND HOT WATER

After space heating and cooling costs, water heating is one of the most significant energy expenses for the average household. About 20 percent of a homeowner's energy use is dedicated to water heating, said Raymond VanAssche, vice president, innovation, Rinnai America Corp.

“Most of us have consistent routines. You can program [the Control-R device] to recirculate the water at 6 o'clock in the morning, knowing you're going to be in the shower at 6:10.”

— Raymond VanAssche, vice president, innovation, Rinnai America Corp.

Tankless water heaters are about 35 percent more efficient than a traditional storage tank system, VanAssche said.

In a tankless system, water goes into the unit and passes through a heating structure fueled with natural gas or propane to heat the water to a pre-set temperature (usually 120 degrees Fahrenheit). Tankless systems allow the homeowner to set up a recirculation system, so that warm water is continuously circulated throughout the home to provide on-demand hot water to every faucet and showerhead in the house.

“That's a huge saving in energy cost because you're not waiting for



Tankless water heater systems fueled by natural gas offer significant energy and cost savings for consumers, reducing the average household expense by 35 percent over traditional tank water systems.

“When you look at the total cost of ownership, the homeowner has an opportunity to save a considerable amount of money in their budget by installing a tankless system. There’s always going to be a trade-off between installation cost versus overall savings with energy, but these high-tech appliances offer a good return on investment.”

— Rinnai’s VanAssche

your storage tank to supply hot water to each fixture,” VanAssche said. “It maintains an optimum water temperature throughout the whole house, so you’re using less energy to reheat the water.”

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.

Like many manufacturers, Rinnai has augmented its tankless hot water system with an app that brings even more technology to the system. Rinnai’s Control-R Wi-Fi app can be programmed to recirculate

water based on predetermined schedules or personal usage.

“Most of us have consistent routines,” VanAssche said. “You can program it to recirculate the water at 6 o’clock in the morning, knowing you’re going to be in

the shower at 6:10.”

The Control-R also allows homeowners to operate the system through a Bluetooth wireless push-button as well as offering voice activation through Amazon Alexa, Google Home and Samsung Smart Things.

While tankless water heaters have a higher upfront cost, the added efficiency of the tankless system combined with the lower cost of natural gas as a fuel provides lower operating costs, and a tankless system will often pay for itself within five to seven years.

SMART LAUNDRY: CONNECTED WASHERS AND DRYERS ADD CONVENIENCE TO LAUNDRY DAY

Smart homes — where appliances and devices can be controlled remotely via Wi-Fi technology — are becoming more popular among consumers, with 70 percent of homeowners surveyed by the Association of Home Appliance Manufacturers, or AHAM, saying they would consider purchasing or are planning to buy a connected appliance.

A Zion Market Research report estimates that the smart-home market will grow at an annual rate of about 15 percent, reaching about \$53.4 billion by 2022. Connected

home appliances are gaining popularity because they can save both time and energy, according to AHAM.

A SMARTER LAUNDRY SOLUTION

Smart washers and dryers — especially when they rely on natural gas for clothes drying and water heating — can help reduce energy use and save money.

