

# naturalLiving

Fall/Winter 2018

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# Peace of mind

Natural gas generators keep the heat on ... and the lights and refrigerator, too.

By Drew Robb

It would be great if homeowners could rely on the electric grid to keep the power on. However, outages are on the rise across the nation. That's why so many homeowners are buying natural gas generators to ensure that when the grid goes down, the lights, the heat and refrigerator always stay on.

"When it comes to power outages, natural gas is an excellent fuel choice by virtue of its availability," said Jacob VanWormer, associate product manager, Generac Power Systems. "As natural gas is utility-supplied, and because severe storms that knock out power rarely have a similar such impact on the natural gas infrastructure, a home standby natural gas generator can keep the lights on for as long as necessary."

Time after time, those with diesel or propane generators are left sitting in the dark when they run out of fuel. They are either unable to leave the house due to weather conditions, local gas stations are closed or propane suppliers are out of product. In the vast majority of cases, however, the natural gas infrastructure will stand tall. Anyone wise enough to have a natural gas backup generator available can keep their home powered up until the electric utility has a chance to restore power.

## POWER OPTIONS

Homeowners have different preferences when it comes to exactly how much power they require during an outage. Generator representatives can provide advice on the various options. Some want only basic services and are happy to sacrifice certain appliances and devices. In that case, selected circuit backup provides essential coverage that protects only the most important circuits, such as lights, the heater, water heater, refrigerators/freezers and sump pumps.

Alternatively, whole-home backup power means the entire home is backed up all the time. Whenever there is an outage, the power stays on automatically. All devices, appliances and services are immediately available. However, that entails the purchase of a larger backup generator than one used for selected circuit backup.

VanWormer also mentioned a managed power option. This applies to those that want to back up their entire home without having to invest in a larger, costlier generator. With a power management system, the generator can work smarter, protecting all of a home's circuits by turning off the most power-hungry appliances, such as air conditioning, if the power is needed elsewhere. Later, when generator capacity becomes available, those other appliances will operate automatically. This approach maximizes the use of the natural gas generator while containing costs.

"When choosing a home standby generator, it is important to understand there are many options available that can be tailored to meet any installation," VanWormer said.

Fire and building codes typically require home standby generators to be installed 5 feet away from a structure. Some regions, however, allow certain types of generators to be positioned 18 inches away.

"A standby generator is one of the best investments a homeowner can

*(continued on page 04)*



PHOTO COURTESY OF GENERAC POWER SYSTEMS.

Natural gas-powered, standby generators, like Generac Power System's 22kW Guardian Series (above), restore power immediately to homeowners during an outage, allowing them to keep on everything from the heat to lights to appliances.

*(continued from page 03)*  
 make. They protect the home and keep the power on no matter what the weather is doing,” said Ed Del Grande, home improvement expert and TV host. “A transfer switch will automatically start the unit so it can power up your home in seconds whether you are home or away.”

**ALWAYS AVAILABLE**

A standby generator’s average cost is typically between \$3,500 to \$4,500, according to VanWormer. There is an additional cost for installation, which varies by location and particular situation. There is a wide range of units and manufacturers to choose from.

The Kohler Generators 30 RCL is a 30 kW standby generator that can power the entire home during an outage. It features a liquid-cooled engine and noise-reduction technology to keep sound levels to a minimum. The generator keeps heating, air-conditioning, lights, refrigerators, sump pumps and security systems running in the event of a power

*“The generator will sense the loss of electricity and start supplying backup power in about 10 seconds, providing peace of mind and a seamless experience for the homeowner. When electric power returns, the generator will return to standby mode, ready to back up the home when the next outage occurs.”*

**— Jacob VanWormer, associate product manager, Generac Power Systems**

outage. It can also be used to protect sensitive electronics, including smartphones, computers and entertainment systems, as it includes voltage and frequency regulation. “As people continue to build larger homes, we’ve seen an increased demand for a residential generator of this size,” said Melanie Tydrich, strategic marketing lead, Kohler Generators. Generac’s air-cooled 22kW Guardian Series natural gas backup generator includes Wi-Fi remote monitoring. This enables homeowners to monitor

their generators at all times from anywhere in the world from a web-enabled mobile device or computer. This helps them to ensure their generators are ready to provide backup power even when they are not at home. The Guardian Series generator is wired directly into the home’s electrical system. There are no extension cords to be run during an outage, and the units turn on and off automatically, triggered by a failure in the electric grid.