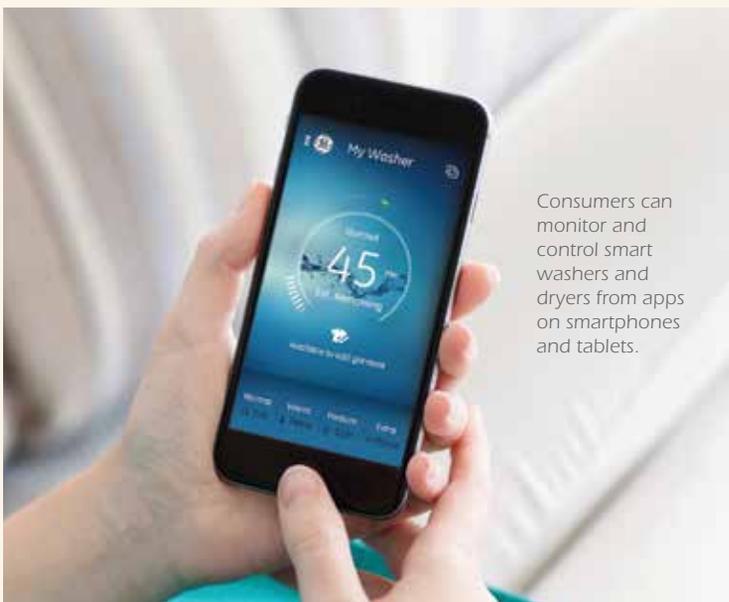
Homes using natural gas to fuel water heating, clothes drying and cooking use about one-fourth less energy than a comparable all-electric home, resulting in annual utility bills that are roughly 49 percent less, according to the American Gas Association.

Smart washers and dryers connect to a smartphone or tablet and transmit information about the appliance’s operation in real time, providing the consumer with more precise control. Many are also compatible with Amazon Alexa or Google Home, providing voice-activated operation.

Smart washers and dryers allow consumers to schedule cycles, monitor remaining cycle time, receive alerts when a cycle is finished or start and pause a cycle.

When a load is finished and ready to go to the dryer, smart washers send an alert. If the owner cannot make it to the washer when the load is finished, many provide a “smart tumble” feature

PHOTO COURTESY OF GE APPLIANCES, A HAIER COMPANY



Consumers can monitor and control smart washers and dryers from apps on smartphones and tablets.

“When you look at the total cost of ownership, the homeowner has an opportunity to save a considerable amount of money in their budget by installing a tankless system,” VanAssche said. “There’s always going to be a trade-off between installation cost versus overall savings with energy, but these high-tech appliances offer a good return on investment.”

Whether it’s tankless water heating, smart thermostats or smartphone apps that let homeowners control energy use, technology gives them greater power to control usage, reducing both cost and their energy footprint. ■

Smartphone apps allow consumers to control many home appliances remotely. Rinnai America Corp.’s Control-R device allows consumers to set a recirculation schedule to ensure on-demand hot water throughout the home.



PHOTO COURTESY OF RINNAI AMERICA CORP.

that will move clothes around every few minutes to keep them from wrinkling and mildew-free until it’s time to transfer them to the dryer. Specialized sensors can also determine how dirty clothes are and automatically select the appropriate amount of detergent and water for optimal cleaning.

Smart dryers remind the homeowner if clothes have been left in the dryer, and automatically extends the tumble time to reduce wrinkles. Moisture sensors monitor clothing during the cycle and adjust the time and temperature to efficiently dry clothes without over drying.

That extra control augments the better results produced by natural gas dryers, which are better for fabrics because they heat up almost instantly, cool down quickly and provide a gentler heat than electric dryers.

Diagnostic sensors in both washers and dryers can send an alert when a repair is needed or when it’s time to run the self-cleaning cycle on the washer or clean the lint



Smart washers and dryers make laundry more convenient, sending alerts when cycles are done and allowing consumers to start and pause cycles remotely.

screen on the dryer. Some smart appliances even monitor use of laundry supplies and link to an Amazon Prime account to allow automatic ordering.

Smart appliances, according to AHAM, continue to evolve with new features and capabilities being added regularly. ■

PHOTO COURTESY OF GE APPLIANCES, A HAIER COMPANY

naturalChoices

Many communities are using gas lighting to offer that special romantic ambience.

From new developments to historical restorations, gas lighting is very much in demand.



PHOTO COURTESY OF LEGENDARY LIGHTING LLC

An alluring glow

Gas lighting brings charm to the neighborhood.

By Drew Robb

Natural gas is preferred in the home for heat, cooking and many appliances. And now, it is even gaining ground in lighting. From beachfront attractions to historical restorations and upscale housing developments to downtown revitalization projects, gas lighting is very much in demand.