**WHY SO MANY POWER OUTAGES?**

The United States has led the world in electrification for decades. However, its aging power infrastructure now requires serious investment in order to provide reli-

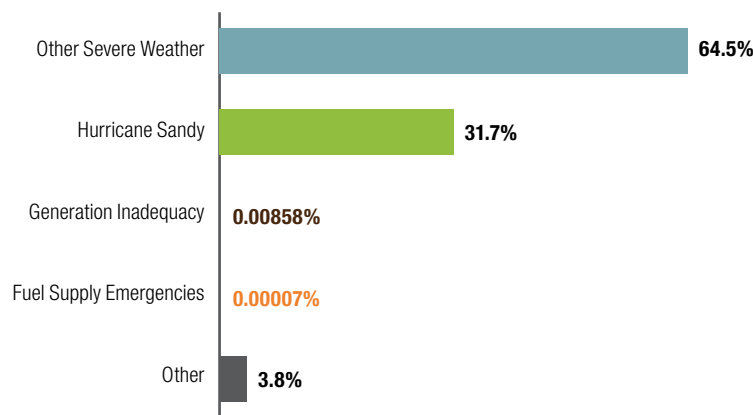
able power. That’s why the number of outages is on the rise, according to the U.S. Energy Information Administration (EIA). It is up to an average of 1.3 interruptions per customer per year with each household going without power for at least four hours during the year.

As might be expected, those in less densely populated regions have the highest outage statistics. But EIA numbers show that even those living in large municipalities still averaging one outage and slightly less than two hours of interrupted electric service per year.

The U.S. now endures more blackouts than any other developed nation. The EIA and the North American Electric Reliability Corp. (NERC) noted that the number of U.S. power outages lasting more than an hour has increased steadily over the past decade.

**Cause of major electricity disturbances in the U.S. 2012-2016**

Share of total customer-hours disrupted



SOURCE: EIA AND RHODIUM GROUP ANALYSIS

“The generator will sense the loss of electricity and start supplying backup power in about 10 seconds, providing peace of mind and a seamless experience for the homeowner,” VanWormer said. “When electric power returns, the generator will go back to standby mode, ready to backup the home when the next outage occurs.”

### CLEAN-BURNING GENERATORS

Some owners try to get by with diesel or gasoline generators. Both, however, are costlier, dirtier and may not do the job at the moment of most pressing need.

“Natural gas is a cleaner-burning fuel when compared to alternatives like diesel and gasoline,” said VanWormer. “Furthermore, its availability during an outage makes it superior to diesel or gasoline.”

How? When the grid is down, there is a very good chance that gas stations in the area will also be without power. During a serious weather event, the local transportation infrastructure is likely to be affected by downed trees and power lines. This makes a trip to the gas station or home store for refueling difficult or impossible.

Along with a relatively continuous flow of fuel,

natural gas is cost effective and does not require any refilling, making backup power seamless and hassle free. ■



PHOTO COURTESY OF GENERAC POWER SYSTEMS.

Generac Power System's air-cooled 22kW Guardian Series natural gas backup generator includes Wi-Fi remote monitoring. This enables homeowners to monitor their generators at all times from anywhere in the world from a web-enabled mobile device or computer.

In comparison, homeowners in Japan lose power for an average four minutes per year.

Even more worrying is the overall trend. The EIA maintains a five-year database of outages with the last reported period ending in 2014. The next report is due in 2019. The five-year averages show a worrying trend. For 2000 to 2004, there were an average of 44 reported grid outages per year. That rose to 100 from 2005 to 2009, and 200 from 2010 to 2014. In other words, the five-year annual average of outages has been doubling every five years.

As well as the age of the underlying power infrastructure, demand for electricity is growing as Americans rely increasingly on digital devices and the seasonal demand for air conditioning grows, said Massoud Amin, director, Technological Leadership Institute at the University of Minnesota, who studies the U.S. power grid.

He added that shifts in weather patterns are also impacting grid reliability. According to his numbers, weather used to account for about 17 percent to 21 percent of all power grid interruptions. Now it is up to 68 percent to 73 percent of all major outages.