“We were in the process of building our new house and needed an exceptional time-period piece to match our entryway décor,” said a homeowner in Indiana. “The natural gas lantern made a beautiful entrance even more inviting.”

LONG HISTORY

Gas lighting preceded the development of electrical lighting by many decades. It was commonplace in the major cities of Europe in the 19th century. However, electric lighting displaced gas lanterns due to its suitability for inside spaces. Although electric light bulbs have long attempted to mimic the alluring glow of gas, they could never compare to a real flame.

“Many communities are again using gas lighting to offer that special, romantic ambiance,” said Kathy Shook, owner and founder, Legendary Lighting LLC and Copper Sculptures Inc. “The open flame of today’s gas lighting offers that same welcoming glow as in years past.”

Gas lighting is a great way to enhance the beauty of any surroundings. From lamps on either side of the front door to entryways and outside rooms, the magnetism of gas lighting is unrivaled.

EMITTING LIGHT

New to the market, however, is the use of gas lighting to combine the beauty of the flame inside a lantern with light emitting diode, or

“Many communities are again using gas lighting to offer that special, romantic ambiance. The open flame of today’s gas lighting offers that same welcoming glow as in years past.”

*— Kathy Shook, owner and founder,
Legendary Lighting LLC and Copper Sculptures Inc.*



LED, lighting for higher-intensity coverage if needed. This technology uses heat from the flame to generate enough wattage for LED bulbs.

“Gas lighting allows the potential homeowner to instantly realize that all the benefits of a gas-supplied home are available,” Shook said. “The enchantment of a gas lighting development speaks for itself when people are driving through the area during the evening hours.”

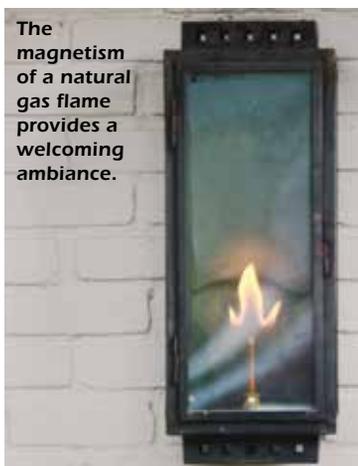
With today’s corrugated stainless-steel tubing, or CSST, (see related article on Page 12), retrofitting for gas lanterns has never been easier. Post-mounted lamps can easily be added, as can hanging ceiling-mount lanterns on porches. On the safety

side, gas lighting must be kept a certain distance from combustible materials. At least 1 foot is required from the top of the lantern to any ceiling or other combustible material.

While gas lighting is common outdoors, it can also be installed inside to create a dramatic effect indoors. “Gas lanterns are very popular in restaurants, dining rooms or kitchens,” Shook said.

For safety purposes, if there is any interruption in the flame while in the “on” position, automatic shut-off valves and electronic ignition systems cut the gas supply.

Whether indoors or outdoors, gas lighting has a way of bringing charm to the neighborhood. ■



The magnetism of a natural gas flame provides a welcoming ambiance.

PHOTO COURTESY OF LEGENDARY LIGHTING LLC

A TOUCH OF DISTINCTION: NATURAL GAS LIGHTING OFFERS ENDLESS POSSIBILITIES

Builders and developers across the country are using gas lighting to stamp a signature look on their projects.

“Natural gas lighting sets itself apart by presenting a warm and inviting light signature to any outdoor space,” said Patrick Jardini, owner, American Gas Lamp Works LLC. “By highlighting properties and projects with gas lights, developers and designers offer a unique and distinct feel that sets them apart from the competition.”

American Gas Lamp Works focuses on traditional styles to add Old-World charm to new neighborhoods

and outdoor environments. Jardini believes that gas lights bring warmth to the community, not only by their production of heat but through the gentle and comforting light they emit. The nostalgic experience they create is unlike any other, he said.