“In 2017, we had Hurricanes Irma and Harvey in addition to multiple nor’easters, which caused about 1 billion total utility hours lost,” said Jacob VanWormer, associate product manager, Generac Power Systems. “Combine all that with consumers using ever-more electronics, tools and appliances, and an increase in electric vehicles, and it becomes imperative that one has a consistent source of power.”

With power outages becoming a fact of life for many in America, it makes sense to install a home generator. Factors such as cost of power, reliability, energy efficiency and environmental friendliness make a natural gas home standby generator the perfect choice.

PHOTO COURTESY OF AMERICAN GAS LAMP WORKS.

**Outdoor gas lamps can provide as much light as a 50-watt electric light at a fraction of the cost.**



# Lighting the way

Natural gas provides reliable and elegant outdoor lighting.

By Tonya McMurray

In the 1880s, Austrian chemist and engineer Carl Auer von Welsbach invented the gas mantle, a mesh fabric bag infused with a chemical and metal solution that generates a bright white light when heated by a gas flame. The technology greatly improved gas lighting, and soon lamps using gas mantles filled streets and homes in North America and Europe for much of the late 19th and early 20th centuries.

That same technology, perfected over more than 100 years, remains one of two technologies for outdoor natural gas lamps on the market today.

## A PRIMARY LIGHT SOURCE

Lamps using a gas mantle, also called a Welsbach mantle, can be used as a primary outdoor lighting source. A single gas mantle generates the same amount of light as a 50-watt electric bulb, but uses the energy of a pilot light, said Patrick Jardini, head of business development, American Gas Lamp Works LLC.

“They are similar to what you see in a Coleman camping lantern,” he said. “They produce a solid white light, like a light bulb. The mantles are a concentrated ignition that provides a good amount of light in the surrounding area.”

The mantles do require some routine maintenance, Jardini said. The open flames need to be relit from time to time, and the mantles should be changed about once a year or any time they are no longer fully intact. About twice a year, homeowners should clean the glass and remove any debris to enhance airflow around the mantles.

## OUTDOOR AMBIANCE

Homeowners who want outdoor lighting to set a mood rather than to create a primary light source may be more interested in lamps using open flame technology.

The flame from a gas mantle burner heats a mesh fabric bag infused with a chemical and metal solution, generating a bright white light. Named because of the way the bag hangs over the flame, the gas mantle has been perfected over more than 100 years to create safe and reliable light.



Maintenance-free, open flame technology is used primarily for ambient lighting to create a feeling or particular look for a home, Jardini said. Lamps using open flame illumination offers the warm, flickering light of an open gas flame, providing a dramatic ambiance to outdoor settings, entrances and walkways.

“They produce a flickering flame, like a candle, inside the lantern and don’t throw much light, so they provide more beauty than functionality,” he said.

The size and shape of the flame can be controlled by adjusting the gas valve of the lamp. Open flame burners are intended to burn around the clock but can be turned off and manually relit.

*(continued on page 08)*



PHOTO COURTESY OF AMERICAN GAS LAMP WORKS.

*(continued from page 07)*

## THE FINISHING TOUCH

Regardless of the technology used, gas-fueled lights and tiki torches add the finishing touches to outdoor living spaces.

“The latest direction our industry is moving toward is complete outdoor spaces: patios, pools, fire pits and beyond,” Jardini said.

A recent Houzz Landscaping Trends study found that 56 percent of homeowners are making updates to improve their backyard for entertaining, a move that the National Association of Realtors reports can add significant value to a home.

From casual tiki torches to elegant brass or copper lamps, natural gas lighting can complement any outdoor space. Lights can be mounted on exterior walls, porch ceilings or on lamp posts. Sensors and timers can help reduce fuel use by ensuring that lights are only on when needed.

The use of outdoor gas lamps requires access to a natural gas line. Because gas lines are most easily installed during the early stages of construction or renovation, it’s important to get specifications from your gas and fixture suppliers as early in the planning process as possible, Jardini said.

“Sometimes customers can be leery of installing gas lamps, due to being unfamiliar with the technology. Gas lamps are safe and approved

for outdoor use when installed per manufacturer’s recommendations and local and national fuel gas codes,” he said.

A local gas specialist, plumber or HVAC provider can provide information and installation of a natural gas line and fixture while ensuring adherence to local and national fuel gas codes and manufacturer’s recommendations.