However, it’s not just homes that are harnessing the natural beauty of gas lighting. Communities across the country are utilizing gas lamps to dress up main streets. They quickly become tourist attractions and the source of countless photo opportunities.

Gas fixtures are also customizable, with options for a wide variety of projects. Whether the intention is attractive ambient lighting, adding a dramatic touch to an outdoor living space, providing reliable lighting in the event of extreme weather or a special something to set a property apart, gas lighting offers endless possibilities.

Take the case of the upscale Opus Myers Park community, condominium development in Charlotte, North Carolina. It consists of full-floor, premium-finished residences with windows in every room and no shared lobbies or hallways. Each of the five steel and concrete buildings will feature gas-lit urban mews, recalling many European pedestrian streets with their

PHOTO COURTESY OF AMERICAN GAS LAMP WORKS LLC

Property owners are adding natural gas lighting for dramatic effect.



intimate feel. In addition to 25 natural gas lights, all 24 luxury condo units will have natural gas furnaces, tankless water heaters, ranges and fireplace logs.

“Gas lighting is really about crafting an environment and focusing on warmth and beauty over pure functionality,” Jardini said.

Gas lamps can be safely burned 24 hours a day. When installed according to the manufacturer’s instructions, they are unlikely to ever blow out. If a gas lamp does need to be relit, the fixtures are intelligently designed to properly ventilate any gas produced inside the lamp.

Additionally, gas lamps are energy efficient. They typically use a comparable amount of gas to that used by the pilot light in a home boiler or stove.

“While we are confident that gas lamps are safe for outdoor use, customers have the option of adding electronic ignition to any natural gas open flame fixtures, which includes an automatic ignition and shut off feature,” Jardini said. ■



Natural gas lanterns provide an ambiance that is impossible to achieve with electric lighting.

PHOTO COURTESY OF AMERICAN GAS LAMP WORKS LLC



Natural gas lighting adds atmosphere to an entryway.

PHOTO COURTESY OF LEGENDARY LIGHTING LLC



Flexible delivery

CSST offers safety and efficiency in natural gas connections.

By Tonya McMurray

Corrugated stainless steel tubing, or CSST, is becoming the standard for natural gas delivery within homes throughout the United States.

Developed in Japan in the 1980s to reduce the risk of leaking gas and related fires following earthquakes, CSST was an improvement over the rigid black iron pipe that frequently failed during seismic activity.

CSST is a flexible, stainless steel pipe covered in yellow or black plastic coating. It's typically routed through, under or along floor joists in the basement, inside interior walls or over ceiling joists in attic spaces.

U.S. contractors began using CSST in 1990, and it quickly grew in popularity because of its convenience. More than 1 billion feet of CSST gas piping has been installed in 8 million U.S. homes since 1990, according to CSST Safety, a coalition of CSST manufacturers.

PEACE OF MIND

"CSST is a great, time-saving alternative to black iron pipe or copper to run a natural gas or propane line," said John Hannan, vice president, sales, Pro-Flex CSST. "Because it's flexible, it eliminates the need for numerous fittings, cuttings and threading pipe."

Due to its flexibility, CSST can be snaked through walls or around obstacles, making installation easier and quicker.

Installation time is reduced often as much as 70 percent compared to standard piping and can be accomplished with a tube cutter and wrench, Hannan said. While CSST is more expensive than traditional pipe, the reduced labor and installation costs often result in a lower overall cost.

"CSST has become a common product for gas piping," said Hoss Budde, president, Burnaby Manufacturing Ltd. "A lot of consumers will find that contractors have gotten rid of the threading machine and will only offer hookups using this product."

In addition to convenience and easier installation, CSST has fewer connections, which makes it more resistant to leaks.

"CSST leaves a job with virtually only two joints, one at the connection of the service and one at the appliances," Budde said. "It gives peace of mind knowing there are no joints in the walls or ceilings."

The yellow or black PVC cover makes CSST easily identified during any renovation work, so contractors and homeowners know exactly where the gas piping is, Budde said.