Outdoor lamps are an important part of creating warm and inviting living spaces. When fueled by natural gas, outdoor lighting provides a cost-effective, environmentally friendly and reliable light source, even during a power outage. And, natural gas lighting does not tend to attract insects.

“However, the real benefit is the feeling it gives our clients,” Jardini said. “We consider our lamps a luxurious accessory for the home. It’s refined, distinct and custom tailored for the client. Just as a diamond necklace conveys style and garners attention to the wearer, gas lamps provide the same for homes by creating a cozy and warm environment.” ■



PHOTO COURTESY OF AMERICAN GAS LAMP WORKS.

Open flame burners create a soft light, providing a cozy ambiance to outdoor settings. Maintenance-free, open flame burners can burn 24/7.

Outdoor tiki torches help set a more casual mood while providing lighting and ambiance for outdoor living spaces.



PHOTO COURTESY OF AMERICAN GAS LAMP WORKS LLC.



# Cleaning up

Natural gas makes laundry day more cost effective and energy efficient.

By Tonya McMurray

**W**hen thinking about ways to make a home more energy efficient, doing laundry doesn't necessarily jump to the top of the list. But washers and dryers are among the top energy-using appliances, according to the American Council for an Energy Efficiency Economy (ACEEE). Using natural gas for dryers and hot water can help reduce that cost while also reducing greenhouse gas emissions.

Natural gas clothes dryers are less prevalent than electric dryers, even in homes with natural gas, but they can offer significant benefits, according to the American Gas Association (AGA).

Both gas and electric dryers function in pretty much the same way: A small electric motor turns the drum to tumble the clothes inside as well as an electric fan to distribute heated air. The primary difference between natural gas and electric dryers is the heating unit. Electric dryers use electric heating coils to supply heat and control the dryer drum and blowers.

Natural gas dryers, on the other hand, use an electronic ignition switch to light a burner, which heats the air by a flame instead of an electric element. Gas dryers do still use some electricity to power the motors in the appliance, but electricity use is dramatically decreased, according to ACEEE.

## SAVING ENERGY AND DOLLARS

The market share for natural gas dryers has remained relatively consistent at around 20 percent since 2007, according to AGA. But if just

10 percent more consumers used natural gas dryers instead of electric dryers, it would reduce carbon dioxide emissions by 240,000 tons each year. ACEEE estimates that when the energy used in

the conversion and delivery are factored in, a natural gas dryer uses one-third less energy than an electric dryer.

While gas dryers tend to have a higher upfront purchase price, that cost is quickly offset by a lower cost of operation. AGA estimates that a natural gas dryer costs about \$27 a year in fuel costs while a comparable electric dryer costs \$86 a year.

The energy and cost savings for laundry increase even more in homes using a natural gas hot water heater since natural gas water heaters cost less to operate and can heat water twice as fast. In fact, a home using natural gas to fuel water heating, cooking and clothes drying uses about one-fourth less total energy than a comparable all-electric home, resulting in annual utility bills that are roughly 49 percent less, according to AGA. In addition to saving money and electricity, natural gas dryers often produce better results. Gas dryers are gentler to fabrics because they heat up almost instantly, cool down quickly and produce a more gentle heat than electric dryers, according to SmarterHouse (SmarterHouse.org), an online guide to home energy savings produced by the ACEEE. ■





# Warm and cozy

Natural gas adds convenience and efficiency to fireplace installations.

By Tonya McMurray

Perhaps nothing creates an inviting indoor ambiance better than a fireplace. Adding warmth, coziness and significant value to a home, fireplaces remain one of the most popular features homeowners seek, according to the Hearth, Patio and Barbecue Association (HPBA).

HPBA's most recent consumer survey shows that 61 percent of homeowners own and use a fireplace, insert or stove, with 86 percent reporting high levels of satisfaction with their hearth product, said Emily McGee, director of communications, HPBA. About a quarter of fireplace owners have a gas fireplace, a number that has remained fairly stable over the last six years.

Convenience and cost savings are key factors that contribute to the popularity of gas fireplaces, said Rachel Romaniuk, marketing coordinator, Regency Fireplace Products.

"It's clean and easy to maintain," she said. "You literally just turn it on. There's no pollution, and it's very affordable in comparison to electricity."

## CONTROLLING THE FIRE

The newest generation of gas fireplaces uses an electronic ignition system to start the fire, saving even more fuel by not having a pilot light running when the fireplace is not in use. Most also come with remote controls and have a battery backup in the case of a power outage.

"Gas fireplaces light with the flip of a switch or press of a remote control to provide heat, light and luxurious comfort in the rooms that you love to spend time in," said Andrea Alden, digital writer, Napoleon Products. "You won't be dealing with hauling, lugging, lighting or cleaning up after a wood fire. Gas fireplaces are a source of comfort and many will even work during a power outage so that your family will remain safe and warm."

Unlike woodburning fireplaces, the heat from a gas fireplace can often be regulated, typically between 40 percent and 100 percent of the maximum British thermal unit (BTU) output, Romaniuk said. This allows for maxi-

mum comfort and flexibility.

Many newer fireplace products come with heat exchangers that maximize the heating potential, making the units even more cost and energy efficient.

"In a wood-burning fireplace or older models of gas inserts, a lot of heat went up the chimney," Romaniuk said. "The heat exchanger brings that heat back into the room as radiant heat. You can also add a blower that will push the heat further into the room. So, you are making even more use of the gas you're already burning to increase zone heating."

## AN ARRAY OF OPTIONS

Homeowners can choose from inserts, direct vent fireplaces or vent-free units in a variety of sizes, depending on their needs and lifestyle. The key to a successful fireplace installation is a consultation with a trained and reputable dealer, Romaniuk said.

A dealer will assess the living space and identify appropriate options. The dealer will also recommend the right size of fireplace and the appropriate number of BTUs needed for optimal heating.

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Natural gas fireplaces offer the look of a traditional wood fireplace with the convenience and energy efficiency of natural gas.

PHOTO COURTESY OF REGENCY FIREPLACE PRODUCTS.

Contemporary designs add a modern flair with a variety of choices for the firebed, including stones, glass and driftwood.



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“You want to make sure you have enough to heat the entire space, but at the same time, you don’t want it so hot that you can never turn it on,” Romaniuk said.

Natural gas inserts go into an existing hearth, offering a cost-effective way to update an existing fireplace with a new look and add the convenience and cost savings of natural gas at the same time. Inserts seal the space, eliminating drafts and creating additional energy efficiency. As an added benefit, the insert liner also seals the chimney, which will keep out bats and rodents, Romaniuk said.

Direct vent gas fireplaces are vented through a wall or roof and do not require a chimney, allowing flexibility in where they can be installed. However, she said, they will likely require remodeling or retrofitting, making them costlier to install.

Vent-free gas fireplaces are highly versatile because they do not require venting to the outside, allowing for installation almost anywhere in the home. However, they are not approved for use in Canada and

some states, so homeowners need to check local codes before choosing a vent-free model.

Some consumers want a fireplace primarily for visual appeal, opting for designer lines that provide large fireplaces with minimal heat.

“In those cases, people want less heat because they’re going to leave it on for long periods of time, and maybe at all times of the year,” Romaniuk said. “It’s primarily just to look at, and you’re not relying on it for heat.”

Whether opting for an insert or a full fireplace, consumers can choose between a traditional look with a log set designed to resemble wood-burning fireplaces or modern, contemporary styles that offer crystals, driftwood, river stone and other elements for the fire bed.

“The rapid acceleration of gas-fired hearth appliance technology is exciting to see,” said Jack Goldman, president and CEO, HPBA. “We have modern, linear gas fireplaces, fire tables to fit any outdoor setting, and everything from colored glass to stones to artificial wood of every kind to please every consumer. The innovation of these fireplaces can make them an integral part of any room in the house.” ■

# No limits

Tankless water heaters provide multifunction versatility.

By Drew Robb

**T**ankless water heaters have established a reputation as an environmentally friendly, energy efficient and low-cost way to supply water to the entire home. Their use in the home provides plentiful water where and when it is needed.

What isn't always realized is the versatility of tankless natural gas water heaters. While their primary use is in household water heating, tankless water heaters are also experiencing increased deployment as home heating systems, pool and spa heaters and snow melts. These are great space savers for single homes or multifamily structures.

## NEARLY LIMITLESS HOT WATER

A tankless natural gas water heater is a space-efficient solution with low operating costs. Fuel is only consumed when water is actually needed. But as soon as hot water is required, it is instantly available.