Installation should be performed by a qualified professional who can ensure the CSST is properly connected. Building codes require CSST to be bonded to prevent electric shock in case of failure in a branching circuit and grounded to prevent damage or fire from an electrical surge caused by lightning.

Building codes before 2009 did not require bonding or grounding of CSST, so homeowners with CSST installed in older homes should have it inspected by a qualified electrician to make sure it complies with current codes, according to CSST Safety.

When installing CSST, it's important to accurately identify the British thermal unit, or BTU, requirements of a given appliance since that will determine the appropriate tube size for the machine to operate effectively, Hannan said. Consumers should also know that it is prohibited to mix and match fittings from different CSST manufacturers.

"Not all CSST brands are the same," he said. "Be sure to read the reviews that sellers of CSST will provide." ■

PHOTO COURTESY OF PRO-FLEX CSST



Corrugated stainless steel tubing, or CSST, has replaced iron and copper pipes as a way of delivering natural gas and propane to residential and commercial facilities due to its greater safety and ease of installation.

PLUGGING IN: GAS CONVENIENCE OUTLETS AND CSST OFFER SAFE, EASY ACCESS TO NATURAL GAS SUPPLY

Convenience outlets offer homeowners an easy way to connect outdoor appliances to a natural gas supply delivered through corrugated stainless-steel tubing, or CSST.

The outlets work well with CSST, said Hoss Budde, president, Burnaby Manufacturing Ltd. They easily connect to CSST to provide a plug similar to an electrical outlet that allows homeowners to simply plug in gas grills, patio heaters, lights and other appliances.

The convenience outlet eliminates the need for homeowners to hire a contractor to connect new gas appliances.

"The homeowner can purchase an appliance, come home and plug it in," Budde said. "No calling a contractor to come out and install it. No having to shut down the whole house while the contractor installs it and then relighting all the appliances once he's done."

A new line of Versatile Gas Plugs™, VGP, offers convenience plugs enclosed in a small box designed to blend into wood, concrete, brick or rock surfaces. The VGP models conceal tubing, pipes and valves and allow for drainage of surface water through the box.

Once installed, the outlets allow homeowners to have more flexibility in the placement of outdoor appliances. Convenience outlets can connect to appliances via a flexible hose up to 10 feet long so that homeowners can move appliances around the patio or yard. Double outlets are also available so homeowners can plug in two devices at the same time.

The outlets also simplify moving and storage, Budde said. If homeowners buy new appliances, they can easily unplug the old appliance and plug in the new one without the need for contractors to connect or disconnect gas lines. When winter comes, homeowners can simply unplug the appliance and move it into winter storage. And, if homeowners move, they can take the appliance



When paired with corrugated stainless-steel tubing, or CSST, convenience outlets (like pictured) provide an easy, plug-in connection to a home's natural gas supply.

with them without having to call a contractor to disconnect it from the gas supply.

Convenience outlets come with a variety of safety features. They automatically shut off if the temperature reaches 300 degrees, and most require that the manual valve be shut off before the appliance is connected or disconnected. To ensure safety when connecting to CSST, homeowners should ensure the CSST lines are bonded and grounded.

With the proper permits, a homeowner who knows how to do gas piping can install the outlet themselves, Budde said. When doing so, they will likely want to order an extra strap to better secure the outlet in the box due to CSST's flexibility. Homeowners who are not comfortable connecting gas piping should contact a contractor or plumber to do the initial installation. ■



Water, water, everywhere

Natural gas and water team up to heat homes in various ways.

By Drew Robb

Natural gas and water can bring comfort to every part of a home. These natural gas heating systems employ a boiler to supply hot water (or steam) through a network of pipes. The result is a cozy and comfortable residence with low utility bills.

ENERGY STAR®, a program managed by the U.S. Environmental Protection Agency and the U.S. Department of Energy, helps businesses and individuals save money and protect the environment through superior energy efficiency. According to ENERGY STAR, about half of the energy used in homes goes to heating and cooling. Making smart decisions about the heating system can have a significant impact on utility bills.