"Some of the compelling reasons to use natural gas water heaters are performance and nearly limitless hot water," said Mark Risinger, owner, Austin, Texas-based Risinger & Co., a specialist in architect-driven remodeling or new-build projects. "There is no longer a problem of water running out if someone takes a long shower."

He added that tankless units take up almost no space and have a much longer life span than tank-type water heaters, which have a useful life of about 10 years.

## HIGHLY-EFFICIENT INTEGRATED SYSTEMS

Natural gas-powered tankless water heaters are also very efficient. Instead of having separate natural gas tankless systems for heating and hot water, some homeowners prefer an integrated system. A combined space and water heating system is a great way to use a set of equipment to provide both functions. A natural gas tankless water heater not only provides continuous hot water for use throughout the home, it offers space heating whenever it is needed.

These combo systems are highly efficient. They can achieve 95 percent efficiency, compared to only 78 percent for traditional home

*"Some of the compelling reasons to use natural gas water heaters are performance and nearly limitless hot water. There is no longer a problem of water running out if someone takes a long shower."*

— Mark Risinger, owner, Risinger & Co.



PHOTO COURTESY OF RHEEM MANUFACTURING CO.

A tankless natural gas water heater, like Rheem Manufacturing Co.'s Prestige system (above), is a space-efficient solution with low operating costs. Fuel is only consumed when water is actually needed. But as soon as hot water is required, it is instantly available.

furnaces and 58 percent for tank-storage water heaters. Studies show that an integrated system can reduce energy consumption by up to 20 percent, compared to separate water-heating and space-heating equipment. By investing in only one highly-efficient natural gas system, homeowners can greatly reduce their lifecycle costs, compared to buying separate independently-operating systems for hot water and space heating. This approach offers significant space savings compared to the typical furnace and storage water-heater arrangement.

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PHOTO COURTESY OF RINNAI CORP.

Tankless water heaters, such as those made by Rinnai Corp. (left), are environmentally friendly, energy efficient and low-cost.

*(continued from page 13)*

Integrated systems are ideal options for new-build properties, when extensive renovation work is being planned, or when an aging water tank is up for replacement.

### LIFELONG HEATING

A hydronic heating system is another home-heating option. It uses hot water circulation to heat up a home. A natural gas tankless water heater distributes hot water through sealed pipes to radiators throughout the home. The same system can also be used to heat towel rails and floor slabs. A pump is installed that recirculates hot water to save on energy costs.

This system generally operates independently of the domestic hot water supply. In some cases, radiators in each space emit natural radiant heat, which can be individually adjusted to provide the desired level of comfort in each room. In other cases, tubing is run below the floor to provide warmth to cold floors such as bathrooms and kitchens. While traditional central heating systems transmit airborne particles, hydronic heating systems provide dust-free and allergen-free heating.

Natural gas hydronic systems are fuel efficient, provide unsurpassed comfort and can last the entire life of the building. Heat loss is minimized, and unoccupied spaces can be maintained at lower temperatures to lower energy usage.

It's no wonder that more and more homes are turning to tankless, natural gas-powered technology to heat their homes.

### NATURAL GAS VERSATILITY

Natural gas tankless water heaters, then, have expanded their scope beyond their traditional usage for domestic water heating. They have proven so versatile that they are increasingly being used for space heating. In some areas, they are even used to warm swimming pools, keep spas toasty, and melt snow and ice during frigid temperatures.

Due to their value in terms of environmentally friendliness, energy efficiency, space savings and lower utility bills, natural gas tankless units are now looked upon as a mainstream approach to keeping water hot. That's why many manufacturers and retail outlets offer

*Natural gas hydronic systems are fuel efficient, provide unsurpassed comfort and can last the entire life of the building. Heat loss is minimized, and unoccupied spaces can be maintained at lower temperatures to lower energy usage.*

natural gas tankless units. These include Rheem, Rinnai, Takagi, Noritz, Bosch and A.O. Smith. In addition, home improvement stores such as Home Depot, Lowes and Ace Hardware can help homeowners select the right unit for their domestic water, pool, spa or snow melting needs. ■

## TANKLESS WATER HEATERS: WHAT YOU NEED TO KNOW

Natural gas tankless water heaters have grown tremendously in popularity over the past decade. They are finding their way into more residential units. Whether it is self-contained homes or apartment buildings, contractors and owners are finding that homeowners and residents are demanding natural gas appliances and water heaters.