“Compared to electricity, natural gas systems are by far the more cost-effective choice,” said Bob Dressler, a licensed heating, ventilation and air conditioning installer and product expert, eComfort, in Bolingbrook, Illinois.

NEW HEIGHTS

Boilers are at the heart of every radiated heating system. They produce and send hot water (or steam) to radiators that distribute heat evenly throughout the entire home. Residential boilers used to take up half the basement and required the placement of ugly, clanking radiators in each room.

For people who have older boilers and radiators in their homes, it is well worth considering the installation of a modern system. Over the past decade, standards in efficiency have propelled natural gas boiler-technology to new heights. Modern boilers are compact and can be as much as 50 percent more efficient than their older counterparts. Warmth is transported throughout the premises via pipes to unobtrusive baseboard radiators.

Stewart Unsdorfer, licensed HVAC contractor and founder, Central Heating & Air Conditioning Co., in Cleveland, Ohio, said there are several factors to consider when purchasing new residential boilers. He stressed correct sizing. A boiler that is too large will waste energy and cause bills to soar. A boiler that is too small won't do the job. Homeowners should seek advice from utility representatives and HVAC contractors about correct boiler sizing.

Another factor to check is the energy efficiency rating of the natural gas boiler. A unit with a higher rating will provide more heat at a lower cost than an alternate unit with a lower score. The Department of Energy estimates indicate that replacing an aging natural gas boiler with a new, high efficiency-one could reduce fuel bills by half.

Unsdorfer said buying the right boiler for a homeowner's specific needs will keep them comfortable for years to come while keeping energy bills low.

GIANT RADIATOR

Natural gas radiant floor systems offer an alternative to heat being fed to spaces via radiator units. They typically consist of a piping system laid under a floor that is fed hot water from the boiler. The entire floor, in effect, acts as a giant radiator.

Radiant floor heating fueled by natural gas is more efficient than baseboard heating systems. It doesn't distribute allergens like forced-air systems and uses relatively little electricity. Installation costs, though, should be factored in.

“I would almost always recommend natural gas for radiant floor heat, especially when used with a high-efficiency boiler,” said eComfort's Dressler said.

Some homeowners install such systems in one room while others place them throughout the home. Comfort settings for these systems are controlled by thermostats, just like other types of heating systems. For example, bathroom floors are often set to run in the first part of the day, replacing cold tile with a welcoming morning warmth. Home heating professionals can install automatic valves and thermostats for each space.

For homeowners looking for a heating solution that provides low utility bills, the combination of natural gas and hot water from a boiler is worth a look. ■



PHOTO COURTESY OF RINNAI AMERICA CORP.

Tankless water heaters, such as this unit by Rinnai America Corp., provide abundant hot water whenever and wherever it is needed.

(continued from page 03)

holes or tears in seals surrounding windows and doors. Seal leaks by applying tape, foam or felt weather stripping to doors and caulking the joints around window frames and between the frame and wall.

Check to see if gaps between siding and windows or door frames are bigger than a nickel. If they are, the American Society of Home Inspectors recommends reapplying exterior caulk. Silicone caulk is best for exterior use because it doesn't shrink and can withstand the elements. Other winter energy-saving tips include:

- Cover electrical outlets to prevent cold air from entering through the outlets.

- Check insulation to make sure it is adequate. Proper insulation and air-sealing measures can save homeowners up to 20 percent on heating costs or up to 10 percent of total energy costs, according to the U.S. Environmental Protection Agency.
- Insulate water pipes to minimize risk of freezing during frigid temperatures and help maximize the efficiency of a hot-water system. Precut pipe foam is available at most hardware stores.
- Reverse ceiling fans to run clockwise, so they circulate warm air throughout the room.
- Dust and vacuum air ducts, so the heating system doesn't have to work as hard to circulate heat throughout your home. ■



TIPS FOR CUTTING YOUR HEATING BILLS

In winter months, open your curtains during the day to naturally heat your home and close them at night to keep the heat inside.



Use a programmable thermostat to set your heater back while you are away or asleep.

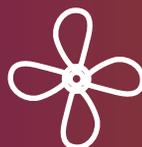


Consider air sealing your home and adding insulation to your walls and attic to help retain your home's heat. Up to 25 percent of your home's heat is lost through small cracks and holes throughout your home.

Seal your air ducts, and make sure they are properly insulated when they are installed in an unheated area of the home, such as an attic or crawlspace.



Weatherstrip around your doors and windows to keep warm air from escaping.



Set your ceiling fan to spin clockwise to blow the rising hot air down.



Make sure your chimney is clean.

Source: Energy Saver (www.energy.gov/energysaver), Weatherscan Assistance Program Technical Assistance Center (<http://waptac.org>) and U.S. Energy Information Administration (www.eia.gov)

GRILLED PORK TENDERLOIN

INGREDIENTS

1 pork tenderloin (1 to 1 1/2 pounds)
 1/4 cup lightly packed dark brown sugar
 1 teaspoon kosher salt
 1 teaspoon smoked paprika
 1/2 teaspoon onion powder
 1/2 teaspoon garlic powder

DIRECTIONS

- 1 Trim the pork tenderloin. Using a thin, sharp knife, remove any connective tissue (silver skin) and fat from the surface of the tenderloin.
- 2 Make the rub. Combine the sugar, salt, paprika, onion powder and garlic powder in a small bowl.
- 3 Rub the tenderloin. Pat the spice rub onto the surface of the tenderloin and set aside while you prepare the grill. You can also tightly wrap the tenderloin in plastic wrap and refrigerate the rubbed pork for one hour or up to overnight.
- 4 Prepare the grill for zone cooking. For a gas grill, heat one side to high or medium-high heat and leave the other side unlit.

- 5 Grill the tenderloin for 12 minutes to 15 minutes. Place the tenderloin over direct heat. Cover and cook, flipping the tenderloin only once, until the internal temperature reaches 140°F to 145°F, five minutes to seven minutes per side. Move to indirect heat if the tenderloin starts to char too much, and continue to cook until it reaches the correct internal temperature; about 18 minutes total cook time.
- 6 Wrap and rest the tenderloin. Remove the tenderloin from the grill to a clean cutting board and tent loosely with aluminum foil. Rest for 10 minutes; the meat will finish cooking from the residual heat, and the juices will redistribute for optimal flavor.
- 7 Slice and serve. Slice crosswise into thin pieces before serving.



PHOTO COURTESY OF JOE LINGEMAN

RECIPE NOTES

Make ahead: The tenderloin can be trimmed and rubbed up to 24 hours in advance. Remove from the refrigerator 30 minutes before grilling.

Storage: Store leftovers in an airtight container in the refrigerator for up to three days.

SOURCE: WWW.THEKITCHN.COM

MEXICAN GRILLED CORN

INGREDIENTS

4 ears corn
 1/2 cup mayonnaise
 1 1/2 cups sour cream
 1/4 cup freshly chopped cilantro leaves
 1 cup freshly grated Parmesan
 1 lime, juiced
 Red chili powder, to taste
 2 limes cut into wedges, for garnish

DIRECTIONS

- 1 Remove the husks of the corn but leave the core attached at the end so you have something to hold on to.
- 2 Grill the corn on a hot grill or cast-iron griddle pan until slightly charred.

- 3 Turn the corn so it gets cooked evenly all over.
- 4 Mix the mayonnaise, sour cream and cilantro together.
- 5 Grate the Parmesan in another bowl.
- 6 While the corn is still warm, slather with mayonnaise mix.
- 7 Squeeze lime juice over the corn and shower with Parmesan.
- 8 Season with chili powder and serve with extra lime wedges.



SOURCE: WWW.FOODNETWORK.COM