But like any modern technology, to some people, tankless water heaters still are somewhat of a mystery. After all, many have grown up with the presence of a space-hogging water tank in their homes all their lives. How can you do without a tank and still have hot water?

Tankless water heaters deliver all the hot water needed by a household at any time of the day or night – on demand.

“When you turn on the shower, appliance or faucet, cold water is fed to the unit,” said Shaun Larson, a Realtor with Larson James Real Estate in Franklin,



Tennessee. “Water is then heated as it passes inside the tankless heater. This water becomes almost immediately available wherever it is required in the home.”

A natural gas tankless unit heats water instantaneously and sends it to any faucet, shower or appliance. As demand fluctuates, the system adjusts automatically to meet user preferences for water temperature. The great thing about this arrangement is that there is no need to continually heat and reheat a storage tank. As a result, energy consumption is greatly reduced.

In many cases, taking out the old tank frees up a lot of space for a room extension or an extra closet. The tankless unit is tiny in comparison, about the size of a small briefcase. It can easily be hung on a wall or installed in a like garage, closet or utility room.

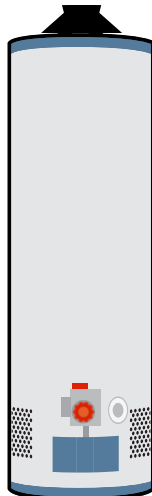
Similar to a tanked electrical or natural gas system, there is a brief delay as the cold water is flushed out of the line before hot water is available. This is typically no more than a second or two. Some households select to set up a recirculating system in their home to ensure hot water is instantly available as soon as the faucet is turned. This entails some additional piping and the installation of a recirculating pump.

**Tankless water heater**



About the size of a suitcase, a tankless water heater mounts on your wall.

**Traditional water heater**



About the size of a small fridge, a filled tank heater must be located in a space that can support 400-600 pounds



## Chimichurri grilled steak with fire roasted corn and mango lime salsa

### INGREDIENTS

1 cup fresh Italian parsley leaves  
1/2 cup olive oil  
1/3 cup red wine vinegar  
1/4 cup fresh cilantro leaves  
2 cloves garlic, peeled  
3/4 tsp crushed red pepper  
1/2 tsp ground cumin  
1/2 tsp salt  
4 (5 oz) beef tenderloin medallions

### DIRECTIONS

- 1 Combine parsley, oil, vinegar, cilantro, garlic, garlic, red pepper, cumin and salt in blender or food processor container. Cover; blend until smooth.
- 2 Pour half of the sauce into small bowl, cover; refrigerate until ready to use.

- 3 Pour remaining sauce into shallow glass dish add tenderloins. Turn to coat evenly, marinate in refrigerator for four hours or overnight, turning occasionally.
- 4 Heat sauté pan or large skillet over medium-high heat; sear tenderloins about 12 to 15 minutes for medium rare or until desired doneness. Discard marinade. Lightly brush with reserved chimichurri sauce and serve with fire roasted corn and mango lime salsa.

SOURCE: WWW.DOLESUNSHINE.COM



## Grilled chicken wings

### INGREDIENTS

2 lbs. chicken wings  
2 tbsp olive oil  
2 tsp brown sugar  
2 tsp garlic powder  
2 tsp chili powder  
2 tsp smoked paprika  
1 tsp onion powder  
Kosher salt and freshly ground black pepper, to taste

### INGREDIENTS FOR DIPPING SAUCE

1/3 cup roasted red pepper, chopped  
2 oz goat cheese  
2 tbsp sour cream  
1/4 tsp salt

### DIRECTIONS

- 1 Preheat natural gas grill to 425°F. Line grill rack with foil paper.

- 2 In a large bowl, combine wings, olive oil, brown sugar, garlic powder, chili powder, paprika, onion powder, salt and pepper, to taste.
- 3 Mix until wings are coated. Place wings on lined grill rack for 25 minutes, using tongs to turn halfway through.
- 4 Make the dipping sauce by combining roasted red pepper, goat cheese, sour cream and salt in a food processor bowl until creamed.
- 5 Serve wings immediately with dipping sauce.

SOURCE: WWW.OUTDOORCOOKING.COM

